

**TRANSBOUNDARY HAZE POLLUTION IN THE ASEAN REGION: AN  
ASSESSMENT OF THE ADEQUACY OF THE LEGAL AND POLICY  
FRAMEWORK IN INDONESIA**

**LAELY NURHIDAYAH**

S.H. (Sarjana Hukum) Jenderal Soedirman University, Indonesia  
LLM (Adv) The University of Queensland, Australia



Macquarie Law School  
Macquarie University, Sydney, Australia

This thesis is presented for the degree of  
Doctor of Philosophy in Law

January 2014



## **Abstract**

Transboundary haze pollution is one of the major ongoing problems in the ASEAN region. This haze pollution is the result of land/forest fires, and mostly originates in Indonesia. In addition to a long dry season, human activities such as the clearing of forests and land for plantations and agriculture, particularly in peatland areas, are a major cause of these fires. The impacts of these fires are significant and include damage to biodiversity, people's health and the region's economy, and contribution to global climate change. It is clear that haze pollution has an impact locally, nationally, regionally and internationally. Thus, while transboundary haze pollution is regarded as an international or regional problem, and there are already international and regional legal mechanisms in place to address the issue, it is argued that transboundary pollution is often more effectively addressed through domestic law.

The challenge in addressing and enforcing transboundary haze–pollution control lies in the implementation and enforcement of law at the domestic level. Therefore, the legal frameworks in Indonesia for addressing land/forest fires are examined in this thesis. The main aim is to examine the adequacy of existing legal and policy frameworks in Indonesia in addressing transboundary haze pollution. This examination includes institutional arrangements, community-based fire management, and the issue of REDD+ and its implication for forest fires reduction. This research fills a gap in the literature on the current legal and policy framework in Indonesia. It argues that a well-structured integrated legal framework is crucial in addressing land/forest fires. It finds that the existing legal framework in Indonesia is inadequate to address land/forest fires. A new legislation must be enacted to specifically address the issue.

However, land/forest fires are a complex problem cutting across many interests, sectors, communities, nations and regions. Therefore, no single solution will work to address this issue. Addressing transboundary haze pollution requires cooperation at the international, regional, national and local levels. Thus, it is proposed that, in addressing transboundary haze pollution, a synergetic and integrated approach is required, with coherence between international, regional, national and local frameworks. Further, it is argued that the best way to address land/forest fires at the national level is to improve all relevant measures, including the legal and institutional framework, public participation and law enforcement.



## Statement of Candidate

I certify that the work in this thesis, entitled *Transboundary Haze Pollution in the ASEAN Region: An Assessment on the Adequacy of the Legal and Policy Framework in Indonesia*, has not previously been submitted for a degree, nor has it been submitted as part of requirements for a degree to any other university or institution other than Macquarie University.

I also certify that the thesis is an original piece of research and it has been written by me. Any help or assistance that I have received in my research work and the preparation of the thesis itself has been appropriately acknowledged.

In addition, I certify that all information sources and literature used are indicated in the thesis.

Laely Nurhidayah  
41320956

Date: 15 January 2014



## **Acknowledgements**

First, I would like extend my sincere gratitude to my principal supervisor Associate Professor Shawkat Alam. Thank you for your encouragement, guidance, support and patience from the beginning of my candidature until the end. Without your support, I could not have overcome the difficulties that I faced throughout my PhD journey. I also would like to express my sincere gratitude to my Adjunct Supervisor, Professor Zada Lipman, who has given me tremendous support and guidance in the improvement of my thesis. Both of you are special people who deserve the upmost appreciation and recognition.

Thanks are also due to Macquarie University for providing me with an International Macquarie Research Excellence Scholarship (iMQRES). Financial support provided by this scholarship enabled me to undertake this research project. I would also like to give my thanks to Macquarie Law School, which has supported me with the facilities for conducting my research, and supported me in particular by funding my conference attendance and fieldwork research. The feedback from the conferences that I attended was beneficial for the improvement of my thesis. Also, to Professor Brian Opeskin and Dr Carlos Bernal Pulido, thank you for your valuable feedback on my thesis and work during LAWS 901, 902 and 903.

Thanks also to the editors and reviewers from the journals to which I submitted articles for giving me feedback on my work, and to Elite Editing for their editorial support on this thesis. I would also like to express my sincere gratitude to the government officials, NGOs, community members and friends from the fieldwork who helped me during my research in Sumatera and Kalimantan.

To the Macquarie administrative staff (Debbie, Elanor) and my PhD colleagues (Nafis, Natalia, Christine, Tanzim, Yuri, Huoang, Cenuk, Riyanti Djalante, Gil, Ade, Sany and others), thank you for helping me during my candidature. Your assistance and companionship helped me to avoid succumbing to the isolation of writing a thesis. Finally, I would like to thank my family and friends who gave me encouragement and the mental support necessary to finish my thesis.





# Contents

<b>Abstract.....</b>	<b>iii</b>
<b>Statement of Candidate .....</b>	<b>v</b>
<b>Acknowledgements .....</b>	<b>vii</b>
<b>Contents .....</b>	<b>ix</b>
<b>List of Figures.....</b>	<b>xv</b>
<b>List of Tables .....</b>	<b>xv</b>
<b>List of Cases.....</b>	<b>xvii</b>
<b>List of Legislation.....</b>	<b>xix</b>
<b>List of Publications and Conferences Derived from this Thesis.....</b>	<b>xxi</b>
<b>List of Abbreviations .....</b>	<b>xxiv</b>
<b>Chapter 1: Introduction .....</b>	<b>1</b>
1.1. Introduction .....	1
1.2. Geographical Background.....	2
1.2.1. ASEAN.....	2
1.2.2. Indonesia.....	4
<i>1.2.2.1 Causes of Land/Forest Fires.....</i>	<i>5</i>
1.3. Research Question.....	7
1.4. Rationale of Research .....	8
1.5. Aim of Research.....	9
1.6. Significance of Research.....	10
1.7. Methodology .....	10
1.7.1. Doctrinal Analysis .....	10
1.7.2. Empirical Research.....	12
1.8. Outline of the Study .....	14
<b>Chapter 2: Theory, Developments and Gaps in the International Legal Framework for Addressing Transboundary Pollution.....</b>	<b>17</b>
2.1. Introduction .....	17
2.2. The Trail Smelter Arbitration.....	18
2.3. The Stockholm Declaration and the Rio Declaration .....	19
2.4. State Responsibility for Environmental Harm .....	21
2.4.1. Definition of State Responsibility and Liability for Environmental Harm .....	22
2.4.2. Advantages and Disadvantages of a Liability Regime.....	24
2.4.3. Liability Regime in the ASEAN Region .....	26
2.5. State Responsibility for Transboundary Environmental Harm as Customary Law .....	28
2.5.1. The Shortcomings of the Enforcement of State Responsibility .....	30
2.5.2. The Rules of State Responsibility and Liability in Transboundary Environmental Harm .....	31
2.5.3. The Work of the International Law Commission.....	32

2.6. Responsibility of States for Internationally Wrongful Acts.....	33
2.6.1. Internationally Wrongful Acts of a State .....	34
2.6.2. International Responsibility of States.....	35
2.6.3. The Implementation of the International Responsibility of a State.....	35
2.6.4. International Liability for Injurious Consequences Arising Out of Acts not Prohibited by International Law .....	36
2.6.5. Draft Articles on Prevention of Transboundary Harm from Hazardous Activities .....	36
2.6.5.1 <i>Prevention</i> .....	37
2.6.5.2 <i>Cooperation</i> .....	40
2.6.6. Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities .....	42
2.7. Civil Liability: An Alternative Approach to State Liability .....	45
2.8. The Implication of the Rule of State Responsibility on Indonesian Forest Fires .....	46
2.8.1. Due Diligence Obligation and the Problem of Attribution .....	48
2.9. Multilateral Environment Agreements on Atmosphere and Biodiversity .....	51
2.9.1. The UNFCCC 1992 and the Kyoto Protocol.....	51
2.9.2. The CBD.....	54
2.9.3. The Ramsar Convention.....	56
2.9.4. The Synergy Between the UNFCCC, CBD and Ramsar Convention.....	57
2.10. Agenda 21 and its Implication for Reducing Forest Fires and Transboundary Pollution .....	58
2.11. Conclusion .....	61

### **Chapter 3: ASEAN Regional Legal Framework to Address Transboundary Haze**

<b>Pollution.....</b>	<b>63</b>
3.1. Introduction.....	63
3.2. ASEAN: An Overview.....	64
3.3. Regional Environmental Governance .....	65
3.3.1. Definition.....	66
3.3.2. Integration Model—EU and ASEAN.....	68
3.3.3. Regional Environmental Governance—EU and ASEAN .....	72
3.3.3.1 <i>EU</i> .....	72
3.3.3.2 <i>LRTAP</i> .....	73
3.3.3.3 <i>ASEAN</i> .....	76
3.4. ASEAN Regional Environmental Legal Framework in Addressing Haze Pollution .....	79
3.4.1. Soft Law—Strategies, Action Plans and Policy, Resolutions, Declarations and Accords.....	79
3.4.1.1 <i>ASEAN Cooperation Plan on Transboundary Pollution 1995</i> .....	80
3.4.1.2 <i>Regional Haze Action Plan (RHAP)</i> .....	81
3.4.1.3 <i>Zero Burning and Controlled Burning Policy</i> .....	82
3.4.1.4 <i>ASEAN Peatland Management Initiative (APMI)</i> .....	84
3.4.1.5 <i>ASEAN Peatland Management Strategy (APMS)</i> .....	85
3.4.2. Hard Law—Binding Agreements.....	86
3.4.2.1 <i>Agreement on Conservation of Nature and Natural Resources (ACNNR)</i> .....	86
3.4.2.2 <i>ASEAN Agreement on Transboundary Haze Pollution (AATHP)</i> .....	87
3.4.2.3 <i>International Principles Adopted</i> .....	90
3.4.2.4 <i>Obligations of the Agreement (Prevention, Monitoring, Assessment,                 Preparedness and National Emergency Response)</i> .....	91
3.4.2.5 <i>Cooperation Provisions</i> .....	93

3.4.2.6 <i>Financial Arrangements</i> .....	95
3.4.2.7 <i>Settlement of Disputes</i> .....	96
3.4.2.8 <i>Institutional Arrangements</i> .....	98
3.4.2.9 <i>Strengths and Weaknesses of the AATHP</i> .....	99
3.5. Conclusion .....	103
<b>Chapter 4: The Indonesian Legal Framework to Address Transboundary Haze</b>	
<b>Pollution .....</b>	<b>106</b>
4.1. Introduction .....	106
4.2. Hierarchy of Law .....	107
4.2.1. Administrative Structures .....	110
4.2.2. The Problem of Overlapping Laws .....	110
4.3. Legislation and Regulations .....	112
4.3.1. Law No. 32/2009 on Environmental Protection and Management .....	112
4.3.1.1 <i>Summary</i> .....	112
4.3.1.2 <i>Evaluation</i> .....	114
4.3.2. Government Regulation No. 4/2001 Concerning Control of Environmental Degradation and/or Pollution Related to Forest and/or Land Fires .....	116
4.3.2.1 <i>Summary</i> .....	116
4.3.2.2 <i>Evaluation</i> .....	125
4.3.2.3 <i>Main Areas to be Strengthened</i> .....	126
4.3.3. Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires .....	128
4.3.3.1 <i>Summary</i> .....	128
4.3.3.2 <i>Evaluation</i> .....	133
4.3.4. Law No. 41/1999 on Forestry .....	136
4.3.4.1 <i>Summary</i> .....	136
4.3.4.2 <i>Evaluation</i> .....	141
4.3.5. Agriculture Law No. 18/2004 .....	144
4.3.5.1 <i>Summary</i> .....	144
4.3.5.2 <i>Evaluation</i> .....	145
4.3.6. Law No. 5/1990 Concerning the Conservation of Living Resources and Their Ecosystems .....	147
4.3.6.1 <i>Summary</i> .....	147
4.3.6.2 <i>Evaluation</i> .....	148
4.3.7. Law No. 22/1999 on Local Government, as Revised by Law No. 32/2004 .....	150
4.3.7.1 <i>Summary</i> .....	150
4.3.7.2 <i>Evaluation</i> .....	153
4.3.8. Law No. 24/2007 on Disaster Management .....	156
4.3.8.1 <i>Summary</i> .....	156
4.3.8.2 <i>Evaluation</i> .....	157
4.4. Conclusion .....	159
<b>Chapter 5: CBFiM in Indonesia .....</b>	<b>162</b>
5.1. Introduction .....	162
5.2. International Framework .....	163
5.3. The Concept of CBFiM .....	164
5.3.1. Definitions .....	166
5.4. Fire Awareness and Education .....	171
5.5. The Linkages among CBNRM, CBFM and CBFiM .....	171

5.6. Land Tenure, Customary Laws, Conflict and Forest Fires .....	176
5.7. Legal Framework for CBFiM .....	182
5.7.1. Government Regulation No. 4/2001 Concerning Control of Environment Degradation and/or Pollution Related to Forest and/or Land Fires .....	183
5.7.2. Ministry of Forestry Regulation No. P12/Menhut-II/2009 on the Control of Forest Fires .....	183
5.7.2.1 <i>Top-down and Bottom-up Approaches</i> .....	185
5.7.2.2 <i>Strengthening Community Capacity</i> .....	186
5.7.3. Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires .....	188
5.7.4. Ministry of Environment Regulation No. 10/2010 on the Mechanism to Prevent Pollution and/or Damage to the Environment Related to Land and/or Forest Fires ....	190
5.8. CBFiM Case Studies in South Sumatera and Central Kalimantan Provinces .....	191
5.8.1. CBFiM in South Sumatera .....	191
5.8.1.1 <i>Sustainable Livelihood Approach</i> .....	192
5.8.1.2 <i>The Causes of Land/Forest Fires in South Sumatera</i> .....	193
5.8.1.3 <i>Local Knowledge</i> .....	194
5.8.2. CBFiM in Central Kalimantan .....	194
5.8.2.1 <i>An Evaluation of CBFiM in Central Kalimantan</i> .....	196
5.8.2.2 <i>The Causes of Land/Forest Fires in Central Kalimantan</i> .....	198
5.8.2.3 <i>Land Tenure Security and CBFiM</i> .....	200
5.8.2.4 <i>Local Knowledge</i> .....	203
5.9. Conclusion .....	205
<b>Chapter 6: The REDD+ Program and its Implications for Forest Fire Reduction Efforts in Indonesia .....</b>	<b>208</b>
6.1. Introduction .....	208
6.2. REDD .....	210
6.2.1. Background .....	210
6.2.2. REDD Scheme in the UNFCCC, Kyoto Protocol and Beyond .....	211
6.2.3. REDD+ and the Issue of Land/Forest Fires .....	220
6.2.4. REDD, Forest Fires and Community-based Participation .....	221
6.2.5. REDD+ Indonesia .....	223
6.2.5.1 <i>Indonesia National REDD+ Strategy</i> .....	223
6.2.5.2 <i>Coordination and Synergy Issues</i> .....	228
6.2.6. International Funding .....	229
6.2.6.1 <i>Indonesia–Australia KFCP</i> .....	229
6.2.6.2 <i>Indonesia–Norway REDD+ Partnership</i> .....	232
6.3. Legal Framework .....	233
6.3.1. Presidential Instruction No. 10/2011 Concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance .....	236
6.3.2. Presidential Regulation No. 61/2011 on National Action Plan on Reduction of GHG .....	238
6.3.3. Presidential Instruction No. 2/2007 on Acceleration of Rehabilitation and Revitalisation of the ex-Mega Rice Project in Central Kalimantan .....	239
6.4. Demonstration Activities .....	240
6.4.1. Merang REDD Pilot Project .....	241
6.4.2. Mawas Peatland Conservation Area Project .....	242
6.5. REDD+ implementation in Central Kalimantan .....	242

6.5.1. Governor Regulation No. 10/2012 concerning Local Strategy and Action Plan for REDD+ (Central Kalimantan).....	243
6.6. Conclusion.....	248
<b>Chapter 7: Conclusions and Recommendations .....</b>	<b>251</b>
7.1. The Context.....	251
7.2. Strengthening the Legal Frameworks .....	252
7.2.1. International Framework (Chapter 2).....	252
7.2.2. Regional Measures (Chapter 3).....	254
7.2.3. Indonesian Legal Framework (Chapter 4).....	256
7.2.4. CBFiM (Chapter 5).....	258
7.2.5. REDD+ and Opportunities for Indonesia (Chapter 6).....	259
7.3. Synergetic, Adaptive and Integrated Approach .....	260
7.4. Implications and Significance of the Research .....	262
7.5. Issues for Further Research and Policy Development .....	263
7.6. The Way Forward .....	264
<b>Appendices.....</b>	<b>267</b>
Appendix I. List of Laws/Regulations Relevant in Addressing Land/Forest Fires as discussed in Chapter 4.....	267
Appendix II. List of Regulations Relevant in Examining Community Based Fire Management as discussed in Chapter 5.....	269
Appendix III. List of Relevant Legislation/Regulations in Chapter 6. ....	270
Appendix IV.....	271
Central Kalimantan Governor Instruction No. 188.44/228/2012 concerning Integrated Institutional Structure in Central Kalimantan in Controlling Land/Forest Fires.....	271
Appendix V. Ethics Approval.....	275
Appendix VI. Interviews Guidelines.....	277
Appendix VII. Table of gaps and overlaps legislation in Indonesia .....	282
Law No. 32/2009 on Environmental Protection and Management .....	282
Government Regulation No. 4/2001 Concerning Control of Environmental Degradation and/or Pollution Related to Forest and/or Land Fires .....	283
Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires ...	284
Law No. 41/1999 on Forestry.....	284
Agriculture Law No. 18/2004.....	285
Ministry of Agriculture Decree No. 14/Permentan/PL.110/2009 on the Guidelines for the Utilisation of Oil Palm Plantation on Peatland Areas. ....	285
Presidential Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance.....	285
Law No. 5/1990 Concerning the Conservation of Living Resources and Their Ecosystems .....	285
Ministry of Environment Regulation No. 10/2010 on the Mechanism to Prevent Pollution and/or Damage to the Environment Related to Land and/or Forest Fires ....	286
<b>Bibliography .....</b>	<b>287</b>



## **List of Figures**

Figure 1. Map of Indonesia.....	5
Figure 2. Institutional Framework of Haze Cooperation .....	98
Figure 3. Hierarchy of Law.....	108
Figure 4. Hierarchy of Law.....	109
Figure 5. Various Modes of Community Input in Decision Making in Fire Management .....	170
Figure 6. Conceptual Model of the Multi-level REDD Payments.....	219
Figure 7. REDD+ National Strategy .....	227

## **List of Tables**

Table 1. Hierarchy of Administrative Levels .....	110
---	-----





## List of Cases

- Certain Phosphate Lands in Nauru (Nauru v Australia) (Preliminary Objections)* (1993) 32 ILM 530
- Corfu Channel (United Kingdom and Northern Ireland v Albania) (Judgment)* [1949] ICJ Rep
- International Fisheries Company (USA v United Mexican States)* IV 691 (1931)
- Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America) (Judgment)* [1986] ICJ Rep
- Phosphates in Morocco (Italy v France) (Judgment)* [1938] PCIJ (ser A/B)
- Pulp Mills on the River Uruguay (Argentina v Uruguay) (Judgment)* [2010] ICJ Rep
- Trail Smelter Arbitration (USA v Canada) (Awards)* (1941)
- Rawa Tripa Case (Ministry of Environment v PT Kalista Alam) ) in District Court of Meulaboh* (2012) No 12/PDT.G/2012/PN-MBO.
- Eksponen 66 dkk v APhi dkk in the district court of Medan in 1998 (District Court of Medan No 425/Pdt.G/1997/PN.Mdn 15 Juni 1998).*
- PT ADEI Plantation v KLH* (2013) Court file No PDM-79/PKL.CI/12/2013.
- PT Adei Plantation in District Court of Bangkinang (Court Decision No 19/Pid-B/2001/PN.BKN, 1 October 2001)*



## **List of Legislation**

Agriculture Law No. 18/2004 (Indonesia)

Basic Agrarian Law No. 5/1960 (Indonesia)

Directorate General Forest Protection and Conservation Decree No. 21 & 22/KPTS/DJ-IV/2002 concerning Structure and Guidelines of/for the Fire Brigades for Fire Control and Prevention

Government Regulation as Substitute of Forestry Law No. 1/2004 (Indonesia)

Government Regulation No. 34/2002 concerning Forest Management, Forest Plan and Development and Utilisation of Forest

Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires (Indonesia)

Governor Regulation No. 10/2012 concerning Local Strategy and Action Plan for REDD+ (Central Kalimantan)

Governor Regulation No. 13/2009 on the Rights of *Adat* Community

Governor Regulation No. 52/2008 on the Guidance of Opening Lands and Yards for the Community in Central Kalimantan (Indonesia).

Law No. 10/2004 concerning the Establishment of Laws and Regulations (Indonesia)

Law No. 24/2007 on Disaster Management (Indonesia)

Law No. 25/1999 on Financial Balance (Indonesia)

Law No. 32/2004 on Local Government (Indonesia)

Law No. 32/2009 on Environmental Protection and Management (Indonesia)

Law No. 33/2004 on Financial Balance (Indonesia)

Law No. 41/1999 on Forestry (Indonesia)

Law No. 5/1990 concerning the Conservation of Living Resources and their Ecosystems (Indonesia)

Law No. 22/1999 on Local Government (Indonesia)

Local Government Regulation No. 16/2008 concerning Institution of Dayak Community in Central Kalimantan

Local Government Regulation No. 5/2003 concerning Controlling Land/Forest Fires (Central Kalimantan)

Ministry of Agriculture Decree No. 14/Permentan/PL.110/2009 on the Guidelines on the Utilisation of Oil Palm Plantation on Peatland Areas

Ministry of Environment Regulation No. 10/2010 on the Mechanism to Prevent Pollution and/or Damage to the Environment related to Land and/or Forest Fires

Ministry of Forestry Regulation No. P 68/Menhut-II/2008 concerning Demonstration Activities

Ministry of Forestry Regulation No. P.55/Menhut-II/2008 on the Master Plan on the Rehabilitation and Conversion of Peatlands Development Areas in Central Kalimantan

Ministry of Forestry Regulation No. P12/Menhut-II/2009 on the Control of Forest Fires

Presidential Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Governance of Natural Primary Forest and Peatland

Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires (Indonesia)

Presidential Regulation No. 28/2011 concerning the Use of Protected Forest for Underground Mining

Presidential Regulation No. 61/2011 concerning National Action Plan on Reduction of GHG

Presidential Regulation No. 8/2008 concerning BNPB

## **List of Publications and Conferences Derived from this Thesis**

### Conferences/Workshops

1. 'Transboundary Haze Pollution in ASEAN: Assessment on the Adequacy of Regional Framework and National Legal Framework in Indonesia' (Paper accepted for the 8<sup>th</sup> Asian Law Institute Conference, Kyushu, Japan, 26–27 May 2011).
2. 'Transboundary Haze Pollution in ASEAN: Assessment on the Adequacy of Regional Framework and National Legal Framework in Indonesia' (Paper presented at the HDR Showcase previously Works in Progress Seminar, Faculty of Arts, Macquarie University, Sydney, Australia, 7 June 2011).
3. 'Transboundary Haze Pollution in ASEAN: Assessment on the Adequacy of Regional Framework and National Legal Framework in Indonesia' (Paper presented at the Indonesian Studies Postgraduate Workshop, Australian National University, Canberra, Australia, 21–22 July 2011).
4. 'Transboundary Haze Pollution in ASEAN: Assessment on the Adequacy of Regional Framework and National Legal Framework in Indonesia' (Abstract accepted for poster presentation at World Climate Research Program, Open Science Conference, Denver, Colorado, 24–28 October 2011).
5. 'Addressing Air Pollution and Climate Change an Assessment of Legal and Policy Framework in Indonesia' (Paper presented at the Climate Futures Postgraduate Forum, 29 November 2011).
6. 'The Influence of International Law upon ASEAN Approaches in Addressing Transboundary Haze Pollution in the ASEAN Region' (Paper presented at the 3<sup>rd</sup> NUS-Asian SIL Young Scholars Workshop, NUS Law School, 22–24 February 2012).
7. 'The Role of International Environmental Law in addressing Haze Pollution in the ASEAN Region' (Paper presented at the ANZSIL and AsianSIL Joint Conference, UNSW, Sydney, 25–26 October 2012).
8. 'Legislations, Regulations, and Policies in Indonesia Relevant to Address Land/Forest Fires and Transboundary Haze Pollution: A Critical Evaluation' (Paper accepted at the Colloquium on Environmental Scholarship, Vermont Law School, Vermont, 11–12 October 2012).

9. 'Legislations, Regulations, and Policies in Indonesia Relevant to Address Land/Forest Fires and Transboundary Haze Pollution: A Critical Evaluation' (Paper presented at the 10<sup>th</sup> Asian Law Institute Conference, National Law School of India, Bangalore, 23–24 May 2013).
10. 'Reducing Emissions from Deforestation and Forest Degradation (REDD)+ Program and its Implication on Forest Fire Reduction Effort: Case Study in Central Kalimantan Indonesia' (Paper accepted at the NCCRAF National Adaptation Conference, Hilton Hotel, Sydney, 25–27 June 2013).
11. 'Reducing Emissions from Deforestation and Forest Degradation (REDD)+ Program and its Implication on Forest Fire Reduction Effort: Case Study in Central Kalimantan Indonesia' (Paper presented at the IUCN Academy of Environmental Law Annual Colloquium, University of Waikato, Hamilton, New Zealand, 24–28 June 2013).
12. 'Regional Environmental Governance: An Evaluation of the ASEAN Legal Framework for Addressing Transboundary Haze Pollution' (Paper presented at Student's Workshop on Research in International Law, New Delhi, India, 13–16 November 2013).

#### Working Paper

1. The Influence of International Law upon ASEAN Approaches in Addressing Transboundary Haze Pollution in the ASEAN Region (AsianSIL Working paper, December 2012) <[http://www.asiansil.org/publications/YSW%202012\\_12.pdf](http://www.asiansil.org/publications/YSW%202012_12.pdf)>.

#### Articles

1. Laely Nurhidayah, Legislation, Regulations, and Policies in Indonesia Relevant to Address Land/Forest Fires and Transboundary Haze Pollution: A Critical Evaluation, *Asia Pacific Journal of Environmental Law (APJEL)* vol 16, Australian Center for Climate and Environmental Law, The University of Sydney, 2013 .
2. Laely Nurhidayah, Zada Lipman, Shawkat Alam, Regional Environmental Governance: An Evaluation of the ASEAN legal framework for Addressing Transboundary Haze Pollution, *Australian Journal of Asian Law*, vol 15 No. 1, Article 6, 2014.

3. Laely Nurhidayah, Community Based Forest Fires Management in Indonesia: A Legal Analysis and Case Study in South Sumatra and Central Kalimantan Province, up-coming publication The Law Asia Journal, The University of Queensland, 2014.

## List of Abbreviations

AATHP	ASEAN Agreement for Transboundary Haze Pollution
ACNNR	Agreement on Conservation of Nature and Natural Resources
APMI	ASEAN Peatland Management Initiative
APMS	ASEAN Peatland Management Strategy
ASEAN	Association of Southeast Asian Nations
ASEP	ASEAN Sub-Regional Environmental Programme
ASMC	ASEAN Specialized Meteorological Centre
Bakosurtanal	<i>Badan Koordinasi Survei dan Pemetaan Nasional</i> (National Coordinating Agency for Surveys and Mapping)
Bappenas	<i>Menteri Negara Perencanaan Pembangunan Nasional</i> (State Ministry of National Development Planning)
BAU	Business as Usual
BLH	Badan Lingkungan Hidup (Environmental Agency)
BKPRN	<i>Badan Koordinasi Penataan Ruang Nasional</i> (National Spatial Planning Coordinating Board )
BKSDA	Balai Konserasi Sumber Daya Alam (Natural Resources Conversation Agency)
BNPB	<i>Badan Nasional Penanggulangan Bencana</i> (National Agency for Disaster Management)
BPBD	<i>Badan Penanggulanga Bencana Daerah</i> (Regional Disaster Management Agency)
CBD	Convention on Biological Diversity
CBFiM	Community-based Fire Management
CBFM	Community-based Forest Management
CBNRM	Community-based Natural Resources Management
CDM	Clean Development Mechanism
CIFOR	Center for International Forestry Research
CITES	<i>Convention on International Trade in Endangered Species</i> of Wild Fauna and Flora
CKPP	Central Kalimantan Peatlands Project
CO <sub>2</sub>	Carbon Dioxide
COP	Conference of Parties
CSOs	Civil Society Organisations
DFID	Department for International Development
EfE	Environment for Europe
EIA	Environment Impact Assessment
EMEP	European Monitoring and Evaluation Programme
EU	European Union
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GTZ	<i>Gesellschaft für Technische Zusammenarbeit</i>
HPH	Hak Pengusahaan Hutan (Forest Concession Rights)



HPHTI	Hak Pengusahaan Hutan Tanaman Industri (Industrial Forest Plantation Permit)
HTI	Hutan Tanaman Industri
HTR	<i>Hutan Tanaman Rakyat</i>
ICJ	International Court of Justice
ICRAF	International Center for Research in Agro Forestry
ILC	International Law Commission
IPCC	Intergovernmental Panel on Climate Change
IUCN	<i>International Union for Conservation of Nature</i>
KFCP	Kalimantan Forest and Climate Partnership
Komda	Komisi Daerah (Regional Commission)
LAPAN	Lembaga Penerbangan dan Antariksa Nasional (Institute of Aeronautics and Space)
LRTAP	Long-Range Transboundary Air Pollution
LULUCF	Land use change and forestry sector
MEAs	Multilateral Environmental Agreements
MPA	<i>Masyarakat Peduli Api</i> village fire brigade community
MPR	Majelis Permusyawaratan Rakyat (People's Consultative Assembly)
MRV	Measurement Reporting and Verification
MSC	Ministerial Steering Committee
NGOs	Nongovernmental Organizations
NRM	Natural Resources Management
OECD	Organisation for Economic Co-operation and Development
PCIJ	Permanent Court of International Justice
<i>Perpu</i>	<i>Peraturan pengganti Undang-Undang</i> (Law/Government Regulation substitute Law)
PES	Payments for an environmental services
PHPA	<i>Perlindungan Hutan dan Konservasi Alam</i> (Forest Protection and Nature Conservation)
RECOFTC	Regional Community Forestry Training Center
REDD+	Reducing Emissions from deforestation and forest degradation
RHAP	Regional Haze Action Plan
Satgas	Satuan Tugas (Task Force)
SSFFMP	South Sumatera Forest Fire Management Project
UKP4	<i>Unit Kerja Presiden Bidang Pengawasan dan Pengendalian Pembangunan</i> (President's Delivery Unit for Development Monitoring and Oversight)
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNPAR	Universitas Palangkaraya (Palangkaraya University)

UPTD	Unit Pelaksana Teknis Daerah (District Technical Implementing Units)
WCED	World Commission on Environment and Development
Walhi	Wahana Lingkungan Hidup ( Friends of the Earth)
WBH	Wahana Bumi Hijau (Green Earth Organization)
WWF	<i>World Wildlife Fund</i>





# Chapter 1: Introduction

## 1.1. Introduction

Transboundary haze pollution is one of the major ongoing environmental problems in the ASEAN region.<sup>1</sup> This haze pollution is the result of land/forest fires, mostly originating in Indonesia. The worst forest fires were recorded in 1997–1998, and since then they have repeated every year with varied intensity. Transboundary haze pollution episodes that severely affected neighbouring countries occurred in 2006, 2009, 2012 and 2013.<sup>2</sup> In addition to long dry seasons, human activities such as clearing forests and land for plantations and agriculture, particularly in peatland areas, are a major cause of these fires.<sup>3</sup> The impacts of these fires are significant. They cause damage to biodiversity, health and the economy, and affect the global climate.<sup>4</sup> It is claimed that the 1997 forest fires alone caused 20 million people in Indonesia to suffer from respiratory problems.<sup>5</sup> Economic losses during land/forest fires include crop or plantation destruction, agricultural losses and disruption to tourism and transportation. In addition, carbon emissions from peat fires are a major contributor to the global increase of CO<sub>2</sub> in the atmosphere.<sup>6</sup> It is clear that haze pollution has a great impact locally, nationally, regionally and internationally.

Addressing transboundary haze pollution requires cooperation at the international, regional, national and local levels. As in the case of climate change, transboundary haze pollution can only

---

<sup>1</sup> ASEAN Secretariat, *ASEAN Socio-cultural Community Blue Print* (2009) <<http://www.asean.org/archive/5187-19.pdf>> 14.

<sup>2</sup> Baradan Kuppusamy, 'Skies Free of Haze but Burning Need to Solve Problem of Annual Fires Remains', *The Star Online* (Kuala Lumpur), 2013; Hasnita A Majid, 'Haze Back in Singapore as 50 Hotspots Detected in Sumateras Appear Hands Off', Channel News Asia (6 September 2009) <<http://wildsingaporenews.blogspot.com.au/2009/08/haze-back-in-singapore-as-50-hot-spots.html#.UeUxpI2XR8E>>; S Ramesh and Sharon See, 'Haze: PSI in Singapore Hits Highest Level since 1997', *Channel Asia News* (17 June 2013); 'Singapore in Year's Worst Pollution as Indonesia Haze Hits', *BBC* (7 September 2012) <<http://www.bbc.co.uk/news/world-asia-19515000>>.

<sup>3</sup> Bappenas, 'Planning for Fire Prevention and Drought Management Project' (Working paper 1, Asian Development Bank, 1998).

<sup>4</sup> Mark E Harrison, Susan E Page and Suwido H Limin, 'The Global Impact of Indonesian Forest Fires' (2009) 56(3) *Biologist* 156, 159.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

be adequately addressed if action is taken at all levels.<sup>7</sup> For these reasons, solving transboundary haze pollution requires the implementation of both international and domestic law.<sup>8</sup> There are already international and regional legal mechanisms in place to address the issue, but transboundary pollution is arguably often more effectively addressed through domestic law.<sup>9</sup> The challenge in addressing and enforcing transboundary haze–pollution control lies not only in ensuring an adequate legal framework, but also in the implementation and enforcement of law at the domestic level. Therefore, the legal and policy frameworks in Indonesia for addressing land/forest fires are examined in this thesis.

This thesis uses the definition of haze pollution from the ASEAN Agreement for Transboundary Haze Pollution (AATHP). Haze pollution is defined as ‘smoke resulting from land/forest fires which cause deleterious effects of such a nature as to endanger human health, harm living resources, and ecosystems and material property and impair or interfere with amenities and other legitimate uses of the environment’.<sup>10</sup> Transboundary haze pollution can be defined as ‘haze pollution whose physical origin is situated wholly or in part within the area under the national jurisdiction of one ASEAN Member State which is transported into the area under the jurisdiction of another Member State’.<sup>11</sup>

## **1.2. Geographical Background**

### **1.2.1. ASEAN**

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1976 in Bangkok Thailand. The aims of ASEAN are to promote economic, social, cultural, technical and educational cooperation, as well as regional peace and stability, among the countries of the region.<sup>12</sup> Currently, the Member Countries of ASEAN include Brunei Darussalam, Cambodia,

---

<sup>7</sup>J Corfee-Morlot et al, 'Cities, Climate Change and Multilevel Governance' (Environment Working paper No 14, OECD, 2009) <<http://www.oecd.org/environment/climatechange/44242293.pdf>> 85.

<sup>8</sup> Noah D Hall, 'Transboundary Pollution: Harmonizing International Law and Domestic Law' (2007) 40(4) *University of Michigan Journal of Law Reform* 681, 681.

<sup>9</sup> Ibid.

<sup>10</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 1(6).

<sup>11</sup> Ibid art 1(13).

<sup>12</sup> ASEAN, *Overview* <<http://www.asean.org/asean/about-asean>>.

Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam and Lao People's Democratic Republic.<sup>13</sup>

The ASEAN region is one of the most ecologically diverse regions in the world.<sup>14</sup> Indonesia, Malaysia and the Philippines are recognised as megadiverse, meaning that they have extremely high level of biodiversity.<sup>15</sup> However, the ASEAN region also faces significant problems with forest fires, transboundary haze pollution, deforestation and loss of biodiversity.<sup>16</sup> The Fourth ASEAN State of the Environment Report 2009 recognises that damage caused by natural and man-made disasters such as forest fires are a setback to development, and that addressing this issue is important.<sup>17</sup> ASEAN also has large areas of peatland, covering around 25 million hectares, or almost 60 per cent of total world peatland. Seventy per cent of this peatland is in Indonesia.<sup>18</sup> The burning of peatland during the dry season is a major source of haze pollution in the ASEAN region.

Environment degradation in the ASEAN region, and the failure of regional cooperation to address this issue, particularly the transboundary haze–pollution problem, is described by Elliot as causing a crisis in regional identity and credibility within ASEAN.<sup>19</sup> Elliot argues that environmental cooperation in ASEAN is constrained by the ASEAN Way.<sup>20</sup> Indeed, ASEAN is more reliant on prevention and cooperation than on establishing a liability regime or adopting formal legal instruments to protect the environment.<sup>21</sup> This is a reflection of the ASEAN Way, which emphasises non-interference in each other's domestic affairs, the use of consensus planning and cooperative programs, and a preference for national implementation rather than

---

<sup>13</sup> ASEAN, *ASEAN Member States* < <http://www.asean.org/asean/asean-member-states>>.

<sup>14</sup> ASEAN, *Overview of ASEAN Cooperation on Environment* <<http://environment.asean.org/about-us-2/>>.

<sup>15</sup> Ibid.

<sup>16</sup> ASEAN Secretariat, *Fourth ASEAN State of the Environment Report* (October 2009) <<http://www.asean.org/resources/publications/asean-publications/item/fourth-asean-state-of-the-environment-report-2009-2>> 3.

<sup>17</sup> Ibid.

<sup>18</sup> Haze ASEAN Online, *Combating Haze in ASEAN: Frequently Asked Questions* <<http://haze.asean.org/info/faq-combatinghaze>>.

<sup>19</sup> Lorraine Elliot, 'ASEAN and Environmental Cooperation: Norms, Interests and Identity' (2003) 16(1) *Pacific Review* 29, 29.

<sup>20</sup> Ibid.

<sup>21</sup> Koh Kheng-Lian and Nicholas A. Robinson, 'Strengthening Sustainable Development in Regional Inter-Governmental Governance: Lessons from the 'ASEAN WAY'' (2002) *Singapore Journal of International & Comparative Law* 640, 643.

reliance on a strong region-wide agency or bureaucracy.<sup>22</sup> The ASEAN Way is based on the Malay cultural practices of consultation (*musyawarah*) and consensus (*mufakat*) in the management of problems, which emphasise the notion of brotherhood.<sup>23</sup> The main characteristics of Malay culture are discreteness, politeness, harmony, informality, organisational minimalism, symbolism, inclusiveness, a non-confrontational bargaining approach and an indirect approach to conflictive situations.<sup>24</sup> An in-depth discussion of the legal framework in ASEAN in addressing transboundary haze pollution and regional environmental governance is discussed in Chapter 3 of this thesis.

### 1.2.2. Indonesia

Indonesia is an archipelagic country in Southeast Asia consisting of 17,508 islands. It lies between latitudes 11° S and 6° N, and longitudes 95° E and 141° E. The major islands are Java, Sumatera, Kalimantan, Sulawesi and Papua. Java is the most populous island with a population of around 135 million people, and is the administrative centre and location of the capital of Indonesia. By contrast, Sumatera, Kalimantan, Sulawesi and Papua are less populous than Java but are rich in natural resources such as coal, oil, copper and timber. Indonesian Gross Domestic Product (GDP) was estimated at \$707 billion in 2010 and \$823 billion in 2011. In 2010, natural resources contributed 11.2 per cent of GDP (oil, gas, copper, gold, coal), agriculture contributed 15.3 per cent (timber, oil palm) and manufacturing contributed 24.8 per cent.<sup>25</sup>

Indonesia shares land borders with Malaysia on Borneo, Papua New Guinea on the island of New Guinea and East Timor on the island of Timor. It also shares maritime borders with Singapore, Malaysia, the Philippines and Australia (see Figure 1). Considering this geography, tensions along borders with neighbouring countries are inevitable. One major cause of tension in the region is transboundary haze pollution, particularly smoke from land/forest fires, which has affected Malaysia and Singapore. Below is the map of Indonesia and its neighbouring countries.

---

<sup>22</sup> Ibid.

<sup>23</sup> Paruedee Nguitragool, *Environment Cooperation in Southeast Asia ASEAN's Regime for Transboundary Haze Pollution* (Routledge, 2011), 29.

<sup>24</sup> Ibid.

<sup>25</sup> Ministry of Industry, Republic of Indonesia, *Republic of Indonesia Industry Facts and Figures* <[www.kemenperin.go.id/download/82](http://www.kemenperin.go.id/download/82)> 52.



**Figure 1. Map of Indonesia**



Source: <http://www.lib.utexas.edu/maps/indonesia.html>

### **1.2.2.1 Causes of Land/Forest Fires**

Land and forest fires in Indonesia are mostly the result of, or related to, human activities. According to an Asian Development Bank-funded report, ‘human activities include traditional slash and burn for upland agriculture and conversion of natural forest (secondary forest) to other forms of land use giving rise to fires, which escaped into forested areas’.<sup>26</sup> However, Tacconi argues that traditional slash-and-burn practices are not the major cause of the smoke pollution; he states that ‘slash and burn agriculture provide only one of the ignition sources of fires and possibly not the most significant’.<sup>27</sup> He argues further that:

the main contributors to smoke-haze pollution which affected Singapore and Malaysia in 2006 were fires in the peatlands of Sumatra’s Jambi, Riau, and South Sumatra provinces due to land clearing for oil palm and timber plantations and in the South Sumatra wetlands due to livelihood activities.<sup>28</sup>

<sup>26</sup> Bappenas, above n 3, i.

<sup>27</sup> Luca Tacconi and Andrew P Vayda, ‘Slash and Burn and Fires in Indonesia: A Comment’ (2006) 56 *Ecological Economics* 1, 3.

<sup>28</sup> Ibid.

Chokkalingam and Suyatno also suggest that ‘deforested and drained peatland are becoming major annual fire flashpoints’.<sup>29</sup> They argue that it is unclear whether companies or communities are the major actors in igniting the fires,<sup>30</sup> although they do suggest that fire is a cheap and effective community wetland–management tool in Indonesia.<sup>31</sup> Based on the study by Dennis et al, there are several direct causes of fires. These include fires as a tool in land clearing, both by smallholders (indigenous people, migrants) for conversion of forest to alternate land uses (coffee, rubber), rotational tree cropping and short rotation swidden, and by large landholders (companies) as a weapon in land tenure disputes; accidental fires (escaped); and fire connected with resource extraction.<sup>32</sup>

Anna Tibaijuka, Executive Director of the United Nations Human Settlements Programme (UN-HABITAT), suggests that economic and social factors are at the root of many fires in Indonesia.<sup>33</sup> She concludes there are three causes that have a strong effect on the start and multiplication of forest fires in Indonesia.<sup>34</sup> First, the influx of transmigrants from other parts of Indonesia, usually Java, to areas of low population density and dense cover forest, usually Sumatera and Kalimantan, leads to the use of fire for land clearing, as the new population needs cleared land to grow food.<sup>35</sup> Second, the growing number of plantations in Indonesia has resulted in the widespread clearing of forests using fire.<sup>36</sup> This makes the plantations and surrounding forests vulnerable to fire.<sup>37</sup> The third issue is the competition for land/forest resources between local communities, logging concessionaries and industrial plantation companies.<sup>38</sup> Fires are used as a weapon against competing groups or companies.<sup>39</sup>

---

<sup>29</sup> Unna Chokkalingam and Suyanto, 'Fire, Livelihoods and Environmental Degradation in the Wetlands of Indonesia: A Vicious Cycle' (Brief No 3, Center for International Forestry Research, 2004) 1. <[http://www.cifor.cgiar.org/publications/pdf\\_files/firebrief/FireBrief0403.pdf](http://www.cifor.cgiar.org/publications/pdf_files/firebrief/FireBrief0403.pdf)>.

<sup>30</sup> Ibid 2.

<sup>31</sup> Ibid 1.

<sup>32</sup> Rona A Dennis et al, 'Fire, People and Pixels: Linking Social Science and Remote Sensing to Understand Underlying Causes and Impacts of Fires in Indonesia' (2005) 33 *Human Ecology* 456, 478.

<sup>33</sup> United Nations Human Settlements Programme (UN-HABITAT), 'Inter-Agency Report on Indonesian Forest and Land Fires and Proposals for Risk Reduction in Human Settlements' (UN-HABITAT, Risk and Disaster Management Programme, 2000) xi.

<sup>34</sup> Ibid.

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

### 1.3. Research Question

The main goal of this research is to address the issue of land/forest fires in Indonesia, which cause transboundary haze pollution in the ASEAN region. Hall argues that addressing transboundary haze pollution requires the implementation of both international law and domestic law.<sup>40</sup> However, he points out that transnational pollution can be addressed more effectively through the domestic legal system.<sup>41</sup> Therefore, while the emphasis of this research is to examine the domestic legal framework in Indonesia for addressing transboundary haze pollution, international and regional legal frameworks are also taken into consideration. The main aim of this research is to answer the following question:

How adequate are the existing legal and policy frameworks in Indonesia in addressing transboundary haze pollution?

The assessment of the existing system is conducted by examining the strengths, weaknesses and overlaps in the legal and policy framework, and making recommendations on what should be an appropriate legal framework according to this assessment. This thesis argues that a well-structured integrated legal framework is crucial in addressing land/forest fires. In developing this framework, it is important to incorporate international environmental law and policy and to observe the regional legal framework. Therefore, this research will examine the principles of international law and the regional mechanisms relevant to addressing transboundary haze pollution and liability, to identify those principles that should be incorporated into the Indonesian legal system.

In assessing the adequacy of the current Indonesian legal framework, this research will also examine the extent to which public participation has been incorporated, particularly in relation to community-based fire management (CBFiM). Part of this assessment will be aided by interviews by the researcher. Addressing the problem at ground level in Indonesia is crucial since one of the root causes of land/forest fires is the practice of farmers and the local community to use fires to clear land for agriculture. This research will also identify the barriers and challenges in

---

<sup>40</sup> Hall, above n 8, 681.

<sup>41</sup> Ibid.

addressing transboundary haze pollution effectively at ground level. In addition, this research examines the extent to which current climate change regimes, particularly the Reducing Emissions from Deforestation and Forest Degradation (REDD+) initiative, assist to combat land/forest fires in Indonesia. The purpose is to examine whether the current legal framework already incorporates a forest fires reduction strategy into REDD+, and whether a holistic fire management approach is already an integral strategy of REDD+. The discussion of CBFiM and REDD+ is necessary to allow the findings to be incorporated into the domestic legal framework addressing land/forest fires in Indonesia.

#### 1.4. Rationale of Research

Transboundary haze pollution is one the oldest and most persistent problems in environmental law,<sup>42</sup> and has proven difficult to address.<sup>43</sup> Land/forest fires may create environmental and social disasters, devastating health, livelihood and property in the region's most vulnerable and marginalised communities.<sup>44</sup> The impact of these land/forest fires also reaches beyond Indonesia, causing emergency haze in neighbouring countries such as Malaysia and Singapore.<sup>45</sup>

Land/forest fires are a complex problem cutting across many interests, sectors, communities, nations and regions.<sup>46</sup> No single solution works to address the issue. As mentioned, while international and regional approaches are important, transboundary haze pollution often can be addressed more effectively through the domestic legal system. Therefore, this research approaches the problem by investigating the issue at the ground level; that is, the community level. A related investigation is on the contribution to reducing land/forest fires of the current climate regime initiative REDD+. The rationale for investigating a bottom-up solution to the transboundary haze–pollution problem is that communities are both part of the problem and part of the solution. Many academics and practitioners have argued that the approach to addressing land/forest fires should be shifted away from centralised policies towards policies that approach

---

<sup>42</sup> Ibid 681.

<sup>43</sup> Ibid

<sup>44</sup> Judith Mayer, 'Transboundary Perspectives on Managing Indonesia's Fires ' (2006) 15(2) *The Journal of Environment and Development* 202, 203.

<sup>45</sup> Ibid.

<sup>46</sup> David Ganz, *Framing Fires: A Country by Country Analysis of Forest and Land Fires in the ASEAN Nations* (Project FireFight South East Asia, 2002), iii.

problems and solutions from the grassroots level.<sup>47</sup> In addition, top-down regulatory approaches seem to have had limited success in addressing land/forest fire issues.<sup>48</sup> It is notable that the Singapore–Indonesia collaboration to deal with land/forest fires suggests that one possible reason that the land/forest fires continue on a yearly basis is the failure to tackle the problem at the community level.<sup>49</sup>

In addition, the rationale of this research in focusing on the legal framework in Indonesia is that there is already a large amount of literature focusing on the approach of ASEAN regional legal mechanisms to address transboundary haze pollution. However, literature addressing the haze pollution problem from a current policy and legal framework in Indonesia is lacking. Therefore, this research fills the gap in the literature on the current legal and policy framework in Indonesia. Currently, no specific legislation has been enacted in Indonesia to address the land/forest fires problem. Therefore, this thesis is timely in the present context, as it can contribute to the improvement of future legislation in Indonesia to control land/forest fires.

## **1.5. Aim of Research**

The aim of this research is to examine the adequacy of the existing legal and policy frameworks in Indonesia in addressing transboundary haze pollution. This examination includes institutional arrangements; public participation, particularly CBFiM; and the issue of REDD+ and its implication for the forest fires reduction effort. Case studies and interviews conducted by the researcher are also taken into consideration, particularly on CBFiM in Central Kalimantan and South Sumatera provinces. The aim of this thesis is to offer possible solutions to address the issues of land/forest fires and transboundary haze pollution in the ASEAN region.

---

<sup>47</sup> Suhardi Suryadi, 'Community Forestry Institutionalized: Never or Ever: The Community Forestry Program at Sesaot Village in Nusa Tenggara Barat Province of Indonesia' (Paper presented at the Enabling Policy Frameworks for Successful Community Based Resource Management Initiatives Conference: Eighth Workshop on Community Management of Forest Lands, Hawaii, 2001) 220.

<<http://www2.eastwestcenter.org/environment/CBFM/Suhardi.pdf>>; Elinor Ostrom, *Governing the Commons* (Cambridge University Press, 1990), 1.

<sup>48</sup> Erika Techera, *Law, Custom and Conservation: The Role of Customary Law in Community-Based Marine Management in the South Pacific* (Macquarie University, 2009) 3.

<sup>49</sup> Ministry of Environment, *Indonesia-Singapore Collaboration to Deal with the Land and Forest Fires in Jambi Province* (24 July 2009) <[haze.asean.org/docs/1272361130/Jambi+Collaboration.../view](http://haze.asean.org/docs/1272361130/Jambi+Collaboration.../view)>.

## **1.6. Significance of Research**

The significance of the thesis is to recommend law reform and policy change options for Indonesia. The expected outcomes include suggestions and recommendations for improvement of the legal framework in Indonesia, and the enrichment of the relevant literature. The research also contributes through publications in journals and the media to reach a broader audience and provide them with a reference on the solutions of how to deal with the haze pollution problem based on an assessment of the international, regional and national legal framework.

## **1.7. Methodology**

This research uses a qualitative research method. The methodology employed involves both normative and empirical research. Normative research uses document analysis, which is conducted through an examination of the existing literature and documents at the international, regional and domestic level. This involves doctrinal analysis. At the international level, the documents are in the form of treaties, customary laws, published articles and case law. At the regional level, they are in the form of agreements, resolutions, declarations, accords, action plans, initiatives and published articles. At the domestic level, documents are in the form of legislation, regulations, policy, government and non-government reports, and published articles and newspapers. The research is normative since it involves assessing the adequacy of the existing legal and policy framework in Indonesia in addressing transboundary haze pollution. The research also involves empirical research because it seeks to determine why the existing legal and policy framework is not effective in addressing haze pollution by conducting interviews with government officials and the community.

### **1.7.1. Doctrinal Analysis**

Doctrinal analysis is employed in this study to examine existing international, regional and domestic frameworks. International legal frameworks can provide a theoretical foundation for addressing haze pollution at the national level. In this regard, it is necessary to examine whether the international framework and obligations have been adopted in domestic legislation. International frameworks include international customary law and treaties. Discussing

international customary law regarding transboundary pollution involves an examination of the principle of state responsibility, which is embodied in Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration. The ‘state responsibility principle’, which is considered as customary law, consists of the duty to prevent transboundary pollution and the duty to compensate for the damage caused by transboundary pollution. The treaties examined in this research are the Multilateral Environmental Agreements (MEAs) in atmosphere and biodiversity: the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD) and the Ramsar Convention. These MEAs can be used as indirect frameworks for addressing haze pollution at the domestic level.

The ASEAN regional framework is assessed to examine the ASEAN legal framework and the coherency and harmonisation between the regional and domestic legal framework. Several measures have been taken by ASEAN to address haze pollution, including soft laws (that is, declarations, resolutions, accords and guidelines) and hard laws or binding agreements, such as the AATHP and the ASEAN Agreement on Conservation of Nature and Natural Resources (ACNNR).

At the domestic level in Indonesia, the national and local legal frameworks are examined. In the first stage of the examination of the legal framework in Indonesia, doctrinal analysis will be employed to examine the existing legislation concerning land/forest fires. This analysis will focus on examining the strength, weaknesses, gaps and overlaps of the existing legislation. This review will also involve an assessment of the existing institutional framework. The main regulations examined in this research are Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires; and Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires. Government Regulation No. 4/2001 is considered the implementation of the zero burning policy, while Presidential Instruction No. 16/2011 is considered an improvement to the institutional framework in addressing land/forest fires. Other laws and regulations related to land/forest fires examined in this research include Law No. 41/1999 on Forestry, Agriculture Law No. 18/2004, Law No. 32/2009 on Environmental Protection and Management, Law No. 32/2004 on Local Government, Law No. 5/1990 concerning the Conservation of Living Resources and their Ecosystems, and Law No. 24/2007 on Disaster Management. These sectoral laws are related to the issues of

land/forest fires, and contain provisions on land/forest fires and are expected to support the effort in controlling land/forest fires. Beside these main sectoral legislations, several sub-legislations as policy of the government are also taken into consideration.

### **1.7.2. Empirical Research**

Empirical research, through in-depth interviews, is conducted in this study with the particular aim to collect data on CBFiM in Indonesia and the REDD+ scheme. Empirical research is important, as it can provide an understanding of the real problems and challenges faced at the local level. For these reason, two provinces were chosen for this fieldwork as case studies; namely, South Sumatera Province and Central Kalimantan Province. These two provinces are prone to fires, particularly peatland fires, which occur regularly every year. They have also become pilot projects for the CBFiM and REDD+ scheme.

The fieldwork research for this project involves interviews by the researcher with key participants, including government officials from the central and local government levels, local communities, academics and nongovernmental organisations (NGOs). Not all stakeholders are covered in this thesis due to limitations of time for the fieldwork research. Corporations are not subject to be interviewed in this thesis as the focus is on community based fire management. At the government level, the focus is on local government. Key participants from the central government were drawn from the Ministry of Forestry. However, due to the non-availability of key persons in the forestry sector during the time of fieldwork, an interview was conducted with lower staff only in the Directorate of Forest Fire Control.

At the local level in South Sumatera Province, interviews were conducted with the following institutions:

- District Technical Implementing Unit (UPTD) of Land/Forest Fires Control, Forestry Agency, South Sumatera Province
- Natural Resources Conservation Agency (BKSDA), South Sumatera Province
- Environmental Agency (BLH), South Sumatera Province
- Regional Disaster Management Agency (BPBD), South Sumatera Province
- Wahana Bumi Hijau (WBH), South Sumatera Province (an NGO concerned with environmental protection).



In Central Kalimantan Province, interviews were conducted with several key participants, including local government officials, NGOs, academic members and the local community, as follows:

- Provincial Forestry Agency (Dinas Kehutanan), Central Kalimantan Province
- Provincial Environmental Protection Agency, Badan Lingkungan Hidup (BLH), Central Kalimantan Province
- Natural Resources Conservation Agency (BKSDA), Central Kalimantan Province
- Central Kalimantan Peatland Project (CKKP)
- Friends of Earth (Walhi), Central Kalimantan
- Heads of village and village officials in Jabiren, Pilang and Tanjung Taruna
- Local people in the villages of Pilang, Tanjung Taruna and Taruna in Pulang Pisau Regency
- An academic from the University of Palangkaraya, who is an expert on the indigenous people of Central Kalimantan.

Key participants from local government agencies were chosen based on the position they held and their job descriptions, which needed to relate to the response to land/forest fires. Three agencies relevant in responding to land/forest fires in Central Kalimantan are the Forestry Agency, Environmental Protection Agency and BKSDA, the latter of which employs the forest fire brigade, *Manggala Agni*. Key participants were usually high-ranking members of their institution, such as the secretary or head.

In Central Kalimantan, the head of the CKKP assisted this research by choosing the villages suitable as case studies and helping to make contact with local people. However, not all the local people listed were available for interview. Thus, during the fieldwork, the researcher looked for alternative participants who would be aware of the issues of interest, such as village staff or farmers who owned rubber plantations. Formerly, CKKP has conducted a pilot project on CBFiM in Pulang Pisau regency, which is a fire prone area in Central Kalimantan. Most local people who were interviewed for that project were farmers.

The fieldwork was conducted during the dry season in September 2012, the peak season for peatland fires in Central Kalimantan. The researcher had the opportunity to observe peatland fires directly in those villages, such as in Jabiren and Pilang villages in Pulang Pisau Regency; and to experience the impact of peatland fires during a visit to Palangkaraya, Central Kalimantan, when the city was blanketed by haze pollution. The researcher interviewed local people and village

officials to obtain data on CBFiM, as well as their knowledge, perceptions and experiences on the causes, impact, response and community initiatives regarding land/forest fires.

Interviews were conducted face-to-face and were of more than one hour in length. The researcher used semi-structured interviews with guidelines refer to appendix VI of this thesis, but was open to other questions depending on the response of the interviewee. Before the interview, the researcher informed interviewees about the nature of the research and obtained their consent. For this research ethics approval had been obtained see appendix V of the thesis. The researcher then analysed the data obtained from the interviews. Not all of the data from the interviews is included in the thesis. Only the relevant data from 14 interviews are included.

There were two main difficulties in conducting this fieldwork research. First, the locations in which the interviews were conducted are remote, and the villages were spread over a large area. Due to remoteness, interviews with local peoples in South Sumatera provinces were not conducted. Second, it was difficult to interview local people during the day, as they were working in their farms or travelling to other villages. Therefore, ideally, this research needed extra time and a generous budget, especially for transportation. The lack of these two requirements was a barrier to the fieldwork.

## **1.8. Outline of the Study**

This thesis comprises seven chapters. In general, the thesis is divided into three parts focusing on international, regional and national legal frameworks, respectively. The present chapter has introduced the thesis, giving the background, research question, rationale and research aim, significance of the research, methodology used and an outline of the thesis.

Chapter 2 outlines the international legal framework to address transboundary air pollution. It examines the concept of state responsibility, which is considered as customary international law. The chapter begins with an overview of the Trail Smelter Arbitration and the Rio and Stockholm Declarations. Then the examination of state responsibility and liability continues with the current developments from the work of the International Law Commission (ILC). In addition, this thesis examines the framework under the treaties or MEAs on atmosphere and biodiversity, which

directly or indirectly provide a legal framework to address air pollution from land/forest fires. This chapter serves to illustrate that in addressing transboundary pollution, states have shifted their approach from a liability regime to a prevention and cooperation regime. In assessing the strengths and weaknesses of the international legal framework, Chapter 2 identifies the principles that are important for Indonesia to adopt to strengthen its legal and policy framework.

Chapter 3 provides an insight into the regional context. It reviews the ASEAN legal framework in addressing haze pollution. This involves an examination of the soft laws (resolution, declarations and guidelines) and hard law (the AATHP, and the Agreement on the Conservation of Nature and Natural Resources [ACNNR]) in response to haze pollution. This chapter serves to illustrate that the regional approach is similar to the international regional framework for addressing transboundary pollution since it also adopts a prevention and cooperation approach. This chapter also identifies a number of important principles that can assist Indonesia in improving its legal and policy framework.

Chapter 4 provides an examination of the legal framework in Indonesia for addressing land/forest fires. It reviews the adequacy of the existing legal framework in Indonesia to address transboundary haze pollution. The main legislation that will be reviewed in this chapter is Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires. Several statutes relevant to the forest fires and haze pollution issue will also be examined.

Chapter 5 examines CBFiM. It reviews the adequacy of the existing legal framework regarding the involvement of the local community in addressing the haze pollution problem, particularly through CBFiM. Case studies and interviews undertaken by the researcher were taken into consideration. South Sumatera and Central Kalimantan Provinces were chosen as the case studies for discussion of the implementation of CBFiM.

Chapter 6 deals with REDD+ and its implications for the reduction of land/forest fires in Indonesia. It reviews the readiness of the legal framework in Indonesia in implementing REDD+ in the context of land/forest fire reduction, and whether this is already integrated into the REDD+ strategy. A REDD+ pilot project in Central Kalimantan is used as the case study.

Chapter 7 is the conclusions and recommendations to the thesis. It contains a summary of the findings and recommendations from Chapters 1–6, discusses the implications and significance of the research, outlines the issues for further research and states the implications for policy development.

## **Chapter 2: Theory, Developments and Gaps in the International Legal Framework for Addressing Transboundary Pollution**

### **2.1. Introduction**

This chapter discusses rules, principles, developments and gaps in the international legal framework addressing transboundary pollution. The main aim of this chapter is to provide an assessment of the international legal frameworks, which can also provide a theoretical foundation in addressing haze pollution at the regional and national levels. In addition, the aim of this chapter is to provide an understanding of how international environmental law responds to transboundary pollution, the development of international law on transboundary pollution and its gaps. Two main frameworks are employed in this chapter; first, the framework under customary international law, or the state responsibility principle; and second, the framework under treaties or MEAs in atmosphere and biodiversity. These include the UNFCCC and its Kyoto Protocol, the CBD and the Ramsar Convention. Relevant MEAs are only discussed briefly in this chapter, as they are only indirectly relevant to the issue of transboundary haze pollution. Only relevant provisions are identified in Chapter 2. However, a detailed study of a UNFCCC initiative that could potentially have major implications for improving the legal framework in relation to transboundary haze pollution is provided in Chapter 6.

The obligation of states not to cause environmental harm is a central principle in international environmental law.<sup>1</sup> The International Court of Justice (ICJ) regards this principle as customary law, thus states will be held responsible for breach of this principle.<sup>2</sup> The concepts of the no harm principle and state responsibility for environmental harm are derived from the decision of the Trail Smelter Arbitration. This thesis argues that if the State observes these principles, this will significantly improve efforts to combat the haze pollution problem. The core principle of state responsibility is the duty to prevent transboundary pollution and the duty to pay compensation for

---

<sup>1</sup>David Hunter, James Salzman and Durwood Zaelke, *International Environmental Law and Policy* (Foundation Press, 2nd ed, 2002) 419.

<sup>2</sup>David Hunter, James Salzman and Durwood Zaelke, *International Environmental Law and Policy* (Foundation Press, 3rd ed, 2007), 502.

damages to victims. The concept of state responsibility is also embodied in Principle 21 and Principle 2 of the Stockholm Declaration and the Rio Declaration, respectively.

The discussion in this chapter is divided into three major parts. The first part examines the principles, development and gaps of state responsibility and liability for environmental harm regime. This part also discusses the cooperation and prevention regime to address transboundary pollution. The second part is the application of the state responsibility regime in the ASEAN legal framework and Indonesian forest fires and what the lesson from international law that Indonesia can learn for strengthening its legal framework. The third part is concerned with the current treaties and conventions related to atmosphere and biodiversity and soft law, such as Agenda 21, as international instruments which can be used to combat forest fires.

## **2.2. The Trail Smelter Arbitration**

The concept of state responsibility is derived from the decision of the Trail Smelter Arbitration. Indeed, the law on transboundary pollution can be said to have developed out of this famous decision. Rubin stated that ‘every discussion of the general international law relating to pollution starts and must end with mention of the Trail Smelter Arbitration’.<sup>3</sup> Kiss and Shelton note that the Trail Smelter case is considered as ‘having laid out the foundations of international law at least regarding trans-frontier pollution’.<sup>4</sup> Hunter *et al* argue that ‘the Trail Smelter arbitration contains substantive customary law rules regarding transboundary air pollution disputes and it is important because it provides legal precedent for diplomatic solutions for such disputes and precedent for possible future international litigation’.<sup>5</sup>

The Trail Smelter case involved two states, the United States of America (USA) and Canada. This case was concerned with damage to the property of apple growers in Washington State, USA caused by transboundary fumes from a smelter located in British Columbia, Canada. In the decision, the Tribunal held that:

---

<sup>3</sup> Alfred P Rubin, ‘Pollution by Analogy: The Trail Smelter Arbitration’ (1971) 50 *Oregon Law Review* 259, 259.

<sup>4</sup> Alexander Kiss and Dinah Shelton, *International Environmental Law* (Martinus Nijhoff, 1991), 185.

<sup>5</sup> Hunter, Salzman and Zaelke, above n 1, 504.

under the principles of international law, as well as of the law of the United States, no state has the right to use of its territory in such a manner as to cause injury by fumes in or to the territory of another or properties or person therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.<sup>6</sup>

However, there is debate among scholars regarding the interpretation of this decision. For example, Bratspies and Miller identify two core principles of international law in this decision: ‘first, ... States have a duty to prevent transboundary environmental harm, and second they have an obligation to pay compensation for the harm they cause’.<sup>7</sup> Conversely, environmentalists argue that ‘the Trail Smelter’s decision implicitly recognized the right to pollute as long as the pollution does not cause damage to another State’.<sup>8</sup> This thesis supports the conclusion of Bratspies and Miller that the Trail Smelter Arbitration implies the duty to prevent transboundary environmental harm and to compensate for damages.

### **2.3. The Stockholm Declaration and the Rio Declaration**

Despite little applicability of the Trail Smelter case in modern disputes, it is considered as the genesis of Principle 21 of the Stockholm Declaration 1972 and Principle 2 of the Rio Declaration 1992. Principle 2 of the Rio Declaration states that ‘States have the sovereign right to exploit their own resources pursuant to their environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction do not cause damage to the environment of other States’.<sup>9</sup> Gaines argues that responsibility in these principles implies the duty to provide reparation or compensation.<sup>10</sup> However, he argues that due to the undefined term of responsibility, the duty to compensate in these principles remains a hollow concept.<sup>11</sup> The Organisation for Economic Co-operation and Development (OECD) also considers that the word ‘responsibility’ in Principle 21 of the Stockholm Declaration does not correspond to a clearly

---

<sup>6</sup> Ad Hoc International Arbitral Tribunal 11 March 1941, *Reports of International Arbitral Awards Trail Smelter Case (United States, Canada)*, 1965.; Hunter, Salzman and Zaelke, above n 2, 503.

<sup>7</sup> Rebecca M Bratspies and Russel A. Miller (eds), *Transboundary Harm in International Law Lessons from the Trail Smelter Arbitration* (Cambridge University Press, 2006), 3.

<sup>8</sup> Austin L Parrish, ‘Sovereignty’s Continuing Importance? Traces of Trail Smelter in the International Law Governing Hazardous Waste Transport’ in Rebecca M Bratspies and Russel A Miller (eds), *Transboundary Harm in International Law: Lessons from the Trail Smelter Arbitration* (Cambridge University Press, 2006) 1.

<sup>9</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992).

<sup>10</sup> Sanford E Gaines, ‘International Principles for Transnational Environmental Liability: Can Developments in Municipal Law Help Break the Impasse?’ (1989) 30(2) *Harvard International Law Journal* 311, 311.

<sup>11</sup> *Ibid.*

defined legal concept.<sup>12</sup> However, based on the combination of preoccupations of a political, ethical and legal nature, the OECD considers this principle to have two meanings: (1) preventing damage to the environments of other States and (2) the compensation of such damage to prevent it from occurring.<sup>13</sup>

It can thus be concluded that there are two important principles in Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration; namely, state sovereignty and state responsibility, which to some extent conflict with each other. A state sovereignty regime has been recognised in many international conventions.<sup>14</sup> However, Parrish states that there is a limit to sovereignty.<sup>15</sup> Hunter *et al* argue that State sovereignty is not absolute and unlimited.<sup>16</sup> McCaffrey argues that the absolute territorial sovereignty approach as supported by Harmon<sup>17</sup> is undesirable and has long been rejected.<sup>18</sup> In addition, Rosas argues that ‘Westphalia’s heritage, that is the inter-State system of sovereign and equal nation States, should be destroyed to save the world and common heritages of mankind’.<sup>19</sup> Rosas’s argument may be exaggerated, as a balance between state sovereignty and state responsibility is probably required to achieve these principles. As Hall pointed out, the general substance of transboundary pollution law provides a more balanced approach, requiring states to undertake due diligence to prevent significant harm.<sup>20</sup> Indeed, state sovereignty is very much challenged by other principles of international law<sup>21</sup> such as state responsibility, sustainable development, good neighbourliness, the common heritage of humankind, the obligation not to cause environmental harm, and inter- and intra-generational equity.

---

<sup>12</sup> OECD, *Legal Aspects of Transfrontier Pollution* (OECD, 1977), 381.

<sup>13</sup> Ibid.

<sup>14</sup> The treaties recognising state sovereignty are *the UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage*, *the 1972 World Heritage Convention* and *the 1992 Biodiversity Convention*.

<sup>15</sup> Parrish, above n 8, 1.

<sup>16</sup> Hunter, Salzman and Zaelke, above n 1, 381.

<sup>17</sup> The Harmon Doctrine: The fundamental principle of international law is the absolute sovereignty of every nation, as against all others, within its territory.

<sup>18</sup> Stephen C McCaffrey, *The Law of International Watercourses: Non Navigational Uses* (Oxford University Press, 2001), 111.

<sup>19</sup> Allan Rossa, 'Issues of State Liability for Transboundary Environmental Damage' (1991) 29(60) *Nordic Journal International Law* 29, 43.

<sup>20</sup> Noah D Hall, 'Transboundary Pollution: Harmonizing International Law and Domestic Law' (2007) 40(4) *University of Michigan Journal of Law Reform* 681, 686.

<sup>21</sup> Hunter, Salzman and Zaelke, above n 1, 381.



Further, Stockholm Declaration Principle 22 is reaffirmed in Rio Declaration Principle 13, which suggests that the law on liability and compensation should be developed at the national and international levels. Principle 13 of the Rio Declaration states:

States shall also cooperate in an expeditious way and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.<sup>22</sup>

However, it seems that the state responsibility and liability regime at the international level is still underdeveloped and has remained static. States are reluctant to develop and implement the liability regime at the international level.

## **2.4. State Responsibility for Environmental Harm**

The principle of state responsibility incorporates not only the duty to compensate but also the duty to prevent. In fact, the traditional approach to enforcement of international law relies on the rules of state responsibility.<sup>23</sup> In addition, state responsibility and liability are important instruments of redress within the system of environmental protection, especially in transboundary pollution.<sup>24</sup> Despite its importance, there are present limits and shortcomings to the enforcement of state responsibility, particularly in the ASEAN region where the doctrine of state sovereignty is one of the preferred options reflected in the notion of the 'ASEAN Way' and embedded in the ASEAN charter'.<sup>25</sup>

It is argued that state responsibility is the most complex area of international law.<sup>26</sup> Indeed, the topic is extremely difficult and complex, and as Higgins pointed out, the codification of the rule

---

<sup>22</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992).

<sup>23</sup> Jutta Brunee, 'The Responsibility of States for Environmental Harm in a Multinational Context-Problems and Trends' (1993) 34(3) *Les Cahiers de Droit* 827, 832.

<sup>24</sup> Karl Zemanek, 'State Responsibility and Liability' in Winfried Lang, Hanspeter Neuhold and Karl Zemanek (eds), *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, 1991) 187, 197.

<sup>25</sup> Koh Kheng-Lian, 'ASEAN Environmental Protection in Natural Resources and Sustainable Development: Convergence versus Divergence?' (2007) 4 *Macquarie Journal International Comparative Environmental Law* 43, 47.

<sup>26</sup> Alan L. Springer, *The International Law of Pollution Protecting the Global Environment in a World of Sovereign States* (Quorum Books, 1983), 124.

of state responsibility is lengthy.<sup>27</sup> This statement is borne out by the fact that the work of the ILC on state responsibility has taken 40 years.<sup>28</sup> This is because this work was required to encompass and interpret not only the issue of the attributability of the State, but also the entire substantive law of obligations and the entirety of international law relating to compensation.<sup>29</sup>

#### **2.4.1. Definition of State Responsibility and Liability for Environmental Harm**

There is no exact and clear definition provided in international treaties on state responsibility and liability for environmental harm. Mainly, there are two distinct definitions of state responsibility. The first is a broader context that includes the element of the duty to prevent and the duty to compensate in the definition of state responsibility. The second is narrower and separates the element of liability from state responsibility. Baxter describes 'liability' in terms comparable to 'responsibility'. This definition is used not only to describe the consequences of the obligation, but also to mean the obligation itself.<sup>30</sup> The same point of view is taken by Barboza, who adopts a broad characterisation of liability that covers not only the obligation of reparation, but also the whole range of obligations of notification, information, consultation and harm prevention.<sup>31</sup> Likewise, Anzilotti, Basdevant, Bourquin and Brierly bring the notion of responsibility and liability into almost total synonymousness.<sup>32</sup> By contrast, some scholars divide the terms state responsibility and state liability.<sup>33</sup> Dupuy differentiates the terms responsibility and liability, with the former used to refer to the obligation to prevent, while the latter refers to the obligation to compensate.<sup>34</sup> Gaines argues that 'the persistent obstacle of unwillingness of states to yield state sovereignty over natural resources is the cause of the difficulty to secure a clear definition of State Responsibility'.<sup>35</sup>

---

<sup>27</sup> Robert Rosenstock, 'The ILC and State Responsibility' (2002) 96 *The American Journal of International Law* 792, 793.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Alan E Boyle, 'State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction' (1990) 39 *International and Comparative Law Quarterly* 1, 9.

<sup>31</sup> Ibid 9–10.

<sup>32</sup> Pierre Marie Dupuy, 'The International Law of State Responsibility: Revolution or Evolution' (1989-1990)(11) *Michigan International Law* 105, 109.

<sup>33</sup> Ibid.

<sup>34</sup> PM Dupuy, 'International Liability for Transfrontier Pollution' in Michael Bothe (ed), *Trend in Environmental Policy and Law* (International Union for Conservation of Nature and Natural Resources 1980) vol 15, 363, 364.

<sup>35</sup> Gaines, above n 10, 313.

In fact, international organisations such as the ILC, the United Nations Environment Program (UNEP) and the World Commission on Environment and Development (WCED) have worked to develop state responsibility and liability and codify these principles. The ILC defined the responsibility of states as the general principle that ‘every internationally wrongful act of a State entails the international responsibility of that State’.<sup>36</sup> The UNEP defined state responsibility as ‘the principle of international law by which States may be held accountable for inter-state claims’.<sup>37</sup> The WCED Experts Group on Environment stated that a:

State is responsible under international law for breach of international obligations relating to the use of natural resources or the prevention or abatement of an environmental interference; the State shall cease activities which breach an international obligation regarding the environment; and provide compensation for the harm caused.<sup>38</sup>

The UNEP divided state responsibility into two forms. The first category is state responsibility for internationally wrongful acts. This refers to the breach of an international obligation and includes responsibility for fault arising from the violation of due diligence standards.<sup>39</sup> The second is a much narrower concept, recognised as ‘state liability’ for the harmful consequences of lawful activities.

In treaties and judicial practice, the term ‘responsibility’ refers to the obligations of a State, and ‘liability’ refers to the consequences that ensue from a breach of those obligations.<sup>40</sup> Another possible use of ‘liability’ refers to an obligation in private law, while ‘responsibility’ refers to the obligations of States in public international law. In contemporary international law, the term ‘responsibility’ also means the consequences arising from the breach of an international obligation, and the term ‘liability’ means the duty to compensate.<sup>41</sup> Indeed, the vague and unclear definition and rules of responsibility and liability need to be clarified in the treaty and convention. For Example, the Resolution on Responsibility and Liability under International

---

<sup>36</sup> *Responsibility of States for Internationally Wrongful Acts*, 56/83, 53rd session, UN Doc A/56/49 (Vol. I)/Corr. 4 (2001) art 1.

<sup>37</sup> UNEP, *Training Manual on International Environmental Law*

<[http://www.unep.org/environmentalgovernance/Portals/8/documents/training\\_Manual.pdf](http://www.unep.org/environmentalgovernance/Portals/8/documents/training_Manual.pdf)>.

<sup>38</sup> Article 21 General Principles, Rights and Obligations concerning Natural Resources and Environmental Interference approved by the WCED Experts Group on Environmental Law, 18–20 June 1986, the Hague. <<http://www.un-documents.net/ocf-a1.htm>>.

<sup>39</sup> UNEP, above n 37, 35.

<sup>40</sup> Boyle, n above 30, 9.

<sup>41</sup> Zemanek, above n 24, 191–193.

Law for Environmental Damage –The Institute of International Law provides the basic distinction on responsibility and liability. Article 1 states that “the breach of obligation of environmental protection established under international law engages responsibility of State (international responsibility) entailing as consequence the obligation to re-establish the original position or to pay compensation”.<sup>42</sup> “Civil liability of operators can be engaged under domestic law or the governing rules of international law regardless of the lawfulness of the activity concerned if it results in environmental damage”.<sup>43</sup> In fact, in most agreements on environmental protection, there are no rules at all on state responsibilities or there are only very general and vague rules.<sup>44</sup>

#### **2.4.2. Advantages and Disadvantages of a Liability Regime**

There are advantages and disadvantages of this international liability regime. Zemanek argues that ‘state responsibility and liability are no miracle cure for environment protection at present’.<sup>45</sup> Similarly, Gaines points out that ‘environmental liability cannot effectively correct every instance of transnational environmental damage that threatens regional and global ecosystems’.<sup>46</sup> Neither can liability function as a legal device to protect the environment; for example, in the Exxon Valdez case, compensation did not adequately substitute for remedial response capability.<sup>47</sup> Further, Brunee<sup>48</sup> and Boyle<sup>49</sup> argue that liability and liability treaties are not a panacea for pollution, environmental damage or other forms of transboundary harm; they are sceptical as to whether this liability regime has had much impact on industry or contributed to improving standards. Zemanek argues that ‘what primarily is needed is a greater willingness of the people and the government of the world to eliminate or reduce the threats to environment which

---

<sup>42</sup> Responsibility and Liability under International Law for Environmental Damage, Session of Stasbourg 1997, The Institute of International Law, article 1.

<sup>43</sup> Ibid

<sup>44</sup> Riccardo Pisillo-Mazzeschi, 'Forms of International Responsibility for Environmental Harm' in Francesco Francioni and Tullio Scovazzi (eds), *International Responsibility for Environmental Harm* (Graham & Trotman Limited, 1991) 15, 18.

<sup>45</sup> Zemanek, above n 24, 187.

<sup>46</sup> Gaines, above n 10, 315.

<sup>47</sup> Ibid.

<sup>48</sup> Jutta Brunee, 'Of Sense and Sensibility: Reflections on International Liability Regimes as Tools for Environment Protection' (2004) 53(2) *The International and Comparative Law Quarterly* 351, 351.

<sup>49</sup> A.E Boyle, 'Globalising Environmental Liability: The Interplay of National and International Law' in Gerd Winter (ed), *Multilevel Governance of Global Environment Change: Perspective from Science, Sociology and the Law* (Cambridge University Press, 1st ed, 2006) 559, 566.

industrial development and consumption have produced'.<sup>50</sup> On the other hand, Brunee argues that an environmental liability regime is important to make polluters pay for the environmental costs of their activities, to compensate innocent victims and to protect the environment.<sup>51</sup> In addition, it is argued that the development of rules of international law concerning environmental protection is less significant unless accompanied by effective means for ensuring enforcement, compliance and the settlement of disputes.<sup>52</sup> Vicunna also argues that environmental regimes should include specific rules on responsibility and liability to ensure their effectiveness in terms of both encouraging and providing for restoration and compensation. For example, the Cartagena Protocol on Biosafety to the CBD<sup>53</sup> recognises the importance of a liability and redress regime.<sup>54</sup>

Despite the advantages and disadvantages of a liability regime, there are hurdles in developing a liability system because, until now, the international law on liability has remained static. Gaines identifies three reasons for these hurdles.<sup>55</sup> First, as international dialogues are more concerned with the distinction between private and state liability, the more fundamental question of what activities should give rise to liability has been largely ignored and remains vague.<sup>56</sup> Second, State practice has failed to keep pace with international environmental concerns.<sup>57</sup> International agreements now cover a narrow range of environmental issues, mostly ultra-hazardous activities.<sup>58</sup> Third, international deliberations have failed to consider the goals for a liability system.<sup>59</sup> This thesis argue that a liability regime whether private and state liability should be advanced and developed in international environmental law treaties.

---

<sup>50</sup> Zemanek, above n 24, 187.

<sup>51</sup> Brunee, above n 48, 351.

<sup>52</sup> Patricia W Birnie and Alan Boyle, *International Law and the Environment* (Clarendon Press Oxford, 1992 ), 136.

<sup>53</sup> *Cartagena Protocol on Biosafety to the Convention on Biological Diversity* (entered into force 29 January 2000) art 27.

<sup>54</sup> It is stated in art 27 as follows: The conference of the Parties to this protocol shall, at its first meeting, adopt a process with respect to the appropriate elaboration of international rules and procedures in the field of liability and redress for damage resulting from transboundary movements of living organisms, analyzing and taking due account of the ongoing processes in international law in these matters and shall endeavour to complete this process within four years.

<sup>55</sup> Gaines, above n 10, 314.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

### 2.4.3. Liability Regime in the ASEAN Region

Regarding transboundary haze pollution in the ASEAN region, it seems unlikely that ASEAN will establish a liability regime to protect the environment in its legal framework in the future. Establishing a liability regime in the ASEAN region is not likely to be a politically viable option.<sup>60</sup> This thesis argue that a liability regime should be advanced in the ASEAN region in the future or that more binding obligations should put in place, if the ASEAN wants to address the transboundary haze pollution problem effectively. In 1999, ASEAN Secretary General Rodolfo Severino stated that the Member Countries of ASEAN could not sue members responsible for transboundary pollution because of the grouping's principle of non-intervention.<sup>61</sup> This view was also adopted by Severino (1999) who stated:

Legal enforcement by ASEAN member countries against Indonesia for the haze is not in the books right now. ASEAN is one forum to discuss the issue but it does not have a precedent for such legal action.<sup>62</sup>

This view is also evidenced in the current regional framework, the AATHP (discussed in Chapter 3), which lacks an effective enforcement and liability regime. Hence, enforcement and liability rely more on domestic action. Arguably, ASEAN needs to tackle the problem of environmental haze pollution seriously and to focus on more powerful and binding measures. As McDowell states, environmental problems in ASEAN are widely perceived as entering a stage of crisis, particularly as regards deforestation.<sup>63</sup>

Despite the robust and dynamic legal development of state responsibility and liability for protecting the local, regional and global environment at the international level, the implementation of this regime remains static at the ASEAN regional level. This is because of the doctrine of state sovereignty that is reflected in the ASEAN Way. The fundamental principles of

---

<sup>60</sup> Claudio Forner et al, 'Keeping the Forest for the Climate Change's Sake: Avoiding Deforestation in Developing Countries under the UNFCCC' (2006) 6 *Climate Policy* 1, 1.

<sup>61</sup> Li Lin Chang and Ramkishan S Rajan, 'Regional Versus Multilateral Solutions to Transboundary Environmental Problems: Insights from the Southeast Asian Haze' (2001) *The World Economy* 1, 11.

<sup>62</sup> Ibid.

<sup>63</sup> Mark A McDowell, 'Development and Environment in ASEAN' (1989) 62 *Asia Pacific Affairs*, University of British Columbia 307, 307.

the ASEAN Way, as found in the Treaty of Amity and Cooperation in Southeast Asia,<sup>64</sup> are as follows:

- Mutual respect of independence, sovereignty, equality, territorial integrity, and national identity of all nations;
- The right of every State to lead its national existence free from external interference, subversion or coercion;
- Non-interference in the internal affairs of one another;
- Settlement of difference or disputes in a peaceful manner;
- Renunciation of the threat or use of force;
- Effective cooperation among themselves.<sup>65</sup>

Conversely, Boer argues that the development of the state responsibility principle at the international level has resulted in States growing increasingly concerned about meeting their international obligations for protecting the local, regional and global environment.<sup>66</sup> States have also been increasingly prepared to litigate their environmental disputes before courts and international tribunals as in the example of the claim made by Nauru against Australia for environmental damage from mining operations.<sup>67</sup> The latest environmental dispute is the claim made by Argentina against Uruguay before the ICJ. This case concerned pulp mills on the River Uruguay, which Argentina claimed had violated the procedural and substantive obligations under the 1975 Statute on the River Uruguay,<sup>68</sup> and which were alleged to have caused environmental damage to the river. The court held that Uruguay had breached its procedural obligations under the 1975 Statute.<sup>69</sup> The important contribution of this case to international law is that the court recognised the environmental impact assessment principle as customary law, and took into consideration the duty of States to cooperate.<sup>70</sup> The court stated that the requirement to undertake environment impact assessment in the case that proposed industrial activities may have a

---

<sup>64</sup> *Treaty of Amity and Cooperation in Southeast Asia* (entered into force 24 February 1976) <<http://www.asean.org/news/item/treaty-of-amity-and-cooperation-in-southeast-asia-indonesia-24-february-1976-3>>.

<sup>65</sup> *Ibid.*

<sup>66</sup> Ben Boer, Ross Ramsay and Donald Rothwell, *International Environmental law in the Asia and Pacific* (Kluwer Law International, 1998), 1-2.

<sup>67</sup> *Certain Phosphate Lands in Nauru (Nauru v Australia) (Preliminary Objections)* (1993) 32 ILM 530.

<sup>68</sup> Michael Faure and Song Ying (eds), *China and International Environmental Liability* (Edward Elgar Publishing Limited, 2008) 39.

<sup>69</sup> *Pulp Mills on the River Uruguay (Argentina v Uruguay) (Judgment)* [2010] ICJ Rep, [267] <<http://www.icj-cij.org/docket/files/135/15877.pdf>>

<sup>70</sup> *Ibid* [204].

significant impact in the transboundary context is considered as customary international law.<sup>71</sup> The implication of this case for the Indonesian haze pollution problem is that, to prevent transboundary pollution, international law requires the assessment of proposed projects' potential harmful transboundary effects on people, property and the environment of other States.<sup>72</sup>

## **2.5. State Responsibility for Transboundary Environmental Harm as Customary Law**

The status of state responsibility as customary international law is an advantage in the protection of the environment and combating transboundary pollution, and assists the victims of this pollution. This principle has been adopted in the AATHP, which states in article 3(1) that:

the Parties have, in accordance with the charter of United Nations and the principles of international law, the sovereign right to exploit their own natural resources and the responsibility to ensure that activities do not cause damage to the environment of other States.<sup>73</sup>

According to this principle, States have the obligation to prevent transboundary pollution and to pay compensation to victims. With the status of state responsibility as customary international law, States are more concerned to meet their obligations to protect the local, national, regional and global environment.

Despite the claim that state responsibility for transboundary environmental harm is regarded as customary law, controversy<sup>74</sup> and inconsistencies in State practices remain regarding this principle in the environmental field. The controversy relates to many points of the concept of state responsibility, and its uncertain legal footing.<sup>75</sup> The codification of the state responsibility rules into a treaty and/or convention would clarify the legal footing. In addition, the rarity of state responsibility claims in trans-frontier pollution indicates that State practices on this principle are inconsistent. For example, no affected State brought a claim against the Soviet Union in the case

---

<sup>71</sup> Ibid.

<sup>72</sup> Ibid [203].

<sup>73</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 3.

<sup>74</sup> The controversy lies in the reluctance of States to adopt the codification of State responsibility into treaties.

<sup>75</sup> Brune, above n 48, 353; Brune, above n 23, 834.



of the Chernobyl nuclear reactor failure; no affected State brought a claim against Indonesia in the case of transboundary haze pollution in 1997/1998; and no affected State brought a claim against Switzerland in the case of the Sandoz spill in the Rhine.

Customary law is developed through agreement in international law and State practice. According to the ICJ, the constituents of customary law are as stated in article 38(b) that the court in deciding disputes should apply international custom, as evidence of general practice accepted as law. The ICJ emphasises State practice or an empirical approach as evidence of customary law. However, there is no definition of what constitutes State practice. According to the ICJ, certain norms should be both extensive and uniform. However, this State practice on certain conduct need not necessarily continue over long periods, nor consistently conform to the rule.<sup>76</sup> Thus, according to Hunter, inconsistency of this customary law has been treated as a breach of rule.<sup>77</sup> To prove customary laws exist, two general acceptances of the rule must be established by a court: first, State practice must be demonstrated to be consistent with the rule (observable behaviour); second, States must be shown to act in accordance with the rule from a sense of legal obligation, or acceptance of these regularities as the law of the State (*opinio juris*).<sup>78</sup> In other words, both an empirical and normative approach is needed to prove custom. However, Bodansky argues that the approach to determine customary law is more empirical than normative. It is arguable that custom is in many ways more difficult than treaty law for a practitioner, as it requires articulating the rule of law and then proving that the rule is accepted by States as law.<sup>79</sup>

To determine that a norm is part of customary law, according to traditional account, one would need to undertake a systematic survey of State behaviour. For example, with respect to the duty to assess activities that may cause transboundary harm and to notify potentially affected States, it is necessary to identify the set of activities that pose a significant risk of transboundary harm and then to examine how often States undertake assessment and provide notification.<sup>80</sup> In the same way, to prove the duty to prevent significant transboundary pollution as customary law, one would need to identify whether States regularly take action to limit the escape of pollution

---

<sup>76</sup> Brunee, above n 48, 312.

<sup>77</sup> Hunter, Salzman and Zaelke, above n 1, 310.

<sup>78</sup> The *Scotia*, 14 Wall 170, 187 (1871) quoted in *Paquete Habana*, 175 U.S. 677, 20 S Ct 290 (1900).

<sup>79</sup> Hunter, Salzman and Zaelke, above n 1, 310.

<sup>80</sup> Daniel Bodansky, 'Customary (and Not So Customary) International Environmental Law' (1995) *Global Legal Study* 105, 111.

beyond their jurisdiction.<sup>81</sup> To prove state responsibility for transboundary environmental harm, it is necessary to examine whether the State takes action to prevent such harm to other countries, accepts responsibility for potential damage, and provides reparation or compensation for pollution caused to another country. This is clearly illustrated in the Trail Smelter case (see Section 2.2), in which Canada was found liable to pay damages to the USA for smelter pollution.

### **2.5.1. The Shortcomings of the Enforcement of State Responsibility**

Enforcing the rules of state responsibility is problematic. Brunee argues that the limitation is rooted in the vagueness of the rules, the violation of which trigger state responsibility.<sup>82</sup> In fact, a customary norm itself does not provide a precise standard for these rules.<sup>83</sup> In this matter, the rules on state responsibility are not yet well developed and accepted as treaties. Another, difficulty in enforcing state responsibility is the reluctance of States to cede their sovereignty to judicial settlement.

In seeking compensation or remedies in the environmental field, the first difficulties lie particularly in proving causation,<sup>84</sup> identifying the polluters<sup>85</sup> and evaluating the claim for the damages.<sup>86</sup> There is a problem of scientific uncertainty particularly with the complexity of environmental problems. For example, the 1979 Convention on Long-range Transboundary Air Pollution<sup>87</sup> states clearly that the Convention does not contain a rule on state liability as to damage. This is due to the definition, which states that in such long distance transboundary air pollution, it is not generally possible to distinguish the contributions of individual emission sources or groups of sources.<sup>88</sup> A further difficulty inherent in environmental problems is that it is hard to identify the polluter. Paragraph 13 of the EU Directive 2004/35/CE on environmental liability with regard to the prevention and remedying of environmental damage states that not all

---

<sup>81</sup> Ibid 105.

<sup>82</sup> Brunee, above n 23, 827.

<sup>83</sup> Ibid.

<sup>84</sup> Providing evidence for a causal link between an activity and its effects as regards pollution is problematic. Due to this difficulty, it is practically impossible to bring a case into court or seek compensation for damages.

<sup>85</sup> In the case of long distance transboundary pollution, such as air pollution, it is difficult to identify the sources of the pollution and identify the polluters.

<sup>86</sup> As compensation would be in monetary terms, it is difficult to evaluate the cost of ecological damage.

<sup>87</sup> *Convention on Long-Range Transboundary Air Pollution*, signed 14 November 1979 (entered into force 15 July 1982).

<sup>88</sup> Ibid art 1.

forms of environmental damage can be remedied by a liability mechanism. The damage should be quantifiable, the polluters identifiable, and there must be a causal link.

Not all forms of environmental damage can be remedied by means of the liability mechanism. For the latter to be effective, there needs to be one or more identifiable polluters, the damage should be concrete and quantifiable and a causal link should be established between the damage and the identified polluter (s). Liability is therefore not a suitable instrument for dealing with pollution of a widespread, diffuse character, where it is impossible to link the negative environmental effects with acts or failure to act of certain individual actors.<sup>89</sup>

Several additional factors have added to state reluctance to enforce state responsibility. The rules in treaties are often not well developed, causing great uncertainty for any party to a specific dispute.<sup>90</sup> The jurisdiction or authority of the formal dispute resolution mechanisms may be inadequate to ensure a meaningful remedy.<sup>91</sup> Formal dispute mechanisms can be slow and costly, and formal dispute procedures may simply be inappropriate for reaching effective and practical solutions to the technical and difficult issues frequently posed by environmental treaties.<sup>92</sup> Moreover, Hoffman argues that ‘the use of public international law for redress of injuries due to transboundary pollution is burdensome and has great potential in jeopardizing the harmony of nations’.<sup>93</sup> In addition, Brunee argues that ‘the traditional state responsibility principle does not adequately cover the true ecological costs’.<sup>94</sup>

### **2.5.2. The Rules of State Responsibility and Liability in Transboundary Environmental Harm**

This section will review the works of international organisations such as the ILC to develop the legal aspects of transboundary pollution, including state responsibility and liability. This section is beneficial as a legal foundation in examining how the rules of state responsibility and liability develop, the implications of this development on combating the haze pollution problem in the ASEAN region and how this rule applies in the case of land/forest fires in Indonesia.

---

<sup>89</sup> *Directive 2004/35/CE of the European Parliament and of the Council 2004.*

<sup>90</sup> Hunter et al, above n 5, 488.

<sup>91</sup> Ibid.

<sup>92</sup> Ibid.

<sup>93</sup> Kenneth B Hoffman, 'State Responsibility in International Law and Transboundary Pollution Injuries' (1976) 25 *International and Comparative Law Quarterly* 509, 511.

<sup>94</sup> Brunee, above n 23, 827.

### 2.5.3. The Work of the International Law Commission

The ILC is a body established by the United Nations General Assembly in 1948. Its function is to promote the progressive development of international law and its codification.<sup>95</sup> In regards to development and codification of state responsibility and liability in transboundary harm, the ILC has worked on two major topics; namely, state responsibility for international wrongful acts and international liability for injurious consequences arising out of acts not prohibited by international law. The discussion of the latter topic is divided into two parts, the first dealing with prevention of transboundary damage from hazardous activities and the second dealing with international liability in case of loss from transboundary harm arising out of such activities.

The project of the ILC to codify state responsibility is the most ambitious since the Vienna Convention which aimed to ensure the bindingness of international law to provide for its enforcement without an international policing force.<sup>96</sup> Even though, the ILC has successfully codified the state responsibility principle, none of draft articles have been transformed into a treaty and the prospects of doing so are low.<sup>97</sup> The General Assembly has noted the instruments and the possibility at some point to transform it into a Convention in the future and the instruments are available for scrutiny, use and rejection by States, international organizations, courts, tribunal and others.<sup>98</sup> Indeed, the ILC's work on codification of the state responsibility principle provides a framework for the solution of disputes on transboundary harm. However, overlaps and confusion still exist in the interpretation. For example, in relation to transboundary harm because of forest fires there are overlaps and confusion as to whether transboundary harm cases should refer to draft articles on state responsibility for internationally wrongful acts or draft principles on the allocation of loss in case of transboundary harm arising from hazardous activities. Transboundary harm because of land/forest fires due to activities in opening land for plantation and agriculture is not categorized as an international wrongful act and draft principles

---

<sup>95</sup> See: *Statute of the International Law Commission 1947*, art 1.

< [http://legal.un.org/ilc/texts/instruments/english/statute/statute\\_e.pdf](http://legal.un.org/ilc/texts/instruments/english/statute/statute_e.pdf)>.

<sup>96</sup> Alan Nissel, *The ILC Articles on State Responsibility: Between Self Help and Solidarity*, (2006) 38, *International Law and Politics*, 355,356.

<sup>97</sup> Sean D Murphy, Book Review of *The Law of International Responsibility*(James Crawford, Allain Pellet, and Simon Olleson, eds.Oxford University Press, 2010), Public Law and Legal Theory Paper No. 2012-74 , 3.

<sup>98</sup> Ibid.

on the allocation of loss refer to civil liability while the previous ones refer to state responsibility.

## **2.6. Responsibility of States for Internationally Wrongful Acts**

The ILC has worked since 1949 to develop and codify the state responsibility principle. In 2001, the Commission completed the work and adopted the draft articles on the Responsibility of States for Internationally Wrongful Acts. The draft articles are formulated through codification and progressive development and intended as basic rules of international law concerning the responsibility of States for their international wrongful acts.<sup>99</sup> Judge Jessup has pointed out that the historic function of the law of state responsibility was to provide, in general world interest, adequate protection for the stranger and its property.<sup>100</sup>

As these articles are general in coverage, the emphasis is on establishing the secondary rules of state responsibility, which only regulate the general conditions under international law for the State to be considered responsible for wrongful actions or omissions and the legal consequences that flow there-from.<sup>101</sup> The general character of these articles is shown by article 3, which states that the characterisation of an act of a State as internationally wrongful is governed by international law.<sup>102</sup> The general coverage of the draft articles of state responsibility means it is applicable to many fields, including human rights, disarmament, environmental protection and the law of the sea.

These draft articles are divided into four parts, as follows. Part 1 is the internationally wrongful act of a State, which deals with the requirements for the international responsibility of the State to arise, including the attribution of conduct of a State. Part 2 is the international responsibility of a State, which deals with the legal consequences for the responsibility of a State such as cessation and reparation. Part 3 is the implementation of the international responsibility of a State, which

---

<sup>99</sup>*Responsibility of States for Internationally Wrongful Acts*, 56/83, 53rd session, UN Doc A/56/49 (Vol. I)/Corr. 4 (2001).

<sup>100</sup> Hoffman, above n 93, 509.

<sup>101</sup> Hoffman, above n 93, 509; Springer, above n 26, 125.

<sup>102</sup> *Responsibility of States for Internationally Wrongful Acts*, 56/83, 53rd session, UN Doc A/56/49 (Vol. I)/Corr. 4 (2001) art 3.

deals with State action and reaction on internationally wrongful acts such as invocation and countermeasures. Part 4 contains general provisions.

### 2.6.1. Internationally Wrongful Acts of a State

The basic principle of the draft articles contained in article 1 states that every breach of international law by a State entails its international responsibility.<sup>103</sup> This article is reflected in the codification of international law. The Permanent Court of International Justice (PCIJ) applied this principle in a number of cases, including the *Phosphates in Morocco* case.<sup>104</sup> The ICJ also applied the principle in the *Corfu Channel* case,<sup>105</sup> the *Gabcikovo-Nagymaros Project* case,<sup>106</sup> the *Military and Paramilitary Activities in and against Nicaragua* case,<sup>107</sup> the *British Claims in the Spanish Zone of Morocco* case, and the *International Fisheries Company* case.<sup>108</sup> Two elements should be established to claim that there is an internationally wrongful act of a State under article 2; namely, the act or omission must be attributable to the State, and it must constitute a breach of an international obligation.<sup>109</sup>

The attribution of conduct to a State is defined in draft articles 4–10. It is accepted as a general rule in these draft articles that the only conduct attributed to the State is that undertaken by its organs of government. In addition, it is accepted as a general rule that the conduct of a private person is not attributable to a State under international law. In respect to the conduct of State-owned or controlled companies or enterprises, it is stated that their activities are not attributable to a State unless they are exercising elements of government authority or conducting activities directed or controlled by the State as stated in articles 5 and 8.<sup>110</sup> Indeed, according to these articles, the conduct of a private person or group of persons, whether attributable to a State or not, is subject to interpretation and examination.

---

<sup>103</sup> Ibid art 1.

<sup>104</sup> *Phosphates in Morocco (Italy v France) (Judgment)* [1938] PCIJ (ser A/B), 4.

<sup>105</sup> *Corfu Channel (United Kingdom and Northern Ireland v Albania) (Judgment)* [1949] ICJ Rep, 244.

<sup>106</sup> *Gabcikovo-Nagymaros Project (Hungary v Slovakia) (Judgment)* [1997] ICJ Rep, 7.

<sup>107</sup> *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America) (Judgment)* [1986] ICJ Rep, 14.

<sup>108</sup> *International Fisheries Company (U.S.A.) v. United Mexican States*, IV 691 (1931).

<sup>109</sup> *Responsibility of States for Internationally Wrongful Acts*, 56/83, 53<sup>rd</sup> session, UN Doc A/56/49 (Vol. I)/Corr. 4 (2001) art 2.

<sup>110</sup> Ibid arts 5 and 8.

### 2.6.2. International Responsibility of States

For the breach of international obligations, responsibility of a State involves legal consequences as suggested in article 28. The legal consequences include the obligation of a State to cease the act (article 30)<sup>111</sup> and to make reparation (article 31)<sup>112</sup> to the injured State/s. Reparation can take the form of restitution (article 35),<sup>113</sup> compensation (article 36)<sup>114</sup> and satisfaction (article 37).<sup>115</sup> Full reparation can be one or a combination of these forms of reparation.

### 2.6.3. The Implementation of the International Responsibility of a State

Under article 42, the injured State can invoke another country for breach of an international obligation.<sup>116</sup> This invocation is relatively formal in character, such as by filing an application before a competent international tribunal to seek cessation of the act or reparation. For this invocation, the injured State shall give notice of its claim to the wrongdoer as stated in article 43 as follows:

#### Notice of claim by an injured State

1. An injured State which invokes the responsibility of another State shall give notice of its claim to that State.
2. The injured State may specify in particular:
  - (a) The conduct that the responsible State should take in order to cease the wrongful act, if it is continuing;

---

<sup>111</sup> Ibid art 30.

<sup>112</sup> Ibid art 31.

<sup>113</sup> A State responsible for an internationally wrongful act is under the obligation to make restitution; that is, to re-establish the situation that existed before the wrongful act was committed, provided and to the extent that restitution: (a) is not materially impossible, (b) does not involve a burden out of all proportion to the benefit deriving from restitution instead of compensation.

<sup>114</sup> (1) A State responsible for an internationally wrongful act is under an obligation to compensate for the damage caused thereby, insofar as such damage is not made good by restitution; (2) The compensation shall cover any financially assessable damage, including loss of profits, insofar as it is established.

<sup>115</sup> (1) The State responsible for an internationally wrongful act is under the obligation to give satisfaction for the injury caused by that act, insofar as it cannot be made good by restitution or compensation; (2) Satisfaction may consist in an acknowledgement of the breach, an expression of regret, a formal apology or another appropriate modality; (3) Satisfaction shall not be out of proportion to the injury and may not take a from humiliating to the responsible State.

<sup>116</sup> *Responsibility of States for Internationally Wrongful Acts*, 56/83, 53<sup>rd</sup> session, UN Doc A/56/49 (Vol. I)/Corr. 4 (2001) art 42.

- (b) What form reparation should take in accordance with the provisions of part two.

For non-performance to fulfil its obligations, the injured State may take countermeasures against the State responsible for an internationally wrongful act (article 49). The countermeasures may not be taken if the internationally wrongful act has ceased or the dispute is pending before the court or tribunal (article 52).

#### **2.6.4. International Liability for Injurious Consequences Arising Out of Acts not Prohibited by International Law**

In 1949, international liability for injurious consequences arising out of acts not prohibited by international law was listed as one of the agendas of the constituted Commission's basic long-term program of work for more than 50 years. This topic is to some extent narrower than state responsibility for wrongful acts. However, some argue it remains similarly difficult and controversial. Boyle identifies two reasons for this.<sup>117</sup> First, at a theoretical level, Boyle questions the clarity of the conceptual basis and necessity to distinguish it from state responsibility.<sup>118</sup> Second, at a practical level, he questions the useful basis for codification and development of existing law and practice relating to environmental harm.<sup>119</sup> Indeed, the draft articles on state responsibility and international liability for injurious consequences of acts not prohibited by international law somewhat overlap.

#### **2.6.5. Draft Articles on Prevention of Transboundary Harm from Hazardous Activities**

The draft articles on prevention of transboundary harm from hazardous activities generally contain two aspects considered as general principles of law: (i) States have a duty to prevent, minimise and control pollution and environmental harm; and (ii) States have a duty to cooperate in mitigating risk and emergencies through notification, consultation, negotiation and exchanging information.

---

<sup>117</sup> Boyle, above n 30, 26.

<sup>118</sup> Ibid.

<sup>119</sup> Ibid 26.



The prevention principles contained in this text can be viewed as the affirmation and reflection of Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration. The draft articles adopted in 1995, particularly article A (6), contained language clearly similar to that found in Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration, as shown below:

The freedom of States to carry on or permit activities in their territory or otherwise under their jurisdiction or control is not unlimited. It is subject to the general obligation to prevent or minimize the risk of causing significant transboundary harm, as well as any specific obligations owed to other States in that regard.<sup>120</sup>

There is a similarity between the draft articles and the AATHP, particularly concerning the prevention and cooperation principles embodied in the draft articles. Prevention and cooperation are also the main guiding principles in addressing transboundary haze pollution in the ASEAN region. Environment cooperation in ASEAN has been characterised by a weak form of institutionalism and reliance on national institutions, rather than by a central bureaucracy.<sup>121</sup>

### **2.6.5.1 Prevention**

The general obligation to prevent transboundary environmental harm is already well established in international law. In addition, prevention of transboundary harm to the environment, persons and property has been accepted as an important principle in many multilateral treaties concerning protection of the environment, nuclear accidents, space objects, international watercourses, management of hazardous waste and protection of the marine environment.<sup>122</sup> The draft articles codify and progressively develop the principles and obligations to prevent transboundary environmental harm. Some of the principles contained in the draft articles are also contained in the Stockholm Declaration and Rio Declaration, including prior authorisation (article 11),<sup>123</sup> risk

---

<sup>120</sup> Ibid.

<sup>121</sup> Lorraine Elliot, 'ASEAN and Environmental Cooperation: Norms, Interests and Identity' (2003) 16(1) *Pacific Review* 29, 37.

<sup>122</sup> *Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries*, 53rd session, UN Doc A/56/10 (2001).

<sup>123</sup> Ibid art 11.

assessment (article 12),<sup>124</sup> notification and information (article 15),<sup>125</sup> exchange of information (article 16),<sup>126</sup> information to the public (article 16 bis) and consultations on preventive measures (article 18).<sup>127</sup> These principles are important as the rules of decision for resolving transboundary environmental disputes, and some are important to provide a framework for development and national environmental law.<sup>128</sup>

Article 3 of the draft articles states that the State of origin shall take all appropriate measures to prevent significant transboundary harm or, at any event, to minimise the risk thereof.<sup>129</sup> To implement this, article 5 further states that the State concerned shall take the necessary legislative, administrative or other action, including the establishment of suitable monitoring mechanisms to implement the provisions of the present articles.<sup>130</sup> The focus of these articles is on preventive measures at the domestic level. It is suggested that the obligation of States to take preventive measures is one of due diligence.<sup>131</sup> Great Britain defined due diligence as such care as governments ordinarily employ in their domestic concern.<sup>132</sup> However, it is suggested in the commentary that the degree of due diligence from one country to another is different.<sup>133</sup> The due diligence expected of a State with a well-developed economy and human and material resources, and with highly evolved systems and structures of governance, is different from that which can be expected from States that are not so well placed.<sup>134</sup> The content of this article is similar to the Rio Declaration Principle 11.<sup>135</sup>

---

<sup>124</sup> Before taking a decision to authorise an activity, a State shall ensure that an assessment is undertaken of the risk of such an activity. Such an assessment shall include an evaluation of the possible impact of that activity on persons or property, as well as on the environment of other States.

<sup>125</sup> If the assessment indicates a risk of causing significant harm, the State of origin shall notify without delay the States likely to be affected and shall transmit to them the available technical and other relevant information on which the assessment is based, along with an indication of a reasonable time within which a response is required.

<sup>126</sup> While the activity is being carried out, the States concerned shall exchange in a timely manner all information relevant to preventing or minimising the risk of causing significant transboundary harm.

<sup>127</sup> The States concerned shall enter into consultations, at the request of any of them and without delay, with a view to achieving acceptable solutions regarding measures to be adopted to prevent or minimise the risk of causing significant transboundary harm, and co-operate in the implementation of these measures.

<sup>128</sup> Hunter, Salzman and Zaelke, above n 1, 377.

<sup>129</sup> *Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries*, 53rd session, UN Doc A/56/10 (2001).

<sup>130</sup> *Ibid.*

<sup>131</sup> 'Report of the International Law Commission on the Work of its Forty-Seventh Session' (2 May–21 July 1995) [1995] II(2) *Yearbook of the International Law Commission*.

<sup>132</sup> *Alabama Claims of the United States against Great Britain* (Award, 14 September 1872).

<sup>133</sup> *Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries*, 53rd session, UN Doc A/56/10 (2001).

<sup>134</sup> *Ibid.*

<sup>135</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992) art 11.

Prior authorisation is the fundamental principle required for activities that involve a risk of causing significant transboundary harm as recognised under article 4. Prior authorisation can be considered as a procedural form of a duty to prevent and minimise transboundary environmental harm. Prior authorisation is important as the preventive measure in transboundary harm. Before conducting any activities that may cause significant transboundary harm, permission should be obtained from governmental authorities. The problem in Indonesia is that authorisation is sometimes granted before any proper Environmental Impact Assessment (EIA) is done, or activities may operate without having been granted approval from the government. It is reported that many oil palm plantations and mining sites in Central Kalimantan are operated without prior authorisation.<sup>136</sup> Activists claim that local government sells business permits (authorisations) to exploit the province's natural resources, and that this has become a common practice to increase local revenue.<sup>137</sup> In the case of businesses' failure to conform to regulations, the government has failed to take appropriate action, such as to terminate non-conforming operators who conduct burning activities.

EIA is considered under article 7 (assessment of risk) of the draft articles on prevention of transboundary harm from hazardous activities. This article states that before granting authorisation to operators, the State of origin should ensure that an assessment is undertaken of the risk of the activity causing significant transboundary harm.<sup>138</sup> Thus, the authorisation should be based on the assessment of the environmental impact of the activity. However, in the case of Indonesia, the World Bank has found that adequate EIA measures are not in place.<sup>139</sup> Rather than prioritising the safeguarding of the environment, the empowered local authorities generally prefer to allow the intensive use of local resources to boost local revenue.

---

<sup>136</sup> 'Dukung KPK dalam pengusutan Mafia Perizinan di Kalimantan Tengah', *Banjarmasin Post*, 2 March 2011 <[http://www.koranpagonline.com/index.php?option=com\\_content&view=article&id=1271:dukung-kpk-dalam-pengusutan-mafia-perizinan-di-kalteng&catid=79:borneo&Itemid=422](http://www.koranpagonline.com/index.php?option=com_content&view=article&id=1271:dukung-kpk-dalam-pengusutan-mafia-perizinan-di-kalteng&catid=79:borneo&Itemid=422)>.

<sup>137</sup> Adianto P Simamora, 'No Amdal No Coal Mining in Kalimantan: Ministry', *Jakarta Post* (Jakarta), 26 January 2010 <<http://www.thejakartapost.com/news/2010/01/26/no-amdal-no-coal-mining-kalimantan-ministry.html>>.

<sup>138</sup> *Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries*, 53rd session, UN Doc A/56/10 (2001).

<sup>139</sup> World Bank, *Preliminary Assessment of the State of AMDAL* (2004) <<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/INDONESIAEXTN/0,,contentMDK:20821202~menuPK:382288~pagePK:1497618~piPK:217854~theSitePK:226309,00.html>>.

### 2.6.5.2 Cooperation

The draft articles also recognise the importance of cooperation between the States and international organisations concerned. It is argued that the obligation for States to cooperate with their neighbours in addressing international issues is a binding principle of international law. This is reflected in UN Charter article 1.3 and the 1970 UN Declaration of Principles on International Law. Similarly, article 4 of these draft articles contains a duty to cooperate in good faith, as follows:

States concerned shall cooperate in good faith and as necessary, seek the assistance of any international organizations in preventing or minimizing the risk of significant transboundary harm or at any event in minimizing the risk thereof.<sup>140</sup>

This article recognises the need for cooperation with States concerned and with international organisations. A similar principle of cooperation is also stated in the Stockholm Declaration Principle 24 and the Rio Declaration Principle 7, which call for global cooperation, as follows: ‘States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth’s ecosystem’.<sup>141</sup>

Cooperation is also recognised as one of the principles in the AATHP. Article 3 states: ‘The Parties shall, in spirit of solidarity and partnership and in accordance with their respective needs, capabilities, situations, strengthen cooperation and coordination to prevent and monitor transboundary haze pollution as a result of land/or forest fires which should be mitigated’.<sup>142</sup>

There are several procedural duties or specific forms of cooperation in the draft articles, including notification and information, consultations on preventive measures, exchange of information and notification of an emergency. This procedural duty is argued to be essential to balancing the interests of all States concerned, and an indispensable part of measures designed to prevent or

---

<sup>140</sup>*Draft articles on Prevention of Transboundary Harm from Hazardous Activities*, with commentaries, 53rd session, UN Doc A/56/10 (2001).

<sup>141</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992).

<sup>142</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 3.

minimise transboundary harm.<sup>143</sup> The principle of notification should be regarded as customary law.<sup>144</sup> The obligation to notify other States likely to be affected by an activity is also recognised in the context of utilisation of international watercourses, in article 3 of the Convention on Environment Impact Assessment in a Transboundary Context.<sup>145</sup> Principle 19 of the Rio Declaration also includes the principle of timely notification, as follows: ‘States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment and are subject to a decision of a competent national authority’.<sup>146</sup>

Prior consultation is regulated in article 9. This article further requires that States enter into consultation to agree on measures to prevent significant transboundary harm. This obligation contains an element of a joint examination of the risk of significant transboundary environmental effects associated with the proposed activity. This consultation is conducted upon request from a likely to be affected State and does not require the originating State to initiate consultations.

Another specific form of cooperation is exchange of information. Article 12 of the draft articles requires States to exchange information, as stated below:

While the activity is being carried out, the States concerned shall exchange in a timely manner all available information concerning that activity relevant to preventing significant transboundary harm or at any event minimizing the risk thereof. Such an exchange of information shall continue until such time as the States concerned consider it appropriate even after the activity is terminated.<sup>147</sup>

Articles 16 and 17 of the draft articles state the obligation for emergency preparedness and notification of an emergency. The State of origin should develop contingency plans for responding to emergencies and, where appropriate, cooperate with the State likely to be affected

---

<sup>143</sup> *Draft articles on Prevention of Transboundary Harm from Hazardous Activities*, with commentaries, 53rd session, UN Doc A/56/10 (2001).

<sup>144</sup> Birnie and Boyle, above n 49, 126.

<sup>145</sup> This Convention places detailed obligations on States to notify relevant parties in the case of wanting to undertake activities that are likely to cause significant adverse transboundary impacts. Notification should include information on the proposed activity including any available information on its possible transboundary impact, and the nature of the possible decision.

<sup>146</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992).

<sup>147</sup> *Draft articles on Prevention of Transboundary Harm from Hazardous Activities*, with commentaries, 53rd session, UN Doc A/56/10 (2001) art 12.

and the competent international organisation.<sup>148</sup> Emergency preparedness is an anticipatory action rather than a responsive action. In the case of an actual emergency, the State of origin should, without delay and in the most expeditious way possible, notify the State likely to be affected of the emergency concerning an activity within the scope of the present articles and provide it with all relevant and available information.<sup>149</sup>

#### **2.6.6. Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities**

In 2006, the ILC also adopted the draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities. The draft principles are intended to develop a liability regime governing transboundary damage, as is suggested in Principles 13 and 16 of the Rio Declaration. However, due to the general character of these draft principles, it is intended as a non-binding declaration of draft principles. Principle 3 of the draft principles states the two-fold purposes of the present article; namely, (a) to ensure prompt and adequate compensation to victims of transboundary damage; and (b) to preserve and protect the environment in the event of transboundary damage, especially with respect to mitigation of damage to the environment and its restoration and reinstatement. The purposes are directed not only to ensuring compensation to the victim, but also to protecting and restoring the environment.

The reason that the Commission adopted this principle and separated it from the draft article on prevention of transboundary harm from hazardous activities is because, even though the State fully complies with prevention obligations under international law, accidents that cause transboundary harm to other countries may still occur. Thus, the Commission considers the ‘polluter pays principle’ as the foundation of the present draft principles. These draft principles are intended to provide guidance to States on the international law of liability not covered by specific agreement, and the scope of liability aspect is the same with the draft articles on prevention of transboundary harm from hazardous activities.<sup>150</sup>

---

<sup>148</sup> Ibid art 16.

<sup>149</sup> Ibid art 17.

<sup>150</sup> *United Nations, Draft principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, with commentaries*, 58<sup>th</sup> session, UN Doc A/61/10 (2006).

These draft principles mainly focus on liability attached to the operator or in developing principles of civil liability, as suggested in Principle 4, as follows:

1. Each State should take all necessary measures to ensure that prompt and adequate compensation is available for victims of transboundary damage caused by hazardous activities located within its territory or otherwise under its jurisdiction or control.
2. These measures should include the imposition of liability on the operator or, where appropriate, other person or entity. Such liability should not require proof of fault. Any conditions, limitations or exceptions to such liability shall be consistent with draft principle 3.
3. These measures should also include the requirement on the operator or, where appropriate, other person or entity, to establish and maintain financial security such as insurance, bonds or other financial guarantees to cover claims of compensation.
4. In appropriate cases, these measures should include the requirement for the establishment of industry-wide funds at the national level.
5. In the event that the measures under the preceding paragraphs are insufficient to provide adequate compensation, the State of origin should also ensure that additional financial resources are made available.<sup>151</sup>

The draft principles urge the States to provide international and domestic remedies. Article 6 states that States shall provide their domestic judicial and administrative bodies with the necessary jurisdiction and competence, and ensure that these bodies have prompt, adequate and effective remedies available in the event of transboundary damage caused by hazardous activities located within their territory or otherwise under their jurisdiction or control. These draft principles also apply non-discrimination principles. Article 6(2) provides that the victims of transboundary damage should have access to remedies from the State of origin that are no less prompt, adequate or effective than those available to victims that suffer damage from the same incident within the territory of that State.<sup>152</sup>

The draft principles also provide definitions for the key terms used. It is important to define key terms to make clear the scope of what activities are categorised as hazardous and what damages can be covered. However, the draft principles do not clearly state those activities that constitute a hazardous activity. Instead, they give a broad definition of hazardous activity as activity that involves a risk of causing significant harm. To claim compensation, the draft principles define the

---

<sup>151</sup> Ibid principle 4.

<sup>152</sup> Ibid.

element of damages that can be compensated as serious, significant and substantial harm. These damages include loss of life or personal injury; loss of, or damage to, property; loss or damage by impairment of the environment; the costs of reasonable measures of reinstatement of the property or environment, including natural resources; and the costs of reasonable response measures. A victim of transboundary damage can be any natural or legal person or State that suffers damage.

Another important aspect of the draft principles is in Principle 7, which calls for the development of specific international regimes. It states that '[w]here in respect of particular categories of hazardous activities, specific global, regional, or bilateral agreements would provide effective arrangements concerning compensation, response measures and international and domestic remedies, all effort should be made to conclude such specific agreements'.<sup>153</sup> Such agreement should also include arrangements for industry and or State funds to provide supplementary compensation in the event that the financial resources of the operator are not sufficient to cover the damage. Specific agreements on hazardous activities already exist in relation to nuclear accidents, oil spills and space objects.

Haze pollution can be categorised as a hazardous activity. However, as will be discussed in Chapter 3, the ASEAN Agreement does not provide any regional arrangement concerning compensation or remedies in the event of harm caused by haze pollution. It also lacks an enforcement mechanism and has no meaningful dispute settlement body.<sup>154</sup> This approach is common in ASEAN countries, which prefer weak or soft regionalism that cautions against authoritative environmental agreements and effective institutional structures.<sup>155</sup> This creates a problem in international environmental law, where the environmental regime is relatively new and has a strong reliance on soft law.

---

<sup>153</sup> Ibid principle 7.

<sup>154</sup> Henrike Peichert, 'International Environment Governance' (Draft report, Workshop Royal Institute of International Affairs, 2007)  
<<http://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/260707ieg1.pdf>>.

<sup>155</sup> Elliot, above n 121, 45.



## 2.7. Civil Liability: An Alternative Approach to State Liability

The trend of channelling liability to private parties or operators for transboundary harm arising from hazardous activities is clearly shown in recent draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities, adopted in 2006 by the ILC. A civil liability regime has already been established to deal with such issues as oil pollution and nuclear accidents. Boyle argues that if this draft principle is accepted by the States, the ILC's principles may establish for the first time a genuinely global regime of civil liability for transboundary damage.<sup>156</sup> Brunee pointed out that the shifting of the ILC approach in channelling transboundary environmental damage from the State to civil liability is because the law on state responsibility for environmental harm proved difficult to develop, and its prevalent due diligence standard limits its potential to channel damage costs to the State in which pollution originates.<sup>157</sup> Further, Boyle suggests that claiming compensation from a government for pollution caused by industry undermines the polluter pays principle.<sup>158</sup> In addition, Rao states that:

State liability and strict liability are not widely supported at the international level, nor is liability for any type of activity located within the territory of a State in the performance of which no State officials or agents are involved.<sup>159</sup>

Despite channelling liability to operators or private parties, the State is still responsible for residual liability when the operator cannot pay the compensation for damages. In this regard, States should make provision in their national law for channelling this liability for transboundary environmental damage to operators or private entities.

The aim of the ILC's work to develop civil liability in draft principles on the allocation of loss in the case of transboundary harm is to ensure prompt and adequate compensation for victims of transboundary pollution. States need to establish civil liability for transboundary damage in their national law. Boyle identifies several approaches that need to be taken by States to ensure compensation for the victim, namely:<sup>160</sup>

---

<sup>156</sup> Boyle, above n 49, 585.

<sup>157</sup> Brunee, above n 48, 353; Brunee, above n 23, 834.

<sup>158</sup> Boyle, above n 49, 565.

<sup>159</sup> P S Rao, *First Report on the Legal Regime for the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities*, UN Doc A/CN.4/531, cited in Brunee, above n 48, 351.

<sup>160</sup> Ibid 559.

- a. An access to justice approach. This approach means that the States should make effective recourse for the victims of transboundary harm without discrimination. This approach can be found in principle 4(1) and principle 6(2) and principle 8(2) of the draft principles on the allocation of loss in the case of transboundary harm arising from hazardous activities.
- b. A conflict of laws approach. This approach means facilitating transboundary civil litigation through forum shopping and other procedural reforms. This approach can be found in principle 6(3), (4) of the draft principles.
- c. Harmonization approach. This approach means there is harmonization between international law and national law. For example, states should ensure that national laws set internationally acceptable standards of liability, jurisdiction, and availability of remedies.
- d. Compensation approach. This approach means that the victim of transboundary pollution can get adequate compensation. In this regard, if the operators can not cover all the damages, the states should also be responsible to pay this damage. This approach can be found in principle 7(2) of the draft principles.<sup>161</sup>

However, it will be difficult to apply the access to justice approach in Indonesian national law because the existing liability regime is inadequate. There has been a failure by the State to provide adequate redress for its own citizens.

## **2.8. The Implication of the Rule of State Responsibility on Indonesian Forest Fires**

This section will examine the implication of the state responsibility rule for the issue of Indonesian forest fires. Can Indonesia be held liable for these forest fires? Has the Indonesian government breached international obligations? What lesson can be learnt from the international legal framework for the improvement of the legal framework in Indonesia to address land/forest fires? Based on the rule of state responsibility for internationally wrongful acts, to determine whether Indonesia breaches international obligations, it is necessary to search for the primary and secondary rules of obligation. Cassese described these rules as follows:

It is now acknowledged that a distinction can be made between ‘primary rules’ of international law, that is, those customary or treaty rules laying down substantive obligations for States (on State immunities, treatment of foreigners,

---

<sup>161</sup> Ibid.

diplomatic and consular immunities, respect for territorial sovereignty, etc.), and 'secondary rules' that is rules establishing (i) on what conditions a breach of 'primary rules' may be held to have occurred and (ii) the legal consequences of this breach.<sup>162</sup>

Based on the work of the ILC on draft articles on the Responsibility of States for Internationally Wrongful Acts, an international obligation as a primary rule of obligation may arise from provisions stipulated in a treaty or by the rule of customary international law.<sup>163</sup> Thus, there are two sources to look at in determining whether Indonesia breaches its obligation under international law: a treaty or agreement, and customary international law. Based on customary international law, the State has the obligation not to cause environmental damage to other countries. Indonesia can be seen to breach the primary obligation that derives from customary international law by causing transboundary environmental harm to other countries. To examine whether Indonesia breaches the secondary rules of obligation, and the legal consequences of breach of the primary rule, it is necessary to examine whether this wrongful conduct is attributable to the State in view of the fact that most forest fires are caused by private individuals rather than the State. A discussion of the problem of attribution is provided in Section 2.8.1.

To ascertain whether the State is liable under positive international law, it is necessary to determine what commitments the State had previously.<sup>164</sup> Dupuy suggests that in the case of trans-frontier pollution, it is essential to ascertain whether the State was legally obligated to the polluted State by an agreement prohibiting or preventing pollution.<sup>165</sup> If there is an agreement, reference should first be made to the provisions contained in that agreement before referring to the general principles of international and customary law.<sup>166</sup> In the absence of an agreement or specific rule governing the sanction, customary law and general principles will be taken as a guide.<sup>167</sup> Boyle similarly points out that the responsibility of States for transboundary damage depends principally on objective fault; for example, where there was a failure to act with due care or due diligence, a breach of treaty or the commission of a prohibited act.<sup>168</sup>

---

<sup>162</sup> Robert Perry Barnidge Jr., 'The Due Diligence Principle Under International Law' (2006) 8(1) *International Community Law Review* 81, 89.

<sup>163</sup> *Responsibility of States for Internationally Wrongful Acts*, 56/83, 53rd session, UN Doc A/56/49 (Vol. I)/Corr. 4 (2001).

<sup>164</sup> Dupuy, above n 34, 345–368, 345.

<sup>165</sup> *Ibid.*

<sup>166</sup> *Ibid.*

<sup>167</sup> *Ibid.*

<sup>168</sup> Boyle, above n 49, 559.

The only treaty directly relevant to transboundary haze pollution in the Southeast Asia region is the AATHP, which has only just been ratified by Indonesia.<sup>169</sup> Ratification by Indonesia means that the AATHP would be the first document used to determine whether Indonesia had breached its obligations. However, this Agreement does not contain a strong prohibition clause in tackling transboundary pollution. Instead, it uses soft language. This Agreement adopts the provision of a zero burning policy, which prohibits open burning but may allow some forms of controlled burning.<sup>170</sup> The Agreement encourages States to take measures to promote a zero burning policy to deal with land/forest fires that may result in transboundary haze pollution.<sup>171</sup>

The primary obligation of Indonesia under the Agreement is to prevent and minimise transboundary haze pollution.<sup>172</sup> This would require Indonesia to prevent and mitigate land/forest fires. Mitigate means to make less severe, to reduce and lessen the impact. Thus, any forest fires in Indonesia with the potential to result in transboundary haze pollution in other countries would constitute a breach of this obligation. Under customary law, it is already established that the principles of good neighbourliness and the harmless use of territory apply. From a theoretical perspective, the obligation to use a territory harmlessly leads to prohibiting all trans-frontier pollution. However, in practice, this prohibition could not be taken as absolute. Dupuy argues that there is always some residual trans-frontier pollution, which may be regarded as lawful.<sup>173</sup>

### **2.8.1. Due Diligence Obligation and the Problem of Attribution**

States have an obligation to exercise due diligence to avoid adverse impacts on other states. Due diligence is a concept developed by international case law at the end of the nineteenth century based on the common law that can be expected from a ‘good government’; for example, government observance of international obligations.<sup>174</sup> Birnie and Boyle suggest that ‘due diligence requires the introduction of legislation and administrative controls applicable to public

---

<sup>169</sup> Ratified on 16 September 2014

<sup>170</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 1(14).

<sup>171</sup> *Ibid* art 9.

<sup>172</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 3(3), 4(2).

<sup>173</sup> *Ibid*.

<sup>174</sup> Dupuy, above n34, 369.

and private conduct which are capable of effectively protecting other States and the global environment, and it can be expressed as the conduct to be expected of a good government'.<sup>175</sup>

In the case of land/forest fires, which are mostly conducted by private persons, the question arises whether this conduct is attributable to the State. There are several approaches to examining this issue, including taking a direct and indirect approach, and applying the due diligence principle. Springer discusses the indirect and direct approaches, noting that (1) the indirect approach is based on customary law and is regarded as the most common approach, while (2) the direct approach is based on the objectivity to the conduct of the State.<sup>176</sup> The broad and general language under Principle 21 of the Stockholm Declaration can be interpreted to require a State to control all activities inside its jurisdiction, including the activities of private persons or corporations, with the obligation to take action to ensure that these persons are not violating pollution standards. Based on the indirect approach, Indonesia would be liable for the conduct of its private or corporate activities that cause transboundary environmental harm to other countries. The direct approach normally refers to the term 'objective responsibility' and imposes state responsibility in a more direct manner.<sup>177</sup> In terms of the direct approach, it is clear that a State is responsible for the pollution caused by its own, private individuals and corporate operations.

The work of the ILC on the draft articles on the Responsibility of States for Internationally Wrongful Acts includes the attribution to the conduct of State articles 4–8. Based on these articles, the conduct of private persons is not attributable to States. In the case of Indonesian forest fires, most fires are the result of the conduct of private individuals or companies. Farmers that practice slash-and-burn agriculture cannot, by any measure, be viewed as State organs.<sup>178</sup> Article 8 of the draft articles on the Responsibility of States for Internationally Wrongful Acts states that the conduct of a person or group of persons shall be considered an act of a State under international law if the person or group of persons is in fact acting on the instructions of, or under the direction or control of, that State in carrying out the conduct.<sup>179</sup> However, these arguments are

---

<sup>175</sup>Birnie and Boyle, above n 52, 112.

<sup>176</sup> It is important to prove State involvement, whether the polluting activity is caused by the act or omission of the State.

<sup>177</sup> Ibid 129.

<sup>178</sup> Alan Khee-Jin Tan, 'Forest Fires of Indonesia: State Responsibility and International Liability' (1999) 48(4) *The International and Comparative Law Quarterly* 826, 830.

<sup>179</sup> *Responsibility of States for Internationally Wrongful Acts*, 56/83, fifty-third session sess, UN Doc A/56/49(Vol. I)/Corr.4. (2001).

not sufficient to establish attribution of State conduct. State-owned companies or those companies subject to control by the State are considered separate from the State.<sup>180</sup> Boyle points out that damage resulting from the activities of industries or business will not in normal circumstances be attributable to the source State in international law.<sup>181</sup>

However, based on the due diligence concept, there is no question of ‘vicarious liability’ to assess whether the conduct of a private person is attributable to the State. Instead, the only consideration is of the direct liability of a State for a wrongful omission, consisting of either failure to prevent or failure to abate an act causing damage, attributable to one of its organs.<sup>182</sup> In the case of forest fires, the Indonesian government has failed to prevent or abate transboundary pollution, which has caused, and is causing, environmental damage to other countries.

If Indonesia breaches the obligations assumed in an agreement or imposed by international customary law, can other countries affected by this transboundary pollution invoke international liability? It is a well-established rule of the law of nations that any breach of an obligation assumed in a treaty makes the polluter State liable to make good the damage caused to other parties, or to make reparation and pay compensation for damages.<sup>183</sup> However, in practice no single country affected by haze pollution has ever invoked international liability against Indonesia. The action of neighbouring countries such as Malaysia and Singapore has been limited to protesting to the Indonesian government about haze pollution affecting those countries. This action does not constitute an invocation of responsibility.<sup>184</sup> It was reported that during the enormous Indonesian forest fires of 1997, Singaporean lawyers, economists and diplomats developed the doctrine of State liability for transboundary environmental damage with demands to apply the polluter pays principle for Singapore’s economic losses due to haze from Indonesia’s fires.<sup>185</sup> However, they refrained to file the suit against Indonesia due to observing and keeping ASEAN’s tradition of non-confrontation in solving disputes, and non-interference in a

---

<sup>180</sup> *Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries*, 53rd session, UN Doc A/56/10 (2001).

<sup>181</sup> Boyle, above n 49, 563.

<sup>182</sup> Pierre Dupuy, 'Due Dilligence in the International Law of Liability', *Legal Aspect of Transfrontier Pollution* (OECD, 1977) 369.

<sup>183</sup> Dupuy, above n 34, 345.

<sup>184</sup> *Responsibility of States for Internationally Wrongful Acts*, 56/83, fifty-third session sess, UN Doc A/56/49(Vol. I)/Corr.4. (2001).

<sup>185</sup> Judith Mayer, 'Tranboundary Prespectives on Managing Indonesia's Fires' (2006) *The Journal of Environment and Development* 202, 208.

neighbour's domestic affairs.<sup>186</sup> Moreover, the draft principles on the Allocation of Loss in the Case of Transboundary Pollution arising out of hazardous activities recommend that a State establish liability for operators rather than create a state responsibility regime. After the worst forest fires in 1997/1998 and 2013, Indonesia apologised to Singapore and Malaysia for the resulting haze pollution. A formal apology delivered by the President of Indonesia can be categorised as reparation in the form of satisfaction according to the draft articles on the Responsibility of States for Internationally Wrongful Acts.

## **2.9. Multilateral Environment Agreements on Atmosphere and Biodiversity**

In addressing forest fires and haze pollution, there are no directly relevant treaties or conventions other than the current international MEAs, which are more concerned with the broader issues of deforestation, land use and land use change. However, several conventions exist aimed at protecting earth's atmosphere and biodiversity that are to some extent beneficial as international instruments indirectly supporting the combating of forest fires. These include: (1) the UNFCCC and its Kyoto Protocol, (2) the CBD, and (3) the Ramsar Convention.<sup>187</sup> Forest fires are recognised as an obstacle to achieving the goal of these conventions. These MEAs can help to provide a framework for countries to protect their natural resources, prevent the transboundary spread of pollutants and avoid international conflict.<sup>188</sup>

### **2.9.1. The UNFCCC 1992 and the Kyoto Protocol**

The aim of the UNFCC is to stabilise the greenhouse gas (GHG) concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.<sup>189</sup> Carbon emissions from deforestation<sup>190</sup> and degradation through agricultural expansion, conversion to pastureland, infrastructure development, destructive logging and fires account for

---

<sup>186</sup> Ibid.

<sup>187</sup> *Convention on Wetlands of International Importance especially as Waterfowl Habitat*, opened for signature 2 February 1971, UNTS 14583 (entered into force 21 December 1975) <[http://www.ramsar.org/cda/en/ramsar-home/main/ramsar/1\\_4000\\_0\\_>](http://www.ramsar.org/cda/en/ramsar-home/main/ramsar/1_4000_0_>).

<sup>188</sup> Jack Jacobs, 'A New Look at Environmental Impact Assessments: Using Customary Law to Prevent Domestic and Transboundary Environmental Damage' in Michael Faure and Song Ying (eds), *China International Environmental Liability Legal Remedies for Transboundary Pollution* (Edward Elgar Publishing Limited, 2009) 231.

<sup>189</sup> *United Nations Framework Convention on Climate Change*, signed 9 May 1992 (entered into force 28 June 2002).

<sup>190</sup> Deforestation is the direct human-induced conversion of forestland into non-forestland.

20 per cent of global anthropogenic emission.<sup>191</sup> Therefore, as forest fires are among the contributors to GHGs, this convention provides a framework at the national level in combating forest fires. In the action to meet the objective of the UNFCCC the Parties shall be guided by the principle of common but differentiated responsibilities, precautionary measures, sustainable development and cooperation. The Kyoto Protocol further mandates that in order to achieve the objective of emission reductions States should implement sustainable forest management practices, afforestation and reforestation.<sup>192</sup>

To save and protect the forest in developing countries, these countries need incentives or funding from developed countries. Several mechanisms are available for this. The Kyoto Protocol introduces market-based mechanisms for the implementation of land use, land use change and forestry sector (LULUCF) projects such as the Clean Development Mechanism (CDM) and Joint Implementation (JI) to meet the target of reduction emission. In addition, REDD+, a strategy and incentive for the mitigation of climate change, was introduced in 2005 at the Conference of the Parties (COP) 11 in Montreal. Forner argues that incentives at the international level could encourage national governments to implement regulations for forest protection, or to strengthen domestic enforcement mechanisms.<sup>193</sup> However, these incentives need to be transmitted domestically to actors on the ground, to influence against the decision to clear land and to support interest in preserving forest cover, for example.<sup>194</sup>

At the regional level, the role of ASEAN is to assist member countries to comply with the MEAs. To facilitate this, the ASEAN Working Group on Multilateral Environment Agreement was established to promote ASEAN cooperation on global environmental issues, in particular on atmosphere- and chemical-related conventions. The ASEAN Working Group on Multilateral Environment Agreement aims to strengthen cooperation among member countries to the implementation of multilateral agreements addressing climate change, such as the UNFCCC and Montreal Protocol, and to identify and address the constraints on member countries in implementing international environmental agreements. ASEAN has identified that a major

---

<sup>191</sup> D Mollicone et al, 'Elements for the Expected Mechanism on 'Reduced Emissions from Deforestation and Degradation, REDD' under UNFCCC' (2007) 2 *Environmental Research Letters* 1, 1.

<sup>192</sup> Kyoto Protocol to The United Nations Framework Convention on Climate Change, adopted in Kyoto, Japan, on 11 December 1997, entered into force on 16 February 2005, article 2 (1) (a) (iii).

<sup>193</sup> Forner et al, above n 60, 7.

<sup>194</sup> Ibid.



constraint on implementing MEAs is their heavy dependence on the financial and human resources of member countries.

Indonesia ratified the UNFCCC on 3 December 2004 with Law No. 6/ 1994. Indonesia emits significant levels of GHGs.<sup>195</sup> The largest share of current emissions comes from land use and land use changes (forest fires, illegal logging, peatland and forest degradation and deforestation) (48 per cent), followed by peat fires (12 per cent) and agriculture (5 per cent). Combined, emissions from land use change, forestry, peat and agriculture amount to about 65 per cent of total emissions.<sup>196</sup>

The Indonesian government has made a non-binding commitment to reduce its GHG emissions by 26 per cent using its own funding, and by up to 41 per cent with international funding from Business as Usual (BAU) levels in 2020.<sup>197</sup> With a mitigation scenario, Indonesia can reduce its emissions by up to 48 per cent, with 80 per cent of this abatement potential expected from the forestry, peat and agriculture sectors. Fire management and combating illegal logging is one of the activities proposed for a 26 per cent reduction scenario.

There should be synergy between efforts in combating climate change and efforts in combating land/forest fires. These two issues are interrelated and the policy of fire management should be in line with the policy of mitigation of GHG emissions in addressing climate change. The Government of Indonesia set a target in 2007 in the LULUCF sector to reduce hotspots (forest fires) in that year compared to 2006 levels. REDD+ offers incentives to Indonesia to reduce its GHG emissions from LULUCF, including by reducing hotspots, and it is expected that this will contribute to the reduction of the transboundary haze–pollution problem. Further discussion on REDD+ and the forest fires reduction effort is delivered in Chapter 6.

---

<sup>195</sup> National Council on Climate Change, *National Economic, Environment and Development Study (NEEDS) for Climate Change: Indonesia Country Study* (National Council on Climate Change, Republic of Indonesia, 2009) <[http://unfccc.int/files/cooperation\\_and\\_support/financial\\_mechanism/application/pdf/indonesia\\_needs\\_final\\_report.pdf](http://unfccc.int/files/cooperation_and_support/financial_mechanism/application/pdf/indonesia_needs_final_report.pdf)> 1.

<sup>196</sup> Ibid.

<sup>197</sup> Bappenas, *Indonesia Climate Change Sectoral Roadmap—ICCSR Synthesis Report* (Bappenas, Republic of Indonesia, 2009) <<http://bappenas.go.id/get-file-server/node/11431/>> 6.

### 2.9.2. The CBD<sup>198</sup>

One of the aims of the CBD is the conservation of biological diversity. The CBD provides a framework at the national level to conserve biodiversity, particularly through the preservation of forests. In relating to combating forest fires, this Convention provides a framework that indirectly combats land/forest fires by taking measures for the prevention of damage to biodiversity (an impact of forest fires) and measures on liability and redress in the national legislative framework.<sup>199</sup> Forest fires, which are one of several threats to biodiversity, threaten flora and fauna in forests and cause the loss of habitats and food for wildlife.<sup>200</sup> The other threats to biodiversity in Indonesia include high population growth, deforestation, habitat degradation and fragmentation, consumption/over-exploitation, pollution and climate change.<sup>201</sup> Article 6 of the CBD states the general measures for conservation and sustainable use as follows:

- (a) Each contracting Party should develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plan or programmes which shall reflect the measures set out in this Convention.
- (b) Integrate as far as possible and as appropriate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.<sup>202</sup>

For the implementation the CBD has expanded its program of work on Forest Biological Diversity. One of programs is Element 1: Conservation, Sustainable Use and Benefit Sharing. There are activities to prevent and mitigate the adverse effect of forest fires and fire suppression include:

- a. Identify policies, practices, measures, aimed at addressing the causes and reducing impacts on forest biological diversity resulting from human induced uncontrolled/unwanted fires, often associated with land clearing and other land use activities.
- b. Promote understanding of the role of human-induced fires on forest ecosystems and on species, and of the underlying causes

---

<sup>198</sup> *Convention on Biological Diversity*, opened for signature 5 June 1992, (entered into force 29 December 1993).

<sup>199</sup> Ministry of Environment, *Indonesia Third National Report to the CBD* (Ministry of Environment, Republic of Indonesia, 2005).

<sup>200</sup> Ministry of Environment, *Fourth National Report to the Convention on Biological Diversity* (Ministry of Environment, Republic of Indonesia, 2009).

<sup>201</sup> Ibid.

<sup>202</sup> *Convention on Biological Diversity*, opened for signature 5 June 1992 (entered into force 29 December 1993) art 6.

- c. Develop and promote the use of fire management tools for maintaining and enhancing forest biological diversity, especially when there has been a shift in fire regimes
- d. To promote practices of fire prevention and control to mitigate the impacts of unwanted fires on forest biological diversity.
- e. Promote development of systems for risk assessment and early warning, monitoring and control and enhance capacity for prevention and post fire forest biodiversity restoration at the community, national and regional levels.
- f. To advise on fire –risk prediction systems, surveillance, public education and other methods to minimize human induced uncontrolled/unwanted fires.
- g. Develop strategies to avoid negative effects of sectoral programmes and policies which could induce uncontrolled forest fires
- h. Develop a prevention plan against devastating fires and integrate them into national plans targeting the biological diversity of forests.
- i. Develop mechanisms, including early warning systems, for exchange of information related to the causes of forest biodiversity loss, including fires, pests and diseases and invasive species.

For the purpose of the implementation of this Convention, the Indonesian government, through the Ministry of Environment, established the Indonesia Biodiversity and Action Plan (2003–2020). This Plan is argued as a means of integrating biodiversity considerations into policies and plans for sectoral and cross-sectoral development.<sup>203</sup> The program relating to forests and wetland includes restructuring policies in granting forest management rights; the prohibition of natural forest conversion, taking into account the needs of local and indigenous communities;<sup>204</sup> sustainable forest management; and addressing threats to biodiversity (such as by decreasing the frequency of forest fires). Indonesia has already enacted a regulation with the aim of conserving biological resources and their ecosystems with Law No. 5/1990 concerning the Conservation of Living Resources and their Ecosystems. Further discussion on this legislation is provided in Chapter 4.

At the regional level, in line with the purpose of the CBD, ASEAN enacted the ACNNR (1985), which aims to conserve and manage living resources, and deals with the issue of protecting biological diversity. To some scholars, this Agreement is ‘progressive’ and ‘remarkable’.<sup>205</sup> The fundamental principle of this Agreement is that the Contracting Parties within the framework of

---

<sup>203</sup> Ministry of Environment, above n 192.

<sup>204</sup> Ibid.

<sup>205</sup> Kheng Lian Koh, 'Asean Agreement on the Conservation of Nature and Natural Resources, 1985: A Study in Environmental Governance' (Paper presented at the WPC Opening Plenary Symposium B: Managing with Change, Durban, 2003) 3.

national laws adopt measures to maintain essential ecological processes and life support systems to preserve genetic biodiversity, and to ensure the sustainable utilisation of harvested natural resources under their jurisdiction with a view to attaining the goal of sustainable development.<sup>206</sup> In regards to combating forest fires, this Agreement contains provisions that encourage the Parties to control the clearance of vegetation, such as the requirement to prevent bush and forest fires in article 6(2)(a).<sup>207</sup> This Agreement is promising in dealing with the conservation of biodiversity in the region. However, Ben Boer argues that the challenge for the Agreement is its translation into national implementation measures.<sup>208</sup> The Agreement has not yet formally entered into effect, as it still lacks the necessary ratifications.<sup>209</sup> Further discussion on this Agreement is delivered in Chapter 3.

### **2.9.3. The Ramsar Convention**

The Ramsar Convention is an intergovernmental treaty adopted on 2 February 1971 in the Iranian city of Ramsar whose mission is “the conservation and wise use of all wetlands through local, regional, and national actions and international cooperation as a contribution towards achieving sustainable development throughout the world”.<sup>210</sup> The Ramsar Convention recognises the importance of conserving wetlands and their flora and fauna. Article 2 of this Convention has mandated the Contracting Parties to designate suitable wetland within their territories for inclusion in a list of Wetlands of International Importance. In addition, articles 3 and 4 suggest that the Contracting Parties should promote conservation and wise use of wetland, regardless of whether they are included in the list. This Convention provides a framework for recognising the importance of wetlands, including peatland. This framework can be used at the national level to conserve peatland and reduce damage to wetlands due to conversion into oil palm plantations by burning, which triggers forest fires. In addition, to address the impact of peat swamp fires the Standing Committee of the Ramsar Convention suggested that the inclusion of more peat swamp forest sites in the existing protected area systems is needed. The Convention provides the framework for a concerted global effort to address the problem such as that the contracting

---

<sup>206</sup> *Agreement on the Conservation of Nature and Natural Resources*, signed 9 July 1985 (not yet entered into force).

<sup>207</sup> Ibid.

<sup>208</sup> Boer et al, above n 66, 307.

<sup>209</sup> Ibid

<sup>210</sup> The Ramsar Secretariat, *The Ramsar Convention Manual: a Guide to the Convention on Wetlands* (Ramsar, Iran, 1971), 6th ed., 2013, p 1 <<http://www.ramsar.org/pdf/lib/manual6-2013-e.pdf>>.

Parties to the Ramsar Convention that have experience in peat swamp fire control and management offer their technical and financial assistance to the affected countries.<sup>211</sup>

Indonesia has ratified the Ramsar Convention with Presidential Decree No. 48/1991. The Ramsar Convention came into force in Indonesia on 8 August 1992. Currently, Indonesia has designated five sites as Wetlands of International Importance. These include Berbak, Danau Sentarum, Rawa Aopa Watumohai National Park, Sembilang National Park and Wasur National Park.<sup>212</sup> Threats to wetland in Indonesia come from illegal logging,<sup>213</sup> encroaching development (e.g., harbors and industrial estates),<sup>214</sup> invasion for transmigration programs and oil palm plantation development, and forest fires.<sup>215</sup> The main problem for the protection of wetlands and peatland in Indonesia is that there is no specific regulation on the protection and conservation of wetlands, and there is inconsistency in government regulation and policy.

At a regional level, wetlands are dealt with by the ACNNR. In addition, ASEAN has established soft law initiatives such as the ASEAN Peatland Management Strategy (APMS) and the ASEAN Peatland Management Initiative (APMI). APMS aims to provide a framework to guide the sustainable management of peatland in the ASEAN region. APMI aims to provide a mechanism for collective cooperation between ASEAN Member States to address the issue of peatland management, to reduce transboundary haze pollution and climate change impact.<sup>216</sup>

#### **2.9.4. The Synergy Between the UNFCCC, CBD and Ramsar Convention**

There is a linkage between climate change and biodiversity-related multilateral agreements. Climate change is a threat to biodiversity just as the damage to biodiversity brought by deforestation, peat fires and land use change threatens to increase GHGs. Preserving biodiversity, forests and wetlands contributes to the mitigation of climate change. Due to the linkages between these issues and their solutions, synergy in approaches towards their treatment in law (such as in

---

<sup>211</sup> Ibid.

<sup>212</sup> Ramsar, *The Annotated Ramsar List: Indonesia* <[http://www.ramsar.org/cda/en/ramsar-pubs-annolist-anno-indonesia/main/ramsar/1-30-168%5E16563\\_4000\\_0\\_>](http://www.ramsar.org/cda/en/ramsar-pubs-annolist-anno-indonesia/main/ramsar/1-30-168%5E16563_4000_0_>).

<sup>213</sup> Ibid.

<sup>214</sup> Ibid.

<sup>215</sup> M R Bowen et al, *Anthropogenic Fires in Indonesia: A View from Sumatera* (Government of Indonesia and the European Union, 2000) 6.

<sup>216</sup> Global Environment Center, *The Peatland Programme* <<http://www.gecnet.info/index.cfm?&menuid=90>>.

conventions) would lead to increased effectiveness. Synergy aims at enhanced coordination between MEAs, especially through linking processes to increase the effect of the sum of joint activities beyond the sum of individual activities, to make efforts more effective and efficient.<sup>217</sup>

ASEAN launched an initiative on synergies and inter-linkages among multilateral agreements in 2001. The aim of this initiative was to assess the status of the implementation of conventions to which ASEAN Member Countries are party, and to explore opportunities for member countries to better coordinate the implementation of the conventions, especially with regard to institutional and legal frameworks, financing, capacity building and stakeholder participation.<sup>218</sup>

From this perspective, it can be concluded that the CBD and Ramsar Convention contribute to the achievement of the UNFCCC goal to stabilise the concentration of atmospheric GHGs. Conversely, the UNFCCC contributes to the achievement of the CBD and Ramsar Convention in conserving biodiversity and wetlands. Concerning haze pollution, these three Conventions have provisions that directly or indirectly affect and support combating land/forest and peatland fires. The synergy and harmonisation between the legal obligations under these biodiversity-related conventions should contribute to improving policy and legal and administrative coordination at the national level as Indonesia seeks to comply with its international obligations.<sup>219</sup>

## **2.10. Agenda 21 and its Implication for Reducing Forest Fires and Transboundary Pollution**

Agenda 21, which is considered a soft law, is a comprehensive Plan of Action to be taken globally, nationally and locally. It provides guidance for governments, with a particular focus on helping them to achieve sustainable development.<sup>220</sup> This document was adopted by 178 governments at the United Nation Conference on Environment and Development (UNCED) held

---

<sup>217</sup> UNEP, *Synergies and Cooperation: A Status Report on Activities Promoting Synergies and Cooperation between Multilateral Environmental Agreements, in particular Biodiversity-related Conventions and Related Mechanisms* (UNEP World Conservation Monitoring Centre, Cambridge, 2004 ) 15.

<sup>218</sup> ASEAN, *ASEAN Cooperation on Environment*  
<<http://environment.asean.org/index.php?page=overview:globalenv>>.

<sup>219</sup> UNEP, above n 217, 37.

<sup>220</sup> UNCED, *Agenda 21*,  
<<http://sustainabledevelopment.un.org/index.php?page=view&nr=23&type=400&menu=35>>.

in Rio de Janeiro Brazil, 3–14 June 1992.<sup>221</sup> In addressing the issue of forest fires and transboundary haze pollution in Indonesia and ASEAN, this document is an important guide for government to take measures at the local level to reduce the harmful impact of human activities on the environment and to achieve sustainability.

The concept and policy agenda of sustainable development can be traced to the 1987 report of the WCED, 'Our Common Future' (the Brundtland Report); the UNCED (1992); and the Plan of Implementation of the World Summit on Sustainable Development (2002). There is no uniform definition of sustainable development, but the Brundtland Report definition, as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs', is commonly accepted.<sup>222</sup> Sustainable development has emerged as a guiding principle for policy and decision making. While sustainable development does not have a fixed content and has undergone many interpretations, its central elements involve *inter alia* policy integration, integrating environmental, social and economic concerns; taking precautionary measures; considering global implications of domestic policy directions; involving communities in decision making; using multiple scales of policy and governance; and emphasising the importance of good governance (anti-corruption measures).<sup>223</sup> The measures necessary to achieve sustainable development as endorsed by Agenda 21 will be used in this thesis. These include measures for combating poverty, conservation and management of resources for development, and integrated approaches to the planning and management of land resources.

The issue of combating poverty is relevant in addressing land/forest fires, as poverty is the root cause of why farmers conduct burning activities. Poverty reduces people's capacity to use resources in a sustainable manner.<sup>224</sup> A specific anti-poverty strategy is therefore one of the basic conditions for ensuring sustainable development. Agenda 21 suggests that it is important to integrate sustainable livelihoods and environmental protection by empowering local or

---

<sup>221</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992).

<sup>222</sup> Report of the World Commission on Environment and Development, 42<sup>nd</sup> sess, Agenda item 83(e), UN Doc A/42/427 (4 August 1987).

<sup>223</sup> Stephen Dovers and Robin Connor, 'Institutional and Policy Change for Sustainability' in Benjamin J Richardson and Stepan Wood (eds), *Environmental Law for Sustainability* (The Osgoode Readers, 2006) 21, 32; *The United Nations, Plan of Implementation of the World Summit on Sustainable Development*, GA Res 2, UN Doc A/COONF.199/20 (26 August–4 September 2002).

<sup>224</sup> Report of the World Commission on Environment and Development, 42<sup>nd</sup> sess, Agenda item 83(e), UN Doc A/42/427 (4 August 1987).

community groups to alleviate poverty and develop sustainability.<sup>225</sup> Capacity building and human resource development are other strategies suggested in Agenda 21. This includes education and awareness raising programs concerning sustainable development and protection of the atmosphere at the local and national levels. The issue of combating poverty will be examined in Chapter 5.

An integrated approach to the planning and management of land resources as suggested in Agenda 21 Chapter 10 is relevant to the existing problems in Indonesia arising from a sectoral approach to the planning and management of land resources. Agenda 21 suggests that the State should develop policies that ‘take account of environmental, social, demographic and economic issues and that encourage sustainable land use and management of land resources and take the interest of the local population into account’.<sup>226</sup> However, it is argued that the existing policies in Indonesia are based on ‘development at all costs’.<sup>227</sup> For example, the objectives of the Five-Year Development Plan are focused on improving macro-economic indicators. Both central and local government seeks investment and favours large-scale development. As a result, private and corporate interests prevail over social and environmental development, both in the short and long term. To some extent, fires are the result of policies that favour deforestation and land conversion over the conservation of biodiversity.

In combating deforestation, Agenda 21 has identified major weaknesses in the policies, methods and mechanisms adopted to support and develop the ecological, economic, social and cultural roles of trees, forests and forestland. Therefore, Agenda 21 recommends that States should take a holistic approach to establishing effective measures in combating deforestation, including through improved and harmonised policy formulation, planning and programming at the national level; legislative measures and instruments; development patterns; public participation, especially by women and indigenous people; roles of the private sector; administrative structures and mechanisms, including inter-sectoral coordination; decentralisation and responsibility; and an incentive system.<sup>228</sup>

---

<sup>225</sup> UNCED, above n 211.

<sup>226</sup> Ibid.

<sup>227</sup> UNEP, *Sustainable Use of Natural Resources in the Context of Trade Liberalization and Export Growth in Indonesia: A Study on the Use of Economic Instruments in the Pulp and Paper Industry*, < <http://www.unep.ch/etb/publications/indonesia.pdf> > 2.

<sup>228</sup> Ibid [11.1].



Agenda 21 provides guidelines for the conservation and management of natural resources. These include protecting the atmosphere, combating deforestation and an integrated approach to the planning and management of land resources. The implementation of Agenda 21 at the national and local levels, especially by adopting an integrated and holistic approach to the management of land resources and combating of deforestation, is essential and has significant implications for combating forest fires, which lead to transboundary haze pollution.

## **2.11. Conclusion**

International law already provides frameworks and mechanisms for responding to the problem of transboundary haze pollution: the state responsibility principle, which is considered as international customary law, MEAs on atmosphere and biodiversity such as the UNFCCC, CBD and Ramsar Convention, and Agenda 21 can be used as frameworks to combat forest fires at the national level. This thesis argues that the state responsibility principle, MEAs in atmosphere and biodiversity, and Agenda 21 play important roles in assisting nations to take action in preventing and controlling land/forest fires. However, there is a problem in the implementation of the rule of state responsibility, particularly in the ASEAN region, as this principle is constrained by the rule of State sovereignty reflected in the ASEAN Way. In addition, the implementation of MEAs at the national level is problematised by inadequate legal frameworks, financial resources, human resources and capacity building.

There is a gap in the concept of state responsibility, with the lack of a clear definition of state responsibility and liability creating confusion and uncertainty about this concept. Some scholars define state responsibility in broad terms, while others define it narrowly. Some argue that state responsibility implies the obligation of the State to prevent transboundary environmental harm and to pay compensation for damages. However, some international organisations separate the terms ‘state responsibility’ (where there is wrongful conduct of the state) and ‘state liability’ (which results from lawful activities, where no wrongful conduct is involved). Clarity on the definitions of state responsibility and liability is needed. This is because state responsibility may include the duty to prevent and pay compensation for damages. Further, as the term ‘international liability’ in the work of the ILC appears to overlap with state responsibility, it may be

unnecessary to develop separate draft principles. Therefore, to clarify the definition in treaty or agreement, the definition should include the consequences. For example, definition of State responsibility will have consequences that the state should have an obligation of cessation or non-repetition and to pay the reparation to the injured State.<sup>229</sup> While, international liability should then develop into civil liability regime will have consequences that the individual who causes the injury should pay the compensation.

In addressing transboundary environmental harm, States prefer to adopt and implement a prevention and cooperation regime rather than a liability regime. This is shown by the approach of the ASEAN region in the AATHP, which primarily emphasises intensified prevention and cooperation in its approach. A liability regime is conspicuously absent from this Agreement. Improving prevention and cooperation is good. However, this effort should also be combined with liability regime. Thus, this thesis argues that a liability regime should be established in the ASEAN legal framework to improve its effectiveness.

The rule of state responsibility and liability would have a significant impact on the Indonesian legal framework, especially in tightening the due diligence principle to prevent transboundary environmental harm. The examination of the principles of international law in this chapter has shown that, to improve the legal framework in Indonesia such that it can more effectively address transboundary haze pollution, a comprehensive approach is needed. Specifically, this approach would require (1) prevention, including taking all appropriate legislative, administrative, prior authorisation, risk assessment (EIA) and integrated development planning measures; (2) cooperation, including notification, consultation and the exchange of information, research and technical assistance; and (3) a liability regime that implements the polluter pays principle, and adopts the principle of non-discrimination. (4) a stricter law enforcement.

---

<sup>229</sup> *Responsibility of States for Internationally Wrongful Acts*, 56/83, 53rd session, UN Doc A/56/49 (Vol. I)/Corr. 4 (2001) art 30 & 31

## **Chapter 3: ASEAN Regional Legal Framework to Address Transboundary Haze Pollution**

### **3.1. Introduction**

Transboundary haze pollution in the ASEAN region is a shared environmental problem. Therefore, a regional system and framework to secure agreement, to cooperate and to implement specific action programs to address this problem is essential.<sup>1</sup> In addressing shared environmental problems such as transboundary haze pollution, ASEAN is more reliant on prevention and cooperation than on establishing a liability regime or adopting formal legal instruments to protect the environment.<sup>2</sup> This is a reflection of the ASEAN Way, which emphasises non-interference in other's domestic affairs, the use of consensus planning and cooperative programs and a preference for national implementation rather than reliance on a strong region-wide agency or bureaucracy. In addition, ASEAN prefers soft law rather than hard law. There are only two ASEAN hard laws or binding agreements; namely, the ACNNR (1985) and the AATHP (2002).

This chapter mainly focuses on examining the effectiveness of the ASEAN regional legal framework, particularly the AATHP's provisions and other haze-related soft laws and policy, in addressing transboundary haze pollution. To examine the strengths and weaknesses of the ASEAN legal framework, this chapter firstly will examine the regional environmental governance concept and its implications for efforts in addressing haze pollution. Comparison with the European Union (EU) system of environmental governance is also taken into consideration as benchmark to assess strength and weaknesses of AATHP. Finally, the aim of this chapter is to provide a legal foundation for the assessment of the Indonesian legal framework and to examine the coherence between the regional and national framework in addressing haze pollution.

---

<sup>1</sup> Koh Kheng-Lian and Nicholas A. Robinson, 'Strengthening Sustainable Development in Regional Inter-Governmental Governance: Lessons from the 'ASEAN WAY'' (2002) *Singapore Journal of International & Comparative Law* 640, 641.

<sup>2</sup> Ibid.

### 3.2. ASEAN: An Overview

ASEAN was established on 8 August 1976, and it currently comprises the 10 member countries of Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. ASEAN was established to promote cooperation in the region and adopted the principle of the ASEAN Way. The ASEAN Way has advantages and limitations. On the one hand, it has the advantage to maintain stability in the region, while it has limitations in responding to environmental issues. The details aims behind establishing ASEAN, as set out in the ASEAN Declaration (1967) and further elaborated in the ASEAN Charter (2007),<sup>3</sup> were to accelerate economic growth, social progress and cultural development in the region with a spirit of equality and partnership; to promote regional peace and stability in the region; to promote active collaboration and mutual assistance on matters of common interest in the economic, social, cultural, technical, scientific and administrative fields; and to promote sustainable development to ensure the protection of the region's environment and the sustainability of its natural resources.<sup>4</sup>

ASEAN cooperation, which is heavily reliant on diplomacy (State-centric) and does not touch the community level (people-oriented), has invited criticism. It is suggested that, in the early decade of ASEAN's development, NGOs and civil society organisations (CSOs) viewed ASEAN as an 'elitist organization comprising exclusive diplomats and government officials'.<sup>5</sup> Subsequently, in 1997, ASEAN proposed an ambitious goal to achieve an ASEAN Community, stated in the ASEAN Vision 2020 as 'ASEAN as a concert of Southeast Asian nations, outward looking, living in peace, stability and prosperity, bonded together in partnership in dynamic development and in community of caring societies'.<sup>6</sup> In 2003, with the Declaration of ASEAN Concord II (Bali Concord II), ASEAN further affirmed its commitment to establishing an ASEAN Community by 2020. This is to be based on three pillars: an ASEAN political security community, an ASEAN economic community and an ASEAN socio-cultural community. Environmental issues in this regard are included as part of the ASEAN socio-cultural community.

---

<sup>3</sup> *The ASEAN Charter* has transformed ASEAN into a legal and rule-based organisation. Charter of the Association of Southeast Asian Nations, signed 20 November 2007 (entered into force 15 December 2008) <<http://www.asean.org/archive/publications/ASEAN-Charter.pdf>> ('*ASEAN Charter*').

<sup>4</sup> Ibid art 1.

<sup>5</sup> Tay and Lim May-Ann, 'Assessment and Overview: ASEAN and Regional Involvement of Civil Society' (Paper presented at the ASEAN Secretariat (ASEC) Symposium on Methods of Stakeholder Engagement in Regional Organisations, Jakarta, 23–25 November 2009) <<http://library.fes.de/pdf-files/bueros/indonesien/07912.pdf>> 51.

<sup>6</sup> ASEAN, *ASEAN Vision 2020* (signed 15 December 1997) <<http://www.asean.org/asean/asean-summit/item/asean-vision-2020>>.

In addition, the commitment to establish the ASEAN Community is affirmed in the ASEAN Charter, which came into force on 15 December 2008. The ASEAN Charter provides the legal status and institutional framework of ASEAN.<sup>7</sup> It also codifies ASEAN norms, rules and values. The ASEAN Charter was established to develop the concept of a people-oriented ASEAN. It is intended as a shifting from a diplomacy-oriented paradigm to civil society engagement. As suggested in article 1(13), the purpose of ASEAN is to promote a people-oriented ASEAN in which all sectors of society are encouraged to participate in, and benefit from, the process of ASEAN integration and community building.<sup>8</sup> Despite the intention to reform ASEAN to place more focus on civil society engagement, some scholars such as Tay point out that the current form of civil society engagement is in its infancy.<sup>9</sup> Moreover, Collins argues that the ASEAN Charter makes no provision for an institutionalised role for CSOs and provides no space for citizens to have any input into the ASEAN decision-making process.<sup>10</sup>

The implication of ASEAN as a people-oriented organisation for environmental protection is significant. As the ASEAN Eminent Persons Group indicated, the notion of a people-oriented ASEAN means there will be a greater participation of people.<sup>11</sup> The Aarhus Convention<sup>12</sup> suggested that there are three pillars of public participation, including access to information, public participation in decision making and access to justice in environmental matters. Thus, if ASEAN wants to be seen as a people-oriented organisation in the environment sector, these three pillars should be established, even though ASEAN countries are not Parties to this Convention.

### 3.3. Regional Environmental Governance

Regional environmental governance is an important element that must be considered in examining ASEAN's response to, and measures taken to address, transboundary haze pollution. The importance of examining regional environmental governance lies in gaining insight into how

---

<sup>7</sup> ASEAN, *Overview* <<http://www.asean.org/asean/about-asean>>; Tay and Lim, above n 5, 47.

<sup>8</sup> ASEAN Charter, above n 3, art 1(13).

<sup>9</sup> Tay and Lim, above n 5, 51

<sup>10</sup> J Alan Collins, 'A-People Oriented ASEAN: A Door Ajar or Closed for Civil Society Organizations?' (2008) 30 *Contemporary Southeast Asia: A Journal of International and Strategic Affairs* 313, 326.

<sup>11</sup> Ibid.

<sup>12</sup> *Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters*, signed 25 June 1998 (entered into force 30 October 2001) <<http://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf>>. This Convention was ratified by 45 Parties on 23 November 2011, mostly from European countries and Central Asia.

environmental governance is managed at the regional level, to identify the strengths and weaknesses of the current system of regional environmental governance. Regional environmental governance systems can differ markedly in their approach, as can be seen when comparing the regional environmental governance system in ASEAN to that in the EU. The importance of regional environmental governance is particularly because regional frameworks can respond to environmental problems that are too large for single countries to solve, but too small to attract global attention.<sup>13</sup>

### 3.3.1. Definition

It is recognised that regional environmental governance is an ‘emergent concept rather than an established discipline’.<sup>14</sup> This may be because, in much of the environment literature, ‘the concept of region is not mentioned and discussed as the local, the national and the global means for addressing environmental problems’.<sup>15</sup> Balsiger has observed that ‘in the last two decades the attention of scientists, politicians, and the media has focused more and more on the global level of environmental crisis and governance mainly through the concept of global warming and global biodiversity’.<sup>16</sup>

To understand the concept of regional environmental governance, the terms ‘region’, ‘environment’ and ‘governance’ need to be defined. There is no accepted definition of the concept of ‘region’.<sup>17</sup> The main challenge in finding an accepted definition of region is whether it emphasises economic integration, security arrangements or cooperation on the environment. A region is also usually a spatial object. The definition used here is that of Balsiger, who defines a region as ‘a set of contiguous States in the international political economy and security literatures and an area that can span all or part of the territories of more than one State in the environmental politic literature’.<sup>18</sup> The terms ‘environment’ and ‘governance’ are already widely and diversely used concepts. ‘Environment’ refers to the surroundings of an object or the natural environment

---

<sup>13</sup> Jörg Balsiger and Bernard Debarbieux, 'Major Challenges in Regional Environmental Governance Research and Practice' (2011) 14 *Procedia Social and Behavioral Sciences* 1, 1.

<sup>14</sup> Jörg Balsiger and Stacy D VanDeveer, 'Regional Governance and Environmental Problems' in Robert A Denemark (ed), *The International Studies Encyclopedia* (Blackwell Publishing, vol 9, 2010) 6179, 6182.

<sup>15</sup> Balsiger and Debarbieux, above n 13, 2.

<sup>16</sup> Ibid.

<sup>17</sup> Balsiger and VanDeveer, above n 14, 6180.

<sup>18</sup> Ibid 6179.

such as water, air, mountains, biodiversity, and all living and non-living things that occur naturally on earth.<sup>19</sup> 'Governance ... involves more or less formal arrangements adopted for dealing with public issues and involving a wide range of participants, States being only one of them'.<sup>20</sup>

There are many definitions of environmental governance. Kato and Harashima define environmental governance as how societies deal with environmental problems.<sup>21</sup> It is concerned with the interactions among formal and informal institutions and the actors within the society that influence how environmental problems are identified and framed.<sup>22</sup> It is also related to how environmental issues reach the political agenda, how policies are formulated and how programs are implemented.<sup>23</sup> Florano defines environmental governance as:

multilevel interactions (i.e. local, national, international/global) among but not limited to three main actors, *i.e.*, State, market and civil society, which interact with one another, whether in formal and informal ways; in formulating and implementing policies in response to environment related demands and inputs from the society; bound by rules, procedures, processes, and widely accepted behavior, possessing characteristics of good governance for the purpose of attaining environmentally sustainable development.<sup>24</sup>

From this definition, a significant element of environmental governance involves multiple stakeholders (State, civil society and market) in decision making and implementation. The question is whether the formulation of environmental governance, which involves multiple stakeholders, is applied in the ASEAN region. Since decision making in ASEAN only involves the State, participation by civil society and markets in decision making is limited. Probably the aspect that needs to improve in ASEAN is the engagement of civil society and markets in decision making, although to some extent public participation is problematic. The difficulty with public participation in the ASEAN region is that local communities are complex, with divergent,

---

<sup>19</sup> Balsiger and Debarbieux, above n 13, 2; New Age Publishers Website, *Definition of Environment* <<http://www.newagepublishers.com/samplechapter/001773.pdf>>.

<sup>20</sup> Ibid.

<sup>21</sup> Kazu Kato and Yohei Harashima, *Improving Environment Governance in Asia: A Synthesis of Nine Country Studies* (IGES, 2000) 3.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> UNEP, *Definition of Environment Governance*, <[http://www.unep.org/training/programmes/Instructor%20Version/Part\\_2/Activities/Interest\\_Groups/Decision-Making/Core/Def\\_Enviro\\_Governance\\_rev2.pdf](http://www.unep.org/training/programmes/Instructor%20Version/Part_2/Activities/Interest_Groups/Decision-Making/Core/Def_Enviro_Governance_rev2.pdf)>.

dynamic viewpoints.<sup>25</sup> The Mekong River Basin water utilisation is an example of involvement of multiple stakeholders comprising many actors and institutions, including Greater Mekong sub-region actors, grassroots organisations, NGOs, media, businesses, multilateral and bilateral groups, policy research institutes, universities and research and/or advocacy networks.<sup>26</sup> One of the Mekong River Basin initiatives is using a strategy to mobilise grass roots engagement of local stakeholders in decision making, dialogue and consensus to accommodate diverse interests and voices.<sup>27</sup>

### 3.3.2. Integration Model—EU and ASEAN

The most sophisticated and highest level of regional environmental governance is integration. The idea of integration is to promote environmental protection and sustainable development in the whole of the region. ‘Integration’ is defined as the act or process of integrating.<sup>28</sup> The leading model of integration is the EU. Regional integration (economic, social and political) in the EU has implications for the integration of environmental law and policy. Faure refers to integration of environmental law as internal integration, which means the integration of ecological goals and decision making, and the balancing of interests with respect to the permitted amounts and quality of pollutants.<sup>29</sup> In the EU, the intention of integration in environmental matters is indicated in the Lisbon Treaty, which states that “the EU is committed to work for the sustainable development of Europe based on a high level of protection and improvement of the quality of the environment”.<sup>30</sup> Through integration in environmental law in the EU the scope of EU environmental policy making has dramatically increased.<sup>31</sup> This means there has been a shift from environmental decision making at the national Member-State level, to collective decision making at the Union level. The EU has direct authority over Member States in environmental matters.<sup>32</sup>

---

<sup>25</sup>Kevin Woods (ed), 'Transboundary Environmental Governance in the Mekong River Basin: Civil Society Spaces for Transboundary Participation' (Paper presented at Politics of the Commons: Articulating Development and Strengthening Local Practices, Chiang Mai, Thailand, 11–14 July 2003).

<sup>26</sup> Ibid.

<sup>27</sup> Megan Cartin et al, *Mekong River Basin Mobilising Grassroots Engagement and Facilitating High-Level Dialogue for Transboundary Water Management* (IUCN, 2012), 1.

<sup>28</sup> Merriam-Webster, *Definition of Integration* <<http://www.merriam-webster.com/dictionary/integration>>.

<sup>29</sup> Michael G Faure, 'Defining Harmonization, Codification and Integration' (2000) *European Environmental Law Review* 174, 181.

<sup>30</sup> John Vogler, 'European Union Environmental Policy' in Lorraine Elliot and Shaun Breslin (eds), *Comparative Environment Regionalism* (Routledge, 2011) 19, 19.

<sup>31</sup> Balsiger and VanDeveer, above n 14, 6179.

<sup>32</sup> Susan Baker, 'Environmental Governance in the EU' (Working paper, Cardiff University, 2001) <<http://www.cardiff.ac.uk/socsi/resources/wrkgpaper12.pdf>> 3.



The approach to environmental governance and integration in the EU is different to in ASEAN. While the EU established integration through the establishment of a supranational institution, ASEAN retains their values, the ASEAN Way, which means that the sovereignty of ASEAN's Member States remains in those States. Consequently, in the environmental sector, ASEAN has not integrated its environmental policy into the legal framework of the Member States as the EU has done with its integration model.<sup>33</sup> However, the intention of harmonisation of environmental policy in the ASEAN region is already recognised in several declarations and resolutions. The intention of harmonisation is also stated in the ASEAN Socio-cultural Community Council Blue Print, which states that ASEAN aims to harmonise environmental policies and databases on a systematic basis, to support the integration of the environmental, social and economic goals of the region.<sup>34</sup> One of the planned actions is harmonisation in terms of measurement, monitoring and reporting, towards the implementation of 13 priority environmental parameters.<sup>35</sup> However, this harmonisation will not be an easy task. Smets argues that harmonisation of the existing regulations in the region is difficult to implement when countries have different political and legal systems, and different social and environmental objectives.<sup>36</sup>

Many research studies have compared regionalism in the EU and ASEAN. From their perspective, it is an implicit understanding that any successful project on regionalism will finish by looking something like the EU.<sup>37</sup> Elliot and Berslin, in their book 'Comparative Environmental Regionalism', state that the EU model remains a significant example in discussing regionalism.<sup>38</sup> This is because the EU is the most institutionalised regional organisation, and thus provides a solid example of actual regional governance. Its significance is mostly owing to the deliberate and active attempt to promote the EU 'model' of regional governance in other parts of the world.<sup>39</sup> As Romano Prodi states:

---

<sup>33</sup> In Article 288 of the Treaty on the Functioning of the European Union, it is stated that, in a legal basis to exercise the Union's competences, the institutions shall adopt regulations, directives, decisions, recommendations and opinions.

<sup>34</sup> ASEAN Secretariat, *ASEAN Socio Cultural Community Blue Print* (2009) <<http://www.asean.org/archive/5187-19.pdf>>.

<sup>35</sup> Ibid.

<sup>36</sup> H Smets, 'The OECD Approach to the Solution of Transfrontier Pollution' in Jolanta Nowak (ed), *International and Comparative Aspects A Symposium* (The British Institute of International and Comparative Law, 1976) 1, 4.

<sup>37</sup> Lorraine Elliot and Shaun Beslin (eds), *Comparative Environment Regionalism* (Routledge, 2011), 1.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.; Mary Farrell, 'EU Policy Towards Other Regions: Policy Learning in the External Promotion of Regional Integration' (2009) 16(8) *Journal of European Public Policy* 1165, 1166.

Our European model of integration is the most developed in the world. Imperfect though it still is, nevertheless works on a continental scale. Given the necessary institutional reforms, it should continue to work well after enlargement. And I believe we can make convincing case that it would also work globally.<sup>40</sup>

However, comparing the EU and ASEAN model is sometimes unnecessary, as former Secretary General of ASEAN, Severino, states:

Any comparison between Europe as integrated in the European Union on the one hand and Asia, as exemplified by ASEAN, on the other hand is at best gratuitous and at worst odious. In a talk I gave in Brussels a few years ago, I said that comparing ASEAN to the EU reminded me of that despairing lament of Professor Higgins in *My Fair Lady*, 'why can't a woman be more like a man?' This was in reference to the custom of measuring ASEAN's progress in regional integration against the EU's achievements. I said then that this was a bit unfair, since ASEAN was never meant to be like the EU, which has a European Commission that negotiates trade agreements on the behalf of the Union, a supranational authority with powers of enforcement, and which has now produced a draft constitution. On the other hand, ASEAN member States have been from the beginning jealous of and sensitive about their sovereignty and remain so, quite apart from the immense diversity of Southeast Asia.<sup>41</sup>

Conversely, Borzel and Risse point out that the EU perceives itself as a model for effective and legitimate governance to be followed by other regions.<sup>42</sup> ASEAN also attempts to copy the EU model of integration with the adoption of the ASEAN Charter with the goal to establish an ASEAN Community by 2020. A major step to establish an ASEAN Community is the realisation of an economic community through a single market based on the free flow of goods, services, investment, capital and skilled labour, to be completed in 2015,<sup>43</sup> and the adoption of the blue prints of an ASEAN socio-cultural community and ASEAN political security community, for the realisation of the integration of the two others pillars. ASEAN has also turned into a rule- and

---

<sup>40</sup> Romano Prodi, 'Europe and Global Governance' (Speech delivered at the 2<sup>nd</sup> COMECE Congress, Brussels, 31 March 2000).

<sup>41</sup> Rodolfo C Severino, 'Regional Integration in Europe and Asia: Past, Presents and Futures' (Speech delivered at the Joint Conference of INSEAD and the Asia-Europe Foundation Singapore, 7–8 July 2003); Koh Kheng-Lian, 'ASEAN Environmental Protection in Natural Resources and Sustainable Development: Convergence versus Divergence?' (2007) 4 *Macquarie Journal International Comparative Environmental Law* 43, 67.

<sup>42</sup> Tanza A Borzel and Thomas Risse, 'The Rise of (Inter-) Regionalism: The EU as a Model of Regional Integration' (Paper presented at the Annual Convention of the American Political Science Association, Toronto, Canada, 2009) <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1450391&download=yes](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1450391&download=yes)> 1.

<sup>43</sup> Ibid.

rights-based community with a legal personality. Article 3 of the ASEAN Charter confers legal personality on ASEAN, as an intergovernmental organisation.<sup>44</sup>

This integration of social, economic and political issues in the ASEAN region and the goal to establish an ASEAN Community may look like the EU concepts. Integration in the EU is reflected in the objectives of the Treaty on the European Union (1992) in Article B, as follows:

- To promote economic and social progress which is balanced and sustainable, in particular through the creation of an area without internal frontiers, through the strengthening of economic and social cohesion and through the establishment of economic and monetary union, ultimately including a single currency in accordance with the provision of this Treaty;
- To strengthen the protection of the rights and interest of the nationals of its Member States through the introduction of citizenship of the Union;
- To develop close cooperation on justice and home affairs.<sup>45</sup>

Even though the ASEAN idea of integration looks similar to that of the EU, they differ in several respects, particularly with regard to their institutions. While the ASEAN Summit, which is the supreme policymaking body of ASEAN, resembles the European Council and its Presidency, ASEAN remains an intergovernmental organisation, lacking any supranational institution. It is argued that deeper integration in the ASEAN region cannot be successfully achieved without the establishment of a stronger institutional structure with a better enforcement mechanism.<sup>46</sup> Moreover, there is no ASEAN parliament as in the EU, and no ASEAN court of justice. Decisions are taken by consultation and consensus, and ASEAN does not have an independent dispute settlement body. This is very different to the EU institutions, where to carry out the task entrusted to the Community, several institutions were established, including a European Parliament, a Council, a Commission, a Court of Justice and a Court of Auditors, which in the legal context has a supranational character.<sup>47</sup> Supranational institutions can be understood as

---

<sup>44</sup> ASEAN Charter, above n 3, art 3.

<sup>45</sup> 'Treaty on European Union' (1992) 55 *Official Journal of the European Union* C 191, art B. <<http://eur-lex.europa.eu/en/treaties/dat/11992M/htm/11992M.html>>.

<sup>46</sup> Lin Cun Hung, 'ASEAN Charter: Deeper Regional Integration under International Law?' (2010) *Chinese Journal of International Law* 821, 829.

<sup>47</sup> 'Treaty on European Union' (1992) 55 *Official Journal of the European Union* C 191, art 4; Elliot and Beslin, above n 37, 21.

‘regional organs operating at higher level or one level of a multi-level system of governance’.<sup>48</sup> By contrast, ASEAN mostly emphasises cooperation and non-centralised bureaucracy.

### **3.3.3. Regional Environmental Governance—EU and ASEAN**

This research will not compare environmental governance in the EU and ASEAN in detail because the focus of this thesis is on assessing the legal framework in Indonesia. However, to some extent, it is worth looking at how other regions have successfully cooperated on environment to contribute to the improvement of environmental quality in their region. The purpose of this comparison is to identify the strengths and weaknesses of these examples, and to learn from best practice.

#### **3.3.3.1 EU**

Pan-European environmental cooperation has contributed significantly to the impressive improvement of environmental quality in the countries of Central and Eastern Europe.<sup>49</sup> The Environment for Europe (EfE) partnership was established in 1991 at the Dorbis Conference, with coordination and supervision from the United Nations Economic Commission for Europe (UNECE). The key success of this cooperation lay in involving all stakeholders. In particular, the three factors that explain the success of the EfE<sup>50</sup> are openness and participation, networking and flexibility.<sup>51</sup> As part of this multi-stakeholder approach, governments, financial institutions, NGOs and many others, from 56 countries, have shared their experience and strength to improve their environment.<sup>52</sup>

In addition, legally binding environmental agreements developed under the EfE process have both complemented and strengthened the regional environmental protection structure. Five

---

<sup>48</sup> Edward Best, *Supranational Institutions and Regional Integration*

<<http://www.eclac.cl/brasil/noticias/paginas/2/22962/BEST-SUPRANATIONAL%20INSTITUTIONS%20AND%20REGIONAL%20INTEGRATION.pdf>> 2.

<sup>49</sup> Ralf Nordbeck, 'Pan-European Environmental Cooperation Achievements and Limitations of the "Environment for Europe" process' in Lorraine Elliot and Shaun Breslin (eds), *Comparative Environmental Regionalism* (Routledge, 2011) 50.

<sup>50</sup> Environment for Europe process is a unique partnership of member States within the UNECE region, organisation of the United Nation system represented in the region, other intergovernmental organisation, regional environment centres, non-governmental organisation, the private sector and other major group.

<sup>51</sup> Nordbeck, above n 49, 52.

<sup>52</sup> Ibid.

environmental treaties have been negotiated and are now in force: the Convention on Long-Range Transboundary Air Pollution (LRTAP), the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo), the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, the Convention on the Transboundary Effects of Industrial Accidents and the Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters. Besides these five environmental treaties, several other binding Protocols have been implemented, including the Protocol on Strategic Environment Assessment under the Espoo Convention; the Protocol on Civil Liability and Water-related Accidents under the Transboundary Water Convention and the Convention on Industrial Accidents; and the Protocol on Pollutant Release and Transfer Registers under the Aarhus Convention. From these environmental treaties, it is clear that Europe prefers legally binding agreements to address the issues of transboundary pollution. By contrast, ASEAN prefers soft laws or non-binding agreements. As in Europe, transboundary air and water pollution is a common problem at the regional level in Southeast Asia.

### **3.3.3.2 LRTAP**

The LRTAP Convention is considered as the first international legally binding instrument to deal with air pollution on a broad regional basis.<sup>53</sup> This Convention could become a benchmark for ASEAN to observe how Europe deals with the problem of air pollution. Even though the source of air pollution addressed by the LRTAP is different from the source of air pollution for ASEAN, the principles embodied in the LRTAP might be used in the AATHP. In theory based on an analysis conducted by Florano using Pamela Chasek's<sup>54</sup> (Strength Index)<sup>55</sup> and on paper, the

---

<sup>53</sup> UNECE, *The 1979 Geneva Convention on Long-range Transboundary Air Pollution*, opened for signature 13 November 1979 (entered into force 16 March 1983) <[http://www.unece.org/env/lrtap/lrtap\\_h1.html](http://www.unece.org/env/lrtap/lrtap_h1.html)>.

<sup>54</sup> Pamela S Chasek, *Earth Negotiations: Analyzing thirty years of environmental diplomacy*, United Nations University Press, (2001), 234-235.

<sup>55</sup> The strength Index was developed to measure the theoretical strength of a legally binding international Agreement. The list of 12 variables was developed in consultation with academics and diplomats who have been involved in negotiating environmental treaties and literature review. It includes: provision for secretariat/commission, provisions for reporting by parties, provisions for reservations to parts of conventions or annexes, provisions for the secretariat to monitor states compliance, mechanism for dealing with non-compliance, provisions for observations or inspections, dispute settlement mechanism, provisions for amendments, protocol, or annexes, explicit performance standards, liability provisions, financial resources, arrangements, or mechanisms, if the agreement has been in force for 5 years or more, have the parties adopted protocols or amendments? Pamela Chasek rated the Agreement based on its contents, not on its implementation record or evaluation of its effectiveness.

AATHP is much stronger than the LRTAP.<sup>56</sup> However, in the implementation the LRTAP is one of the most effective environmental accords in the world.<sup>57</sup> The AATHP could learn from experience with the LRTAP, particularly with the implementation strategies such as “critical loading”, “best applicable technology”, and “convention multiple protocol approach” to broaden the provision of the Convention. Based on Florano’s analysis both the AATHP and LRTAP do not have provisions for the secretariat to monitor states compliance, mechanisms for dealing with non-compliance, provisions for observations, and liability provisions.<sup>58</sup> The AATHP is stronger because the LTRAP does not allow parties to make reservations on any provision in the Agreement. The AATHP can be amended through the Conference of the Parties and has procedural performance standards which serve as a guidelines and has clearly identified possible financial sources and mechanisms.<sup>59</sup> The LRTAP Convention is an example of what can be achieved through intergovernmental cooperation.<sup>60</sup> The main features of the LRTAP are policy cooperation, scientific cooperation and exchange of information, monitoring and cooperation in the field of training. The original Convention does not contain any binding commitment to undertake concrete measures for the reduction of specific pollutants.<sup>61</sup> Only the obligation to limit air pollution in general is stated in article 2 of the LRTAP: ‘the Contracting Parties shall endeavour to limit and, as far as possible, gradually reduce and prevent air pollution including long-range transboundary air pollution’.<sup>62</sup> However, binding commitments on specific reductions of specific pollutants over specified periods are imposed under eight Protocols to the Convention.<sup>63</sup> As Kiss and Shelton point out, the Convention contains provisions that are concrete and precise.<sup>64</sup>

---

<sup>56</sup> Ebinizer R Florano, Assessment of the “Strengths” of the New ASEAN Agreement on Transboundary Haze Pollution, *International Review for Environmental Strategies*, Vol 4 No 1 (2003), 127, 127.

<sup>57</sup> Ibid, 143.

<sup>58</sup> Ibid, 130.

<sup>59</sup> Ibid, 136.

<sup>60</sup> Ibid.

<sup>61</sup> Christer Agren, 'Long Range Transboundary Air Pollution' in Gabriel Maria Kutting (ed), *Institutional and Infrastructure Resource Issues: Conventions, Treaties and Other Responses to Global Issues* (Encyclopedia of Life Support Systems) <<http://www.eolss.net/Sample-Chapters/C14/E1-44-02-08.pdf>>.

<sup>62</sup> UNECE, above n 53, art 2.

<sup>63</sup> The eight Protocols are as follows:

- 1999 Protocol to Abate Acidification, Eutrophication and Ground Level Ozone (entered into force 17 May 2005);
- 1998 Protocol on Persistent Organic Pollutants (POPs) (entered into force 22 October 2003); 1998 Protocol on Heavy Metals (entered into force 29 December 2003);
- 1994 Protocol on Further Reduction of Sulphur Emissions (entered into force 5 August 1998);
- 1991 Protocol concerning the Control of Nitrogen Oxides of Emissions of Volatile Organic Compounds or their Transboundary Fluxes (entered into force 14 February 1991);

Each of the eight Protocols mentioned above regulates the reduction of a specific set of pollutants. For example, the objective of the Protocol to Abate Acidification, Eutrophication and Ground Level Ozone is to control and reduce emissions of sulphur, nitrogen, oxides, ammonia and volatile organic compounds. This Protocol imposes concrete obligations on each Party to, by 1993, have reduced and maintained the reduction in annual emissions of these pollutants by 30 per cent from 1980 levels, in accordance with the ceiling and timescales specified in Annex II. These concrete obligations are more or less like the approach taken by the Kyoto Protocol on the reduction of emissions of GHGs. In conducting the reduction emissions obligation, the Party should consider technical, scientific and economic criteria, and use the best available techniques to achieve its goals. The Protocol also emphasises exchange of information and technology in article 4.<sup>65</sup> Further, the Protocol contains provision on public awareness. Article 5 states that the Party may make information available to the public with a view to minimising emissions, including information on less polluting fuels, renewable energy and energy efficiency, including their use in transport and in volatile organic compounds in products, including labelling; management options for wastes containing volatile organic compounds that are generated by the public; good agricultural practices to reduce emissions of ammonia; health and environmental effects associated with the pollutants covered by the present Protocol; and steps that individuals and industries may take to help to reduce emissions of pollutants covered by the present Protocol.<sup>66</sup>

The Convention also contains specific provisions on financing, regulated by the Protocol on Long-Term Financing of the Cooperative Program for Monitoring and Evaluation of the Long-Range Transmission of Air Pollutants in Europe (EMEP). The Protocol provides for financing through mandatory contributions made on an annual basis and supplemented by voluntary contributions. Thus, the success of this Convention lies in the combination of its application of cooperation principles (policy and scientific), concrete obligations in Protocols to reduce specific

- 
- 1985 Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at Least 30 Percent (entered into force 2 September 1987);
  - 1984 Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in the Europe (EMEP) (entered into force 28 January 1988).

<sup>64</sup> Alexander Kiss and Dinah Shelton, *International Environmental Law* (Martinus Nijhoff, 1991), 234.

<sup>65</sup> 'Each Party shall create favourable conditions to facilitate the exchange of information, technologies, techniques with the aim of reducing emissions of sulphur, nitrogen oxides, ammonia and volatile organic compounds'.

<sup>66</sup> *Protocol to the 1979 Convention on Long-range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground-Level Ozone* (signed 30 November 1999) art 5.

emissions by specified timescales, and the provision of mandatory financing to support the implementation of the agreement.

### 3.3.3.3 ASEAN

Environmental problems in the ASEAN region are particularly related to natural resources management. These include deforestation, erosion and soil degradation<sup>67</sup> and the increasing pressure of transboundary pollution, including air, water and land pollution. These problems are strongly linked to population pressures and the high priority placed on economic growth in the region.<sup>68</sup> As Vervorn states, the major cause of environmental decline in Southeast Asia has been the 'industrialization of Asia within the world economy'.<sup>69</sup>

ASEAN's concerns about the environment started formally in 1981 with the establishment of the Manila Declaration on the ASEAN Environment, which endorsed the ASEAN Sub-Regional Environmental Programme (ASEP), with six priority areas such as environmental management, nature conservation, terrestrial ecosystems, marine environments, industry and environment, environmental education and training, and environmental information.<sup>70</sup> The Manila Declaration was the first ASEAN Declaration on cooperation on the environment.<sup>71</sup> However, ASEAN had been promoting environment cooperation since 1977 with initiation of ASEP I. The development and refinement of ASEP can be divided into three phases: ASEP I (1978–1982), ASEP II (1983–1987) and ASEP III (1988–1992). Subsequently, cooperation on the environment in ASEAN continued with the establishment of the ASEAN Strategic Plan of Action on the Environment (1994–1998).<sup>72</sup>

---

<sup>67</sup> Ben Boer, Ross Ramsay and Donald Rothwell, *International Environmental Law in the Asia Pacific* (Kluwer Law International, 1998) 225.

<sup>68</sup> Ibid.

<sup>69</sup> Lorraine Elliot, 'ASEAN and Environmental Cooperation: Norms, Interests and Identity' (2003) 16(1) *Pacific Review* 29, 32.

<sup>70</sup> *Manila Declaration* (signed 30 April 1981) <<http://environment.asean.org/manila-declaration-on-the-asean-environment/>>.

<sup>71</sup> Koh Kheng Lian (ed), *ASEAN Environmental Law, Policy and Governance* (World Scientific Publishing 2009 ) vol I.

<sup>72</sup> This Strategic Plan of Action has the following objectives:

- To respond to specific recommendations of Agenda 21 requiring priority of action in ASEAN;
- To introduce policy measures and promote institutional developments that encourage the integration of environment factors in all developmental processes, both at the national and regional levels;



ASEAN's response to environmental challenges has been mainly to call for action and cooperation as embodied in soft law resolutions, declarations, accords and policy. Some specific environmental problems have also resulted in agreements, which are considered as hard law and are more legally binding than soft law documents. Since 1981, several declarations and resolutions have been established in response to environmental concerns. These include the Manila Declaration on ASEAN Environment (1981),<sup>73</sup> the ASEAN Declaration on Heritage Parks and Reserves (1984),<sup>74</sup> the Bangkok Declaration on the ASEAN Environment (1984),<sup>75</sup> the Jakarta Resolution on Sustainable Development (1987),<sup>76</sup> the Kuala Lumpur Accord on Environment and Development (1990),<sup>77</sup> the Singapore Resolution on Environment and Development (1992)<sup>78</sup> and the ASEAN Declaration on Environmental Sustainability (2007).<sup>79</sup> In

- 
- To establish long-term goals on environmental quality, and work towards harmonised environmental quality standards for the ASEAN region;
  - To harmonise policy directions and enhance operational and technical cooperation on environmental matters, and undertake joint actions to address common environmental problems; and
  - To study the implications of AFTA on environment and take steps to integrate sound trade policies with sound environmental policies.

<sup>73</sup> The objective of the Manila Declaration is to ensure the protection of the ASEAN environment and the sustainability of its natural resources. Further, the declaration endorses the adoption of the ASEAN Environmental Programme (ASEP).

<sup>74</sup> The objective of this declaration is to preserve and protect national parks and nature reserve of ASEAN Member Countries.

<sup>75</sup> The objective of this declaration is to implement the ASEAN Development Strategies through an integrated approach and incorporate an environment dimension into development planning. This declaration also sets policy guidelines, which should be adopted in member countries to achieve the objectives of the declaration. These policy guidelines include guidelines in respect to environment management, nature conservation, marine environment, industry, urban environment, environment education and training, environment information systems, and environmental legislation. This declaration also proposes to revise ASEP II.

<sup>76</sup> The objective of this resolution is the adoption of the principle of sustainable development in the ASEAN member countries.

<sup>77</sup> The *Kuala Lumpur Accord*, adopted 19 June 1990, is one of the significant declarations containing the commitment to initiate concrete efforts toward the achievement of sustainable development. One of the initiatives in this accord is to harmonise environmental quality standards, transboundary pollution prevention and abatement practices between member countries, as well as to harmonise the approach towards natural resources management.

<sup>78</sup> This resolution is again concerned with the issue of sustainable development. There are two points agreed in this resolution: to enhance regional cooperation towards sustainable development and to address development and global environmental issues. This resolution also contains a policy urging the member countries to harmonise policy directions and cooperate on transboundary water pollution, forest fires, oil spills and transboundary hazardous waste.

<sup>79</sup> There are three important aspects to this declaration; namely, environmental protection and management, responding to climate change, and conservation of nature resources. One of the commitments in regards to environmental protection and management is to implement measures and enhance international and regional cooperation to combat transboundary environmental pollution, including haze pollution, through among other things, capacity building, enhancing public awareness, strengthening law enforcement, promoting environmentally sustainable practices and combating illegal logging and its associated illegal trade. Further, this declaration calls upon the international community to participate in and contribute to afforestation and reforestation, and to reduce deforestation, forest degradation and forest fires, including by promoting sustainable forest management and development, and combating illegal logging.

addition, two binding Agreements have been established: the ACNNR (1985) and the AATHP (2002).

Most of these resolutions/declarations and agreements place particular emphasis on promoting sustainable development, especially sustainable natural resources managements (NRM), in the ASEAN region. The concept of 'sustainable development' adopted from the Brundtland Report is accepted as a guiding principle for all environmental protection and resource management strategies at the national and regional levels.<sup>80</sup> Currently the focus of environmental cooperation in ASEAN under the ASEAN Socio-cultural Community Blue Print 2009–2015 falls in 10 priority areas, including preventing and managing transboundary haze pollution.<sup>81</sup>

Regional environmental governance in ASEAN is indicated in both soft laws (including the Blue Print) and hard laws by the preference for prevention and cooperation over establishing a liability or compensation regime. Due to the inability of ASEAN to tackle haze pollution, some scholars, including Elliot, argue that regional cooperation has failed, resulting in a crisis of regional identity and credibility within ASEAN.<sup>82</sup> Regional environmental governance in ASEAN is heavily focused on the interests of the elites and the State; it is clearly missing the involvement of civil society. At the regional level in ASEAN, public participation in decision making remains limited. Public participation is essential to assist decision makers to understand and identify public interest concerns while formulating environmental policies.<sup>83</sup> Further, Richardson and Razzaque point out that public participation is particularly significant in the context of

---

<sup>80</sup> Lorraine Elliot, 'ASEAN's Environmental Regime: Pursuing Sustainability in Southeast Asia ' (2000) 10 *Global Environmental Change* 237, 237.

<sup>81</sup> The 10 priority areas are as follows:

1. Addressing global environmental issues
2. Managing and preventing transboundary environmental pollution
  - Haze pollution
  - Hazardous waste
3. Promoting sustainable development through environmental education and public participation
4. Promoting environmentally sound technology
5. Promoting sustainable use of coastal and marine environment
6. Promoting sustainable use of natural resources and biodiversity
7. Promoting sustainable freshwater resources
8. Responding to climate change and addressing its impact
9. Harmonising environmental policies and database
10. Promoting quality living standard in ASEAN cities.

<sup>82</sup> Elliot, above n 63, 29.

<sup>83</sup> Benjamin J Richardson and Stepan Wood (eds), *Environmental Law for Sustainability A Reader* (Hart Publishing, 2006 ), 165.

sustainable development.<sup>84</sup> Elliot argues that the current regional structures of ASEAN have failed to offer an effective channel of communication for and among a wide range of stakeholders, including local communities and sub-national units.<sup>85</sup>

### **3.4. ASEAN Regional Environmental Legal Framework in Addressing Haze Pollution**

ASEAN has already taken several measures in response to transboundary haze–pollution problems. These include soft laws (resolutions and declarations, action plans, guidelines and initiatives) and hard laws (Agreements). However, Simon Tay argues that the effectiveness of these measures suffers from weaknesses in monitoring, assisting and ensuring State compliance.<sup>86</sup> The weakness of the ASEAN framework on environmental governance stems particularly from the lack of concrete binding obligations on Parties. The inherent tension between the ASEAN Way (non-interventionist) versus the need to have firm obligations and implement the transboundary pollution Agreement is the major cause for the lack of progress by ASEAN in addressing transboundary haze pollution particularly the liability regime. The ASEAN Agreement on Transboundary Haze Pollution does not include any punitive measures. Arif Yuwono, deputy Minister of Indonesia, has pointed out that under the Agreement both Singapore and Malaysia as well as other affected countries, agreed not to file civil suits against Indonesia.<sup>87</sup> The measures taken by ASEAN are detailed in the following sub-sections.

#### **3.4.1. Soft Law—Strategies, Action Plans and Policy, Resolutions, Declarations and Accords**

Several resolutions, declarations and accords are concerned with the transboundary pollution issue. The Kuala Lumpur Accord on Environment and Development, for example, calls for

---

<sup>84</sup> Ibid.

<sup>85</sup> Lorraine Elliott, 'ASEAN and Environmental Governance: Rethinking Networked Regionalism in Southeast Asia' (2011) 14 *Procedia Social and Behavioral Sciences* 61, 63.

<sup>86</sup> Simon C Tay, 'South East Asian Forest Fires: Haze over ASEAN and International Environmental Law' (1998) 7(2) *South East Asian Fires* 202, 204.

<sup>87</sup> No Civil Suits for haze pollution: Official, *The Jakarta Post*, 11 August 2014, <<http://www.thejakartapost.com/news/2014/08/11/no-civil-suits-haze-pollution-official.html>>.

efforts towards the harmonisation of transboundary pollution prevention and abatement practices.<sup>88</sup> The Singapore Declaration 1992 also calls for ASEAN Member Countries to enhance environmental cooperation, particularly in issues of transboundary pollution, natural disasters and forest fires, and in addressing the anti-tropical timber campaign.<sup>89</sup> The Singapore Resolution on Environment and Development 1992 confirms efforts to enhance regional cooperation to address transboundary pollution. Significant policies have also been agreed as part of the Singapore Resolution concerning promoting cooperation towards sustainable development. These include agreements to cooperate in setting basic environmental quality standards and regulations at the national level, to work towards harmonised environmental quality standards in the region, and to adopt long-term quantitative goals relating to ambient air quality and river quality.<sup>90</sup> Further, the Singapore Resolution calls for harmonisation of policy directions and sets up operational and technical cooperation on environmental matters such as transboundary air and water pollution, natural disasters, forest fires, oil spills, transboundary movements, disposal of toxic chemicals and hazardous wastes, joint actions to address the anti-tropical timber campaign,<sup>91</sup> and development and implementation of specific programs relating to haze caused by forest fires.

However, none of these resolutions or declarations has been targeted specifically at addressing transboundary haze pollution; they are only concerned with transboundary pollution in general. Moreover, these resolutions and declarations are not binding. They are only recommendations to harmonise policy directions in addressing air pollution in the region. Thus, they are not adequate in addressing the haze pollution problem.

#### ***3.4.1.1 ASEAN Cooperation Plan on Transboundary Pollution 1995<sup>92</sup>***

The ASEAN Cooperation Plan on Transboundary Pollution is a response to the increasing impact of transboundary pollution in the ASEAN region. It particularly covers three program areas:

---

<sup>88</sup> *Kuala Lumpur Accord on Environment and Development* (signed 19 June 1990) <<http://cil.nus.edu.sg/rp/pdf/1990%20The%20Kuala%20Lumpur%20Accord%20on%20Environment%20and%20Development.pdf.pdf>>.

<sup>89</sup> *Singapore Declaration* (signed 28 January 1992) <<http://environment.asean.org/resolution-on-environment-and-development-2/>>.

<sup>90</sup> *Resolution on Environment and Development* (signed 18 February 1992) <<http://environment.asean.org/resolution-on-environment-and-development-2/>>.

<sup>91</sup> Ibid.

<sup>92</sup> ASEAN, *ASEAN Cooperation on Transboundary Haze Pollution* <<http://environment.asean.org/asean-cooperation-on-transboundary-haze-pollution/>>.

transboundary atmospheric pollution, transboundary movement of hazardous wastes and transboundary ship-borne pollution. With regard to transboundary atmospheric pollution, the objectives of this plan are to assess the origin and cause(s) of transboundary atmospheric pollution, and the nature and extent of local and regional haze incidents; to prevent and control sources of haze at both the national and regional levels by applying environmentally sound technologies; to strengthen both national and regional capabilities in the assessment, mitigation and management of haze; and to develop and implement national and regional emergency response plans. Two strategies, one short term and one long term, comprise this action plan. First, the best short-term strategy to address the issue of transboundary atmospheric pollution is to prevent anthropogenic forest fires, especially as arise from land clearing activities in timber and agricultural estates and transmigration projects. As a long-term strategy, zero burning practices are to be promoted. While this action plan appears good on paper because it addresses the root cause of haze pollution problems, there has been a failure in implementation at the national level. To ensure successful implementation, it is imperative to secure public commitment and support.

#### ***3.4.1.2 Regional Haze Action Plan (RHAP)<sup>93</sup>***

The RHAP 1997 contains broad policies and strategies to deal with transboundary pollution. The main objectives of the RHAP are as follows:

- a. To prevent land/forest fires through better management policies and enforcement
- b. To establish operational mechanisms to monitor land/forest fires
- c. To strengthen regional land/forest firefighting capability and other mitigating measures.

Three measures in the RHAP emphasise prevention at the national level, regional monitoring mechanisms, and mitigation and strengthened firefighting capability. In regards to preventive measures, the plan recommends that ASEAN countries develop national plans containing the following elements: air quality management legislation to prohibit open burning, along with strict enforcement; air quality monitoring and reporting regimes; a national task force to develop strategies and response plans to deal with fires and smoke haze; markets for the economic recovery and utilisation of biomass (for example briquette); and appropriate methods for the

---

<sup>93</sup> Hazeactiononline, *Regional Haze Action Plan* <<http://haze.asean.org/info/history-rhap>>.

disposal of agriculture waste. In terms of regional mechanisms, the RHAP aims to strengthen the region's early warning and monitoring system, to provide an alert at the first outbreak of land/forest fires. It also provides for the ASEAN Specialized Meteorological Centre (ASMC) to be further streamlined and strengthened.

This Regional Haze Action Plan can be considered as the embryo of the AATHP. Its influence can be seen in preventive measures also contained in the AATHP, such as to encourage Member States to formulate legislation that prohibits open burning. This action plan can be considered as a significant development of measures in addressing haze pollution. However, a major flaw is that it does not contain any details on implementation. There has also been a failure in implementation at the national level. Due to the failure of this Regional Haze Action Plan, Tay argues that 'ASEAN has to date been unable to supplement failures by Indonesia to address the South East Asian Fires'.<sup>94</sup>

#### ***3.4.1.3 Zero Burning and Controlled Burning Policy***

In response to the land/forest fires that have affected the ASEAN region, a zero burning policy was adopted at the Sixth ASEAN Ministerial Meeting on haze in 1999.<sup>95</sup> The zero burning policy promotes the zero burning techniques applied by plantation companies and timber concessionaries in the region. The zero burning policy is not intended for smallholders or local communities who do not have the resources to implement it. The zero burning policy is defined as 'a method of land clearing whereby the tree stand, either logged over secondary forest or/and an old area of plantation tree crops such as oil palm are felled, shredded, stacked and left in situ to decompose naturally'.<sup>96</sup> Zero burning is defined in the ASEAN Agreement on Transboundary Haze Pollution as a policy that prohibits open burning but may allow some forms of controlled burning.<sup>97</sup> Indonesia has already adopted this zero burning policy into domestic legislation with Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires. In this legislation, all people, including commercial

---

<sup>94</sup> James Cotton, 'ASEAN and the Southeast Asian "Haze": Challenging the Prevailing Modes of Regional Engagement' (Working paper, Australian National University, 1993) 17  
<[http://ips.cap.anu.edu.au/ir/pubs/work\\_papers/99-3.pdf](http://ips.cap.anu.edu.au/ir/pubs/work_papers/99-3.pdf)>.

<sup>95</sup> ASEAN, *Controlled Burning* <[haze.asean.org/docs/1094633658/Controlled+Burning+01.pdf](http://haze.asean.org/docs/1094633658/Controlled+Burning+01.pdf)>.

<sup>96</sup> ASEAN Secretariat, *Guidelines for the Implementation of the ASEAN Policy on Zero Burning* (ASEAN, 2003).

<sup>97</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003), art 1 (14).

companies, smallholders and local peoples, are prohibited from carrying out burning activities in forestland. However, it is difficult to implement a zero burning policy for smallholders, as fire is the cheapest method of clearing land, with no viable alternatives to these practices. Moreover, lack of enforcement has made this regulation ineffective.

The difficulty in implementing a zero burning policy for smallholders has already been noted by Member States of ASEAN. Thus, the ASEAN Environment Ministers, at the tenth ASEAN Ministerial meeting on haze in March 2003, accepted the need to establish guidelines for control burning.<sup>98</sup> 'Control burning' is defined as the controlled application of fire to fuels in either a natural or modified state, under specified environmental conditions that allow fire to be confined to a predetermined area and at the same time produce the intensity required to achieve predetermined management objectives.<sup>99</sup> 'Controlled burning' is defined in the AATHP as any fire, combustion or smouldering that occurs in the open air, and which is controlled by national laws, rules, regulations or guidelines and does not cause fire outbreaks or transboundary haze pollution.<sup>100</sup>

A zero burning policy seems to be the ideal measure to resolve the problem of land/forest fires and haze pollution. However, until now, it has been ineffective in reducing fires in Southeast Asia.<sup>101</sup> The problem is that there has been a failure in implementation at the national level. Fires are a cheap means by which the community and companies can clear land for plantations, with no alternative means being comparable in cost. Some studies suggest that a total ban on the use of fire for land preparation for plantation development is currently impractical, and unnecessary in many situations.<sup>102</sup> Further, Tacconi argues that ASEAN should focus particularly on controlling peat fires rather than continuing to strive for a zero burning regime.<sup>103</sup>

---

<sup>98</sup> ASEAN, above n 95.

<sup>99</sup> ASEAN, *Guidelines for the Implementation of Controlled Burning Practices* (ASEAN, Indonesia, 2004) 1.

<sup>100</sup> ASEAN Agreement on Transboundary Haze Pollution, opened for signature 10 June 2002 (entered into force 25 November 2003), art 1(3).

<sup>101</sup> FAO, *Fire Management—Global Assessment 2006: A Thematic Study Prepared in the Framework of the Global Forest Resource Assessment 2005* (FAO, 2007) <<ftp://ftp.fao.org/docrep/fao/009/a0969e/a0969e00.pdf>> 94.

<sup>102</sup> S Suyanto et al, 'The Role of Fire in Changing Land Use and Livelihood in Riau Sumatera' (2004) 9(1) *Ecology and Society* <<http://www.ecologyandsociety.org/vol9/iss1/art15>> 15.

<sup>103</sup> Luca Tacconi, Frank Jotzo and R Quentin Garfion, 'Local Causes, Regional Cooperation and Global Financing for Environmental Problems: The Case of Southeast Asian Haze Pollution' (Australian National University, Economic and Environment Networking paper, 20 December 2006) <[http://een.anu.edu.au/download\\_files/een0613.pdf](http://een.anu.edu.au/download_files/een0613.pdf)> 4.

#### 3.4.1.4 ASEAN Peatland Management Initiative (APMI)

The recognition of the importance of addressing peatland fires and the need for cooperation had already emerged on the agenda for discussion at the Thirteenth ASEAN Senior Officials on the Environment Haze Technical Task Force Meeting and the Seventh ASEAN Ministerial Meeting on Haze in July 1999. ASEAN recognised that peatland fires were a significant problem that threatened human health, food production and the global climate, and that regional action was required. The APMI was adopted by the Twentieth Meeting of the ASEAN Senior Officials on the Environment Haze Technical Task Force, held in Manila on 27–28 February 2003. The APMI is a mechanism by which the ASEAN Member Countries, through the principle of ASEAN cooperation, can collaborate among themselves or with other international institutions to address the issue of peatland management towards achieving local support and sustaining livelihood options to reduce transboundary haze pollution.<sup>104</sup> In simple terms, the APMI is a cooperation platform in promoting peatland conservation and sustainable management. The detailed objectives of APMI are as follows:

- To enhance understanding and build capacity on peatland management issues in the region;
- To reduce the incidence of peatland fires and associated haze;
- To support national and local level implementation activities on peatland management and fire prevention;
- To develop a regional strategy and cooperation mechanism to promote sustainable peatland management.<sup>105</sup>

The activities of the APMI are endorsed by the Haze Technical Task Force, who particularly support capacity building through the establishment of workshops, training programs and awareness programs; the reduction of peatland fires and associated haze by conducting pilot projects on fire prevention at the provincial and district level; encouraging community involvement in peatland rehabilitation using pilot projects and national activities; and developing a regional strategy to prevent peat fires.<sup>106</sup>

---

<sup>104</sup> ASEAN, *ASEAN Peatland Management Initiative* (ASEAN, Indonesia 2005)

<<http://www.aseanbiodiversity.info/Abstract/53002850.pdf>> 1.

<sup>105</sup> ASEAN Secretariat, *ASEAN Peatland Management Initiative* (ASEAN, 2005), 1.

<sup>106</sup> Ibid.



APMI is a contribution to the implementation of the AATHP. However, addressing and controlling peatland fires are not explicitly mentioned in the AATHP. The Agreement uses the general term of ‘controlling’ land/forest fires, and does not refer to peatland management or controlling peatland fires at all. The initiative of peatland management is thus dealt with separately from the AATHP.

It is important to develop a cooperation platform in promoting peatland conservation and sustainable management. However, ASEAN should also consider developing legislation and policy specifically regulating peatland in the ASEAN region, especially since no ASEAN Member Countries have specific laws or policies that directly regulate peatland.<sup>107</sup> The issue of peatland is related to climate change. ASEAN could extend the AATHP through a Protocol that deals specifically with peatland.

#### ***3.4.1.5 ASEAN Peatland Management Strategy (APMS)***

The APMS was designed as guidance for actions to support the management of peatland in the ASEAN region for the period 2006–2020. The APMS was not intended as a specific regional legal framework for policies of peatland management and conservation. In fact, in the ASEAN Member Countries, there are no specific laws or policies directly related to peatland. In addition, inappropriate and conflicting policies create unsustainable peatland management in the region. Thus, it is argued that there should be a regional legal framework on peatland management and conservation. In particular, ASEAN should provide the legal framework to clarify the definition and classification of peatland, to minimise confusion in managing peatland. This lack of consensus on what peatland is a major issue in managing peatland, and leads to problems in clearly delineating peatland and developing common management guidelines.<sup>108</sup>

The APMS is a framework action developed by the ASEAN Secretariat with the assistance of the Global Environment Center to provide a formal cooperation scheme to solve peatland-related problems in the region, such as peatland fires and transboundary haze pollution. Other issues stemming from peatland fires addressed by the framework are loss of community livelihood, over-exploitation of peatland and its resources, drainage problems, loss of biodiversity, carbon

---

<sup>107</sup> Ibid.

<sup>108</sup> Ibid.

losses, lack of knowledge regarding peatland management and inappropriate management policy.<sup>109</sup> The strategy primarily focuses on enhancing awareness and knowledge on peatland, addressing transboundary haze pollution and environmental degradation, promoting sustainable management of peatland, and enhancing and promoting collective regional cooperation on peatland issues.<sup>110</sup> There are two levels of action conducted at the regional and national level. Several activities are proposed as strategy action plans, including undertaking an inventory and assessment to determine the extent and status of peatland in the ASEAN region and the problems and constraints faced in peatland management. Further to this, it is proposed to conduct research; awareness and capacity building; information sharing; fire prevention, control and monitoring; integrated management; and restoration and rehabilitation of peatland.<sup>111</sup>

### **3.4.2. Hard Law—Binding Agreements**

#### ***3.4.2.1 Agreement on Conservation of Nature and Natural Resources (ACNNR)***<sup>112</sup>

This Agreement was established in 1985, long before the disastrous forest fires and resulting haze pollution of 1997–1998. The objective of the Agreement on Conservation of Nature and Natural Resources (ACNNR) was to conserve and manage living resources. However, the ACNNR already imposes several obligations to minimise trans-frontier environmental pollution, and adopts Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration. Article 20(1) states that Contracting Parties have, in accordance with generally accepted principles of international law, the responsibility of ensuring that activities under their jurisdiction or control do not cause damage to the environment or the natural resources under the jurisdiction of other Contracting Parties or of areas beyond the limits of national jurisdiction.<sup>113</sup> To fulfil this responsibility, article 20(2) states that the Contracting Parties shall avoid to the maximum extent possible and reduce to the minimum extent possible adverse effects of activities under their jurisdiction or control, including effects on natural resources beyond the limits of their national jurisdiction. The obligations imposed in this Agreement to minimise the adverse effects of transboundary pollution are as follows:

---

<sup>109</sup> Ibid.

<sup>110</sup> Ibid.

<sup>111</sup> Ibid.

<sup>112</sup> *Agreement on the Conservation of Nature and Natural Resources*, signed 9 July 1985 (entered into force, 16 November 1997).

<sup>113</sup> Ibid art 20(1).

- To undertake environmental impact assessment before engaging in any activity that may create a risk of significantly affecting the environment or the natural resources of another Contracting Party or the environment or natural resources beyond national jurisdiction.
- To notify in advance the other Contracting Party or Contracting Parties concerned of pertinent details of plans to initiate, or make a change in, activities which can reasonably be expected to have significant effects beyond the limits of national jurisdiction.
- To enter into consultation concerning the above mentioned plans upon request of the Contracting Party or Contracting Parties in question.
- To inform the Contracting Party or Contracting Parties in question of emergency situations or sudden grave natural events which may have repercussions beyond national jurisdiction.<sup>114</sup>

In addition, the Contracting Parties are required to refrain from conducting activities that might adversely affect, directly or indirectly, wildlife habitats situated beyond the limits of their national jurisdiction, especially where these habitats house species listed in Appendix I of ACNNR, or which are located in protected areas.

The ACNNR contains obligations, stated in article 6(2)(a), to prevent bush and forest fires. The ACNNR also details international principles relating to transboundary pollution, such as the duty to conduct an EIA before engaging in any activity that may create a risk to the environment beyond national jurisdiction, the duty of notification and consultation in advance of any initiatives or plans that may create an environmental impact beyond national jurisdiction, and the duty to inform in an emergency. These principles are absent from the AATHP. The Agreement formally entered into force on 16 November 1997. Cambodia, Indonesia, Myanmar, Philippines, Thailand and Vietnam are all parties to the Agreement.

#### **3.4.2.2 ASEAN Agreement on Transboundary Haze Pollution (AATHP)<sup>115</sup>**

The culmination of the ASEAN response to the haze pollution problem is the establishment of the AATHP. This Agreement was signed on 10 June 2002 in Kuala Lumpur and entered into force on 25 November 2003. So far, only nine countries have ratified the AATHP. Until recently,

---

<sup>114</sup> Ibid art 20.

<sup>115</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003).

only Indonesia had not ratified the Agreement. The Indonesian government was expected to ratify the Agreement but, the exact time of ratification was not clear as Indonesia always promised to ratify every time major forest fires affected neighbouring countries. Previously, Indonesia was not ready to be bound by the obligations in the Agreement. The Indonesian parliament was to blame for delays in ratifying the Agreement.<sup>116</sup> The parliament rejected ratification of the Agreement in 2008. The reasons given by the parliament varied from unreadiness, lack of enforcement, and lack of coordination among Indonesian government institutions in implementing the Agreement, to the issue of sovereignty. The ratification of the AATHP is seen as an encroachment on State sovereignty. For Indonesia, the cost of ratifying and implementing the Agreement would be much greater than the benefits gained, such as from the ASEAN haze fund and other technical assistance.<sup>117</sup> The parliament revealed that the delay in ratifying the agreement was a type of bargaining power of Indonesia toward illegal fishing, illegal logging, illegal sand mining, and illegal hazardous waste dumping conducted by Singapore and Malaysia.<sup>118</sup> In addition, Greenpeace has pointed out that Indonesia's reluctance to ratify the Agreement was because it would affect the expansion plans of palm oil in the country.<sup>119</sup> However, after the worst forest fires in June 2013, Indonesia agreed to ratify the Agreement in early 2014. The Ministry of Environment proposed the agenda for ratification to Parliament in early January 2014. Finally, the House of Representatives Commission VII agreed to a draft law on ratification of the Agreement on 3 September 2014 and endorsed the ratification at a plenary meeting on Tuesday 16 September 2014.<sup>120</sup> Ratification by Indonesia will mean that all ASEAN Member States are bound by the Agreement. Thus, it seems that progress is finally being made towards implementation of the AATHP. With the ratification, the position of Indonesia towards the Agreement is clear that they want to co-operate in addressing haze pollution but they do not want their sovereignty interfered with by other countries.

---

<sup>116</sup> Ibid.

<sup>117</sup> Paruedee Nguitragool, *Environment Cooperation in Southeast Asia ASEAN's Regime for Transboundary Haze Pollution* (Routledge, 2011) 84.

<sup>118</sup> Nur Aini, DPR Tunda Ratifikasi Perjanjian Kabut Asap, *Tempo*, 15 October 2006, <<http://www.tempo.co/read/news/2006/10/15/05586097/DPR-Tunda-Ratifikasi-Perjanjian-Kabut-Asap>>

<sup>119</sup> Martin Abbugao, ASEAN Urges Indonesia to Ratify Haze Pact, *Foxnews*, June 30, 2013, <<http://www.foxnews.com/world/2013/06/30/asean-urges-indonesia-to-ratify-haze-pact>>.

<sup>120</sup> DPR, Komisi VII Setujui RUU Persetujuan ASEAN tentang Pencemaran Asap Lintas Batas, 3 September 2014, <<http://www.dpr.go.id/id/berita/komisi7/2014/sep/03/8652/komisi-vii-dpr-setujui-ruu-persetujuan-asean-tentang-pencemaran-asap-lintas-batas>; Margaret S Artonang, RI Ratifies Haze Treaty, *The Jakarta Post*, 17 September 2014, <<http://www.thejakartapost.com/news/2014/09/17/ri-ratifies-haze-treaty.html>>.

The AATHP invites praise and criticism. The criticism is particularly due to the demonstrated ineffectiveness of the Agreement in tackling the haze pollution problem. Nguitragool argues that ‘the substance of the Agreement is shallow considering many regional and national mechanisms such as prevention, monitoring and response and the national action plans have already been established or developed in RHAP’.<sup>121</sup> Moreover, the definition of the haze pollution problem used in the AATHP does not include the underlying causes of land/forest fires, such as poverty, corruption and land rights conflicts.<sup>122</sup> Despite this criticism, this Agreement has been praised by the UNEP as a global role model for tackling transboundary issues, particularly haze. This Agreement is considered as the first legally binding ASEAN regional environmental accord.<sup>123</sup> The main features of the Agreement emphasise prevention, monitoring and technical cooperation. The main objective of the Agreement is to prevent and monitor transboundary haze pollution resulting from land/or forest fires. The details of this objective are contained in article 2 as follows:

The objective of this agreement is to prevent and monitor transboundary haze pollution as a result of land and/or forest fires which should be mitigated, through concerted national efforts and intensified regional and international cooperation. This should be pursued in the overall context of sustainable development and in accordance with the provisions of this Agreement.<sup>124</sup>

Several significant goals can be discerned in the provision above; namely, the prevention and monitoring of haze pollution, mitigation, national effort, intensified regional and international cooperation and sustainable development. It is clear from this provision that the prevention and mitigation effort is to be conducted through several layers of national, regional and international cooperation. Clearly, the haze pollution problem is complex and cannot be tackled solely by national and regional measures; it also requires international cooperation. Further, the above provision emphasises sustainable development as the goal to be achieved by the Agreement. The approach taken in this provision reflects the Member States’ preference for promoting cooperation and sustainable development in the region. As Tay argues, the task for environmental

---

<sup>121</sup> Ibid 72.

<sup>122</sup> Ibid 83.

<sup>123</sup> ASEAN, *ASEAN Agreement on Transboundary Haze Pollution* <<http://haze.asean.org/hazeagreement/>>.

<sup>124</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art2.

law and policy making in response to the Southeast Asian forest fires is not simply firefighting, but is rather the search for sustainable development.<sup>125</sup>

### ***3.4.2.3 International Principles Adopted***

Five international environmental law principles are explicitly adopted in the AATHP. It is suggested by Nguitragool that these principles reflect global and regional principles, as well as the fundamental rectitude upon which regional cooperation is based.<sup>126</sup> These principles are incorporated in article 3 of the Agreement as follows:

1. Principle of no harm or state responsibility not to cause environmental harm  
The Parties have in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment and harm to human health of other States or of areas beyond the limits of national jurisdiction.<sup>127</sup>
2. The Principle of good neighborliness<sup>128</sup> and the duty to cooperate and the Principle of common but differentiated responsibility  
The Parties shall, in spirit of solidarity and partnership and in accordance with their respective needs, capabilities and situations, strengthen cooperation and coordination to prevent and monitor transboundary haze pollution as a result of land and/or forest fires which should be mitigated.<sup>129</sup>
3. The Precautionary principle  
The Parties should take precautionary measures to anticipate, prevent and monitor transboundary haze pollution as a result of land/or forest fires which should be mitigated, to minimize its adverse effects. Where there are threats of serious irreversible damage from transboundary haze

---

<sup>125</sup> Tay, above n 86, 206.

<sup>126</sup> Nguitragool, above n 117, 74.

<sup>127</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 3(1).

<sup>128</sup> The customary principle of good neighbourliness was considered as an adequate legal basis both for intergovernmental arrangements and for granting private remedies to individual pollution victims across national boundaries.

<sup>129</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 3(2).

pollution, even without full scientific certainty, precautionary measures shall be taken by Parties concerned.<sup>130</sup>

4. Principle of sustainable development  
The Parties should manage and use their natural resources, including forest and land resources, in an ecologically sound and sustainable manner.<sup>131</sup>
5. Principle of Public Participation  
The parties in addressing transboundary haze pollution should involve, as appropriate, all stakeholders, including local communities, nongovernmental organizations, farmers and private enterprises.<sup>132</sup>

A significant development in the AATHP is the adoption of the principle of public participation. This principle is important particularly because the concept of environmental governance should include all stakeholders including state, society and market. Public participation in broader terms includes substantive rights such as the right to life and the right to health and well-being, the right to a healthy environment, the right to use and enjoy property, and the right to self-determination, cultural expression and religion. The principle of public participation in the narrowest terms involves procedural rights, including access to environmental information, access to justice and participation in environmental decision making. These rights have been adopted in the Aarhus Convention.

#### ***3.4.2.4 Obligations of the Agreement (Prevention, Monitoring, Assessment, Preparedness and National Emergency Response)***

Several obligations contained in the AATHP particularly need implementation at the national level, from general obligations to specific prevention, monitoring and control measures. Article 4 prescribes general obligations for the Parties to the Agreement. These general obligations appear to be derived from principles of international law. These include the duty to cooperate, duty to notify and consult, and duty to prevent by taking legislative, administrative and/or other measures to implement the obligations under this Agreement. The details of the general obligations are as follows:

---

<sup>130</sup> Ibid art 3(3).

<sup>131</sup> Ibid art 4(4).

<sup>132</sup> Ibid art 3(5).

1. Cooperate in developing and implementing measures to prevent and monitor transboundary haze pollution as a result of land and/or forest fires which should be mitigated, and to control sources of fires, including by the identification of fires, development of monitoring, assessment and early warning systems, exchange information and technology and the provision of mutual assistance.
2. When the transboundary haze pollution originates from within their territories, respond promptly to a request for relevant information or consultations sought by a State or States that are or may be affected by such transboundary haze pollution, with a view to minimizing the consequences of the transboundary haze pollution.
3. Take legislative, administrative and/or other measures to implement their obligations under this Agreement.<sup>133</sup>

In addition to these general obligations, the AATHP requires each Party to take monitoring and prevention action, as stated in articles 7 and 9, respectively. For monitoring, each Party is required to act appropriately to monitor all fire prone areas, all land/forest fires, the environmental conditions conducive to land/forest fires, and haze pollution arising from land/forest fires. In addition, each Party is required to designate one or more bodies to function as a National Monitoring Center. In Indonesia, several bodies with the capacity to monitor land/forest fires through satellite technology have been designated as part of the National Monitoring System. These include the Ministry of Forestry, the Institute of Aeronautics and Space (LAPAN) and the Ministry of Environment. However, there are problems in mobilising the data from this monitoring system into action to quench land/forest fires due to problems with authority and jurisdiction in the areas in which the fires are likely to be located. Foreseeing this, article 6 of the AATHP also suggests that each Party designate one or more competent authorities authorised to act as an administrative functionary to the Agreement.

The prevention actions imposed by the AATHP are as follows:

1. Developing and implementing legislative and other regulatory measures, as well as programmes and strategies to promote zero burning policy to deal with land and /or forest fires resulting in transboundary haze pollution;
2. Developing other appropriate policy to curb activities that may lead to land and/or forest fires;
3. Identifying and monitoring areas prone to occurrence of land and or forest fires;
4. Strengthening local fire management and firefighting capability and coordination to prevent the occurrence of land and/or forest fires;

---

<sup>133</sup> Ibid art 4.



5. Promoting public education and awareness building campaigns and strengthening community participation in fire management to prevent land and or/forest fires and haze pollution arising from such fires;
6. Promoting and utilizing indigenous knowledge and practices in fire prevention and management;
7. Ensuring that legislative, administrative and/or other relevant measures are taken to control open burning and to prevent land clearing using fire.<sup>134</sup>

These prevention measures should be implemented at the national level. They are quite comprehensive and include implementing and developing legislation and policy to promote zero burning practices, promoting education and awareness, and utilising indigenous knowledge. The prevention measures above are a key element of the AATHP. The success of the AATHP relies on the successful implementation of prevention measures at the national level of Contracting Parties. However, the provisions of the agreement are silent on the importance of strengthening enforcement and penalties at the national level. Generally, failure to enforce legislation is the main problem in successfully implementing a zero burning policy.

#### ***3.4.2.5 Cooperation Provisions***

The AATHP emphasises prevention and cooperation in its approach. Cooperation is particularly conducted with coordination from the ASEAN Center. Under the Agreement, the establishment of an ASEAN Center to facilitate cooperation and coordination among the Parties in managing the effects of land/forest fires was recommended. However, until now, this ASEAN Center has not been established. In a press release in Kuala Lumpur in 2002, the ASEAN Ministers agreed to set up an interim arrangement using existing institutions.<sup>135</sup> The ASEAN Secretariat and the ASMC have acted as a coordinating institution since the AATHP came into force in November 2003. However, it is suggested that the role of the ASEAN Center provided by the Agreement is to act as a backup institution, since article 5(2) provides that the ASEAN Center should work on the basis that the national authority will act first to put out the fires. When the national authority declares an emergency, it may make a request to the ASEAN Center to provide assistance.

---

<sup>134</sup> Ibid art 9.

<sup>135</sup> ASEAN, 'The ASEAN Agreement on Transboundary Haze Pollution' (Press Release, 11 June 2002) <[http://www.fire.uni-freiburg.de/iffn/iffn\\_31/14-IFFN-31-ASEAN-Agreement-2.pdf](http://www.fire.uni-freiburg.de/iffn/iffn_31/14-IFFN-31-ASEAN-Agreement-2.pdf)>.

Article 10 also provides for cooperation in preparedness measures. It is suggested in article 10 that the Parties, jointly or individually, develop strategies and response plans to identify, manage and control risks to human health and the environment arising from land/forest fires and related haze pollution arising from such fires. Further, article 12 provides for a Joint Emergency Response. It states that if a Party needs assistance in the event of land/forest fires or haze pollution arising from such fires within its territory, it may request it from any other Party, directly or through the ASEAN Center, or, where appropriate, from other States or international organisations.<sup>136</sup>

The emphasis on cooperation, and facilitation of cooperation by the ASEAN Center, is also seen in Part III on technical cooperation and scientific research. Article 16 on technical cooperation states that to increase the preparedness for and to mitigate the risks to human health and environment arising from land/forest fires or the haze pollution arising from such fires, the Parties shall undertake technical cooperation in this field, including:

- Facilitate mobilization of appropriate resources within and outside the Parties;
- Promote the standardization of the reporting format of data and information;
- Promote the exchange of relevant information, expertise, technology, techniques, know how;
- Provide or make arrangements for relevant training, education, and awareness—raising campaigns, in particular relating to the promotion of zero burning practices and the impact of haze pollution on human health and the environment;
- Develop or establish techniques on controlled burning particularly for shifting cultivators and small farmers, and to exchange and share experiences on controlled burning practices;
- Facilitate exchange and experiences and relevant information among enforcement authorities of the Parties;
- Promote the development of markets for utilization of biomass and appropriate methods for disposal of agricultural wastes;
- Develop training programmes for firefighters and trainers to be trained at local, national, and regional levels;
- Strengthen and enhance the technical capacity of the Parties to implement this Agreement.<sup>137</sup>

This focus on technical cooperation and scientific research as a preferred action needs to be developed and intensified by the Indonesian government in combating forest fires in the future. The trend towards technical cooperation is shown by the signing of a memorandum of

---

<sup>136</sup> Ibid art 12(1).

<sup>137</sup> Ibid art 16.

understanding between Indonesian and Malaysia in Jakarta on 3 June 2008 and between Indonesia and Singapore on collaboration in preventive measures to deal with land/forest fires. Activities to be implemented under this collaboration, particularly on pilot projects, are mostly directed towards Riau and Jambi, where Indonesia's land/forest fires are usually located. Examples of these activities include training workshops on zero burning techniques for community leaders and farmers, training for community firefighting, installation of air quality monitoring stations, fire and haze prevention through rehabilitation and improved management of peatland, alternative livelihood options and promoting zero burning techniques through composting methods.<sup>138</sup> The collaboration between Singapore and Indonesia particularly is a result of the Sub-regional Ministerial Steering Committee (MSC) on Transboundary Haze Pollution, held in November 2006. At this meeting, Indonesia offered its Plan of Action in dealing with transboundary haze pollution, which emphasises tackling haze pollution at the provincial and district levels. Indonesia invited ASEAN Member Countries to collaborate on this Plan, and Singapore offered to do so with Jambi Province to develop a Master Plan over two years to enhance the capacity of local people to deal with land/forest fires.

#### **3.4.2.6 Financial Arrangements**

To support the implementation of the AATHP, the ASEAN Transboundary Haze Pollution Control Fund was established, with contributions being on a voluntary basis. A provision on financial arrangements is important as an incentive or mechanism for improving implementation and compliance. In implementing the AATHP, the State Parties can incur significant direct and indirect costs.<sup>139</sup> The direct costs include, for example, the expenditure necessary to administer and enforce new laws, while the indirect costs include economic and social opportunities foregone or deferred due to the policy changes.<sup>140</sup> Lack of financial, administrative or technical capacities often becomes a barrier for parties to comply with the Agreement,<sup>141</sup> such that financial cooperation is a critical element of national capacity and a positive compliance

---

<sup>138</sup> Haze Online, *Indonesia-Malaysia Collaboration to Deal with the Land and Forest Fires in Riau Province* <<http://haze.asean.org/info/indo-my>>.

<sup>139</sup> David Hunter, James Salzman and Durwood Zaelke, *International Environmental Law and Policy* (Foundation Press, 2nd ed, 2002), 467.

<sup>140</sup> Ibid 467.

<sup>141</sup> Ibid.

measure.<sup>142</sup> The establishment of this Fund reflects a compromise in the negotiating process, where less economically developed Member States such as Laos and Cambodia were not ready for a compulsory contribution. Further, a mandatory contribution was seen as unfair since the poorer members are less affected by the haze.<sup>143</sup> Tan argues that the richer ASEAN countries, such as Malaysia, Singapore and Brunei, are not likely to be willing to contribute to the ASEAN Transboundary Haze Pollution Control Fund.<sup>144</sup> However, the Fund is not solely funded by the Member States, and funding may come from other sources, including relevant international organisations and the international donor community. Liana Bartasida has always considered that that it is Indonesia's interests to ratify the AATHP, particularly because Indonesia stands to obtain a financial advantage.<sup>145</sup>

#### ***3.4.2.7 Settlement of Disputes***

Most binding environmental instruments contain one or more formal dispute settlement procedures.<sup>146</sup> These procedures are also found in the AATHP. However, the dispute resolution mechanism contained in this Agreement is limited only to consultation and negotiation as stated in article 27: 'any dispute between Parties as to the interpretation or application of, or compliance with, this Agreement or any Protocol thereto, shall be settled amicably by consultation or negotiation'.<sup>147</sup> There are limited options for dispute settlement consultation or negotiation. The dispute resolution mechanism in the AATHP is consistent with the ASEAN Way. Acharya describes the ASEAN Way as:

a decision making process that favours a high degree of consultation and consensus. It is a claim about the process of regional cooperation and interaction based on discretion, informality, consensus building and non-confrontational bargaining styles which are often contrasted with the adversarial posturing,

---

<sup>142</sup> Ibid.

<sup>143</sup> Nguitragool, above n 117, 85.

<sup>144</sup> Alan Khee-Jin Tan, 'The ASEAN Agreement on Transboundary Haze Pollution: Prospects for Compliance and Effectiveness in Post-Suharto' (2005) 13 *New York University Environmental Law Journal* 647, 668.

<sup>145</sup> 'Ratifikasi Perjanjian ASEAN Soal Asap Untungkan Indonesia', *ANTARA News* (Jakarta) <<http://www.antaranews.com/print/47664/>>.

<sup>146</sup> Hunter et al, above n 139, 490.

<sup>147</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 27.

majority vote and other legalistic decision making procedures in Western multilateral negotiations.<sup>148</sup>

Similarly, the limited options of dispute settlement are reflected in the ASEAN Charter. Article 23 of the ASEAN Charter states that Member States of the dispute may at any time agree to resolve the dispute through good offices, conciliation or mediation.<sup>149</sup> In addition, disputes relating to the specific ASEAN instruments shall be settled through the mechanisms and procedures provided for in such instruments. Article 25 of the ASEAN Charter sets out the provisions on the establishment of dispute settlement mechanisms, stating that: '[w]here not otherwise specifically provided, appropriate dispute settlement mechanisms including arbitration should be established for disputes which concern the interpretation or application of this Charter and other ASEAN instrument'. The ASEAN instruments appear to exclude the possibility of resolving disputes through the permanent arbitral tribunal or the ICJ. Instead, article 26 of the ASEAN Charter states that when a dispute remains unresolved, it will be referred to the ASEAN Summit, for its decision.<sup>150</sup>

Article 33 of the United Nations Charter sets out a more diverse menu of dispute settlement mechanisms that are available to states, including 'negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement resort to regional agencies or arrangements, or other peaceful means of their own choice'.<sup>151</sup> Other legal instruments for regional environmental management, such as the Helsinki Convention, which notably aims to protect the marine environment of the Baltic Sea Area, provide settlement by negotiation or mediation, or by the permanent arbitral tribunal or the ICJ.<sup>152</sup> Moreover, the AATHP is silent about providing recourse to victims of transboundary haze pollution. Indeed, this Agreement is silent on a liability regime, focusing instead on prevention and cooperation in its provisions.

---

<sup>148</sup> Mark Beeson, 'ASEAN's Way: Still Fit for Purpose?' (2009) 22(3) *Cambridge Review of International Affairs* 333, 336.

<sup>149</sup> *ASEAN Charter*, above n 3, art 25.

<sup>150</sup> *Ibid* art 26.

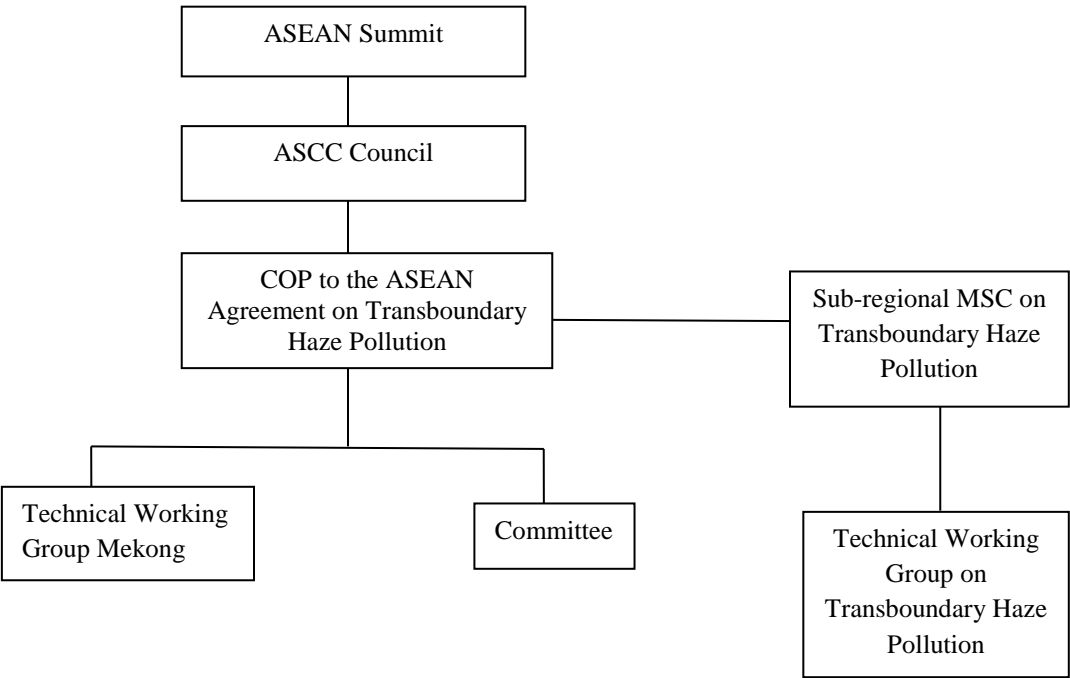
<sup>151</sup> *United Nations Charter*, signed 26 June 1945 (entered into force 24 October 1945) art 33.

<sup>152</sup> Article 26 of the Helsinki Convention states, in the case of dispute between Contracting Parties as to the interpretation or application of this Convention, they should seek a solution by negotiation. If the Parties concerned cannot reach agreement, they should seek the good offices of, or jointly request mediation by, a third Contracting Party, a qualified international organisation or a qualified person. If the Parties concerned have not been able to resolve their dispute through negotiation or have been unable to agree on measures as described above, such a dispute shall be, upon common agreement, submitted to an *ad hoc* arbitration tribunal, to a permanent arbitration tribunal or to the International Court of Justice.

3.4.2.8 Institutional Arrangements

Article 18 of the AATHP provides for its institutional arrangements. For this purpose, the COP was established. The COP meets once every year, with the function of reviewing and evaluating the implementation of the Agreement and considering taking action to ensure its effectiveness; adopting necessary Protocols; and making any amendments that may be required to achieve the objective of the Agreement. Figure 2 charts the institutional framework of haze cooperation.

Figure 2. Institutional Framework of Haze Cooperation



Source: <http://environment.asean.org/index.php?page=overview>

Several institutional frameworks in this haze cooperation have been established to support the implementation of the AATHP, including the Sub-regional MSC on Transboundary Haze Pollution, which was established by Brunei, Malaysia, Indonesia, Singapore and Thailand in 2006 to tackle the transboundary smoke issue following the last major smoke episode in that same year. At the first meeting in 2006, the MSC endorsed Indonesia’s Plan of Action in dealing with Transboundary Haze Pollution.

A new cooperation was also established in the Mekong Region by the ASEAN Environment Ministers in 2006. During the conference on promoting partnerships for the implementation of the AATHP, Thailand proposed the formation of a Sub-regional Group on Transboundary Haze Pollution involving Member Countries in the Mekong region. Sharing best practices and techniques and providing alternatives to the use of fires for shifting cultivation is the particular focus for this Technical Working Group in the Mekong Region.<sup>153</sup> At the Twenty-third ASEAN Summit, held in 2013 in Brunei, ASEAN leaders agreed to adopt and establish an ASEAN Sub-regional *Haze* Monitoring System as a cooperative effort among Member Countries to the Sub-regional MSC on Transboundary Haze Pollution. This can be understood as a response to the worst haze pollution to have affected Singapore and Malaysia, which occurred during June 2013.<sup>154</sup>

#### ***3.4.2.9 Strengths and Weaknesses of the AATHP***

The AATHP has strengths and weaknesses. Some identified strengths of the Agreement include:

1. It is a legally binding regional Agreement that provides a legal framework specifically addressing forest fires and haze pollution. It can be considered as the first regional legal framework for addressing haze pollution problems, and thus serves as a model.
2. It relies on a prevention and cooperation approach. According to the principle of prevention, protection of the environment is best achieved by preventing environmental harm rather than relying on remedies or compensation.<sup>155</sup> Moreover, prevention is less costly than remediation. Transboundary haze pollution is a regional problem that needs cooperation from all countries in that region. It is stated in Stockholm Declaration that ‘Cooperation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres in such a way that due account is taken of the sovereignty and interests of all states’.<sup>156</sup>

---

<sup>153</sup> Haze action online, *ASEAN's response* <<http://haze.asean.org/info/history-response>>.

<sup>154</sup> 'ASEAN Leaders Endorse Haze Monitoring System', Mizzima (Myanmar), 10 October 2013 <<http://www.mizzima.com/mizzima-news/regional/item/10304-asean-leaders-endorse-haze-monitoring-system>>.

<sup>155</sup> Hunter et al, above n139, 507.

<sup>156</sup> *Declaration of the United Nations Conference on the Human Environment* (signed 16 June 1972) principle 24.

The weaknesses of the AATHP include:

1. It does not contain a legal enforcement mechanism for non-compliance. Alan Tan,<sup>157</sup> Rodzina Razali,<sup>158</sup> Simon Tay<sup>159</sup> and Roda Mushkat<sup>160</sup> argue that the AATHP lacks effective sanctions and enforceability. The Agreement is silent in prescribing suitable punishment, civil penalties, criminal sentences or trade restrictions, and it disregards principle 10 of the Rio Declaration by failing to provide 'effective access to judicial and administrative proceedings, including redress and remedy'.<sup>161</sup>
2. It does not address peatland burning, which is the root cause of forest fires and haze pollution. Tacconi et al argue that the AATHP should focus on preventing peat fires,<sup>162</sup> by including explicit provisions to this effect. The extension of the Agreement by a Protocol specifically addressing peat fires and prescribing measures to prevent them would help in reducing this major cause of haze pollution.
3. It does not forbid certain types of conduct or contain a precise obligation clause. The AATHP only has general provisions about promoting a zero burning policy. The Agreement should have a monitoring mechanism to examine the effectiveness of the agreement and the implementation of the zero burning policy. It should also specify times scales for the reduction of land/forest fires as a concrete obligation.
4. The burden of implementation, compliance and enforcement is on Member States. There is no ASEAN central bureaucracy. Tay argues that no matter how solemn and well-meaning the AATHP is, if the implementation is left to individual States, those States may delay the implementation as they see fit.<sup>163</sup> A strong, central ASEAN bureaucracy is needed to make the ASEAN Member Countries comply with the Agreement. The problem is that the ASEAN Way preferences consensus, non-binding rules and a reliance on national institutions and actions rather than the creation of a strong central

---

<sup>157</sup> Tan, above n 144, 661.

<sup>158</sup> Rodziana Mohamed Razali, 'The Shortcomings of the ASEAN's Legal Mechanism to Address Transboundary Haze Pollution and Proposals for Improvement' (2011) *Chinese Society of International Law* 1, 1.

<sup>159</sup> Tay, above n 80, 204.

<sup>160</sup> Roda Mushkat, *International Environmental Law and Asian Values: Legal Norms and Cultural Influences* (UBCPress, 2004), 41.

<sup>161</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992) principle 10.

<sup>162</sup> Tacconi, Jotzo and Garfton, above n 96.

<sup>163</sup> Simon S C Tay (ed), *Fires and Haze in Southeast Asia* (Japan Center for International Exchange, 2002) 58.



bureaucracy.<sup>164</sup> This could hinder the effectiveness of any measures aimed at addressing transboundary environmental problems.

5. The Agreement has a low level of financial support. Robinson argues that a significant contribution to solving the forest fires problem cannot be expected given current funding levels.<sup>165</sup> The low level of financial support for the ASEAN Transboundary Haze Pollution Control Fund is considering likely to continue, as contributions are only voluntary.
6. Monitoring and reviewing compliance would help to ensure the integrity of the Agreement.<sup>166</sup> However, the AATHP's mechanisms for this are weak. The most common mechanism is national self-reporting, but this is sometimes not accurate. It needs verification from a third party and a formal process to access the actual state of national compliance.<sup>167</sup> The AATHP does not mention this monitoring mechanism. It merely states in article 25 that the Parties must transmit to the secretariat reports on the measures taken for the implementation of the Agreement in such a form and at such intervals as determined by the COP.<sup>168</sup>
7. The Agreement also lacks a strong dispute resolution mechanism. There is no provision in the agreement for disputes to be settled by recourse to international courts or arbitration tribunals.<sup>169</sup> The Agreement is also silent as to the recourse of victim States or individuals. Indeed, the dispute resolution mechanisms contained in the AATHP are limited to consultation and negotiation.<sup>170</sup> As discussed above, the dispute resolution mechanism in this agreement is consistent with the ASEAN Way.

While there are many weaknesses in the AATHP, it would be possible to extend the Agreement by the addition of Protocols. To implement the AATHP successfully, the focus should be on ensuring the participation of, and ratification by, all Member States. It is argued that a more concrete and precise Agreement be brought about, so that land/forest fires do not continue

---

<sup>164</sup> Kheng-Lian, above n 65.

<sup>165</sup> Nicholas A Robinson, 'Forest Fires as a Common International Concern: Precedents for the Progressive Development of International Environmental Law' (2001) 18 *Pace Environmental Law Review* 459, 482.

<sup>166</sup> Hunter et al, above n 139, 375.

<sup>167</sup> Ibid.

<sup>168</sup> *ASEAN Agreement on Transboundary Haze Pollution*, opened for signature 10 June 2002 (entered into force 25 November 2003) art 25.

<sup>169</sup> Tan, above n 144, 664.

<sup>170</sup> As stated in art 27 of the Agreement: 'any dispute between Parties as to the interpretation or application of, or compliance with, this Agreement or any protocol thereto, shall be settled amicably by consultation or negotiation'.

recurring. The cooperation so important in the Agreement in addressing haze pollution should not be half-hearted. This extends to financial cooperation. Although smoke haze pollution has become a common concern in the region, in terms of financial cooperation, the AATHP chose to have voluntarily rather than mandatory contributions. The result has been that no country in the region wants to bear the cost of contributing large amount of money to solve the problem. Thus, if the concept of cooperation and regional environmental governance is to be extended to include responsibility for tackling environmental problems transferred from national to regional communities, it follows that the financial arrangements supporting the AATHP should be mandatory. A voluntary contribution scheme is against ASEAN's practice of equal financial contribution, and reflects a lack of solidarity among ASEAN countries.<sup>171</sup>

The three main measures to address transboundary haze pollution, the ASEAN Cooperation Plan 1995, the Regional Haze Action Plan 1997, and the AATHP constitute a cooperation framework regime.<sup>172</sup> While the main policy in addressing forest fires and haze pollution is clearly a zero burning policy, the cooperation framework is then extended into peatland management initiatives and strategies to reduce peat fires with APMI and APMS. These cooperative measures are affirmed in the ASEAN Vision 2020, which states: '[w]e envision the evolution in Southeast Asia of agreed rules of behavior and cooperative measures to deal with the problems that can be met only on a regional scale, including environmental pollution and degradation'.<sup>173</sup>

Finally, it is difficult to measure the effectiveness of the AATHP in addressing transboundary haze pollution because it has only just been ratified by Indonesia.<sup>174</sup> However, based on the assessment of its strengths and weaknesses, there are more weaknesses than strengths. It can be concluded that the AATHP will not be effective in addressing transboundary haze pollution in the future unless there are improvements to the Agreement to eliminate these weaknesses. However, some of the ASEAN Member States have taken steps to implement the AATHP Agreement or rectify some of its weaknesses and Indonesia is in the process of ratification.<sup>175</sup> To address the weaknesses Singapore has recently drafted the Transboundary Haze Bill. This will empower the

---

<sup>171</sup> Tacconi, Jotzo and Garfton, above n 96.

<sup>172</sup> Nguitragool, above n117, 76.

<sup>173</sup> ASEAN, above n 6.

<sup>174</sup> Ratified on 16 September 2014.

<sup>175</sup> Laely Nurhidayah, Zada Lipman, Shawkat Alam, Regional Environmental Governance An Evaluation of the ASEAN Legal Framework for Addressing Transboundary Haze Pollution, (2014), 15 *Australian Journal of Asian Law*, 14.

Singaporean Government to take legal action against companies whose fires have created transboundary haze pollution.<sup>176</sup>

### 3.5. Conclusion

The concept of regional environmental governance has two key features: cooperation and multiple stakeholder involvement. Regional environmental governance in ASEAN has already adopted a cooperation and prevention regime similar to that applied in the EU. However, while the EU prefers a more binding legal framework that imposes concrete obligations and requires the fulfilment of those obligations in specified times scales, ASEAN prefers soft laws. The deficiency of regional environmental governance in ASEAN is manifest in the lack of civil society engagement in decision making at the regional level. Therefore, civil society engagement needs to be improved and increase. Civil society engagement in environmental governance in the ASEAN region remains limited, even after the establishment of the ASEAN Charter, with its goal to establish an ASEAN Community by 2020. However, it is expected that by 2020, civil society engagement will have been improved.

Improving cooperation is essential to addressing transboundary haze pollution. More concrete cooperation and concerted efforts from ASEAN Member countries to address land/forest fires are needed. For example the current initiative and cooperation on ASEAN-Sub-Regional Haze Monitoring System is a concrete cooperation. The system will use high resolution satellite images with land use and concession map to identify culprits which burn land illegally.<sup>177</sup> However, the implementation of this initiative was stalled by the lack of agreement of other parties.<sup>178</sup> In this respect, several measures have been taken, including the ASEAN Cooperation Plan on Transboundary Pollution, the RHAP, the Zero Burning Policy, Controlled Burning Policy, and the APMI and APMS. In addition, two legally binding Agreements—the ACNNR and the AATHP—have been established to provide a legal framework for addressing transboundary pollution.

---

<sup>176</sup> Ibid.

<sup>177</sup> Goh Chin Lian, ASEAN Haze Watch System “Delayed by Others”, *The Strait Times Singapore*, March 7, 2007 <<http://www.straitstimes.com/the-big-story/asia-report/health-environment/story/asean-haze-watch-system-delayed-others-20140306>>.

<sup>178</sup> Ibid

The AATHP is a binding legal framework in the ASEAN region specifically established to address transboundary haze pollution. While the AATHP has been praised as the first legally binding Agreement in the world dealing with haze pollution, critiques include that the agreement is shallow and does not address the underlying causes of haze pollution. In addition, there is a lack of dispute settlement mechanisms, no precise and concrete obligations with specified time scales for implementation, and a low level of financial support. Finally, a more binding agreement is needed. However, the lack of progress of ASEAN in addressing transboundary haze pollution particularly the liability regime is the inherent tension between the ASEAN Way (non-interventionist) versus the need to have firm obligations and implementation of the transboundary pollution Agreement. Even though, it can be concluded that the AATHP will not be effective in addressing transboundary haze pollution in the future unless there are improvements to the Agreement to eliminate these weaknesses, the AATHP has successfully influenced the ASEAN Member States in adopting a zero burning policy in domestic legislation and improving the domestic institutional framework in addressing transboundary haze pollution and enforcement to some extent. The liability regime in the AATHP is still a failure. This has resulted in Singapore drafting a Transboundary Haze Bill that will empower the Singaporean Government to take legal action against companies whose fires have created transboundary haze pollution. This bill also extends to Singaporean companies in foreign jurisdictions, including Indonesia. The proposed law includes the issuance of fines of up to SGD \$300 000 for activities outside Singapore that have resulted in haze within Singaporean boundaries.<sup>179</sup>

The main features of the Agreement are prevention, cooperation and monitoring. In addressing haze pollution, the Agreement emphasises three dimensions of cooperation: national, regional and international. The implementation of the obligations of the Agreement at the national level is essential and crucial to make the Agreement effective. The main obligations that should be implemented at the national level are stated in article 9. They include, among others things, developing and implementing legislative and administrative measures including strategies to promote a zero burning policy. The zero burning policy is the main obligation and key feature of the AATHP. There is already coherency between the national legal framework in Indonesia and the ASEAN legal framework. Long before Indonesia had ratified the AATHP, it had already

---

<sup>179</sup> Laely Nurhidayah, Zada Lipman, Shawkat Alam, Regional Environmental Governance An Evaluation of the ASEAN Legal Framework for Addressing Transboundary Haze Pollution, (2014), 15 *Australian Journal of Asian Law*, 14.

adopted this policy in domestic legislation.<sup>180</sup> The main lesson that Indonesia can learn from the ASEAN regional framework is that it is essential to develop a legal framework that enforces and strictly implements a zero burning policy to prevent land/forest fires.

---

<sup>180</sup> Indonesia has ratified the Agreement on 16 September 2014.

## Chapter 4: The Indonesian Legal Framework to Address Transboundary Haze Pollution

### 4.1. Introduction

In addressing transboundary haze pollution, the role of the domestic legal framework is crucial. Thus, this chapter will examine the adequacy of the existing legal framework in Indonesia in addressing transboundary haze pollution. This chapter will examine the legal instruments that specifically address land/forest fires, and the legislation and regulations indirectly related to land/forest fires, but more specifically concerned with the management of natural resources sectors, such as forestry and agriculture, because there is a close link between the management of these natural resources and forest fires.

The best approach to analysing the adequacy of the legal framework is to adopt a holistic approach and broader legal framework; that is, to examine not only regulations specifically addressing land/forest fires, but also legislation and regulations in other sectors related to land/forest fires, such as forestry law, agriculture law, environmental protection law, autonomy law and disaster management law. This broader approach aims to examine the gaps, overlaps and conflicts between the sectoral and horizontal legislations inherently related to forest fire legislation.<sup>1</sup> It has been observed that there are overlapping laws and legislation in Indonesia and that the conflicts or overlaps in legislation in other sectors can limit the effectiveness of particular legislations intended specifically to address land/forest fires.<sup>2</sup> Based on empirical observation, fire prevention and suppression are often hampered by unclear lines of institutional responsibilities and conflicting policies and legislation.<sup>3</sup> In addition, a clear assignment of responsibility to central, regional and local government is a precondition for effective forest fire management.<sup>4</sup> Finally, based on this analysis, this research will conclude whether the existing

---

<sup>1</sup> Horizontal legislations means between central legislations and local legislations.

<sup>2</sup> Elisa Morgera and Maria Teresa Cirelli, *Forest Fires and the Law A Guide for National Drafters Based on the Fire Management Voluntary Guidelines* (Food and Agriculture Organization of the United Nations, 2009), ix.

<sup>3</sup> Ibid. ix.

<sup>4</sup> Ibid. ix.

Indonesian legal framework is adequate in addressing land/forest fires. A list of the legal instruments discussed in this chapter is outlined in Appendix 3 to this thesis.

## 4.2. Hierarchy of Law

The legal system in Indonesia is based on civil law due to the Dutch occupation of Indonesia for 350 years. However, in reality, Indonesia is characterised by legal pluralism, which refers to the recognition by a nation State of the existence of multiple sources of law within its own jurisdiction.<sup>5</sup> There are four types of laws in Indonesia: *adat* law<sup>6</sup>, Islamic law, national law and Roman (Dutch law). However, for the purposes of the evaluation of the legal framework to address forest fires, only national laws (central government and local government laws) relevant to the forest fire issue will be examined in this chapter. National law has been effectively imposed since Indonesian independence from Dutch occupation.

It is important to understand the hierarchy and type of national law in Indonesia before analysing the country's legal framework for addressing transboundary haze pollution. Details of the types, sources and hierarchy of laws can be found in MPRS Decree No. XX/MPRS/1966 concerning the Source of Laws and Hierarchy of Laws, and Law No. 10/2004 concerning the Establishment of Laws and Regulations. Figure 3 shows the hierarchy of laws in Indonesia from the highest to the lowest as outlined in the MPRS Decree.

It is stated in the Decree that, according to the principle of legal States, the lower legislation should be based on and be in accordance with the higher legislation. Pancasila<sup>7</sup> is 'the source of all sources of law'.<sup>8</sup>

---

<sup>5</sup> Charleston C K Wang, 'Legal Pluralism in Indonesia: Anachronism or an Idea Whose Time has Come?' <<http://www.wanglaw.net/files/indonesia1.pdf>> 1.

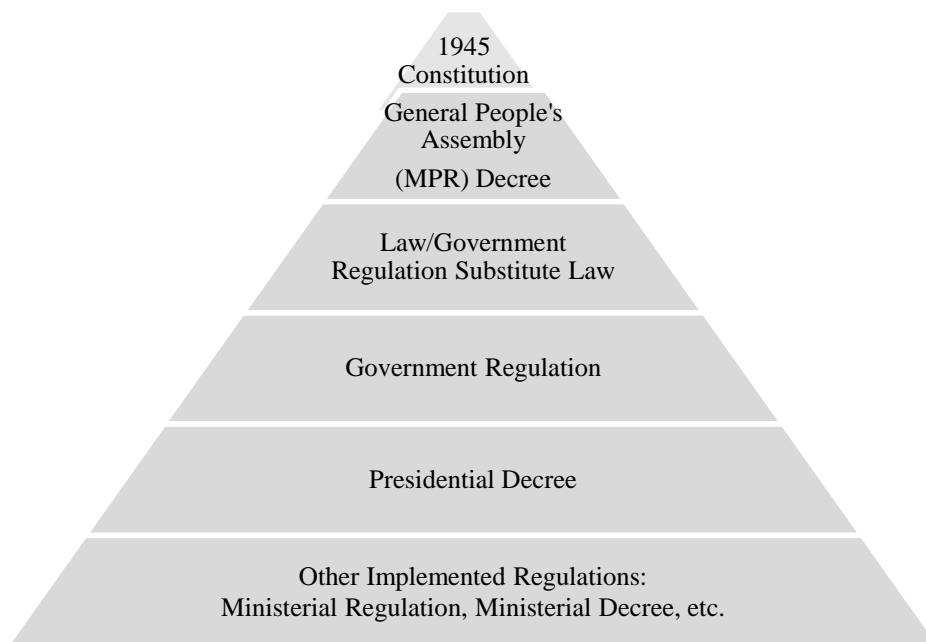
<sup>6</sup> Before the Dutch colonisation, local peoples had their own rules, values and customs, known as *adat* or *adat* law. *Adat* law usually regulates marriage, inheritance and land tenure.

<sup>7</sup> Pancasila is the philosophical foundation of Indonesia. It comprises the five principles of:

1. Belief in the one and only God
2. Just and civilized humanity
3. The unity of Indonesia
4. Democracy guided by the inner wisdom of unanimity, through deliberations among representatives
5. Social justice for all people of Indonesia.

<sup>8</sup> Law No. 10/2004 concerning the Establishment of Laws and Regulations, art 2.

**Figure 3. Hierarchy of Law**



Source: MPRS Decree No. XX/MPRS/1966

Law No. 10/2004 concerning the Establishment of Laws and Regulations brought a number of changes to the hierarchy of legislative framework. Article 7(1) of Law No. 10/2004 states the types and hierarchy of laws from the highest to the lowest (see Figure 4), showing some slight differences from the MPRS Decree hierarchy illustrated in Figure 3, due to eliminating the General People's Assembly (MPR) decrees from the hierarchy of laws. The principle remains that lower laws should not contravene or contradict higher laws.

Laws are formulated by the House of Representatives with the agreement of the President of the Republic of Indonesia (article 1(3)).<sup>9</sup> Government Regulations as Substitution to Law (*Perpu*) are issued by the President of the Republic of Indonesia and come into immediate effect in times of emergency, and cannot be regulated in any other way (article 1(4)).<sup>10</sup> Government Regulations are also issued by the President to implement specific laws (article 1(5)). Presidential Regulations are issued by the President (article 1(6)).

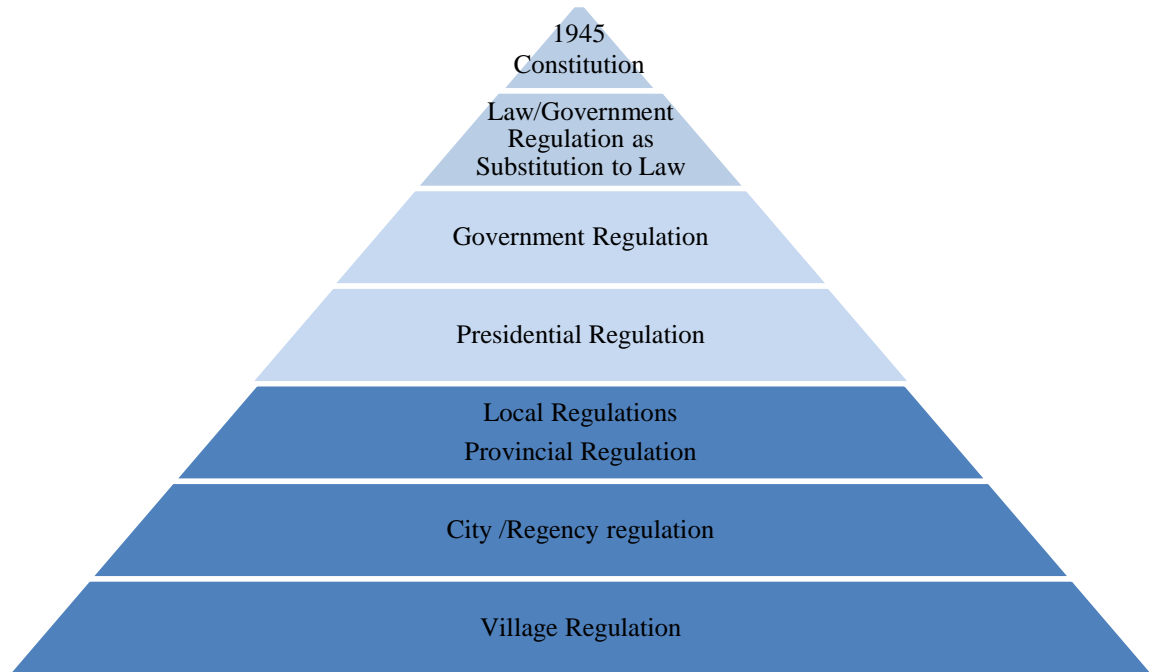
---

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.



**Figure 4. Hierarchy of Law**



Source: Article 2 of Law No. 10/2004 concerning the Establishment of Laws and Regulations.

In practice, there is also a Presidential Instruction that is not mentioned in Law No. 10/2004. It is submitted in an OECD report that Presidential Instructions are located outside the formal legislative hierarchy,<sup>11</sup> and that, while these instructions have no legal standing, they are important as statements of political commitment.<sup>12</sup> However, in other publications, Presidential Instructions are part of regulations or the legislative hierarchy.<sup>13</sup> In the author's interpretation, Presidential Instructions are part of the legislative hierarchy, even though they are not explicitly mentioned and defined in Law No. 10/2004. Their place in the hierarchy is similar to that of Presidential Regulations. In addition, Ministers can enact regulations in the form of Ministerial Regulations and Decrees.

Local regulations are mentioned in article 7(2), and include:

- a. Provincial regulations
- b. City/regency regulations
- c. Village regulations<sup>14</sup>

<sup>11</sup> OECD, *OECD Reviews of Regulatory Reform: Indonesian Government Capacity to Assure High Quality Regulation* (OECD, 2012) 12.

<sup>12</sup> Ibid.

<sup>13</sup> ASEAN Law Organisation, *Legal System* <<http://www.aseanlawassociation.org/papers/LegalSystem.pdf>>.

<sup>14</sup> Law No. 10/2004 concerning the Formulation of Laws and Regulations (Indonesia) art 7 (2).

Local regulations are formulated by the Provincial House of Representative with the agreement of the Governor (article 1(7)). City/regency regulations are formulated by the regency/city House of Representatives with the agreement of the Regent/Mayor. Village regulations are formulated by the Village House of Representative together with the head of village.

### 4.2.1. Administrative Structures

Indonesia has a unitary system of government. In this system of political organisation, most governing power resides in a centralised government.<sup>15</sup> Administrative structures in Indonesia are divided into a central government in Jakarta and local governments. The Unitary Republic of Indonesia is divided into a provincial level, which is further divided into regencies and municipalities, each of which have their own government.<sup>16</sup> Table 1 shows the hierarchy of administrative levels in Indonesia

**Table 1. Hierarchy of Administrative Levels**

<ul style="list-style-type: none"> <li>• National Level (Central Government) in Jakarta</li> <li>• Provincial Level (Local Governments)</li> <li>• Regency/Municipal Level (Local Government)</li> <li>• District Level</li> <li>• Village level</li> </ul>
---

Source: Law No. 32/2004 on Local Government

### 4.2.2. The Problem of Overlapping Laws

Before the enactment of Law No. 22/1999 on Local Government, revised by Law No. 32/2004 on Local Government, Indonesia had a centralised administrative structure. However, with the enactment of Law No. 22/1999, there was a shift from centralisation to decentralisation of government. Some scholars called this the ‘big bang’ of decentralisation, or ‘regional euphoria’.<sup>17</sup> The shift to decentralisation occurred in ‘the reform era’, after the step-down of the Soeharto regime in 1998. During this period, there was a huge demand from local governments to have more authority and power to manage their own regions. The political unrest and impact of the

<sup>15</sup> Encyclopaedia Britannica, *Unitary System* <<http://www.britannica.com/EBchecked/topic/615371/unitary-system>>.  
<sup>16</sup> *Law No. 32/2004 on Local Government (Indonesia)* art 2.  
<sup>17</sup> Jason M Patlis, 'The Role of Law and Legal Institutions in Determining the Sustainability of Integrated Coastal Management Projects in Indonesia ' (2005) 48 *Ocean & Coastal Management* 450, 453.

Asian monetary crisis led to fundamental changes in Indonesia's system of governance.<sup>18</sup> Decentralisation aimed to promote democratic participation, especially in local self-government. Local government is the closest authority to the local people. It was expected that decentralisation would improve services and effective governance. However, it was not completely successful in delivering its promise. Decentralisation is often unsuccessful in developing countries, especially as regards local self-government, where the main outcome is chaotic inefficiency.<sup>19</sup>

In Indonesia, decentralisation not only experienced problems in implementation, but also created confusion, conflict and questions within the Indonesian legal system.<sup>20</sup> Problems of lack of human resources in the bureaucracy, a low capacity of regional and local legislative members and lack of funding sources to support development projects were associated with implementation.<sup>21</sup> This inconsistency was due to local governments also having authority to enact Local Regulations;<sup>22</sup> many of which contradicted the existing central laws,<sup>23</sup> even though article 136(4) Law No. 32/2004 on Local Government provides that Local Regulations should not contravene higher legislation. Patlis criticised the characteristics of Indonesian laws and the legal framework in the management of coastal resources, with this criticism also applying to the management of natural resources more generally:<sup>24</sup>

- (1) Horizontally the laws in governing coastal resources are, in a word, sectoral which has resulted in a series of gaps, overlaps, redundancies, conflicts-all of which can be considered 'disconnect' within the legal framework.
- (2) Vertically the laws governing regional autonomy have provided overly broad provisions, unclear mandates and few guidelines, which have encouraged regional governments to quickly impose their own regulatory framework on natural resources management.

---

<sup>18</sup> J F McCarthy et al, *Origins and Scope of Indonesia's Decentralization Laws. In Decentralization of Forest Administration in Indonesia. Implications for Forest Sustainability, Economic Development and Community Livelihood* (CIFOR, 2006).

<sup>19</sup> R.A.W Rhodes, 'Unitary State ' (Pt Elsevier) (2002 ) *International Encyclopedia of the Social & Behavioural Sciences*.

<sup>20</sup> Patlis, above n17, 451.

<sup>21</sup> M Ryaas Rasyid, 'The Policy of Decentralisation in Indonesia' (Paper presented at the GSU Conference: Can Decentralization Help Rebuild Indonesia?, Atlanta, Georgia, 1 May 2002) <[http://aysps.gsu.edu/isp/files/ISP\\_CONFERENCES\\_INDONESIA\\_RASYID\\_PAPER.pdf](http://aysps.gsu.edu/isp/files/ISP_CONFERENCES_INDONESIA_RASYID_PAPER.pdf)>.

<sup>22</sup> Law No. 32/2004 on Local Government (Indonesia), art 136.

<sup>23</sup> Patlis, above n 17, 451.

<sup>24</sup> Ibid.

- (3) Chronic issues persist in hampering implementation and enforcement of the legal framework, such as lack of funding, training, and staffing coupled with mismanagement and corruption.
- (4) Larger systemic issues relating to legislative drafting and statutory interpretation are likely to undermine current efforts to revise natural resources laws.<sup>25</sup>

### 4.3. Legislation and Regulations

The regulatory framework governing fire management in Indonesia has several limitations: lack of flexibility, unclear fire management structure, imbalance in coordination arrangements and lack of uniform fire management structures at the provincial level.<sup>26</sup> Currently, only one specific legal instrument directly addresses land/forest fires; that is, Government Regulation No. 4/2001, added to by Presidential Instruction No. 16/2011. A draft law specifically addressing land/forest fires was proposed to the House of Representatives in 2008 by the Regional Representative Council.<sup>27</sup> However, it has not yet been enacted.

#### 4.3.1. Law No. 32/2009 on Environmental Protection and Management

##### 4.3.1.1 Summary

The starting point of this research into legal instruments is Law No. 32/2009 on Environmental Protection and Management, as this law is considered as ‘umbrella legislation’ to environmental protection in Indonesia. This law is also higher in the hierarchy than Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires, which is the specific regulation on land/forest fires. Law No. 32/2009 is a relatively new environment protection law in Indonesia and replaces the previous Environment Management and Protection Law No. 23/1997. The law entered into force on 3 October 2009. The aims of this law as stated in article 3 are *inter alia* protecting the territory of the unitary State of the Republic of Indonesia from environmental pollution and/or damage; assuring human safety and health and life; assuring the fulfilment of justice for present and future generations; assuring

---

<sup>25</sup> Ibid, 451–452.

<sup>26</sup> *Inter-Agency Mission on Forest Fires and Human Settlements in Indonesia, June 2000*, <[http://www.fukuoka.unhabitat.org/docs/project\\_reports/project\\_b/08/ForestFiresSum-e.htm](http://www.fukuoka.unhabitat.org/docs/project_reports/project_b/08/ForestFiresSum-e.htm)>. (‘*Inter-agency Mission*’).

<sup>27</sup> ‘Antisipasi Bencana, Dinanti UU Kebakaran Hutan’, *Kompas* (Jakarta), 6 September 2011 <<http://regional.kompas.com/read/2011/09/06/0342080/Dinanti.UU.Kebakaran.Hutan>>. (‘*Antisipasi Bencana*’).

the fulfilment of a right to the environment as part of human rights; controlling the utilisation of natural resources wisely; and realising sustainable development and anticipating global environmental issues.<sup>28</sup>

Law No. 32/2009 is a revision of the previous law, which was ineffective in protecting the environment. To better guarantee legal certainty and protect the right of everyone to obtain a proper and healthy environment as part of extensive environmental protection, it was necessary to replace Law No. 23/1997 on Environmental Management. Law No. 32/2009 is indeed an improvement on the previous Environment Protection Law, particularly as the current Environment Protection Law clearly recognises the right of a healthy environment as part of human rights (article 3).<sup>29</sup> In addition, the new law uses holistic stages in protecting the environment, as the scope of the law covers planning, utilisation, control, preservation, supervision and law enforcement. In addition, it contains enhanced prevention instruments such as strategic environment assessment, spatial planning, environmental quality standards, environmental damage criteria, EIAs, environment management and environment monitoring plans, licenses, economic instruments, environmental audits and budgeting based on the environment (article 14).<sup>30</sup> Further, this law proposes the eco-region approach in preventing and protecting the environment. The new law also empowers the Ministry of Environment with the authority to revoke the business license of any company that violates the legislation: a power that was lacking in the previous legislation.<sup>31</sup> One important measure in the new legislation is environmental strategic analysis and the recognition of polluter pays principle. The legislation has mandated the central government and local government to ensure that the principle of sustainable development becomes a foundation and is integrated into the development of the region and/or policy, plan and program (article 15(1)). Article 87 every personnel in charge of business or activities committing legal violation of environmental pollution and/or destruction incurring losses of other people or the environment shall be obliged to pay compensation.

Finally, there is an improvement in enforcement, particularly since officials are also subject to imprisonment. Article 111 states that an official issuing an environmental permit without the

---

<sup>28</sup>Law No. 32/2009 on Environment Protection and Management (Indonesia), art 3.

<sup>29</sup> Ibid art 65.

<sup>30</sup> Ibid art 14.

<sup>31</sup> Ibid art 76(2).

required EIA and *Upaya Pengelolaan Lingkungan Hidup* (Environmental Management and Monitoring Study) will be liable to imprisonment for a maximum of three years, and for a fine of up to three billion rupiah. In addition, officials issuing business permits without an environmental permit will be liable to imprisonment for a maximum of three years and a fine of up to three billion rupiah .

#### **4.3.1.2 Evaluation**

This law implements a zero burning policy whereby it is prohibited to conduct burning activities in opening land for plantation (article 69(1)(h)). For failing to adhere to this provision, there is a sentence of a minimum of three years and a maximum of 10 years imprisonment, and a fine of a minimum of three billion rupiah and maximum of 10 billion rupiah (article 108).

Unfortunately, this legislation does not have any specific chapter to regulate and address land/forest fires. The emphasis is more on preventing and protecting the environment in general. It does mention land/forest fires in a few provisions. For example, article 21 states the standard criteria for ecosystem damage, including the standard criteria for environmental damage related to land/forest fires. The previous environmental legislation was criticised by Tan for being exceedingly general in scope and containing no specific provisions on controlling land/forest fires.<sup>32</sup> With the new legislation, the issue of forest fires is again not a special or priority issue; the scope of this legislation is general in character. The new legislation emphasises the regulation of the conduct of companies, particularly on EIA. The advantage of this legislation for improving efforts in reducing land/forest fires is that it is mandatory for other sectors to incorporate environmental issues in both central and local government legislation (article 44). This is because so far it seems that the environment has become a separate issue in the development of other sectors. Moreover, government, both central and local, should allocate a budget adequate to fund activities to protect and manage the environment (article 45).

Despite the improvement of this legislation from the previous Law No. 23/1997, still there is no clarity as to the role and responsibility of the Ministry of Environment in the overall framework of forest fire management. Clarity on the roles and responsibility of the Ministry of Environment

---

<sup>32</sup> Alan Khee-Jin Tan, 'The ASEAN Agreement on Transboundary Haze Pollution: Prospects for Compliance and Effectiveness in Post-Suharto' (2005) 13 *New York University Environmental Law Journal* 647, 677.

and coordination with other related ministries such as the Ministry of Forestry, Agriculture and Mining is required to make efforts in reducing land/forest fires effective. However, based on their program, the Ministry of Environment's concern is with public education and awareness generation, especially for small-scale farming and policy reform, while the Ministry of Forestry deals with fire suppression issues.<sup>33</sup> It is argued that the Environment Ministry is weak in playing its role in protecting the environment in Indonesia. However, these weaknesses are mainly due to the limited mandate and authority of the Environment Ministry, which is restricted to policy development and coordination, with enforcement authority in the hands of the policy department and line ministry (the Ministry of Forestry).<sup>34</sup> Increasing local autonomy, with the transfer of authority to the provincial and district levels, has further weakened the role of the Environment Ministry.<sup>35</sup>

Previous environment protection law has suffered from a lack of enforcement, which remains a major problem with the new law. Tan argues that in 'Indonesia the judiciary is frequently paid-off to prevent conviction of high profile figures behind illegal logging and forest fires'.<sup>36</sup> In the aftermath of forest fires in 1997, for example, of 176 companies identified as violators, only five were brought to court, and only one was found guilty.<sup>37</sup> Based on the cases of forest fires, it is clear that only small numbers companies have been brought to justice since 1997. The cases relating to forest fires include:

- PT Adei Plantation in District Court of Bangkinang (Court Decision No 19/Pid-B/2001/PN.BKN, 1 October 2001) PT Adei was found guilty of clearing land by burning. The court imposed a penalty of Rp 250 million and its general manager was sentenced to two years imprisonment.
- *PT ADEI Plantation v KLH* (2013) Court file No PDM-79/PKL.CI/12/2013. A Malaysian company again has allegedly carried out irresponsible burning practices in their concession area in Riau. The court imposed a penalty of 2 billion rupiah and its general manager was sentenced to 1 year imprisonment. According to Walhi environmental NGO this sanction is too low for companies which repeat their action in burning land/forest. Article 108 the Law No 32/2009 on environment protection and management states that every person who conducts land/forest burning should be given a minimum penalty of 3 billion rupiah and a

---

<sup>33</sup>Inter-agency Mission, above n 26.

<sup>34</sup> Rainer Quitzow, Holger Bar and Klaus Jacob, 'Environment Governance in India, China, Vietnam and Indonesia: A Tale of Two Paces' (FFU Report 01-2013, Environmental Policy Research Centre, Freie Universität Berlin) <[http://edocs.fu-berlin.de/docs/servlets/MCRFileNodeServlet/FUDOCSS\\_derivate\\_000000002313/Environmental\\_governance\\_Aisa\\_20130204.pdf?hosts=>](http://edocs.fu-berlin.de/docs/servlets/MCRFileNodeServlet/FUDOCSS_derivate_000000002313/Environmental_governance_Aisa_20130204.pdf?hosts=>).

<sup>35</sup> Ibid.

<sup>36</sup> Tan, above n 32, 678.

<sup>37</sup> Ibid.

maximum penalty of 10 billion rupiah and imprisonment for a minimum of 3 years. Based on this law indeed the sanction imposed on the Adei plantation company is too low.

- Eksponen 66 dkk v APhi dkk in the district court of Medan in 1998 (District Court of Medan No 425/Pdt.G/1997/PN.Mdn 15 Juni 1998).

Eksponen 66 which consists of groups of NGOs who act on behalf of the people of North Sumatera launched a class action against the Indonesian Forestry Entrepreneurs Association (APhi). The Eksponen 66 demanded compensation for the social, economic, and environmental damage caused by the forest fires in 1997. The district court of Medan awarded Rp 50 billion in damages for environmental restoration. The judges concluded that the actions by the plantation owners in burning land and failing to control fires were contrary to their obligations under Environmental Management Act 1997. The court's recognition of legal standing of NGOs demonstrated clear acknowledgement of the public interest which is rarely apparent in these cases.

- Rawa Tripa Case (Ministry of Environment v PT Kalista Alam) in District Court of Meulaboh (2012) No 12/PDT.G/2012/PN-MBO.

The company had violated Law No. 18/2004 on Plantations by conducting illegal land clearing, burning land and planting oil palms without permits. The Meulaboh District Court declared the PT Kalista Alam oil palm company guilty of clearing Rawa Tripa peat forest in Aceh by burning land. The court ordered PT Kalista Alam to compensate material losses worth 114 billion (\$ 9.45 million) and to pay environment restoration fees totalling Rp 250 billion. This is the first case where the court has imposed a severe penalty on a corporation for committing an environmental crime. This decision is expected to have a deterrent effect and be a lesson for other corporations not to violate the law.

#### **4.3.2. Government Regulation No. 4/2001 Concerning Control of Environmental Degradation and/or Pollution Related to Forest and/or Land Fires**

##### **4.3.2.1 Summary**

Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires is considered the main means of specifically addressing land/forest fires. Unfortunately, there is no higher legislation addressing forest fires, as government regulation is lower in the hierarchy. This raises the question of whether the government regards the resolution of this problem as a priority if the choice of legal instruments to address land/forest fires is only by regulating it in lower legislation. It is crucial to have stronger legislation to address land/forest fires.

The ineffectiveness of this regulation is due to some inherent weaknesses. The main problem is the unclear lines of institutional responsibilities in controlling land/forest fires. Nurrochmat



argues that the sectoral approach in this legislation is the cause of its ineffectiveness in controlling land/forest fires.<sup>38</sup> In addition, Tan argues that this regulation suffers from being too general in its proscription of burning activities.<sup>39</sup> He further argues that this regulation does not differentiate as to which fires should be banned or in which context.<sup>40</sup>

#### *4.3.2.1.1. Purpose, Definitions and Scope*

The regulation recognises that land/forest fires have caused ecological, economic, social and cultural damage, as well as environmental pollution, both nationally and beyond the national jurisdiction. Thus, the purpose of Government Regulation No. 4/2001 is to prevent and control land/forest fires. However, it does not explicitly state its aims and purpose in a specific provision, but rather uses the word ‘scope’. It is stated in article 2 of the regulation that its scope includes prevention, control, rehabilitation and monitoring of the damage and pollution because of land/forest fires.<sup>41</sup> Based on this provision, it can be said that this regulation was intended to use holistic and comprehensive stages in addressing haze pollution; namely, the stages of prevention, suppression and rehabilitation.

Definitions pertaining to this regulation are set out in article 1. Definitions are important to prevent confusion and ambiguity in the meaning and scope of application of a regulation. Several terms are defined including forest, land, forestry areas, prevention, control and rehabilitation, person (the person responsible for a business), institutions, ministry, governor and mayor. It is interesting that this regulation does not define ‘forest fire’. Food and Agriculture Organization (FAO) voluntary guidelines for national drafters have suggested that key definitions in forest fire legislation should distinguish the concepts of ‘wildland fires’, ‘forest fire’ and ‘prescribed fire’, and ‘wildfires’.<sup>42</sup> The failure to include a definition of fire is probably because this regulation does not differentiate between different types of fires. This regulation adopts a zero burning policy, which assumes that any fires are undesirable from the perspective of haze pollution

---

<sup>38</sup> Antisipasi Bencana, above n 27.

<sup>39</sup> Tan, above n 32, 682.

<sup>40</sup> Ibid.

<sup>41</sup> *Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires* (Indonesia) art 2.

<sup>42</sup> Morgera and Cirelli, above n 2, 52.

reduction.<sup>43</sup> However, Tacconi argues that not all fires are undesirable.<sup>44</sup> Slash-and-burn agricultural practices by farmers, for example, are not a main source of haze pollution; peat fires are the main source.<sup>45</sup> Tacconi mentions two significant risks in the failure to recognise the impacts of fires; namely a) all fires might be perceived as problematic rather than considering in what circumstances fire may be an appropriate land management tool; b) fires may and often do have differentiated impacts, and depending on their location and impact, fires need to be addressed using different policies.<sup>46</sup> From this point of view, the failure to provide a definition of fire results in incorrect policies, which is a problem. It would be better if the new legislation clarified which fires were considered problematic, to allow for the formulation of correct policies and the increased effectiveness of the regulation.

The responsible institution is defined as the institution for controlling environmental impact. This is the Ministry of Environment at the central level and the Environment Agency at the local level. As stated in article 1(15), the Ministry is defined as the Ministry responsible for managing the environment. Unfortunately, there is inconsistency between this definition and the content of the provision in this regulation, particularly in designating the institution responsible for controlling land/forest fires between the Ministry of Environment and the Ministry of Forestry.

#### *4.3.2.1.2. Prevention, Control/Mitigation and Rehabilitation*

The regulation states the obligation in article 11 that every person is completely prohibited from conducting land/forest burning activities. This provision, which prohibits all kinds of burning activities, could be considered more stringent than the zero burning policy adopted by the AATHP, which allows some forms of controlled burning. Moreover, article 12 of the regulation states that every person has an obligation to prevent damage and pollution relating to land/forest fires.<sup>47</sup> The prevention provision is also applied to business and commercial activities. However, the regulation does oblige companies to prevent forest fires in one specific chapter. It might be

---

<sup>43</sup> Luca Tacconi, Frank Jotzo and R Quentin Garfion, 'Local Causes, Regional Cooperation and Global Financing for Environmental Problems: The Case of Southeast Asian Haze Pollution' (The Australian National University Economic and Environment Networking Paper, 20 December 2006 )  
<[http://een.anu.edu.au/download\\_files/een0613.pdf](http://een.anu.edu.au/download_files/een0613.pdf)> 7.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

<sup>46</sup> Ibid 9.

<sup>47</sup> *Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires* (Indonesia) art 12.

more appropriate, owing to the different nature and capacity of communities and companies, to dedicate separate chapters for regulating their respective obligation in preventing and controlling forest fires.

The regulation states that the person responsible for a business whose activities may have a significant impact on the environment also has an obligation to prevent land/forest fires in the area in which he or she operates (article 13). Article 14 states that the person responsible for a business also has an obligation to possess adequate facilities and infrastructure to prevent wildfires, including early detection systems, preventive equipment and periodic training, as well as standard operating procedures and an organisational unit for wildfire prevention and mitigation. In addition, that person has an obligation to monitor the implementation of preventive measures and periodically, at least once in six months, convey a written report of the monitoring results of fire prevention—including hotspot data in the concession area in which the business operates, the existence of fires based on hotspot data monitored and efforts made by business operators to prevent forest and land fires—together with satellite remote sensing imagery to the governor, regent or mayor and the relevant technical agency (article 15).

For mitigation action, it is stated in article 17 that every person has an obligation to control and mitigate forest fires and land in the location in which the activities are located. Moreover, a person responsible for a business is responsible for the occurrence of land/forest fires in the location in which he or she operates, and must ensure that mitigation is conducted as soon as possible (article 18).

For rehabilitation, article 20 states that every person who has caused the land/forest fires is required to conduct rehabilitation. In addition, article 21 states that a person responsible for a business has an obligation to carry out rehabilitation of areas affected by wildfires in their operations. Further, technical guidelines on environment impact rehabilitation should be issued by local regulation. If these general and technical guidelines have not yet been provided, the rehabilitation should be in accordance with existing valid regulations.

#### *4.3.2.1.3. Institutional Arrangements in Firefighting Activities*

Chapter V contains institutional authority and arrangements for controlling land/forest fires. It divides the authority between the central government, provincial government and municipal and city governments. This institutional arrangement is crucial to making efforts to control land/forest fires effective. However, the institutional arrangements in Indonesia sometimes conflict with other legislation. At the central government level, Government Regulation No. 4/2001 only mentions the Ministry of Forestry and the Ministry of Environment.

The ministry responsible for the forestry sector is responsible for the coordination of firefighting activities in adjacent provinces or neighbouring countries (article 23). In addition, this same ministry is responsible for coordinating and providing facilities for controlling land/forest fires, developing human resources in controlling land/forest fires and implementing international cooperation for firefighting activities (article 24).

In the case of wildfires with inter-regency or inter-city impacts (article 27), the governor is responsible for the control of those fires and the coordination of wildfire mitigation across the regencies and cities (article 28(1)). The governor may seek assistance from the nearest governor or central government for the coordination of wildfire mitigation (article 28(2)) and may establish or appoint the appropriate agency for wildfire control in the region (article 33).

The regent or mayor is responsible for the control of wildfire in a region (article 30) and, in the event of a wildfire, must take the following actions:

- a) mitigation
- b) checking the health of the community in the area affected by land/forest fires
- c) measuring the impacts
- d) informing the public about the fire's impact and the steps necessary to minimise such fires.<sup>48</sup>

However, it is suggested that the obligation of the regent/mayor in controlling land/forest fires does not decrease the obligation of every person and the persons responsible for businesses (article 31(2)). In conducting mitigation activities, the regent or mayor may seek assistance from

---

<sup>48</sup> Ibid art 31.

the nearest regent/mayor (article 32) and must establish or appoint an institution authorised for controlling the wildfire (article 33).

These provisions emphasise the nature of responsibility and institutional arrangement in firefighting or fire mitigation activities. The drawback is that the regulation does not adopt multi-level governance. Multi-level governance, which adopts engagement and cooperation between the different tiers of government, is essential to success in addressing land/forest fires. However, this regulation takes a mono-centric governance approach that only mentions the Ministry of Forestry. The role of the Ministry of Environment, which is clearly mentioned in the definition section as having responsibility for implementing the legislation and managing the environment, is confused by the fact that in the regulation the Ministry responsible for coordinating forest firefighting activities is the Ministry of Forestry. Thus, there is contradiction and conflict between the Ministry roles as given in the definition section and in the content of the legislation, which creates confusion and vagueness in implementation.

#### *4.3.2.1.4. Monitoring and Reporting*

The regent/mayor conducts monitoring of efforts to control land/forest fires in their area (article 34(1)); the governor conducts monitoring of efforts to control land/forest fires that have an impact or are likely to have an inter-regency/city impact (article 34(2); and the Ministry of Forestry conducts monitoring of efforts to control land/forest fires that have an impact or are likely to have an impact in adjacent provinces or neighbouring countries (article 34(3)). The monitoring activities are conducted in a periodic manner to prevent damage or pollution due to land/forest fires, and intensively to tackle the impact of fires and rehabilitate the environment following land/forest fires. If monitoring indicates a violation by a person responsible for a business, the governor/regent/mayor may order that person to stop the violation and act to save, handle and rehabilitate the area affected by the violation (article 38).

Every person who assumes and knows of the occurrence of land/forest fires must report the event to the local government authority in their area (article 39). The local government official in that area who receives the report should record the identity of the reporter, the date of the report, the time and location of the fire event, the cause in triggering the land/forest fire and the assumption

of impact of the land/forest fire (article 39(2)). The local government official should pass this report to the governor/regent/mayor within 24 hours of receiving it (article 39(3)). The governor/regent/mayor should then verify the report's accuracy with local government within 24 hours of receipt (article 39(4)). If, from this verification, it is indicated that there is an occurrence of a land/forest fire, the governor/regent/mayor must order the person responsible for the business to control the land/forest fire and to mitigate its impacts (article 39(5)). If the person responsible for the business is not conducting firefighting, the governor/regent/mayor can ask a third party to fight the fire at the cost of the person responsible for conducting the business (article 40). Every person responsible for a business involved or a third party appointed to control the land/forest fire and rehabilitate the area afterwards should make a report to the governor/mayor/regent.

This procedure on reporting land/forest fires is overly bureaucratic and slow in responding to land/forest fires. The role of government institutions in these provisions is minor. The main actor in controlling land/forest fires is the person responsible for a business. This procedure could also be ineffective, as the cause of the land/forest fire might be local community activities rather than a business's activities. It is clear that the regulation places too much emphasis on the responsibility and obligations of businesses entities.

#### *4.3.2.1.5. The Right of Information, Community Participation and Community Awareness*

Governors, regents, mayors, institutional and technical leaders and the Ministries have an obligation to raise community awareness within their respective jurisdictions. This should include educating government officials on their rights, duties and capabilities to prevent land/forest fires (article 42(1)). One means by which the awareness of the community can be raised is by developing the values, *adat* institutions and traditional customary practices of the community that support land/forest protection (article 42(2)). The governor/regent/mayor also has an obligation to make information available to the community on land/forest fires and their impacts (article 43(1)). This information should be distributed through print, electronic media and/or a public announcement board and should include details on the location and size of land/forest fires, actions to be taken to minimise the impacts, the danger to community health and the ecosystem, the impacts on community life and steps to take in reducing and mitigating the impacts. Further, every person has the same right to information on controlling land/forest fires, including:

- a. maps of fire prone areas
- b. maps ranking dangerous land/forest fire areas
- c. documents of licensing or forest/land concessions
- d. EIA documents
- e. planning in opening land/forest
- f. the results of satellite remote sensing
- g. regular reports from the person responsible for a business on the compliance of requirements for licensing
- h. the results of monitoring.<sup>49</sup>

This information should be provided by the governor/regent/mayor (article 45(2)). Finally, every person has the right to control land/forest fires in accordance with the law (article 46).

These provisions comply with the Aarhus Convention on the right of access to environmental information and AATHP article 9 on promoting awareness building and utilisation of indigenous knowledge and practices in fire prevention and management. To strengthen the capability and awareness of local communities on fire prevention and control, Government Regulation No. 4/2001 also recognises the importance of developing the values, *adat* institutions and traditional customary practices of the community that support land/forest protection.

The regulation describes these provisions as providing transparency of information and community participation. However, despite providing the right to access to information, this provision fails to clarify further any details of the nature of the participation of local communities in prevention or firefighting activities, or how local communities should coordinate and engage with these activities. CBFiM should be supported in the new legislation.

#### *4.3.2.1.6. Offences and Sanctions*

Anyone (individuals and businesses) who fails to prevent environmental degradation and pollution related to land/forest fires is subject to administrative sanctions (article 48). Administrative sanctions are applied to those responsible for a business that cause significant environmental degradation and/or pollution related to land/forest fire by failing to possess the

---

<sup>49</sup> Ibid art 45.

adequate facilities and infrastructure to prevent land/forest fires in their location, or by failing to monitor land/forest fire prevention measures in their location and report the results of these monitoring activities at least once every six months. Administrative sanctions can be in the form of the revocation or suspension of a license, a penalty or a fine.

In addition to administrative sanctions, Government Regulation No. 4/2001 contains compensation and criminal sanctions. Every action or non-action that fails to prevent or control a fire, rehabilitate an area after a fire, or leads to environmental degradation and pollution related to land/forest fires is subject to compensation and/or specific remedial action (article 49). In addition, where a person responsible for a business or activity causes significant pollution or degradation of the environment, by either releasing hazardous and poisonous material or causing hazardous and poisonous waste, that person is absolutely responsible for the losses caused, with the obligation to pay compensation immediately upon the occurrence of the pollution or degradation (article 51(1)). Exceptions are if the person concerned can provide evidence that the environmental degradation or pollution was caused by a natural disaster, war, *force majeure* or actions by a third party (article 51(2)). Arguably, the obligation to compensate is not appropriate if given to every person who fails to prevent or control land/forest fires, especially where this person did not cause the land/forest fire. Moreover, the provision regarding the obligation to compensate for causing negative environmental impacts by hazardous and poisonous material is not appropriate because Government Regulation No. 4/2001 is concerned with land/forest fires and not with hazardous or poisonous material. The inclusion of this provision in the regulation seems illogical.

The activities classified as criminal acts in this regulation are listed in article 52 and include negligent burning of forests and land, failure to mitigate land/forest fires in a person's location of activity, failure by those responsible for business to provide adequate facilities and infrastructure to prevent land/forest fire occurrence in the location of business operations, failure to monitor the measures to prevent land/forest fire occurrence in the location of business operations and report the results at least once every six months, and failure to conduct mitigation of land/forest fires occurring in the location of business operations. The criminal sanctions applied in this regulation are particularly severe for the persons responsible for business if they fail to monitor and give a report at least once in six months. Arguably, the appropriate sanctions should be administrative



rather than criminal. The most obvious shortcoming in this regulation is not listing the relevant offences and related administrative sanctions and penalties directly in the regulation. Instead, the penalties and criminal sanctions are incorporated by reference to other legislation.

#### **4.3.2.2 Evaluation**

In 2009, the FAO released voluntary guidelines for formulating national legislation for fire management. The guidelines suggest that solid forest fire legislation should address the following key elements *inter alia*: definitions, institutional set-up, coordination, planning, monitoring and assessment, prevention, suppression, controlled fire use, participatory and community-based approaches, rehabilitation and law enforcement.<sup>50</sup> The areas that need to be strengthened for responding to land/forest fires, based on these FAO guidelines and the review of the regulation presented above, are the institutional set-up, coordination, planning, participatory and community-based approaches and law enforcement. Further, the FAO suggests that good legislative drafting requires an inter-disciplinary approach between science, socio-demographics, economics and law to determine the actual causes of forest fires, the relation between specific ecosystems (for example, peatland) and fires, the economic and social circumstances related to forest fires, the use of traditional practices to respond to and mitigate fires, and the resources available for implementation and law enforcement.<sup>51</sup>

Government Regulation No. 4/2001 adopts a preventive and repressive approach to reducing land/forest fires. In addition, it applies a total prohibition on using fire in clearing land and forest. However, this total prohibition is probably unnecessary and impractical, as fire is a cheap and effective community wetland-management tool in Indonesia. This argument is supported by Tacconni, who argues that not all fires are undesirable.<sup>52</sup> The focus of attention should be given to the prevention of peat fires,<sup>53</sup> prohibiting all fires in peat areas because of the high risks. In other areas, however, total fire bans should apply only during the dry season. Controlled burning is the most obvious option where legislation can justify the continued use of fire while also ensuring accountability for fire management and guaranteeing that it will be used responsibly.<sup>54</sup> The

---

<sup>50</sup> Morgera and Cirelli, above n 2, 108.

<sup>51</sup> Ibid.

<sup>52</sup> Tacconni et al, above n 43, 19.

<sup>53</sup> Ibid.

<sup>54</sup> Morgera and Cirelli, above n 2, 112.

legislation should regulate and clarify the conditions and procedures for authorised use of fires.<sup>55</sup> In addition, to encourage businesses to control land/forest fires, the legislation should provide incentives for responsible fire use and for contributing to forest fire prevention, detection and suppression.<sup>56</sup>

#### ***4.3.2.3 Main Areas to be Strengthened***

##### ***4.3.2.3.1. Coordination and Clear Lines of Institutional Responsibility***

The most important part of forest fire management is coordination and clear lines of institutional responsibility. However, Government Regulation No. 4/2001 is unclear about the lines of institutional and inter-institutional responsibility between sectoral, local and central government. The regulation only mentions the Ministry of Forestry and the governor/regent/mayor, and does not detail the lines of institutional responsibility at the local level, or the means to achieve coordination and collaboration with other sectoral Ministries, non-department Ministries and research institutes. In addition, how to manage coordination with the National Disaster Management Agency (BNPB) is unclear. The responsibility of the Ministry of Environment, which is mentioned in the definition section as a designated institution in implementing the regulation, is not mentioned again in the content of the regulation. The only role mentioned for the Ministry of Environment is in evaluating EIAs and coordinating restoration or rehabilitation activities related to land/forest fires. Further, how to manage coordination between institutions at the central and local level is unclear. The guidelines in the regulation are too general; for example, a governor can ask for help from another governor near his or her area or from the central government, but the details are unclear.

The FAO suggests that, from a management planning perspective, legislation should establish responsibilities for planning, define clear procedures for inter-institutional coordination and public participation, and ensure that plans are integrated across different sectors, updated regularly and have specific legal consequences.<sup>57</sup> However, Government Regulation No. 4/2001 does not set out clear procedures for inter-institutional coordination; it does not mention any sectoral institutions at all. The involvement of different sectoral institutions, and a clear

---

<sup>55</sup> Ibid.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

coordination plan, integrated across different sectors, is crucial in the management of forest fires. The different institutions that may be involved in forest fires include the Ministry of Environment, the Ministry of Forestry, the Ministry of Agriculture, the Ministry of Mining, the National Development Planning Agency (Bappenas), the BNPB, the Agency for the Assessment and Application of Technology, the LAPAN, the Meteorological Climatologically and Geophysical Agency, the Indonesian Institute of Sciences and institutions and agencies at the local level. As stated, unclear or overlapping responsibilities are one of the major weaknesses of Indonesian national forest fire regulation. To avoid overlaps, any new legislation should clearly state the mandates, powers and responsibilities of the various agencies as specifically as possible.<sup>58</sup>

#### *4.3.2.3.2. Public Participation and Community Involvement*

Public participation and community involvement in forest fire prevention, control and management is an important aspect in improving effectiveness in combating land/forest fires. Community involvement should be a broader initiative that involves the community as the main decision maker in the prevention and control of forest fires. It is argued that CBFiM should be included in the future legal framework. Detail of community involvement in forest fires management will be delivered in Chapter 5, which argues that the nature of community involvement in forest fire prevention, control and management depends on the forest and land management approaches adopted. Village communities must be fully recognised as the dominant level in land management and fire prevention decision making.<sup>59</sup> The village level is the only level at which control and accountability for the use of natural resources is workable, and where fire prevention, detection and suppression are physically possible.<sup>60</sup>

Government Regulation No. 4/2001 recognises the right of access to information in relation to controlling land/forest fires. However, the regulation is silent on the role of public participation in the prevention and controlling of forest fires. The nature of activities in public participation should be set out clearly alongside explanation of coordination between communities, business sectors and government institutions in preventing and suppressing land/forest fires and

---

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

<sup>60</sup> Jean Marie Bompard and Phillipe Guizol, *Land Management in the Province of South Sumatra, Indonesia. Fanning the Flames: The Institutional Causes of Vegetation Fires* (European Union, European Commission, 1999).

undertaking rehabilitation. The approach should involve multiple stakeholders in an integrated and holistic manner. To reduce confusion on who is responsible for firefighting, legislation should specify for which areas local government is responsible. In addition, the legislation should create a basis for the allocation of public funds to support certain fire response-related activities.<sup>61</sup>

Some participatory aspects that could also be mentioned in the legislation include the creation of local committees or groups to undertake certain forest management responsibilities on the basis of specific agreement and followed by the provision of adequate information and training;<sup>62</sup> consultation with local communities and concerned land/forest owners during the process of adoption or revision of forest fire management plans and legislation;<sup>63</sup> participatory community mapping and documentation of traditional resource management practices; documenting traditional ways of controlled burning; establishing dialogue between private companies, local governments and local Forestry Departments; public education and awareness-generation programs; providing training and equipment for local fire suppression; and offering legal advice to communities through NGOs, local governments and professional groups.<sup>64</sup>

### **4.3.3. Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires**

#### ***4.3.3.1 Summary***

This is the latest regulation enacted by the government to improve efforts in controlling land/forest fires, particularly as regards institutional set up and coordination. This regulation uses a disaster risk-reduction approach to address land/forest fires. The leading institutions appointed by this regulation are the BNPB at the national level and Regional Disaster Management Agency (BPBD) at the local level. This approach seems correct, as the BPBD has more capacity and a more appropriate mandate in reducing risk and hazard of land/forest fires than the Ministry of Forestry. The ‘Manggala Agni’, the fire brigade under the Ministry of Forestry, is primarily

---

<sup>61</sup> Morgera and Cirelli, above n 2, 105.

<sup>62</sup> Ibid.

<sup>63</sup> Ibid.

<sup>64</sup> United Nations Center for Human Settlement (UN-HABITAT), 'Inter-Agency Report on Indonesian Forest and Land Fires and Proposals for Risk Reduction in Human Settlements' (UN-HABITAT, Risk and Disaster Management Programme, 2000) <<http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=1861>> 9.

mandated to protect and control land/forest fires in protected forest or conservation areas managed by the Ministry of Forestry, while other forest areas or community lands are a lesser priority. In addition, this regulation is considered a means of improving coordination between several government institutions in controlling land/forest fires, which was lacking in Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires.

This regulation is a significant improvement from the previous regulation, particularly as it improves the institutional framework. It states the different government institutions involved in controlling land/forest fires and gives a clear and specific mandate for each government institution in controlling land/forest fires. This regulation contains general and specific mandates. The first part is a general mandate, obligating 15 government institutions<sup>65</sup> at the central and local government levels:

- (1) To improve land/forest fire control through several activities:
  - a. Prevention of land/forest fires;
  - b. Firefighting;
  - c. Post-fire rehabilitation;
- (2) To cooperate and coordinate in controlling land/forest fires;
- (3) To improve community involvement and the involvement of other stakeholders in controlling land/forest fires;
- (4) To improve law enforcement and apply strict sanctions to individuals or corporations involved in burning land/forest fires.<sup>66</sup>

The second part contains a specific mandate to each government institution listed in the regulation. This regulation uses the ‘framework of multilevel governance approach’ in which addressing land/forest fires requires cooperation from various levels of government, vertically between central government institutions and horizontally between local and central government institutions. The vertical dimension of multi-level governance recognises that the national government cannot effectively address land/forest fires without working closely with local government, and expects local government to act in accordance with the legal framework at the

---

<sup>65</sup> The 15 government institutions listed in the regulation are the Coordinating Ministry of Community Welfare, the Ministry of Forestry, the Ministry of Environment, the Ministry of Research and Technology, the Ministry of Home Affairs, the Ministry of Foreign Affairs, the Ministry of Finance, the National Development Planning Agency, the Attorney General, the National Commander of Armed Forces, the Chief of Police for the Republic of Indonesia, the National Disaster Management Agency, Governors and Mayors/Regents.

<sup>66</sup> *Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires*, pt 1.

higher level.<sup>67</sup> The horizontal dimension of multi-level governance recognises that improving coordination between sectoral institutions will deliver greater effective outcomes in addressing land/forest fires.<sup>68</sup> The horizontal institutions in this regulation are *inter alia* the Ministry of Forestry, the Ministry of Agriculture, the Ministry of Environment, the Ministry of Research and Technology, the Ministry of Home Affairs and the BNPB.

In this regulation, the Ministry of Forestry is no longer the leading institution in controlling land/forest fires as previously mandated in Government Regulation No. 4/2001. The specific task of the Ministry of Forestry as stated in the regulation is to improve coordination with other institutions in controlling land/forest fires; to improve the quality and quantity of human resources in controlling land/forest fires (through the firefighting brigade *Manggala Agni*); to order forestry licence holders to provide human resources and infrastructure in controlling land/forest fires; to give sanctions to licence holders who do not implement activities in controlling land/forest fires; and to improve the performance of the *Penyidik Pegawai Negeri Sipil* (civil service investigators) and *Polisi Hutan* (forestry rangers) in enforcing the laws.<sup>69</sup>

In Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires, the Ministry of Environment is appointed to improve coordination and provide technical assistance for regional and international cooperation related to land/forest fires. Previously, in Government Regulation No. 4/2001, the Ministry of Forestry was appointed to coordinate the implementation of international cooperation in controlling land/forest fires. The Ministry of Environment also has a duty to coordinate rehabilitation of the environment following land/forest fires and to improve the performance of the *Penyidik Pegawai Negeri Sipil* (civil service investigators) and *Polisi Hutan* (forestry rangers) in enforcing laws related to mitigating and responding to land/forest fires.

The Ministry of Research and Technology has a mandate to coordinate and provide assistance for prevention and recommendations on technology in opening land without burning. In addition, the Ministry of Research and Technology is mandated to coordinate assistance of firefighting

---

<sup>67</sup> J Corfee-Morlot et al, 'Cities, Climate Change and Multilevel Governance' (Environment working paper, No 14, OECD, 2009) <<http://www.oecd.org/environment/climatechange/44242293.pdf>> 24.

<sup>68</sup>Ibid.

<sup>69</sup>*Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires* (Indonesia), pt 2.

activities using weather modification such as cloud seeding to accelerate rain. The Head of National Disaster Management is mandated to coordinate activities in reducing the risk of, and disaster preparedness in case of, land/forest fires; to give assistance in firefighting operations at the municipal and provincial levels based on the condition and needs of local regions in controlling land/forest fires; and to have a function as the leading institution in coordinating and mobilising resources in controlling land/forest fires at the national level.

The leading institution at the local government level is the BPBD, which is structurally under the governor and reports its activities directly to the governor. There is no vertical responsibility between the BNPB and BPBD. For this reason, the BPBD only receives funding from the local government budget. According to the secretary of BPBD for South Sumatera Junaidi, in an interview with the researcher, limited funding is one of the problems faced by local disaster management agencies in effectively controlling land/forest fires.<sup>70</sup> Greenpeace also states that investment in forest fire protection in terms of human resources such as forest firefighters, forest investigators, equipment and early warning systems, is low.<sup>71</sup> The governor is mandated to enact Governor Regulations for controlling land/forest fires and to maximise the role and function of the BPBD as a coordinating institution in controlling land/forest fires. In provinces in which the BPBD has not been established, governors should maximise the role and function of local leading institutions in controlling land/forest fires, allocate funding from the provincial budget for controlling land/forest fires and strictly sanction businesses that do not control land fires.

At the municipal level, the mayor/regent has a mandate to enact Mayor/Regent Regulations to control land/forest fires, maximise the role and function of the BPBD as a leading institution in controlling land/forest fires, control land/forest fires in their area and allocate a budget for the implementation of land/forest fire controls.

The important point from this Presidential Instruction is that local government has a mandate to enact Local Regulations both at the provincial and municipal level. The problem with the regulation in controlling land/forest fires is there are inconsistencies between central government regulation and local government regulations. The central government, with Government

---

<sup>70</sup> Laely Nurhidayah, Interview with Junaidi, Secretary of BNPB (Palembang, South Sumatera, 13 September 2012).

<sup>71</sup> Thalif Deen, 'Indonesia's Recurring Forest Fires Threaten Environment', *Inter Press Service News Agency*, 10 July 2013 <<http://www.ipsnews.net/2013/07/indonesias-recurring-forest-fires-threaten-environment/>>.

Regulation No. 4/2001, adopted a zero burning policy, while the local government regulation favours the aspiration of the local community to have a controlled burning policy. The local government in Central Kalimantan, for example, has enacted Local Government Regulation No. 5/2003 concerning Controlling Land/Forest Fires, which assigns some permits to conduct burning activities. Article 2(1) states that every person is prohibited from conducting land/forest burning activities.<sup>72</sup> However, according to article 2(2) for special purposes, land/forest fires can be conducted if a government permit is obtained.

To implement this controlled burning policy, the local government enacted Governor Regulation No. 52/2008 on the Guidance of Opening Lands and Yards for the Community in Central Kalimantan. This regulation is intended for communities not companies. Article 2 of Governor Regulation No. 52/2008 states that every person can open land and yards in new locations both in and outside *adat* territory by considering spatial planning.<sup>73</sup> Every person who opens the land using fires should conduct controlled burning after getting a government permit. Land opening for the purpose of plantations can be conducted by controlled burning in the first year only and in the second and third year, the land should be managed without burning.<sup>74</sup> For rice fields or farming, controlled burning should be conducted. After the rice field is free from tree or biomass debris, it should be managed by opening land without burning. In addition, for peatland areas, every person who opens peatland for rice fields, farming or plantations should note that, when burning shallow peatland for the first time, controlled burning can only be conducted outside the dry season. No burning activities are permitted on deep peatland; that is, peatland more than 50 cm deep. Every person who conducts land clearing not for farming, plantation or rice field purposes should apply controlled burning and not conduct it in the dry season.<sup>75</sup>

As mentioned, before conducting controlled burning, farmers are required to obtain a government permit, generally from the regent/mayor. However, for a land area less than 2.5 hectares, the authority to give a permit is the head of district for 0.5–2.5 hectares, head of village for 0.1–0.5

---

<sup>72</sup> *Local Government Regulation No. 5/2003 concerning Controlling Land/Forest Fires* (Central Kalimantan ) art 2(1).

<sup>73</sup> *Governor Regulation No. 52/2008 on the Guidance of Opening Lands and Yards for the Community in Central Kalimantan* (Indonesia) art 2.

<sup>74</sup> *Ibid.*

<sup>75</sup> *Ibid.*



hectares and head of RT<sup>76</sup> (neighbourhood association) for up to 0.1 hectare. The permit proposal should include the consent of the owners of the land adjacent to the area of proposed controlled burning. Governor Regulation No. 52/2008 also regulates in detail how to conduct controlled burning. For example, the person who conducts controlled burning is not allowed to leave the land until the fire has stopped and is to inform the owner of neighbouring or adjacent areas before conducting controlled burning. Controlled burning is conducted through *gotong royong* or mutual aid from 15.00 to 18.00 o'clock. Despite these provisions, according to an interview conducted by the researcher with Pak Unjung, a *sekdes* (secretary of village) of Tanjung Taruna village Central Kalimantan, the regulation is not enforced,<sup>77</sup> and no permits are sought by the community before conducting burning activities.<sup>78</sup> In addition, no permits are available at village level, as required in the Appendix to the Regulation.<sup>79</sup>

#### **4.3.3.2 Evaluation**

Presidential Instruction No. 16/2011 uses a disaster risk-reduction approach to address land/forest fires. The leading institution appointed by this regulation is the BNPB at the national level and the BPBD at the local level. This approach seems correct, as the BPBD has a greater capacity and more appropriate mandate in reducing the risk and hazard of land/forest fires than does the Ministry of Forestry. The *Manggala Agni*, the fire brigade under the Ministry of Forestry, is primarily mandated to protect and control land/forest fires in protected forest or conservation areas managed by the Ministry of Forestry, while other forest areas or community lands are a lesser priority. This regulation is also considered as a means of improving coordination between government institutions in controlling land/forest fires, which was not clear in the previous Government Regulation No. 4/2001. This regulation indeed is a significant improvement from the previous one, particularly as it improves the institutional framework.

This regulation is also an attempt to adopt multi-level governance, which is particularly needed in Indonesia due to the country's significant sectoral approach problem, which creates gaps and overlaps in its policy between sectors. The sectoral approach towards governance in Indonesia

---

<sup>76</sup> The smallest and lowest structure of the village institution.

<sup>77</sup> Laely Nurhidayah, Interview with Unjung, Secretary of village Tanjung Taruna Village (Tanjung Taruna village, 20 September 2013).

<sup>78</sup> *ibid.*

<sup>79</sup> *ibid.*

has been created by sectoral legislation managed by sectoral ministries from initial drafting until enactment. Each agency champions its own statutes, whether in fisheries, forestry, mining, tourism, agriculture or industry.<sup>80</sup> As a result, overlapping and conflicting provisions and gaps arise. Patlis, in his research on coastal management, pointed out that the law governing coastal resources is horizontally sectoral, resulting in a series of gaps, overlaps, redundancies and conflicts that can be considered as a disconnect within the legal framework.<sup>81</sup>

The multi-level governance approach is widely used by scholars of the European Integration.<sup>82</sup> It is regarded as a starting point for understanding how central government and other public and private actors implement policies from international to national and local levels of action.<sup>83</sup> Multi-level governance particularly is an emerging approach in coping with the climate change issue, which involves:

advancing governance across all level of government and relevant stakeholders to avoid policy gaps between local action plans and national policy frameworks (vertical integration) and to encourage cross scale learning between relevant departments or institutions in local and regional governments (horizontal dimension).<sup>84</sup>

A multi-level governance framework tries to narrow the policy gaps between levels of governance with the adoption of tools for vertical and horizontal cooperation.<sup>85</sup> Newig and Fritsch suggest that a highly polycentric, rather than mono-centric, governance system comprising many agencies and levels of governance results in a higher level of environmental output.<sup>86</sup> Multiple scales of policy and governance involve intergovernmental cooperation and delineation of responsibilities to different levels of government.<sup>87</sup>

Presidential Instruction No. 16/2011 mentions several sectoral institutions at the central government level. The horizontal dimension should be the reflection of how these sectoral

---

<sup>80</sup> Patlis, above n 17, 453.

<sup>81</sup> Ibid.

<sup>82</sup> Andrew Jordan, 'The European Union: An Evolving System of Multi-Level Governance...or Government?' (2001) 29 *Policy and Politics* 193, 193.

<sup>83</sup> Corfee-Morlot et al, above n 67.

<sup>84</sup> Ibid 2.

<sup>85</sup> Ibid 7–8.

<sup>86</sup> Jens Newig and Oliver Fritsch, 'Environmental Governance: Participatory, Multi-Level and Effective' (2009) 19 *Environmental Policy and Governance* 197, 197.

<sup>87</sup> Stephen Dovers and Robin Connor, 'Institutional and Policy Change for Sustainability' in Benjamin J Richardson and Stepan Wood (eds), *Environmental Law for Sustainability* (Hart Publishing, 2006) 55.

institutions at this level coordinate with each other to improve effectiveness in controlling land/forest fires. However, this is not clear from this Presidential Instruction. Instead, it only lists sectoral institutions involved in controlling land/forest fires, and mentions their detailed roles and responsibilities. However, this is still an improvement on Government Regulation No. 4/2001, which only mentions the Ministry of Forestry and seems to take a mono-centric governance approach.

At the local level, there is also an attempt to apply an integrated multi-governance approach where many sectoral institutions are involved in combating land/forest fires. For example, Central Kalimantan enacted Governor Instruction No.188.44/228/2012 on integrated institutional structures in addressing land/forest fires.<sup>88</sup> A list of the institutional structures involved in controlling land/forest fires in Central Kalimantan is provided in Appendix IV to this thesis. However, arguably the structure is a more reactive approach. Someshwar et al argues that the current institutional structure and capacities in Central Kalimantan present several challenges in achieving the needed collaboration across agencies, and the scales for anticipatory action. Specifically:<sup>89</sup>

- Current institutions are set up exclusively to react to the occurrence of fires rather than anticipating and seeking to reduce fire risks.
- In practice, the governance of fire suppression is a one-way and top-down approach: regulations are promulgated at the provincial level, policed at the district level and acted upon at the village and farm level. However, risk and rewards for villagers in fire management are not fully appreciated at the provincial and district level.
- Unreliable access to communication and the high diversity of local fire situations contrast with the use of a hierarchical approach to information dissemination and use.
- There is a propensity to work through government agencies, and a reliance on a 'command and control' approach, rather than an approach characterised by participation and stakeholder value maximisation.
- There is an undue emphasis on penalties, rather than incentives, for the use of fire.<sup>90</sup>

---

<sup>88</sup> The structure of Central Kalimantan's Local Government institutional framework in addressing land/forest fires is mentioned in Governor Instruction No. 188.44/228/2012. The list of this structure will be provided in Appendix IV of this thesis.

<sup>89</sup> Shiv Someshwar, Rizaldi Boer and Esther Conrad, 'Managing Fire Risk in Central Kalimantan Indonesia' (World Resources Report Case Study)

<[http://www.wri.org/sites/default/files/uploads/wrr\\_case\\_study\\_managing\\_peatland\\_fire\\_risk\\_indonesia.pdf](http://www.wri.org/sites/default/files/uploads/wrr_case_study_managing_peatland_fire_risk_indonesia.pdf)> 14.

<sup>90</sup> Ibid.

#### 4.3.4. Law No. 41/1999 on Forestry

##### 4.3.4.1 Summary

An assessment of Law No. 41/1999 on Forestry is important in this discussion of Indonesia's legal and policy framework in responding to and mitigating land/forest fires and the resultant transboundary haze pollution, as this law is related to the management of forests in Indonesia. Forest management, the role of communities and the role of local government are fundamental issues in addressing land/forest fires. Even though this law is not directly related to controlling land/forest fires, it is important to examine how Law No. 41/1999 supports the prevention and control of land/forest fires by how the forest is managed, utilised and conserved, as well as the extent of the coherency of the Forest Law with forest fire regulation. Forests have been heavily depleted in Indonesia; conversion into plantations, mining operations and other developments has resulted in environmental catastrophes, including forest fires and haze pollution.

Law No. 41/1999 on Forestry replaces the previous Law No. 5 of 1967, which was out of date and no longer conformed to the principles of forest control and management. Under Law No. 5/1967, there was an issue of injustice in forest distribution between the local *adat* community and the State, with the Law not recognising the customary rights of local people over their forests. Thus, added to the issue of degradation of forests in Indonesia, there has been confusion and disagreement over who should control Indonesia's forests.<sup>91</sup> As Contreras-Hermosilla and Fay explain:

Indonesia is not only well-known for its richness of extraordinary biodiversity and productivity of its forest but also for its high rate of deforestation and illegal logging, catastrophic fires, and the social tensions over forest rights between the government and indigenous and other local communities.<sup>92</sup>

Thus, the aim of Law No. 41/1999 on Forestry was particularly to enhance the maximum prosperity of the people based on justice and sustainability by securing the forests to an adequate

---

<sup>91</sup> Arnold Contreras-Hermosilla and Chip Fay, *Strengthening Forest Management in Indonesia through Land Tenure Reform: Issues and Framework for Action* (Forest Trends, 2005), iii. <[http://www.forest-trends.org/documents/files/doc\\_107.pdf](http://www.forest-trends.org/documents/files/doc_107.pdf)>.

<sup>92</sup> Ibid.

extent and with a proportional distribution.<sup>93</sup> In addition, the Law aims to optimise the various forest functions of conservation, protection and production, and increase local communities' capacity and capability in participation (article 3). Therefore, this legislation is intended to respond to the current problems in managing Indonesia's forests, particularly the demand for reform of forest management in favour of local communities. However, forestry problems in Indonesia are extensive and complex, and current forestry legislation is expected to respond to and combat forest degradation and deforestation by illegal logging, forest conversion and forest fires.

Law No. 41/1999 on Forestry empowers the Ministry of Forestry to allocate and manage Indonesia's forest. The majority of forestland in Indonesia is classified as State forest, with an estimated total of 143 million hectares. Regarding the national land-use allocation of forests, 143 million hectares is divided into conservation forest, 25 million hectares is natural or peatland forest, 29 million hectares is critical forestland, 18 million hectares is natural forest concession, forest plantations comprise 52 million hectares, 6 million hectares of forest is allocated for local communities and forest allocated for other sectors totals 4 million hectares.<sup>94</sup> Article 4(1) of the legislation states that all forest in the territory of the Republic of Indonesia, including the natural resources contained therein, shall be controlled by the State for the maximum prosperity of the people. This means that the State has the authority to maintain and manage anything related to forests, stipulate certain areas' status as forest or non-forest area, and stipulate and maintain the legal relations of people to forest (article 4(2)). The right of indigenous communities to forests is taken into consideration where they exist (article 4(3)). The status of ownership of forests is divided into two: State forests and title forests (article 5(1)). State forests can take the form of customary forests (article 5(2)). Based on function, forests can be divided into conservation forests, protected forests and productive forests (article 6(2)).

In fact, since the Dutch colonial period, Indonesian policy makers have viewed forest resources as the exclusive responsibility of the central government.<sup>95</sup> However, with decentralisation, the central government must pass part of its authority to local government (article 66). The

---

<sup>93</sup>Law No. 41/1999 on Forestry (Indonesia) art 3(d), (e).

<sup>94</sup> Basoeki Karyaamadja, *Indonesia Law and Forest Tenure* <[http://www.rightsandresources.org/documents/files/doc\\_1767.pdf](http://www.rightsandresources.org/documents/files/doc_1767.pdf)>.

<sup>95</sup> Contreras-Hermosilla and Fay, above n 91, 8.

government's approach towards managing forests has been to give large numbers of industrial concession rights over forest to the private sector to gain revenue and energise national economic development.<sup>96</sup> Consequently, local people have been disadvantaged and forced off their customary lands, creating tensions and conflicts between local communities and the companies granted these forest concession rights. However, in Law No. 41/1999 on Forestry, the rights of local indigenous communities are recognised, and they are acknowledged as entitled to collect forest produce to fulfil their daily needs; manage the forest according to the prevailing indigenous law, provided this is not in contravention of national law; and obtain empowerment for welfare improvement (article 67).

Forest concession rights (HPH) grant the right for the holder to utilise natural forests to cut timber for a period of 20 years plus one planting cycle. The company granted the concession is obliged to pay a natural forest resources contribution and contribute to a reforestation fund (article 35). Concessions can be granted for any forest area, except for the core zones of natural conservation forests or forest zones in national parks (article 24). Once the valuable timber is extracted, the remaining land/forest resources are classified as degraded forest to be utilised for large plantations or other uses.<sup>97</sup> Another form of forest utilisation right is a HPHTI (industrial plantation right), which allows the use of forestland for establishing a plantation forest, to plant and harvest for a period of 30 years plus one planting cycle, and for which concession holders also have to pay a forest utilisation contribution and natural forest resource contribution. Permit holders have an obligation to preserve forests where they operate (article 32). However, fires occur on a large scale in non-forested areas and in plantation or agricultural areas such as HPH areas, HTI industrial plantation areas and swamp forest or peatland areas, which makes monitoring forest preservation difficult.

It is suggested that the government has failed to regulate or monitor the environmental performance of HPH/HTI operations.<sup>98</sup> The management of the forest sector is weak. Staff of the forestry administration is largely reliant on concessionaire reports to determine allowable cuts. Thus, poor logging practices and breaches of regulations are difficult to detect.<sup>99</sup> Forestry

---

<sup>96</sup> Ibid.

<sup>97</sup> Ibid.

<sup>98</sup> Charles Palmer and Stefanie Engel, 'For Better or for Worse? Local Impacts of the Decentralization of Indonesia's Forest Sector' (2007) 35 *World Development* 2131, 2137.

<sup>99</sup> United Nations Center for Human Settlement, above n 64, 25.

legislation mandates limiting the granting of concession rights by considering the sustainability of forests and the certainty of business (article 31). However, this is often disregarded in the issue of concession rights by central and local government. This is perhaps because the legislation does not limit the number of permits able to be granted. Zulkifli Hassan of the Ministry of Forestry stated that in January 2011 the Indonesian Ministry of Forestry issued almost three million hectares of new plantation concessions to 44 firms.<sup>100</sup> This is surprising since Indonesia has already committed to a logging moratorium on the conversion of primary forest under the REDD+ deal with Norway.<sup>101</sup> However, it is well known that bribery is a common practice in the forestry sector in acquiring permits without technical review or recommendation.<sup>102</sup>

Corruption in the forestry sector is rampant. The causes of corruption in Indonesia are facilitated by a number of factors including: large amounts of public resources derived from natural resources, vested interests and politically connected networks, poorly paid civil servants, low and weak regulations and poor law enforcement.<sup>103</sup> Regarding regulations, Indonesia has already enacted Law No 31/1999 on Combating Corruption Crime and Law No 20/2001 on the Changes of the Law No 31/1999 on Combating Corruption Crime. This law has mandated the government to establish the KPK (Corruption Eradication Commission). According to the survey conducted by KPK in 2012 the Ministry of Forestry is considered the country's most corrupt institution.<sup>104</sup> The forestry sector is susceptible to corruption in several number ways, including: the misuse of the reforestation fund, concessions and permits for forest related activities, and illegal logging.<sup>105</sup> A corruption risk assessment conducted by KPK in 2010 revealed several gaps which explained why policies in the forestry sector are vulnerable to abuse. First, the definition of forests and

---

<sup>100</sup> Chris Lang, *On the Eve of Logging Moratorium, Indonesia's Ministry of Forestry Issued almost Three Million Hectares of Concessions* (26 January 2011) <<http://www.redd-monitor.org/2011/01/26/on-the-eve-of-the-logging-moratorium-indonesias-ministry-of-forestry-issued-almost-three-million-hectares-of-concessions/>>.

<sup>101</sup> Ibid.

<sup>102</sup> Transparency International Indonesia, 'Forest Governance Integrity Report Indonesia' (23 November 2011) <[http://www.ti.or.id/media/documents/2011/11/23/f/a/faaa1-report\\_indonesia\\_final\\_rev.pdf](http://www.ti.or.id/media/documents/2011/11/23/f/a/faaa1-report_indonesia_final_rev.pdf)>.

<sup>103</sup> UP4 Anti Corruption, Causes of Corruption in Indonesia, <[www.u4.no/publications/causes-of-corruption-in-indonesia/.../2890](http://www.u4.no/publications/causes-of-corruption-in-indonesia/.../2890)>

<sup>104</sup> Angela Dewan, Indonesia Struggles to clean up corrupt forestry sector, *AFP*, 1 January 2014, <<http://phys.org/news/2014-01-indonesia-struggles-corrupt-forestry-sector.html>>.

<sup>105</sup> Ahmad Dermawan, et al, Preventing the Risk of Corruption in REDD+ in Indonesia, Working Paper 80, CIFOR, 2011, <[www.u4.no/recommended-reading/...the...of-corruption...redd.../2732](http://www.u4.no/recommended-reading/...the...of-corruption...redd.../2732)>.

boundaries of forest zones in several regulations were found to be ambiguous and weak leading to different interpretations and creating uncertainty. Second, there is no consolidated maps of forest areas, third, lack of harmonization and existing overlaps between regulations, and fourth, limited capacity and integrity of forest management units since the government does not possess monitoring for local governments' performance in protecting forest.<sup>106</sup>

Law No 41/1999 does not contain detailed provisions regarding fire prevention, rather the law contains only general forest protection and conservation provisions in articles 46-51. Instead, the detailed regulation on forest fires can be found in Government Regulation No 45/2004 on Forest Protection. This Government regulation No 45/2004 was issued to implement further the provisions in articles 46-51, 77, 80 of Law No 41/1999. The provisions on forest protection from fires are set out in article 18-31. The provision consists of prevention, repression and post fires management. The regulation has mandated the establishment of institutions in national, provincial, regency and forest units which are called brigade forest fires control or *Manggala Agni* ( article 22). To coordinate forest fires control, the Ministry established the Center of forest fires control operation (article 24). The *Manggala Agni* has limited responsibility to control forest fires in state forest areas. Most of the fires in non-forested areas are not the responsibility of the *Manggala Agni*.

To strengthen Law No 41/1999 on Forestry law the government enacted Law No 18/2013 on the Protection of Forest and the Eradication of Forest Destruction. This Law served to address the issue of organized crime, such as illegal logging, illegal mining and illegal plantations in the forest. Even though this law does not directly address land/forest fires, it is beneficial in directly reducing the risk of forest fires as most fires have resulted from deforestation and forest degradation and destruction.

---

<sup>106</sup>UNDP, UN REDD Programme, Participatory Governance Assessment : The 2012 Indonesia Forest, Land, and REDD+ Governance Index, UNDP Indonesia 2013 , 27  
<<http://www.undp.org/content/dam/indonesia/docs/envi/PGA%20Report%20English%20Final.pdf>>.



#### 4.3.4.2 Evaluation

In respect to forest fires, Law No. 41/1999 on Forestry remains vague, comprising only a few provisions on the matter and leaving most details of implementation to regulations, decrees and other measures at the central and local government level.<sup>107</sup> In responding to the land/forest fire issue, this legislation completely prohibits the burning of forest (article 50(3)). The significant provision relating to protecting the forest from fires is article 47, which states that forest protection is an effort to prevent and limit the destruction of forest, forest areas and forest products as a result of *inter alia* fires (article 47(1)). To prevent forest fires, abandoning any flammable material in forest areas is strictly prohibited (article 50(3)(1). Further, article 48(2) states that protection of state forests is the responsibility of the government. Based on this provision, the firefighting unit *Manggala Agni*, from the Ministry of Forestry, established in 2003, only has the responsibility to protect and conduct firefighting activities in State forest. Conversely, the conservation of 'right forest or forest subject to private ownership or private forest zone' and 'forest concession' is conducted by the right holders and holders of forest utilisation licenses, respectively (article 48(4) and article 48(3)). Law No. 41/1999 on Forestry has delineated the responsibility of areas to be managed and protected from forest fires. However, most fires are located in non-forested areas. In this situation, it is not clear whether the local community or local government is responsible. This issue should be clarified. Moreover, there is a land tenure problem in Indonesia that makes it difficult to ascertain who owns the land and who is responsible to control fires on the land. It is argued that conflict over control of land and natural resources due to uncertainty of ownership (State or community) will remain unless a serious effort is made to rationalise the State forest zone.<sup>108</sup>

The uncertainty of ownership of land and natural resources makes firefighting activities difficult. This uncertainty usually results in a 'tragedy of the commons', as illustrated by Hardin, who showed that degradation of the environment is to be expected whenever many individuals use resources in common.<sup>109</sup> For this reason, Ostrom suggests that a clearly defined boundary of resources is a first step in organising collective action as a solution for the tragedy of the

---

<sup>107</sup> Morgera and Cirelly, above n 2, 30.

<sup>108</sup> Contreras-Hermosilla and Fay, above n 91, 1.

<sup>109</sup> G Hardin, 'The Tragedy of the Commons' cited in Elinor Ostrom, *Governing the Commons* (Cambridge University Press, 1990) 2.

commons.<sup>110</sup> The capability of a local community in suppressing forest fires is also limited and is being questioned for its effectiveness. The involvement of local community in forest protection is already recognised in article 48(5) ‘for proper forest protection, the community shall be involved in the forest protection program’. However, due to inadequate rights of communities to land/natural resources, the involvement of the local community is not effective. The marginalisation of local communities causes people to have little commitment to preventing fires outside their farms.<sup>111</sup> The UKP4 (President Delivery Unit for Development Monitoring and Oversight) has suggested that there is a need for remapping the forest ownership in Riau.<sup>112</sup> This mapping is beneficial to identify who is responsible for land burning in the case of land/forest fires.

One important provision noticeably absent from this legislation is peatland forest protection. Only forest in general is regulated. This is significant since the major cause of haze pollution is fires in peatland areas. The prevention of fires in peatland areas is important, as smouldering peat fires are difficult to control. A moratorium on conversion of peatland forest into plantation and agriculture is arguably the best option to prevent further damage to the peatland ecosystem, and to mitigate the risk of peatland forest fires. However, to the oil palm and mining sectors, this policy is considered restrictive of economic growth. With the signing of a Letter of Intent between Indonesia and Norway on a REDD+ partnership in May 2010, Indonesia agreed to a moratorium of forest conversion and peatland concessions for two years.<sup>113</sup> However, it is doubtful whether this moratorium can be categorised as reform of the forestry sector. The moratorium was introduced under Presidential Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance. A detailed examination of this Decree will be delivered in Chapter 6 on REDD+.

The only regulation from the Ministry of Forestry related to peatland is the Ministry of Forestry Regulation No. P.55/Menhut-II/2008 on the Master Plan on the Rehabilitation and Conversion of Peatland Development Areas in Central Kalimantan, as further implementation of Presidential

---

<sup>110</sup> Ibid.

<sup>111</sup> Bompard and Guizol, above n 60, vii.

<sup>112</sup> Novaeny Wulandary, UKP4: Segera Data Kepemilikan Lahan dan Hutan di Riau, *PortalkBR*, 28 June 2014, <[http://www.portalkbr.com/berita/nasional/3300093\\_4202.html](http://www.portalkbr.com/berita/nasional/3300093_4202.html)>.

<sup>113</sup> Chris Lang, *Norway and Indonesia Sign US\$1 billion Forest Deal* (27 May 2010) <<http://www.redd-monitor.org/2010/05/27/norway-and-indonesia-sign-us1-billion-forest-deal/>>.

Decree No. 80/1999 on the General Guidelines on Planning and Management of Peatland in Central Kalimantan and Presidential Instruction No. 2/2007 on Acceleration of Rehabilitation of the ex-Mega Rice Project in Central Kalimantan. This regulation specifically governs the rehabilitation of peatland in Central Kalimantan and does not extend to other peatland areas in Indonesia. It is intended to reverse the damage to peatland areas in Central Kalimantan from the failure of a one million hectare peatland to mega rice-project conversion in 1996, which has brought negative social and environment impacts, was badly damaged during the fires of 1997/1998 and has contributed to haze pollution.

Regarding law enforcement, Law No. 41/1999 on Forestry contains sanctions for negligent burning of forests and land. To be effective, sanctions should be severe enough to act as a deterrent, while not being out of proportion with the nature of the offence, which makes courts and other enforcement bodies reluctant to apply the penalty, allowing the crime to go unpunished.<sup>114</sup> Article 78(3) provides a severe maximum penalty of 15 years' imprisonment and a fine of five billion rupiah. The deliberate destruction of forest protection infrastructure and facilities is punishable by a maximum term of imprisonment of 10 years and a fine of five billion rupiah (article 78(1)). The intentional abandonment of flammable material in forest areas is punishable by a maximum term of imprisonment of three years and a fine of one billion rupiah. In addition to criminal and penalty sanctions, Law No. 41/1999 also contains compensation and administrative sanctions. Article 80 states that every action that violates this law obliges the party responsible for the act to pay compensation in accordance with the extent of the damage or the consequence caused to the State for the costs of rehabilitation, forest condition restoration or other necessary acts (article 80(1)). This compensation operates in addition to the criminal sanctions provided in article 78. The Ministry of Forestry together with UKP4 implement a "multi door approach" for law enforcement. Various relevant regulations will be used to minimize the perpetrators escape from legal action. A multi door approach to address natural resources related crime was launched on 20 May 2013. An MOU on a multi door approach was signed by Indonesian Attorney General, Minister of Environment, Minister of Forestry, Minister of Finance, and Head of PPATK (The Indonesia Financial Report and Analysis Center).<sup>115</sup> The

---

<sup>114</sup> Morgera and Cirelli, above n 2, 100.

<sup>115</sup> Norway Embassy, Indonesia Launched Multidoor Approach to address Natural Resources –Related Crimes, 29-5-2013, <[http://www.norway.or.id/Norway\\_in\\_Indonesia/Environment/Indonesia-Launched-Multidoor-Approach-to-Address-Natural-Resources-related-Crimes-/#.U-maToFdW8A](http://www.norway.or.id/Norway_in_Indonesia/Environment/Indonesia-Launched-Multidoor-Approach-to-Address-Natural-Resources-related-Crimes-/#.U-maToFdW8A)>.

multi door approach addresses commonly multi-edges natural resources/environmental related crimes by enacting various relevant regulations.<sup>116</sup> “

#### **4.3.5. Agriculture Law No. 18/2004**

##### **4.3.5.1 Summary**

Agriculture Law is a sectoral body of law directly related to the issue of land/forest fires. Fires are usually located in agriculture or plantation areas. Therefore, it is crucial to examine the role of the Agricultural Law in reducing land/forest fires. Agriculture Law No. 18/2004 is significant, as this legislation regulates licences in agricultural sectors, particularly permits for oil palm plantations. It is expected that this law can reduce the negative social and environmental impacts of oil palm plantations. One of the aims of the Agricultural Law is to maximise the sustainable management of natural resources.<sup>117</sup>

Oil palm plantations have been blamed as a cause of land/forest fires. These plantations are growing rapidly, making Indonesia the largest global producer of palm oil besides Malaysia.<sup>118</sup> The Ministry of Agriculture projects that oil palm plantations will continue to grow to a total of 9.3 million hectares by 2015.<sup>119</sup> The majorities of oil palm plantations are located in Sumatera, but they are also expanding rapidly in Kalimantan, Sulawesi and Papua. The expansion of oil palm plantations has broad impacts on spatial planning and environmental and social governance.<sup>120</sup> Oil palm plantations have emerged as an important contributor to export revenue, rural employment and as a source of bio-fuel. However, they have also been criticised for causing deforestation, GHG emissions, forest fires and social conflicts.<sup>121</sup>

Agricultural law already provides provision for spatial planning on plantations to reduce environment impact. Article 7 states that spatial planning for agriculture should be conducted

---

<sup>116</sup> Ibid.

<sup>117</sup> Agriculture Law No. 18/2004, art 3.

<sup>118</sup> World Bank, 'Environmental, Economic, and Social Impacts of Oil Palm in Indonesia: A Synthesis of Opportunities and Challenges' (Discussion paper, May 2010)  
<[http://www.ifc.org/ifcext/agriconsultation.nsf/AttachmentsByTitle/WB+discussion+paper/\\$FILE/WB\\_Oil+Palm+SynthesisDiscussionPaperMay2010.pdf](http://www.ifc.org/ifcext/agriconsultation.nsf/AttachmentsByTitle/WB+discussion+paper/$FILE/WB_Oil+Palm+SynthesisDiscussionPaperMay2010.pdf)> v.

<sup>119</sup> Ibid 6.

<sup>120</sup> Ibid.

<sup>121</sup> Ibid.

based on national development planning, national spatial planning; the suitability of land for plantation; social and cultural; environment; interest and community; and market and local aspiration. Agricultural planning should be realistic, beneficial, and conducted in a participatory, integrated, open and accountable manner (article 8). To reduce social conflict, article 9(2) states that when applicants/permit holders want to use customary *adat* land, they should negotiate (*musyawarah*) with the community holders of that land to obtain their approval for the transfer of the land, and to organise to pay compensation for its use.

#### **4.3.5.2 Evaluation**

The policy of Agriculture Law No. 18/2004 to control land/forest fires is reflected in articles 25 and 26. Article 26 states that every person responsible for a business is prohibited from conducting burning activities to open and manage land for plantation, as this causes pollution and damage to the environment. Article 25 states that every plantation company is obliged to maintain the sustainability of the functioning of the environment for the area in which they operate, and to prevent damage to that area (article 25(1)). To prevent damage to the function of the environment, before granting an agriculture business license, the plantation company is obliged under article 25(2) to:

- a. Conduct an environmental impact assessment, environmental management and monitoring plan;
- b. Carry out analysis and risk management when using the result of genetically modified organism;
- c. Make a statement that will be able to provide infrastructure and adequate emergency systems to control the occurrence of land/forest fires in the opening and/or management of land.

Further, article 25(3) states that to maintain the sustainability of the function of the environment and to control the damage after granting an agriculture business permit, the agricultural company should implement an EIA, environmental management and monitoring plan and/or analysis and risk management assessment of the environment, and monitor the implementation. If the company cannot fulfil the requirements stated in article 25(2), they will not be granted a license of business in agriculture. Moreover, if a company that has already been granted a license does not implement the requirements in article 25(3), the permit will be revoked under article 25(5).

It is well known that the problem of forest conversion for oil palm plantations is an acute problem in Indonesia.<sup>122</sup> Peat forest areas are the main sites of conversion, and widespread corruption hinders any attempt to manage forest and agriculture more sustainably.<sup>123</sup> Despite this, the Agricultural Law is silent on regulating peatland areas. The regulation on peatland is governed only at a lower level by the Ministry of Agriculture Decree No. 14/Permentan/PL.110/2009 on the Guidelines for the Utilisation of Oil Palm Plantation on Peatland Areas. As its name implies, this regulation is not intended to protect or conserve peatland; it is intended to guide its use. Some NGOs argue that this regulation legalises the conversion of peatland for utilisation.<sup>124</sup> Indeed, this regulation clearly conflicts with Presidential Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance, reflecting the above-mentioned characteristic of the Indonesian legal framework, as sectoral, conflicted and disconnected.<sup>125</sup>

In the Ministry of Agriculture Decree No. 14/Permentan/PL.110/2009, there are criteria for using peatland areas as plantation. These include being located in plantation areas or converted forest areas, and having a depth of less than 3 meters. The Decree also provides that, in opening land, fires are prohibited.<sup>126</sup> It is recognised that peatland burning increases the amount of GHGs in the atmosphere and is the major cause of haze pollution. Thus, for this reason, the Agriculture Law should also regulate and provide incentives to industry for protecting peatland areas. Where possible, the regulation should prohibit the conversion of peatland areas into plantations or agriculture. The emergence of a market for carbon offset creates a new incentive to move oil palm development to non-forested and non-peatland areas.<sup>127</sup>

The Agricultural Law also contains criminal sanctions. Every person who intentionally opens an/or manages land using open burning causing pollution and/or damage to the environment may be punished by a maximum term of imprisonment of 10 years and a fine of 10 billion rupiah

---

<sup>122</sup> WWF, 'Palm Oil and Forest Conversion'

<[http://wwf.panda.org/what\\_we\\_do/footprint/agriculture/palm\\_oil/environmental\\_impacts/forest\\_conversion/](http://wwf.panda.org/what_we_do/footprint/agriculture/palm_oil/environmental_impacts/forest_conversion/)>.

<sup>123</sup> WWF, 'Oil Palm Plantation and Deforestation in Indonesia: What Role do Europe and Germany Play'

<<http://awsassets.panda.org/downloads/oilpalmindonesia.pdf>>.

<sup>124</sup> Rumah Hijau Kalbar, 'Ancaman Pembukaan Hutan Gambut untuk Perkebunan Sawit' on (26 August 2010)

<[http://walhiwestborneo.blogspot.com.au/2010/08/ancaman-pembukaan-hutan-gambut-untuk\\_26.html](http://walhiwestborneo.blogspot.com.au/2010/08/ancaman-pembukaan-hutan-gambut-untuk_26.html)>.

<sup>125</sup> Patlis, above n 17, 451.

<sup>126</sup> *Ministry of Agriculture Decree No. 14/Permentan/PL.110/2009 on the Guidelines for the Utilisation of Oil Palm Plantation on Peatland Areas* (Indonesia).

<sup>127</sup> World Bank, above n 118.

(article 48). If the violation has caused death or serious injury to other persons, the penalty is imprisonment for 15 years and a fine of five billion rupiah (article 48(2)). Every person who is negligent in opening and/or managing land using fire may receive a penalty of three years' imprisonment and a fine of three billion rupiah (article 49). If the offence has caused death or serious injury, a penalty of five years' imprisonment and/or a fine of 5 billion rupiah may be imposed to all negligent parties (article 49(2)).

#### **4.3.6. Law No. 5/1990 Concerning the Conservation of Living Resources and Their Ecosystems**

##### **4.3.6.1 Summary**

Law No. 5/1990 concerning the Conservation of Living Resources and their Ecosystems is intended as a framework for the conservation and sustainable use of living resources and their ecosystems. The conservation of living resources should be conducted through the following activities, *inter alia*, protection of life support systems, preservation of plant and animal species diversity and their ecosystems and sustainable utilisation of living resources and their ecosystems (article 5).

The protection of life support systems is intended to maintain ecological processes that support the continued existence of living organisms for enhancing human welfare and the quality of human life (article 7). To implement the protection of life support systems, the government will enact certain areas as a life support system protection area (article 8(a)). In addition, this legislation puts an obligation on every holder of land rights or rights over aquatic areas within a life support system to maintain and ensure the continuity of the protected function of the area. The government also undertakes to regulate and conduct law enforcement of land management and utilisation and concession rights to aquatic areas within the life support system (article 9(2)). Degradation within a life support system will be followed by a continuous rehabilitation effort (article 10).

Preservation of plants and animals is conducted through sanctuary reserves and wildlife sanctuaries (article 14). This legislation also mandates the government to establish nature conservation areas, consisting of national parks, grand forest parks and natural recreation parks

(article 29). The Ministry of Forestry is appointed to administer these nature conservation areas. In respect to law enforcement, besides the police, designated civil servants in the Ministry of Forestry are allowed to investigate criminal actions regarding conservation of living resources and their ecosystems. This legislation also contains provisions on criminal punishment. Every person who has intentionally caused a change or alteration of the natural integrity of a conservation area may be punished by imprisonment for a maximum of 10 years and a fine of up to 200 million rupiah (article 40(1)).

#### **4.3.6.2 Evaluation**

This regulation is not directly concerned with land/forest fires. However, forest fires do affect the achievement of the aims of the legislation, which is the conservation of living resources. Thus, it is expected that this legislation could become a foundation for protecting national parks or conservation areas and wetland/peatland areas from forest fires, which can damage national parks and other conservation areas. Many national parks in Indonesia suffer from human encroachment through illegal logging, mining, poaching and forest fires. Illegal logging occurs in 37 of 41 national parks in Indonesia, especially in *Gunung Palung Kutai*, *Danau Sentarum*, *Gunung Leuser* and *Tanjung Puting* national parks.<sup>128</sup> Logged forests seem to be more susceptible to fire than unlogged forests because logging opens up the canopy allowing sunlight to enter and dry the forest floor.<sup>129</sup> Moreover, with the expansion of palm plantations located adjacent or within national parks, national parks also become vulnerable to wildfires.<sup>130</sup> In 2002–2004, for example, more than 50 per cent of burnt areas were in conservation forests (mainly in national parks and nature reserves).<sup>131</sup> The protection of national parks and their habitats is important as a means to the fulfilment of goals and obligations under the CBD, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Ramsar Convention and UNFCCC. Indeed, one the aim of Law No. 5/1990 concerning the Conservation of Living Resources and their Ecosystems is forest protection and nature conservation. As a hotspot of biodiversity,

---

<sup>128</sup> UNEP, Grida, *Illegal Exploitation of National Park*, <<http://www.grida.no/publications/rr/orangutan/page/1272.aspx>>; Christian Nellemann et al (eds), *Rapid Response Assessment The Last Stand of Orang Utan State of Emergency: Illegal Logging, Fire and Pal Oil in Indonesia's National Park* (UNEP/Grid Arendal, 2007), 18.

<sup>129</sup> Friends of the Earth, *Indonesian Forest Fires*, <[http://www.foe.co.uk/resource/briefings/indonesian\\_forest\\_fires.html](http://www.foe.co.uk/resource/briefings/indonesian_forest_fires.html)>.

<sup>130</sup> Nellemann et al, above n 121, 32.

<sup>131</sup> Ibid.



Indonesia's living resources and their ecosystems have an important role for human life and need to be managed and utilised sustainably for the welfare of present and future generations.<sup>132</sup> Forest protection and nature conservation are part of the effort to protect forest areas and their resources, with other aspects of this effort including taking preventive and recovery measures against forest fires, implementing regional conservation of the biodiversity contained therein and developing ecotourism and environmental services.<sup>133</sup>

There is inconsistency between the spirit of Law No. 5/1990 concerning the Conservation of Living Resources and their Ecosystems and Law No. 41/1999 on Forestry, particularly where the Law No. 41/1999 allows the use of protected forests for other developments outside forestry activities, such as mining. Underground mining in protected forests is allowed under Presidential Regulation No. 28/2011 concerning the Use of Protected Forest for Underground Mining. Underground mining still threatens protected forests and may cause their degradation. The inconsistency is seen further with the enactment of the Government Regulation as Substitute of Forestry Law No. 1/2004 on the changes to Law No. 41/1999 on Forestry, which allows the continuity of existing permits and contracts for mining in protected forests. Government policy towards protected forests has generated concern and criticism from several environmental NGOs.

The inconsistencies between legislation and government policy in the forestry sector and the conservation legislation make it difficult to protect national parks or conservation areas effectively. This inconsistency between sectoral laws has been identified as a main characteristic of the legal framework in the management of natural resources in Indonesia. In addition, the threats of illegal logging, land use conversion and encroachment of human activities on national parks represent major challenges to protecting national parks effectively, and are a barrier to reducing land/forest fires. Due to the pervasiveness of corruption in the forestry sector, protected areas of forest are potentially converted into mining or logging operations, or oil palm plantations.<sup>134</sup>

---

<sup>132</sup> *Law No. 5/1990 concerning the Conservation of Living Resources and their Ecosystems* (Indonesia).

<sup>133</sup> The Ministry of Forestry, *REDD Methodology and Strategies Summary for Policy Makers* <[http://www.dephut.go.id/INFORMASI/LITBANG/IFCA/Summary%204%20policy%20makers\\_final.pdf](http://www.dephut.go.id/INFORMASI/LITBANG/IFCA/Summary%204%20policy%20makers_final.pdf)>.

<sup>134</sup> 'Mining Company Working with Indonesian Government to Strip Forest of Protected Status', *The Guardian UK*, 17 April 2013.

#### **4.3.7. Law No. 22/1999 on Local Government, as Revised by Law No. 32/2004**

##### **4.3.7.1 Summary**

An examination of Law No. 22/1999 on Local Government, as revised by Law No. 32/2004 on Local Government, is important to observe the division of authority between the central government and the local government to prevent land/forest fires. In a broader framework, it assists in examining the relationship and authority between the central and local government on natural resources management, conservation and protection of the environment, including controlling land/forest fires.

The enactment of Law No. 22/1999 on Local Government and Law No. 25/1999 on Financial Balance has shifted the system of government and administration from a high degree of centralisation to decentralisation. These laws have been revised and superseded by Law No. 32/2004 on Local Government and Law No. 33/2004 on Financial Balance, respectively. Many of the provisions in Law No. 22/1999 and Law No. 32/2004 are similar, but Law No. 32/2004 is intended to correct the mistakes, and clarify the ambiguities, of Law No. 22/1999.<sup>135</sup> It is argued that the new Law No. 32/2004 puts much greater emphasis on the relationship between central and local government, rather than on the authority or autonomy of local government.<sup>136</sup> However, Tan argues that Law No. 32/2004 appears to favour re-centralisation, which would limit the power of regents and mayors.<sup>137</sup>

The authority given to local government is as wide as possible. Article 7(1) of Law No. 22/1999 states that the authority of local government is in all sectors of government except in foreign affairs, security and defence, fiscal and monetary policy, justice, religious affairs and ‘other authority’, with these being the areas under the authority of the central government. The ‘other authority’ here includes making policies on national planning and development, allocating financial subsidies to the regions, strengthening national economic institution and public administration systems, promoting human resources development, managing the exploitation of natural resources including conservation, and the use of high technology and national

---

<sup>135</sup> Patlis, above n 17, 453.

<sup>136</sup> Ibid.

<sup>137</sup> Tan, above n 32, 689.

standardisation (article 7(2)). It can be concluded from the provision that the management of the exploitation of natural resources including conservation is still under the authority of the central government. This indicates that transfer of authority from central government to local government has been incomplete. A further consequence of this provision is that it creates confusion in the case of forest fires as to who is responsible to prevent and control the disaster because, as the authority for exploitation of natural resources and conservation is the central government, local governments feel that they have little responsibility and stewardship to prevent and control land/forest fires. However, article 10 of Law No. 22/1999 seems to contradict article 7(2), by stating that local government has the authority to manage national resources within their jurisdiction and is responsible for maintaining the sustainability of the environment. These two contradictory provisions create confusion, easily invite a variety of interpretations from central government and local government, and may create conflict among the different tiers of government.<sup>138</sup>

This confusion is clarified in the new Law No. 32/2004 on Local Government, which states in article 10(3) that the authority of the central government includes foreign affairs, security and defence, justice, national fiscal and monetary policy, and religious affairs and the rest is under the authority of local government. In addition, management of natural resources is to be done in a fair and harmonious manner (article 2(6)). Patlis argues that Law No. 32/2004 seeks to clarify the roles and authority of regional government and does a better job than Law No. 22/2009.<sup>139</sup> However, Tan argues that Law No. 32/2004 is still extremely vague as to the division of power over natural resources,<sup>140</sup> stating that management of natural resources is to be done in a fair and harmonious manner (article 2(6)) but not referring to the exact division of this authority between central and local government. Further, Tan argues that Law No. 32/2004 is more in favour of re-centralisation of power, and limits the power of regents and mayors. To some extent, this research agrees with both opinions: that Law No. 32/2004 does do a better job than Law No. 22/1999, particularly in eliminating the contradiction inherent in the previous legislation. However, Law No. 32/2004 remains vague and is too broad in the division of power over natural resources, particularly because the division of power over natural resources is not regulated in

---

<sup>138</sup> Ida Aju Pradjna Resosudarmo, 'Closer to People and Trees: Will Decentralisation Work for People and the Forest of Indonesia?' (2004) 16(1) *European Journal of Development Research* 104, 111.

<sup>139</sup> Patlis, above n 17, 454.

<sup>140</sup> Tan, above n 32, 690.

detail, but is to be regulated in other legislation (article 17(3)) that has yet to be enacted. This overly broad provision is the main characteristic of the law governing regional autonomy, which has resulted in regional governments imposing their own regulatory framework on natural resources management, often without consideration of ensuring coherence with central legislation.

Law No. 22/1999 places full autonomy at the regency and municipal levels, while provinces are given limited autonomy. Full autonomy means they have the authority to create and implement local policies, provided they do not violate national law.<sup>141</sup> However, Patlis argues that article 4(1) of Law No. 22/1999 creates significant ambiguity and conflicts with the pre-existing legal framework.<sup>142</sup> Article 4(1) states that the province, regency and municipalities are given the authority to manage their affairs pursuant to their needs, goals and capacities. This language has been interpreted widely as 'regional euphoria'. In implementing the autonomy law, local government is described by Patlis as exercising 'ingenuity, guile and speed' in enacting new laws to take advantage of rent-seeking opportunities in the management of natural resources.<sup>143</sup> As such, many of the laws enacted by local governments contravene or conflict with central government laws. Most local government regulations are issued as a means of increasing local revenue. This is exacerbated by the absence of a legal mechanism to resolve this inconsistency.

Patlis also describes the shift of authority from the central to the local government as creating confusion, conflict and questions within the legal system of Indonesia.<sup>144</sup> In addition, the speed with which authority has been transferred, and the changing system of governance from centralisation, which applied for 32 years, to decentralisation, means that local governments are largely ill equipped to cope with their new responsibilities.<sup>145</sup> Decentralisation has brought new hope for the improvement of environmental protection. However, there are also challenges to implementation, particularly in the capacity of local governments, and in the 'corruption,

---

<sup>141</sup> M Ryaas Rasyid, 'The Policy of Decentralisation in Indonesia' (Paper presented at the GSU Conference: Can Decentralization Help Rebuild Indonesia?, Atlanta, Georgia, 1 May 2002) [http://aysps.gsu.edu/isp/files/ISP\\_CONFERENCES\\_INDONESIA\\_RASYID\\_PAPER.pdf](http://aysps.gsu.edu/isp/files/ISP_CONFERENCES_INDONESIA_RASYID_PAPER.pdf).

<sup>142</sup> Patlis, above n 17, 453.

<sup>143</sup> Ibid 454.

<sup>144</sup> Ibid 450.

<sup>145</sup> Steve Rhee et al, *Report on Biodiversity and Tropical Forests in Indonesia* USAID No (2004).

<[http://rmportal.net/library/content/1/118\\_indon/view](http://rmportal.net/library/content/1/118_indon/view)> 1–4.

collusion, and nepotism' that is the continued legacy of the previous regime that continues to influence government decisions, legislative development and law enforcement at all levels.<sup>146</sup>

#### **4.3.7.2 Evaluation**

It was expected that, with decentralisation, local government could effectively reduce land/forest fires.<sup>147</sup> This is because the autonomy law gave wide authority to local governments to manage natural resources and the sustainability of the environment. However, this is not the case in Indonesia. There is a gap between theory and implementation, and land/forest fires still occur on a yearly basis in the same areas: Sumatera and Kalimantan.<sup>148</sup> In theory there are several forms of decentralization. The World Bank differentiates three different forms of decentralization including: political, administrative, fiscal and market decentralization.<sup>149</sup> Political decentralization aims to give citizens or their elected representatives more power in public decision making, while administrative decentralization grants authority to local government to conduct local government affairs with minimum direct central government approval. Three major forms of administrative decentralization are deconcentration, delegation, and devolution. Financial responsibility is a core component of decentralization, since if local government are to carry out decentralized functions effectively they must have adequate level of revenues either raised locally or transferred from central government. Finally, the most complete form of decentralization from government's perspective is privatization and deregulation.<sup>150</sup> Decentralization in Indonesia is much more in the form of political and administrative decentralization rather than fiscal decentralization. Local governments receive on average more than 80 percent of their revenue from central government particularly resource poor regions.<sup>151</sup> In theory, fiscal decentralization could be an option to address transboundary haze pollution as the lack of financial resources of local government to address land and forest fires is one of the barriers in putting out fires. However, it is difficult to implement fiscal decentralization because

---

<sup>146</sup> Ibid.

<sup>147</sup> Doris Capistrano, 'Decentralisation and Forest Governance in Asia and the Pacific: Trends, Lessons and Continuing Challenges' in C J P Colfer, R D Dahal and D Capistrano (eds), *Lessons from Forest Decentralization: Money, Justice and the Quest for Good Governance in Asia-Pacific* (Earthscan, 2008) 209, 217.

<sup>148</sup> Ibid

<sup>149</sup> World Bank, *Different Forms of Decentralization*,  
<[http://www.ciesin.org/decentralization/English/General/Different\\_forms.html](http://www.ciesin.org/decentralization/English/General/Different_forms.html)>.

<sup>150</sup> Ibid.

<sup>151</sup> Keith Green, *Decentralization and Good Governance: The case of Indonesia*, Munich Personal RePEc Archive paper No 18097, 28 February 2005, 4 <[http://mpira.ub.uni-muenchen.de/18097/1/MPRA\\_paper\\_18097.pdf](http://mpira.ub.uni-muenchen.de/18097/1/MPRA_paper_18097.pdf)>

of political pressure to maintain the status quo and the desire of central government to retain financial control over revenue.<sup>152</sup> In, addition, in reality public accountability, transparency and strong legal institutions are not yet in place. Corruption in the forestry sector is still rampant, there is no apparent decrease of corruption because of decentralisation, and local expertise or competence is questionable. Therefore, to address transboundary haze pollution and to improve decentralization, fundamental governance issues in forestry sector need to be addressed including corruption, illegal logging, land tenure uncertainty, the power of forestry industry lobbies, and weak enforcement of laws.<sup>153</sup> Further, Capistrano argues that ‘it is difficult to assert a general conclusion on the links between decentralized forest governance and management, forestland rehabilitation, and fire protection’.<sup>154</sup> The impact of decentralisation on fire prevention also varies in different contexts, while the link between decentralised forest management and biodiversity conservation remains uncertain.<sup>155</sup>

The inability of local government to prevent and control land/forest fires seems related to capacity problems and financial resources and is exacerbated by the preference of local governments towards raising local revenue from management of natural resources, especially forests, rather than towards environmental protection. Resosudarmo points out that many local governments believe that successful implementation of decentralisation is dependent on their ability to raise local revenue to support themselves as autonomous areas.<sup>156</sup> Further, Resosudarmo has stated that:

the implementation of decentralization in the forestry sector has led the district governments to emphasize economic interests, particularly in forest rich areas, for example, by issuing uncontrollable and large numbers of small scale licences to companies to convert forest into oil palm plantation or mining.<sup>157</sup>

These massive conversions trigger land/forest fires. There is also a lack of capacity to monitor the implementation of licences, and there are indications that the approval of permits has been based

---

<sup>152</sup> Ibid

<sup>153</sup> Erik Olbrei and Stepen Howes, A Very Real and Practical Contribution? Lessons from the Kalimantan Forests and Climate Partnership, ANU Discussion Paper 16, March 2012, Development Policy Center Crawford School of Public Policy, 4 < [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2041832&download=yes](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2041832&download=yes)>.

<sup>154</sup> Ibid

<sup>155</sup> Ibid

<sup>156</sup> Resosudarmo, above n 131, 119.

<sup>157</sup> Ibid.

on informal incentives rather than on environmental and social considerations.<sup>158</sup> Under decentralisation, a great number of permits have been issued by some districts allowing logging in protected areas.<sup>159</sup> The local governments see this as an opportunity for revenue generation,<sup>160</sup> whereas conservation has been perceived as a loss of revenue opportunity.<sup>161</sup> The Ministry of Forestry Decree on the Criteria and Standards of the Licensing of Forest Product and the Harvesting of Forest Products in Natural Production Forests in November 2000 granted local government the authority to issue not only small-scale licenses, but also medium and large licenses. However, realising the negative consequences of doing so, the Ministry of Forestry circulated a letter to governors and heads of municipalities requesting them to stop issuing large licenses. Then, the Ministry of Forestry revoked this Decree and issued Government Regulation No. 34/2002 concerning Forest Management, Forest Plan and Development and Utilisation of Forest, which returned authority over forests to the central government, making it the sole authority to issue large-scale forest concession rights. However, Government Regulation No. 34/2002 has been criticised as an attempt by the central government to take back their authority and control over natural resources.

Indeed, there has been confusion and a power struggle between local governments and the Ministry of Forestry as a representative of the central government as to the impact of decentralisation on who holds authority in forestry and natural resources management. This confusion has negatively affected the management of the impacts of the utilisation of natural resources such as land/forest fires. Local government feels that they have little responsibility for the negative impacts of natural resource use because the central government issues the licences for large-scale companies. This shows that central government control and decentralisation needs to be complementary. Without a strong and effective central government, decentralisation can lead to loss of policy coherence, heightened inequity, accelerated landscape fragmentation and forest loss.<sup>162</sup> These are the lessons from countries that have already undergone decentralisation and devolution.<sup>163</sup>

---

<sup>158</sup> Ibid.

<sup>159</sup> Ibid.

<sup>160</sup> Ibid

<sup>161</sup> Ibid.

<sup>162</sup> Capistrano, above n 147, 210.

<sup>163</sup> Ibid.

#### **4.3.8. Law No. 24/2007 on Disaster Management**

##### **4.3.8.1 Summary**

It is important to examine the disaster management system in Indonesia, particularly the institutional arrangements and legislative framework in the context of dealing with forest fire management. A landmark Disaster Management Law was enacted on 29 March 2007 to build a new disaster management system in Indonesia.<sup>164</sup> Law No. 24/2007 on Disaster Management defines ‘disaster’ as an event or series of events threatening and disturbing the community life and livelihood, caused by natural and/or non-natural as well as human factors resulting in human fatalities, environmental damage, loss of material or possessions, and psychological impact (article 1(1)).<sup>165</sup> Thus, from this definition, forest fires caused by human factors and causing environmental damage are categorised as disasters.

Disaster management itself is a series of efforts encompassing policies on development with disaster risk, disaster prevention, emergency response and rehabilitation (article 1(5)). Disaster management should take into account four aspects: social, economic and cultural life; environment conservation; benefit and effectiveness; and scope of territory (article 31). Disaster management should comprise three stages: pre-disaster, emergency response and post-disaster (article 33). Several definitions included in Law No. 24/2007 on Disaster Management relate to land/forest fires, including disaster prevention, alertness, early warning, mitigation, disaster emergency response and rehabilitation.

The first priority of this legislation is to provide protection for the community against a disaster threat (article 4(a)). This legislation also aims to guarantee a well-planned, integrated, coordinated and comprehensive disaster management system and to encourage the participation of and partnership between both the public and the private sector (article 4(c), (e)).<sup>166</sup>

---

<sup>164</sup> WHO, *Emergency and Humanitarian Action Country Report* (Indonesia, 2010) 53.

<[http://www.searo.who.int/LinkFiles/EHA\\_CP\\_Indonesia.pdf](http://www.searo.who.int/LinkFiles/EHA_CP_Indonesia.pdf)>.

<sup>165</sup> Law No. 24/2007 on Disaster Management (Indonesia) art 1(1).

<sup>166</sup> Ibid.



The central and local government must bear responsibility for disaster management (article 5).<sup>167</sup> At the national level, the government must establish a BNPB (article 10(1)). This agency was established by Presidential Regulation No. 8/2008 concerning BNPB, and has the function to formulate and stipulate disaster management policy and handle refugees through quick, appropriate, effective and efficient actions, and to coordinate disaster management activities in a well-planned, integrated and comprehensive manner (article 13).<sup>168</sup> In coordinating its duty and functions, the BNPB is coordinated by the Coordinating Ministry of People's Welfare (article 4 of Presidential Regulation No. 8/2008).<sup>169</sup> It includes on its Board the Ministries of Social Affairs, Home Affairs, Public Works, Health and Transport, Finance, Energy and Mineral Resources, Policy and Armed Forces (article 11 of Presidential Regulation No. 8/2008).<sup>170</sup> At the local level, local governments are required to establish local disaster management agencies at the provincial, municipal and city levels (article 18).<sup>171</sup>

#### **4.3.8.2 Evaluation**

In the context of forest fire management, this law is significant in mitigating and controlling land/forest fires from a perspective of disaster management. Disaster management is pursued through a full range from prevention, preparedness, relief, rehabilitation and reconstruction on a cross-sectoral basis with an emphasis on community-level understanding and action to reduce the risk of any kind of disaster.<sup>172</sup> Article 38 suggests that in preventing disaster it is necessary to control the management of natural resources with abrupt and/or gradual potential to become a source of disaster, spatial structuring and environmental management.<sup>173</sup> In addition, article 40 states that any development activity that has a potentially high risk of disaster will require a disaster risk analysis as part of disaster management.<sup>174</sup> In the case of forest fires, the contribution of satellite data is important to disaster management at the pre-disaster stage for risk assessment,<sup>175</sup> early warning<sup>176</sup> and land-use/spatial planning;<sup>177</sup> during disasters for site

---

<sup>167</sup> Ibid art 5.

<sup>168</sup> Ibid art 13.

<sup>169</sup> *Presidential Regulation No 8/2008 concerning BNPB* (Indonesia) art 4.

<sup>170</sup> Ibid.

<sup>171</sup> *Law No. 24/2007 on Disaster Management* (Indonesia) 18.

<sup>172</sup> Ibid.

<sup>173</sup> Ibid art 38.

<sup>174</sup> Ibid art 40.

<sup>175</sup> Risk assessment is risk mapping for multi-hazards for all districts/municipalities. This is especially important in disaster prone areas.

identification<sup>178</sup> and support for the operation centre; and post-disaster, especially in damage assessment for a recovery plan.

Many institutions are involved in disaster management in Indonesia. These include the institutions that conduct risk assessment and risk mapping,<sup>179</sup> issue early warning<sup>180</sup> and undertake land-use/spatial planning.<sup>181</sup> The United Nations Disaster Reduction Organization (now the Office for Coordination to Humanitarian Affairs) has recommended that disaster management should not be the responsibility of only one ministry.<sup>182</sup> In regards to fire prevention and suppression in the overall disaster management system, there is a lack of capacity, as the BPBD lacks financial and technical resources. These factors contribute to the failure in effectively controlling land/forest fires. In the event of massive fires, local government usually needs helps from the BNPB to control fires and make artificial rain. Noticeably, the Ministries of Environment and Forestry are not represented on the Board of the BNPB. Nor are many other government research institutions and ministries from non-departments that have capacity in risk assessment and mapping and early warning systems.<sup>183</sup> For increased capacity of the BNPB, all relevant government institutions should be incorporated on the BNPB Board.

---

<sup>176</sup> Identification and detection of initial hazards.

<sup>177</sup> Integration of risk assessment and mapping in local land use planning.

<sup>178</sup> The delineation of the location of affected areas, for assessing the disaster impact, undertaking damage assessment and planning the mobilisation of resources.

<sup>179</sup> These government institutions are National Coordinating Agency for Surveys and Mapping (*Bakosurtanal*), an institution that has a role in mapping and the capacity to print and distribute maps; the Agency for the Assessment and Application of Technology, an institution that has a capacity in assessing and delivering technology; the Indonesian Institute of Sciences, an institution that conducts research on disaster risk reduction; the LAPAN, an institution that has a capacity to establish a geographic information systems database; the Public Works Department and the Energy and Mineral Resources Department.

<sup>180</sup> Government institutions that conduct early warning include the Meteorological Climatologically and Geophysical Agency, the LAPAN, the Energy and Mineral Resources Department, Public Works, the Ministry of Forestry and the Ministry of Environment.

<sup>181</sup> Government institutions that conduct land-use spatial planning include PU, the Ministry of Forestry, the Agriculture Department, the National Land Agency and Bappenas.

<sup>182</sup> Asian Disaster Preparedness Center, *Policy and Institutional Arrangement for Disaster Management in Indonesia*, <<http://www.adpc.net/pdr-sea/publications/6-PIA-Ind.pdf>> 2.

<sup>183</sup> For example, the Agency for the Assessment and Application of Technology, the Indonesian Institute of Sciences, LAPAN, the Meteorological Climatologically and Geophysical Agency and Bakosurtanal.

#### 4.4. Conclusion

Based on the above analysis, the existing legal framework in Indonesia in addressing land/forest fires is clearly inadequate. The specific regulation addressing land/forest fires, Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires, contains many weaknesses and has not proven effective, with land/forest fires continuing to occur on a yearly basis. The main weaknesses of this Regulation are unclear lines of institutional responsibility, and unclear inter-institutional coordination in controlling land/forest fires. The involvement of different sectoral institutions (multi-level governance) and clear coordination and planning integrated across the different sectors is crucial in the management of forest fires. The involvement of different institutions is clearly missing in Government Regulation No. 4/2001, although Presidential Instruction No. 16/2011 represents a significant improvement in the effort to address the institutional framework of land/forest fire and haze pollution mitigation and response. This Presidential Instruction uses a multi-level governance and disaster management approach that involves, vertically and horizontally, various sectoral institutions and the central and local governments. The leading institutions appointed by this Instruction are the BNPB at the national level and BPBD at the local level. This approach is absent in the previous Government Regulation No. 4/2001, and appears to represent a significant improvement in the institutional framework to address haze pollution.

The other inadequacy of Government Regulation No. 4/2001 is that it is too general. It does not specify and differentiate the different sources and types of fires. Fires in peatland areas are indicated as a major source of haze pollution. However, there are no provisions to address peatland fires specifically in the Regulation or in any other legislation. Moreover, stronger legislation in the form of a statute/law is required to address land/forest fires. The areas that need to be strengthened to respond to land/forest fires in Indonesia based on the review of the current legal framework are, *inter alia*, institutional arrangements, coordination, planning, participatory and community-based approaches and law enforcement.

An analysis of the broader framework of legislation related to land/forest fires shows that even though most of the legislation has adopted a zero burning policy, it is clear that there are some inconsistencies, conflicts and gaps horizontally between sectoral laws, and vertically between

higher legislation and its sub-legislation, between local government legislation and central government legislation. In particular, there are conflicts between the zero burning policy that has been adopted at the central government level and the controlled burning policy adopted by local regulation. It is argued that conflicting and overlapping legislation, vertically with others sectors as well as horizontally, can limit the effectiveness of particular legislation intended specifically to address land/forest fires.<sup>184</sup> As regards the fire management voluntary guideline, the FAO has suggested that proactive fire management should adopt an integrated, inter-sectoral, multi-stakeholder and holistic approach, and that proactive fire management has been absent from the legal framework in Indonesia. Moreover, a clear assignment of responsibility to central, regional and local government is a precondition for effective forest fire management,<sup>185</sup> and thus is an area that requires improvement in Indonesia.

The policy of government to give preference to economic benefits and revenue over environmental protection remains a major problem. ‘Corruption, collusion and nepotism’ as the continuing legacy from the previous regime continue to influence government decisions, legislation development and law enforcement at all levels and are the major challenges in integrating the management of natural resources, achieving sustainable forest management and reducing land/forest fires.<sup>186</sup> However, there is an opportunity for international funding through the REDD+ scheme,<sup>187</sup> which may deliver an improvement in forest conservation and rehabilitation that will ultimately have a positive impact on the reduction of forest fires.

---

<sup>184</sup> Morgera and Cirelli, above n 2, 30.

<sup>185</sup> Ibid.

<sup>186</sup> Rhee et al, above n 138.

<sup>187</sup> Within a climate change regime, the REDD scheme offers incentive for developing countries to protect and save their forests from deforestation and degradation.



## Chapter 5: CBFiM in Indonesia

### 5.1. Introduction

CBFiM is an approach that endeavours to understand the root causes and underlying issues relevant to land/forest fires, issues to which the Indonesian government gives little attention. The government tends to focus on firefighting as the main solution and to adopt a short-term solution when forest fires occur. Indeed, it is difficult to identify the real underlying causes of the problem, and the literature has come to no consensus on this matter.<sup>1</sup> However, it appears that one of the root causes of land/forest fires is the practice of farmers and the local community in using fires to clear land for agriculture.

There is a relationship between inappropriate land-use allocations, lack of tenure security and the behaviour of local people in using fire.<sup>2</sup> For this reason, CBFiM is considered by many to be an important approach to addressing the problem of recurring fires and their related negative impacts.<sup>3</sup> To make CBFiM successful, supporting legislation at the national and local level is needed to facilitate CBFiM and make it attractive to local communities.<sup>4</sup> Thus, this chapter will examine the adequacy of the legal framework relating to CBFiM in controlling land/forest fires in Indonesia<sup>5</sup> and consider under which conditions CBFiM can successfully contribute to the prevention and control of land/forest fires.

---

<sup>1</sup> For example, Unna and Suyanto state different causes of fire ignitions between companies versus communities. See Unna Chokkalingam and Suyanto, 'Fire, Livelihoods and Environmental Degradation in the Wetlands of Indonesia: A Vicious Cycle' (Fire brief No 3, Center for International Forestry Research, October 2004). <[http://www.cifor.org/publications/pdf\\_files/firebrief/FireBrief0403.pdf](http://www.cifor.org/publications/pdf_files/firebrief/FireBrief0403.pdf)>; United Nations Human Settlement Programme (UN-HABITAT), 'Inter-Agency Report on Indonesian Forest and Land Fires and Proposals for Risk Reduction in Human Settlements' (UN-HABITAT, Risk and Disaster Management Programme, 2000); CIFOR, *Underlying Causes and Impacts of Fires in Indonesia* <[http://www.cifor.org/fire/Underlying\\_causes.htm](http://www.cifor.org/fire/Underlying_causes.htm)>; See also Section 1.2.2.1 of this thesis.

<sup>2</sup> S Suyanto, Grahame Applegate and Luca Tacconi, 'Community-Based Fire Management, Land Tenure and Conflict: Insights from Sumatera, Indonesia' in Peter Moore et al (eds), *Communities in Flame: Proceedings of an International Conference on Community Involvement in Fire Management* (FAO, 2002) 27, 27.

<sup>3</sup> FAO, *Community-based Fire Management: A Review* (FAO, 2011) <<http://www.fao.org/docrep/015/i2495e/i2495e.pdf>> 227.

<sup>4</sup> Ibid 19.

<sup>5</sup> A list of regulations relevant to CBFiM is discussed in Appendix 2 of this thesis.

The role of the community in preventing and controlling land/forest fires has been recognised both in the AATHP and in Government Regulation No. 4/2001. Article 9(f) of the AATHP requires each Party to undertake measures to prevent and control activities related to land/forest fires.<sup>6</sup> This includes promoting and utilising indigenous knowledge and practices in fire prevention and management. Government Regulation No. 4/ 2001 article 42(2) also obliges a governor/mayor/regent to assist in promoting the community values, *adat* institutions and traditional customary practices of the community that support the control of land/forest fires.<sup>7</sup> The role of the local community in reducing land/forest fires is also recognised in the Plan of Action between Indonesia and Singapore. The bilateral cooperation between Singapore and Indonesia to deal with land/forest fires in Jambi province recognises that a possible reason that fires continue to persist is that existing efforts do not touch the community level.<sup>8</sup> Thus, land/forest fires should be tackled at the community, provincial and district levels.<sup>9</sup> Supporting this idea, local communities are the closest to the economic, social and environmental issues related to land/forest fires, and therefore the problem can best be understood at the local level.<sup>10</sup>

## 5.2. International Framework

Principles of international law already recognise the role of the community in protecting the environment and contributing to sustainable development. Rio Declaration Principle 22 states that ‘indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices’.<sup>11</sup> States should recognise and duly support indigenous identity, culture and interests, and enable their effective participation in the achievement of sustainable development.<sup>12</sup>

---

<sup>6</sup> ASEAN Agreement on Transboundary Haze Pollution, opened for signature 10 June 2002 (entered into force 25 November 2003).

<sup>7</sup> Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires (Indonesia) art 42 (2).

<sup>8</sup> Ministry of Environment, *Indonesia-Singapore Collaboration to Deal with the Land and Forest Fires in Jambi Province* (24 July 2009) <[haze.asean.org/docs/1272361130/Jambi+Collaboration.../view](http://haze.asean.org/docs/1272361130/Jambi+Collaboration.../view)>.

<sup>9</sup> Ibid.

<sup>10</sup> Erika J Techera, *Marine Environmental Governance From International Law to Local Practice* (Routledge 2012), 199.

<sup>11</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992).

<sup>12</sup> Ibid.

A number of international Conventions also promote community participation to achieve the aims of the Conventions. The CBD recognises the role of the community in the conservation and sustainable use of biological diversity. Article 8(j) states that:

subject to its national legislation, States must respect, preserve, and maintain knowledge, innovation and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovation and practices.<sup>13</sup>

The United Nations Convention to Combat Desertification (UNCCD)<sup>14</sup> also recognises the role of local community participation in achieving the aims of the Convention. Article 3 states that:

The Parties should ensure that decisions on the design and implementation of the programmes to combat desertification and/or mitigate the effects of drought are taken with the participation of populations and local communities and that an enabling environment is created at higher levels to facilitate action at national and local levels.<sup>15</sup>

The UNFCCC recognises the importance of public participation in addressing climate change and its effects. Article 4(i) states: '[t]he importance of promoting and cooperation in education, training and public awareness related to climate change and encourages the widest participation in this process, including that of non-governmental organizations'.<sup>16</sup>

### 5.3. The Concept of CBFiM

CBFiM is considered an important approach to fire management. The concept was developed by the FAO,<sup>17</sup> which considers that CBFiM offers one of the most sustainable, adaptive approaches

---

<sup>13</sup> *The Convention on Biological Diversity (CBD)*, signed 5 June 1992, (entered into force 29 December 1993) art 8 (j).

<sup>14</sup> *The United Nations Convention to Combat Desertification (UNCCD)*, adopted June 1994 (entered into force 26 December 1996) <<http://www.unccd.int/Lists/SiteDocumentLibrary/conventionText/conv-eng.pdf>>.

<sup>15</sup> Ibid.

<sup>16</sup> *The United Nations Framework Convention on Climate Change (UNFCCC)* signed June 12, 1992, (entered into force 21 March 1994).

<sup>17</sup> FAO, above n 3, 19.



for managing fire, especially for prevention.<sup>18</sup> In addition, CBFiM has the potential to effectively address complex issues in fire management involving land use change, increasing population in rural areas, inadequate and inappropriate policy and climate change.<sup>19</sup> CBFiM approaches can play a significant role in fire management, especially where human-based ignitions are the primary source of wildfires that affect the livelihood, health and security of the people.<sup>20</sup> As local people are the main cause of fires, CBFiM makes sense.<sup>21</sup> Applying criminal and administrative sanctions to farmers that practice slash-and-burn techniques seems counterproductive because it creates antagonism between forest officials and rural people.<sup>22</sup> Thus, involving the local population in policy development and fire management practices is a logical approach.<sup>23</sup> In addition, rural communities are the closest to and the most affected by fires and have to deal with these fires by themselves in remote areas where it is difficult to contact local agencies to put out fires.<sup>24</sup> In some developing countries, the application of the CBFiM approach is on the increase.<sup>25</sup> In Africa, for example, a community-based approach is considered the only sustainable and long-term approach to improving the fire situation.<sup>26</sup> However, in developed countries, the CBFiM approach is increasingly less apparent,<sup>27</sup> with fire protection measures becoming part of forest management.<sup>28</sup>

The term CBFiM was first introduced by Sameer Karki at the Regional Community Forestry Training Center (RECOFTC) in Bangkok 2000,<sup>29</sup> and had begun to be documented and analysed for its effectiveness from the early 1990s.<sup>30</sup> CBFiM can be considered as a subset of Community-based Natural Resources Management (CBNRM).<sup>31</sup> Its effectiveness depends on several factors,

---

<sup>18</sup> FAO, Fire Management—Global Assessment 2006. *A Thematic Study Prepared in the Framework of the Global Forest Resource Assessment 2005* (FAO, 2007) <<ftp://ftp.fao.org/docrep/fao/009/a0969e/a0969e00.pdf>> 27.

<sup>19</sup> FAO, above n 3, xi.

<sup>20</sup> Project Firefight South East Asia and the Regional Community Forestry Training Center, 'Critical Elements in CBFiM: A Workshop to Further Define Community-Based Fire Management' (Report from workshop, 8 October 2003) <<http://www.myfirecommunity.net/discussionimages/NPost8217Attach1.doc>> 5.

<sup>21</sup> FAO, above n 3, v.

<sup>22</sup> Peter Hoare, 'A Process for Community and Government Cooperation to Reduce the Forest Fire and Smoke Problem in Thailand' (2004) 104 *Agriculture, Ecosystems & Environment* 35, 40.

<sup>23</sup> FAO, above n 3, v.

<sup>24</sup> Ibid.

<sup>25</sup> FAO, above n 18.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> FAO, above n 3.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

including the existence of supporting policy and legislation, land tenure security, and institutional and community capacity.<sup>32</sup>

### 5.3.1. Definitions

There are several definitions of CBFiM. However, scholars differ on the definition of CBFiM, particularly as regards its characteristics. Therefore, CBFiM still suffers from a lack of clarity and institutional support.<sup>33</sup> Zhang defines CBFiM as ‘an approach in which villagers have shown a profound understanding of fire prevention and control and have participated voluntarily in fire management’.<sup>34</sup> Ganz, Fisher and Moore propose a definition of CBFiM as ‘a type of land and forest management in which a locally resident community (with or without the collaboration of other stakeholders) has substantial involvement in deciding the objectives and practices involved in preventing or utilizing fires’.<sup>35</sup> The definition of Ganz et al places emphasis on the community as decision makers in preventing and utilising fires, and does not seem to require collaboration with other stakeholders. Suyanto et al defines CBFiM as a conscious use of fire by communities to meet specific objectives.<sup>36</sup> This definition is based on the observation of local behaviour in using fires in Lampung Province in Southern Sumatera. Based on this observation, the locals had knowledge in using fires and used that knowledge to encourage fire to escape to adjacent areas, such as previously illegally logged forest, while preventing fires from damaging an adjacent coffee garden.<sup>37</sup> The definition suggested by Suyanto et al thus shows that CBFiM does not always have a positive impact on the prevention and control of forest fires. A collaborative research project by the Center for International Forestry Research (CIFOR) and the International Center for Research in Agro Forestry (ICRAF) reinforces the view that CBFiM can have both positive and negative impacts on forests in some parts of Indonesia.<sup>38</sup> Based on a case study from Lampung Province, it was found that communities manage fires in different types of forest to increase income generation, but are not specifically concerned about maintaining environmental services.<sup>39</sup>

---

<sup>32</sup> Ibid 3.

<sup>33</sup> Project Firefight South East Asia and the Regional Community Forestry Training Center, above n 20.

<sup>34</sup> FAO, above n 3, 5.

<sup>35</sup> Ibid.

<sup>36</sup> Suyanto, Applegate and Tacconi, above n 2, 27.

<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

A workshop to define CBFiM, conducted by Project Firefight South East Asia and the RECOFTC, defines CBFiM as an approach to the management of fire in the landscape that adequately includes communities in decision making about the role, application and control of fire, so that:

- They have the sufficient tenure (formal and informal) to ensure their rights are not subservient to broader (e.g., national, provincial, and district) production and environmental protection aims and objective.
- They consider that involvement in land and fire management decision making and activities will improve, health and security.<sup>40</sup>

The FAO defines CBFiM as:

...a fire management approach based on strategy to include local communities in the proper application of land-use fires (managed beneficial fires for controlling weeds, reducing the impact of pests and diseases, generating income from non-timber forest products, creating forage and hunting, etc), wildfire prevention, and in preparedness and suppression of wildfires.<sup>41</sup>

From this definition, it is shown that not all fires are prohibited; the use of fire with proper application is allowed. This definition includes a wide variety of activities of communities involved in fire management, and includes the use and management of beneficial fire, wildfire prevention and suppression of wildfires. The main feature of CBFiM is that communities are in decision-making roles for the application and control of fire. For communities to have a decision-making role, it is essential that they have sufficient tenure and consider that the involvement in land and fire management will improve their livelihood, health and security.<sup>42</sup> Thus, the control of the community over resources is significant to support the success of CBFiM. It is argued that to be successful in implementing CBFiM, several pre-existing conditions need to be met. These include good governance, and relevant policy and legislation supporting an integrated fire management approach.<sup>43</sup> The challenges for the effective implementation of CBFiM include lack of institutional support, limited capacity, minimal training opportunities, lack of incentives for locals to engage and lack of resources such as funding and technical support.<sup>44</sup>

---

<sup>40</sup> Project Firefight South East Asia and The Regional Community Forestry Training Center, above n 20, 3.

<sup>41</sup> FAO, above n 3, 5.

<sup>42</sup> Ibid 6.

<sup>43</sup> Ibid xi.

<sup>44</sup> Ibid xii.

The most suitable definition and concept of CBFiM based on the existing legal framework in Indonesia would appear to be that of Zhang, which defines CBFiM as an approach of villagers in participating to prevent and control wildfires voluntarily. This is because the other definitions of CBFiM include the application of fires, even though the legal framework in Indonesia prohibits fires in clearing land for plantations and has adopted a zero burning policy. However, the Zhang definition also has a weakness in explaining why communities should voluntarily fight wildfires if they do not have access to areas or stand to gain immediate benefit from the areas in which forest fire occurs.<sup>45</sup> Therefore, the FAO definition of CBFiM, which specifies that local communities should be involved in the proper use of land-use fires and wildfire prevention and control activities, is the most suitable for the case of Indonesian. The need to allow some controlled burning is owing to poverty still being a major problem in Indonesia, with no alternative cheap method of land clearing besides fire being available. The FAO recommends the implementation of the principle of sustainable livelihood. That is a principle that to some extent allows and promotes the appropriate management and responsible use of fire for sustainable silviculture, agriculture, livestock and watershed management and biodiversity conservation, while balancing the need to protect civilians and communities from the unwanted and harmful effects of fire.<sup>46</sup> However, there are challenges in applying the concept of CBFiM. The first is that the legal framework still prohibits the use of fires in clearing land. Second, the preconditions for the success of CBFiM, such as security of land tenure, good governance and a supporting legal framework, do not yet exist. However, notwithstanding these difficulties, this thesis argues that CBFiM can become one of the solutions to the land/forest fires in Indonesia.

## **2.2 Main Features**

The central feature of CBFiM is community decision making. This could be internally initiated with local decision making, or an externally sponsored system with local decision making and collaboration or partnership in local decision making. Collaboration may be conducted with governments, non-government organisations, projects and others, and is based on the premise that no single actor, whether government or civil society, can solve the serious social, economic

---

<sup>45</sup> Hartmut M Abberger, Bradford M Sanders and Helmut Dotzauer, 'The Development of a Community-Based Approach for an Integrated Forest Fire Management System in East Kalimantan, Indonesia' (2002) 53.

<sup>46</sup> FAO, 'Fire Management: Voluntary Guidelines Principles and Strategic Actions' (Fire Management Working paper No 17, FAO, 2006) <<http://www.fao.org/forestry/firemanagement/35853/en/>> 18.

and ecological threats from forest fires.<sup>47</sup> An externally sponsored system is a system in which community capacity has been recognised and supported by external agencies.<sup>48</sup> The external intervention should emphasise approaches that lead to sustainable CBFiM.<sup>49</sup> Thus, the approach should be built on existing knowledge.<sup>50</sup> The community must own the fire management activity and design their community participation approaches to fit their locality.<sup>51</sup> The FAO suggests that the community should call/arrange their own meetings and invite experts that they think will be of use for their location considering their available resources.<sup>52</sup> This activity may be conducted if fire management is integrated with their production/livelihood systems.<sup>53</sup> A critical part of the process for supporting CBFiM is to carry out a baseline study at the village level to record local community aspirations.<sup>54</sup> The study should involve all stakeholders, such as forestry and/or agricultural extension workers and village leaders, and community workshops should be organised to discuss the fire history of the village, fire use, wildfire causes, wildfire impacts and past fire management efforts.<sup>55</sup>

An externally sponsored system with community involvement but no community decision making, where the local community is just used as a labour force, cannot be categorised as CBFiM.<sup>56</sup> In Indonesia, for example, the use of monetary incentives for getting community members to extinguish coal fires threatening a protected area cannot be categorised as CBFiM, as there is no involvement of the community in decision making, and there is no sense of ownership on the part of the community.<sup>57</sup> This kind of model would not endure because once the project is completed and money as an incentive is removed, community action would be unlikely to continue.<sup>58</sup> William Jackson, a global coordinator with the World Conservation Union's (IUCN) Forest Conservation program, argues that 'community participation is not just labour supporting

---

<sup>47</sup> David Ganz and Peter Moore, 'Living With Fire: Summary of Communities in Flames International Conference' in Peter Moore et al (eds), *Communities in Flames: Proceeding of an International Conference on Community Involvement in Fire Management* (Fire Fight South East Asia, 2002) 3.

<sup>48</sup> FAO, above n 3.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

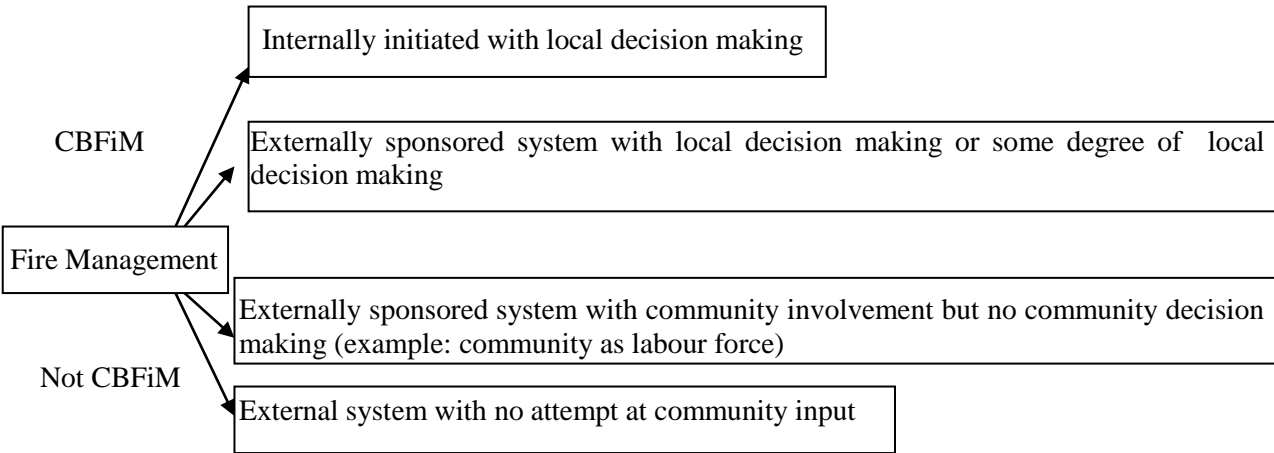
<sup>56</sup> David Ganz, R J Fisher and P F Moore, 'Further Defining Community Based Fire Management: Critical Elements and Rapid Appraisal Tools' (Paper presented at the Third International Wildland Fire Conference, Sydney, Australia, 3–6 October 2003) <<http://www.tssconsultants.com/Files/340.pdf>> 4.

<sup>57</sup> Ganz and Moore, above n 47, 3.

<sup>58</sup> Ibid 3.

fire prevention and suppression but is rather local people managing fire in terms of their own needs'.<sup>59</sup> Similarly, Sukwong, Executive Director of RECOFTC, states that 'the success of community-based fire management should be measured on the basis of its appropriateness for meeting the community's needs and management objective'.<sup>60</sup> However, community needs do not always have positive impacts on the forest environment. From a community perspective, the objective could be maintenance of livelihoods, which may involve clearing forest to plant rice, which may have a negative impact on the environment.<sup>61</sup> Thus, organisations or governments that promote CBFiM should set the objective of fire management as the reduction of negative impacts of fires on the local and global environment.<sup>62</sup> Figure 5 charts the various modes of community input in decision making in fire management.

**Figure 5. Various Modes of Community Input in Decision Making in Fire Management**



Source: Workshop Critical Elements in CBFiM, 2003<sup>63</sup>

<sup>59</sup> Ibid 4.  
<sup>60</sup> Ibid.  
<sup>61</sup> Suyanto, Applegate and Tacconi, above n 2, 31.  
<sup>62</sup> Ibid.  
<sup>63</sup> Project Firefight South East Asia and The Regional Community Forestry Training Center, above n 20, 7.

## 5.4. Fire Awareness and Education

Awareness raising and educating people is considered as one of the key issues in achieving success in reducing land/forest fires. To reduce unwanted fires, it is necessary to take steps to educate the community.<sup>64</sup> The elements of awareness raising and education should be incorporated into the CBFiM model. It is argued that human values, perceptions, beliefs, behaviour and cultural norms are as important as ecological values in fire management.<sup>65</sup> The active participation of communities in a village campaign is important, and the facilitator should understand local culture.<sup>66</sup> One aspect that should be included in the village campaign *inter alia* is the introduction of laws and regulations related to fire.<sup>67</sup> Enabling local people to get involved in managing fires is a lengthy process.

The importance of public awareness is recognised in article 9 of the AATHP, which requires each Party to promote public education and awareness-building campaigns and strengthen community participation in fire management to prevent land/forest fires and haze pollution arising from such fires. In addition, article 42(1) of Government Regulation No. 4 /2001 states that the governor/regent/mayor/head of institution/head of technical institution/Ministry has an obligation to improve community awareness, including making government employees aware of their rights, duties and capability in preventing land/forest fires.<sup>68</sup>

## 5.5. The Linkages among CBNRM, CBFM and CBFiM

Linkage can be observed between CBNRM, Community-based Forest Management (CBFM) and CBFiM. CBFiM, which has the potential to be effective in reducing land/forest fires, should be part of an overall community-based resource management strategy and should if possible be included in CBFM programs.<sup>69</sup> It is argued by many scholars that there should be cohesiveness between these community-based approaches and this linkage has been continually emphasised

---

<sup>64</sup> FAO, above n 46, 233.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid.

<sup>68</sup> Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires (Indonesia).

<sup>69</sup> WWF/IUCN, *Future Fires Perpetuating Problems of the Past* (2003) <[http://data.iucn.org/dbtw-wpd/edocs/arborvitae\\_special\\_fires.pdf](http://data.iucn.org/dbtw-wpd/edocs/arborvitae_special_fires.pdf)> 6.

and strengthened.<sup>70</sup> Therefore, CBFiM should be within the context of overall land-use planning and natural resource management rather than taking an independent identity, and should be an integral part of an overall community capacity-building process.<sup>71</sup> These concepts share the essential feature of communities as decision makers. The objective of CBNRM and CBFM is similar; namely, to achieve poverty reduction, natural resources conservation and good governance.<sup>72</sup> CBFiM aims to manage sustainable landscapes and to improve the community's livelihood, health and security.<sup>73</sup> However, there is concern that fire management issues will complicate and confuse the CBNRM discipline, where CBNRM has already been successfully transformed from a field of interest at an institutional level.<sup>74</sup> In addition, lack of clarity regarding the definition of CBFiM and the absence of a working model of this approach has contributed to the lack of acceptance in incorporating CBFiM into CBNRM by larger research and development communities.<sup>75</sup> Ganz et al argues that a general model of CBFiM and an assessment tool to examine this model is needed.<sup>76</sup>

CBNRM is defined by Blaikie as 'Communities defined by their tight spatial boundaries of jurisdiction and responsibilities, with a distinct and integrated social structure and common interest, and managing their natural resources in an efficient, equitable and sustainable way'.<sup>77</sup> Pretty and Guijt define CBNRM as 'a process by which local groups or communities organise themselves with varying degrees of outside support so as to apply skill and knowledge to the care of natural resources and environment while satisfying livelihood needs'.<sup>78</sup> From this definition, it can be inferred that there is little intervention from government. Ferrer and Nowaza define CBNRM as people-centred, community-oriented and resources-based.<sup>79</sup> It starts from the basic

---

<sup>70</sup> Ibid, 2; Project Firefight South East Asia and The Regional Community Forestry Training Center, above n 20.

<sup>71</sup> WWF/IUCN, above n 69, 4.

<sup>72</sup> Ministry of Foreign Affairs of Denmark, 'Community -Based Natural Resource Management' (Technical Note Danida, 2007)  
<<http://curis.ku.dk/ws/files/33236991/Technicalnotemarts2007CommunityBasedNaturalResourceManagement.pdf>>.

<sup>73</sup> FAO, above n 3, 4.

<sup>74</sup> Ibid.

<sup>75</sup> Ibid.

<sup>76</sup> Ganz, Fisher and Moore, above n 56; Project Firefight South East Asia and The Regional Community Forestry Training Center, above n 20.

<sup>77</sup> Piers Blaikie, 'Is Small Really Beautiful? Community Based Natural Resources Management in Malawi and Botswana' (2006) 34 *World Development* 1942, 1942.

<sup>78</sup> Melissa Leach, Robin Mearns and Ian Scoones, 'Environmental Entitlements: Dynamics and Institution in Community Based Natural Resources Management' (1999) 2 225, 225.

<sup>79</sup> Stephen Duthy and Bernadette Bolo-Duthy, 'Empowering People, Organizations in Community Based Forest Management in the Philippines: The Community Organizing Role of NGOs' (2003) *Annals of Tropical Research* 13, 19.



premise that people have the innate capacity to understand and act on their own problems.<sup>80</sup> They describe CBNRM programs as including:

- Building support institutions or groups to promote resource user's rights;
- Management of the environment for sustainable use;
- Economic upliftment and equal distribution of benefits;
- Forging partnership among institutions (government organizations, people organization, academe and with NGOs) to improve capabilities and expand services;
- Linking and advocacy policy reforms.<sup>81</sup>

There are several models of CBNRM. In one model, the community participates in protecting the environment (for example, national parks), but is not involved in park management.<sup>82</sup> In another, there is a complete ownership of land and natural resources and a shift in power from the State to the communities.<sup>83</sup> Between these two are joint management models or co-management. A complete ownership of land means the communities managing the resources have legal rights, the local institutions and the economic incentives to take substantial responsibility for sustained use of these resources. Communities become the primary implementer, assisted and monitored by technical services.<sup>84</sup> A joint management model or co-management means a system in which the State shares rights and responsibilities regarding natural resources with local communities.<sup>85</sup>

In Southeast Asia, since 1990, multilateral and bilateral aid agencies and NGOs have promoted CBNRM as an approach to achieve socio-economic, political and environmental objectives.<sup>86</sup> The same process is occurring in Indonesia. CBNRM gained recognition at the end of the Suharto regime and with the enactment of decentralisation. The spread of CBNRM and CBFM in

---

<sup>80</sup> Ibid.

<sup>81</sup> Ibid 20.

<sup>82</sup> International Bank for Reconstruction and Development and the World Bank, 'The International Workshop on Community Based Natural Resources Management' (Paper presented at the International CBNRM Workshop, Washington DC, 10–14 May 1998)  
<[http://info.worldbank.org/etools/docs/library/97605/conatrem/conatrem/documents/May98Workshop\\_Report.pdf](http://info.worldbank.org/etools/docs/library/97605/conatrem/conatrem/documents/May98Workshop_Report.pdf)>.

<sup>83</sup> Ibid.

<sup>84</sup> USAID, *Community Based Natural Resources Management (CBNRM) in Africa – A Review*, (2001)  
<[http://cbnrm.net/resources/terminology/terms\\_cbnrm.html](http://cbnrm.net/resources/terminology/terms_cbnrm.html)>.

<sup>85</sup> Ministry of Foreign Affairs of Denmark, above n 72.

<sup>86</sup> Derek Armitage, 'Adaptive Capacity and Community Based Natural Resources Management' (2005) 35 *Environmental Management* 703, 711.

Indonesia has been paralleled by widespread support from CSOs on these concepts.<sup>87</sup> However, Moniaga argues that CBNRM has little recognition, protection and support from State laws and policy.<sup>88</sup> She further argues that laws and policies on natural resources are still dominated by: a) a State-centric paradigm that provides the central government with exaggerated rights over natural resources management, b) sectoral biases and c) conventional natural resources (forest system) management, which fails to notice local capacity and contributions.<sup>89</sup> She further argues that the constraints of a community-based system for managing Indonesia's forests and other natural resources include:

- The political-legal concept of the eminence of State control rights is the root cause of de-legitimization of indigenous and other local, community based rights over natural resources. The concept of State control rights is based on article 33 subsection 3 of the Indonesian Constitution of 1945 which states that 'land, water and their natural riches are controlled by the State and to be utilized for the maximum prosperity of the people;'
- Domination of conventional natural resources management regimes (sectoral approaches, exploitation, orientation) has been systematically destroying indigenous knowledge and sustainable ecosystem management regimes;
- Unequal legal access to natural resources at all levels;
- Domination of a philosophy of developmentalism which is primarily based on economic growth and political stability;
- Centralization of the decision making processes;
- Anthropogenic approaches to natural resource management.<sup>90</sup>

In addition to the little recognition received by CBNRM and CBFM in Indonesia, efforts to promote sustainable CBFM are hampered in many countries by legal restrictions on national laws and legal concepts, especially property rights, which disadvantage rural people directly dependent on forest resources.<sup>91</sup> The recognition of community-based initiatives in the national legal framework is important because law can provide formal recognition within the national legal framework, giving community-based initiatives equal status to government projects.<sup>92</sup>

---

<sup>87</sup> Sandra Moniaga, 'Advocating for Community Based Forest Management in Indonesia's Outer Islands: Political and Legal Constraints and Opportunities' (Paper presented at the IGES International Workshop on Forest Conservation Strategies for the Asia and Pacific Region, 1998) 120  
<<http://enviroscope.iges.or.jp/modules/envirolib/upload/1508/attach/1ws-13-sandra.pdf>>.

<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

<sup>90</sup> Ibid.

<sup>91</sup> O J Lynch, 'Law, Pluralism and the Promotion of Sustainable Community-based Forest Management' (1998) 49 *Unasylva* 194.

<sup>92</sup> Techera, above n 10, 113.

CBFM is an effort to promote the participation of forest communities in the market.<sup>93</sup> The objective of CBFM is to achieve poverty reduction and sustainable resource management.<sup>94</sup> The benefits of CBFM include reduced resource degradation, while simultaneously improving rural livelihoods.<sup>95</sup> It is suggested that the condition of forests is improved by shifting from a State- to community-based tenure regime.<sup>96</sup> There is growing recognition of the importance of community-based management in developing countries. Many countries have enacted legislation to strengthen indigenous ownership of forests. Corruption and illegal logging are the main reasons for shifting from State management to CBFM.<sup>97</sup> In addition, the shift towards a people-oriented approach to forest management reflects the failure of industry to arrest the rate of deforestation or to provide benefits to the rural poor.<sup>98</sup> It is hoped that if local people have ownership over natural resources, it will increase their sense of stewardship to protect their property.

Therefore, CBFiM should be placed in the context of overall land-use planning and natural resources management.<sup>99</sup> To do so, strong and supportive legislation for the implementation of this concept is needed. It is expected that if CBFiM were placed in the context of natural resource management, fire management would become more effective. In fact, community fire management was already prominent in plans formulated following the smoke episodes in the 1980s and 1991.<sup>100</sup> In 2002, for example, more than 60 villages in East Kalimantan received basic fire management training under a project designed by the German Agency for Technical Cooperation (GTZ).<sup>101</sup> Unfortunately, there has been no recognition of CBFiM in the overall context of land-use planning and natural resources management in the legislation in Indonesia. Kharki argues that CBFiM is probably most effective as part of an overall community resource—

---

<sup>93</sup> Arnold Contreras-Hermosilla and Chip Fay, *Strengthening Forest Management in Indonesia through Land Tenure Reform: Issues and Framework for Action* (Forest Trends, 2005), 24.

<sup>94</sup> Sango Mahanty et al, 'Reducing Poverty through Community Based Forest Management in Asia' (2006) 5(1) *Forest and Livelihood* 78, 78.

<sup>95</sup> Tek Narayan Maraseni, Geoff Cockfield and Armando Apan, 'Community Based Forest Management Systems in Developing Countries and Eligibility for CDM' (USQ Livelihood paper, 2005) <[eprints.usq.edu.au/568/1/Livelihood\\_Paper-Final.pdf](http://eprints.usq.edu.au/568/1/Livelihood_Paper-Final.pdf)>.

<sup>96</sup> Mahanty et al, above n 94, 81.

<sup>97</sup> Maraseni, Cockfield and Apan, above n 95.

<sup>98</sup> Duthy and Bolo-Duthy, above n 79, 19.

<sup>99</sup> Project Firefight South East Asia and The Regional Community Forestry Training Center, above n 20,3.

<sup>100</sup> Claire Stockwell, Bill Hare and Kirsten Macey, 'Governing REDD: The TDERM Triptych' (Paper presented at the Climate Law in Developing Countries Post-2012: North and South Perspectives, Ottawa, Canada, 26–28 September 2008) <[www.iucnael.org/zh/.../doc.../264-stockwell-governing-redd-.html](http://www.iucnael.org/zh/.../doc.../264-stockwell-governing-redd-.html)>.

<sup>101</sup> Ibid.

management strategy and cannot be implemented in isolation.<sup>102</sup> There are many diverse approaches and variations of CBFiM, and the correct approach is dependent on the specific situation in specific regions. In Kalimantan, in the South and Central Kalimantan Production Forest Project, for example, fire management is a part of sustainable forest management.<sup>103</sup> The EU funded this project, one of the elements of which is to bring together villagers, companies and government agencies at the local level to develop joint fire protection initiatives.<sup>104</sup>

## 5.6. Land Tenure, Customary Laws, Conflict and Forest Fires

There appears to be a close link between access to land/forests, land tenure security and the behaviour of communities in using fire. The FAO suggests that land tenure security is one of the essential preconditions in successfully implementing CBFiM, alongside good governance and a supporting legal framework.<sup>105</sup> Community cohesion and attachment to local resources is an important aspect in controlling fire use.<sup>106</sup> Land tenure security has also been identified as a key factor in the success or failure of REDD+. Based on the research findings of Bompard and Guizol, one of the institutional causes of fires in South Sumatra Indonesia is the inadequate rights of the local population to land and natural resources.<sup>107</sup> Local communities are excluded from both decision-making processes that affect land management and from the advantages gained from forest exploitation.<sup>108</sup>

In Indonesia, customary *adat* land is recognised. Even though Basic Agrarian Law No. 5/1960 and Law No. 41/1999 on Forestry recognise *adat* forest, in its implementation the government has ignored pre-existing local rights given by *adat* laws.<sup>109</sup> This is probably because customary

---

<sup>102</sup> Sameer Kharki, *Community Involvement in and Management of Forest Fires in Southeast Asia* (PPFSEA, IUCN,WWF, 1986), 27.

<sup>103</sup> International Forest Fires News, *Community-Based Fire Management: The South Kalimantan Experience* <[http://www.fire.uni-freiburg.de/iffn/country/id/id\\_36.htm](http://www.fire.uni-freiburg.de/iffn/country/id/id_36.htm)> 46–53.

Ibid.

<sup>104</sup> Ibid.

<sup>105</sup> FAO, above n 4.

<sup>106</sup> Kharki, above n102, 20.

<sup>107</sup> Jean Marie Bompard and Phillipe Guizol, *Land Management in the Province of South Sumatra, Indonesia. Fanning the Flames: The Institutional Causes of Vegetation Fires* (European Union, European Commission, 1999), vii.

<sup>108</sup> Ibid xiii.

<sup>109</sup> Ibid.

land rights are weak under the Law No. 5/1960 and Law No. 41/1999. Article 3 of Basic Agrarian Law No. 5/1960 states that:

the implementation of *ulayat* rights and other similar rights of *adat*-law communities as long as such communities in reality exist shall be consistent with the nation's interest and the interest of the States based on national unity and shall not contradict the law and regulation of a higher level.<sup>110</sup>

While in Law No. 41/1999 on Forestry, the national interest prevails over community land rights (article 4(3)).<sup>111</sup> Moreover, article 5(4) states that 'if the local *adat* community no longer exists, the management of customary land will return to the Government'.<sup>112</sup> The World Bank suggests that, from a legal perspective, Indonesian tenures are complex, use related and often insecure.<sup>113</sup> This is because they remain continually liable to forfeiture to the State, usually without just compensation.<sup>114</sup> The result is that, rather than there being a developed system of private land law, there is constant intervention in and control of land tenure by the State.<sup>115</sup> There is little or no protection of the rights of indigenous peoples.<sup>116</sup> Prior to 1999, central government agencies started to give concessions to private companies. The land use of the allocation of concession rights sometimes overlapped with indigenous community's territories and property held under local customary law.<sup>117</sup> Marginalisation of local communities has caused these communities to have little stewardship to prevent fires outside their land.<sup>118</sup> In addition, fires are also used by communities as a weapon in land tenure or land use disputes.<sup>119</sup>

Land management is an important issue in addressing land/forest fires.<sup>120</sup> Land management policies that favour deforestation and forest conversion are indicated as a cause of land/forest fires. Bompard and Guizol suggest that fire risk can be reduced if land management policies and decision-making processes are amended to consider the needs of local people in an equitable

---

<sup>110</sup> *Basic Agrarian Law* No. 5/1960 (Indonesia) art 3.

<sup>111</sup> *Law No. 41/1999 on Forestry* (Indonesia) art 4(3).

<sup>112</sup> *Ibid* art 5(4).

<sup>113</sup> Charleston C K Wang, 'Legal Pluralism in Indonesia: Anachronism or an Idea Whose Time has Come?' <<http://www.wanglaw.net/files/indonesia1.pdf>>.

<sup>114</sup> *Ibid*.

<sup>115</sup> *Ibid*.

<sup>116</sup> *Ibid*.

<sup>117</sup> Rona A Dennis et al, 'Fire, People and Pixels: Linking Social Science and Remote Sensing to Understand Underlying Causes and Impacts of Fires in Indonesia' (2005) 33 *Human Ecology* 456, 466.

<sup>118</sup> Bompard and Guizol, above n 107, xiii.

<sup>119</sup> Dennies et al, above n 117, 477.

<sup>120</sup> Bompard and Guizol, above n 107, xiv.

way.<sup>121</sup> However, the formulation of land/forest management policy remains dominated by the central government, without extensive consultation with provincial and district authorities and local people.<sup>122</sup> The procedure for granting land to estate plantations is also flawed.<sup>123</sup> Poor land-use management has increased the conflict between local communities and other parties who have been given the land management rights by government. Two patterns of land tenure problems causing land/forest fires can be discerned. First, smallholders with an informal claim over national parks or disputed lands designated to others parties, usually smallholders use fire to establish and reassert their claim over land. Second, individuals use fire to secure informal recognition of the land that the community previously considered as common property.<sup>124</sup> It is contended that, to reduce forest fires, the government should address the underlying causes of the conflict between community and private companies; that is, the government should be more equitable in the allocation of property rights over lands and policy reform in the forestry sector.<sup>125</sup>

However, local communities do also contribute to sustainable management of resources. Moniaga argues that local communities have been practicing sustainable management of natural resources, including forests, for centuries by using local knowledge and wisdom.<sup>126</sup> She further argues that Indonesia's indigenous and other local people play an important role in the conservation and sustainable management of the nation's forest.<sup>127</sup> Siscawati similarly argues that local people have managed and protected forests through strong traditional knowledge and a traditional law system; for example, Dayak farmers (indigenous to Central Kalimantan) manage fruit, rattan and limbo agro-forests by mimicking the processes of natural forests.<sup>128</sup> Similarly, in Krui Lampung, people manage a *damar* agro-forest, which also mimics natural forest.<sup>129</sup>

---

<sup>121</sup> Ibid.

<sup>122</sup> Jean Marie Bompard and Phillipe Guizol, *Land Management in the Province of South Sumatra, Indonesia. Fanning the Flames: The Institutional Causes of Vegetation Fires* (European Union European Commission, 1999).

<sup>123</sup> Ibid.

<sup>124</sup> Dennis et al, above n 117, 478.

<sup>125</sup> Kharki, above n 102, 8.

<sup>126</sup> Moniaga, above n 87, 121.

<sup>127</sup> Moniaga, above n 87, 120.

<sup>128</sup> Mia Siscawati, 'Underlying Causes of Deforestation and Forest Degradation in Indonesia: A Case study on Forest Fire' (Paper presented at the IGES International Workshop on Forest Conservation Strategies for the Asia and Pacific Region Hayama, Kanagawa, Japan 21-13 July 1998) <[enviroscope.iges.or.jp/modules/envirolib/upload/.../1ws-7-mia.pdf](http://enviroscope.iges.or.jp/modules/envirolib/upload/.../1ws-7-mia.pdf)>. 44, 45.

<sup>129</sup> Ibid.

Despite their contribution to sustainable forestry, the role of local communities is not fully recognised by government. Some local governments have recognised *adat* forests. However, the Ministry of Forestry does not conduct systematic efforts to support these local initiatives.<sup>130</sup> The Ministry of Forestry has requested that local governments discontinue granting community forest if the Ministry of Forestry has not allocated these forest areas as such.<sup>131</sup> Many examples of tenure conflict can be given. In the Krui Case, an *adat* community consisting of 16 traditional socio-political units (*marga*) had been practicing agro forestry in a certain area,<sup>132</sup> which, in 1984, was classified by the Ministry of Forestry as State forest, with private companies being granted logging concessions in that area.<sup>133</sup> The communities protested against this decision. CSOs and NGOs supported the communities and lobbied the Minister of Forestry for recognition of this community agro-forestry initiative, requesting that security of tenure be granted to the Krui People.<sup>134</sup> The government recognised this indigenous agro-forestry system or CBFM in Krui Lampung with Ministerial Decree No. 47/1998 regarding the Areas for Special Purposes.<sup>135</sup> This recognition was considered a policy breakthrough, and it sets an important precedent for community forestry in Indonesia.<sup>136</sup>

Similar cases in land tenure problems have occurred in East Kalimantan, where the *adat* territories of the Wehea people in the District of Kutai were allocated by government as logging concessions.<sup>137</sup> After the concessionaires left the territories, the Wehea indicated their wish to manage the forest as *their* forest.<sup>138</sup> Facilitated by NGOs, they asked the Bupati/Regent to recognise their rights over the forest. The Bupati declared that 38,000 hectares of forest were to be managed by the Wehea as protected forest, but the local people and local government are still waiting for the decision from the Ministry of Forestry.<sup>139</sup> A further case of land tenure conflict is the Gukguk case. The Gukguk *adat* communities live in the sub-district of Merangin District

---

<sup>130</sup> Chip Fey, *Review of Legal Frameworks for Community-Based Natural Resources Management in Selected Asian Countries* (World Agroforestry Center 2007), 24.

<sup>131</sup> Ibid.

<sup>132</sup> Ibid.

<sup>133</sup> Ibid.

<sup>134</sup> Ibid.

<sup>135</sup> Ibid.

<sup>136</sup> Chun K Lai, Delia C Catacutan and Agustin R Mercado Jr, 'Decentralizing Natural Resources Management: Emerging Lessons from ICRAF Collaboration in Southeast Asia' (Paper presented at the International Seminar on Decentralization and Devolution of Forest Management in Asia and the Pacific, Davao Philippines, 30 November–4 December 1998) <<http://sanrem.cals.vt.edu/1010/DecentralizingNatural.pdf>>.

<sup>137</sup> Fey, above n 130, 24.

<sup>138</sup> Ibid.

<sup>139</sup> Ibid.

Jambi, where they received recognition of their right to 690 hectares of *adat* forest from the Bupati of Merangin.<sup>140</sup> A logging company operating near their territories expanded their logging activities into the *adat* forest without permission and without giving compensation to the communities. The communities asked the company to end the logging, return their territories and pay compensation.<sup>141</sup> The community successfully negotiated with the company.<sup>142</sup> These cases show that security of land tenure increases the sense of ownership of local communities, who demonstrate a greater concern to protect and practice sustainable forest management as a result. Suyanto et al also argue that clear ownership and community involvement in managing forests are key determinants in securing sustainable land management.<sup>143</sup>

Since the reform era, there has been a window of opportunity for forestry land reform with the social forestry policy and program.<sup>144</sup> Currently, the Ministry of Forestry has designated only 202,570 hectares for the community forest program.<sup>145</sup> Of this, communities have been granted licences over only 73,000 hectares (more secure legal tenure).<sup>146</sup> This number contrasts with the area of logging concessions of 27.8 million hectares, of which private companies enjoy 5.4 million hectares.<sup>147</sup> There are several Ministry of Forestry regulations on the social forestry program, including:<sup>148</sup>

1. Ministerial Decree No. 677/1998 31/2001 on Community Based Forest Management, which targets farmers and cooperatives, legal institutions and tenure arrangements, for five-year temporary permits and 25-year stewardship agreements.
2. Ministerial Decree 1997 on Private Forest, targets individuals and collectives, local people, tenure arrangements, individual land ownership.
3. Ministerial Decree No. 4/1998 on Area with Special Purposes, target group is collectives, and tenure arrangements with no time limit and evaluation every five years.
4. PP Director Decree 2001 on Co Management Areas Production Forest in Java, target group is farmers, and tenure arrangements with sharing benefits, 25 per cent farmer/75 per cent company.

---

<sup>140</sup> Ibid.

<sup>141</sup> Ibid.

<sup>142</sup> Ibid.

<sup>143</sup> S Suyanto et al, 'Land Tenure, Agroforestry Adoption, and Reduction of Fire Hazard in a Forest Zone: A Case Study from Lampung, Sumatera, Indonesia' (2005) 65 *Agroforestry System* 1, 1.

<sup>144</sup> Sirait Martua, 'The Emergence of Forest Land Redistribution in Indonesia' (Working paper No 85, World Agroforestry Center, 2009) <<http://www.worldagroforestry.org/sea/Publications/files/workingpaper/WP0122-09.PDF>>.

<sup>145</sup> Fey, above n 130, 22.

<sup>146</sup> Ibid.

<sup>147</sup> Ibid.

<sup>148</sup> Martua, above n 144, 8.



However, these social forestry programs do not recognise the community-based rights of indigenous communities over the land.<sup>149</sup> This is a serious constraint in promoting community-based ecosystem management.<sup>150</sup> Moniaga argues that none of these programs clearly defines property rights concerning land except for areas with special purposes.<sup>151</sup> The State's legal superiority over land is largely maintained, especially for indigenous people that may participate in an area with special purposes.<sup>152</sup> Suryadi expresses a similar view that the adoption of a community forestry program has not led to more serious implementation of forestry decentralisation to the local community level, increased community welfare or strengthened organisational capacity at the community, district or regional levels.<sup>153</sup> Lynch argues that an alternative policy and legal framework that supports civil society and recognises community-based tenurial rights provides the best prospects for improving forest management.<sup>154</sup>

Indeed, clearly defined land tenure that provides legal ownership is considered to provide the necessary incentives for communities to manage fire both in the short and long term.<sup>155</sup> However, property rights themselves arguably do not provide adequate incentives and conditions for sustainable management.<sup>156</sup> Lynch agrees that they are necessary but insufficient conditions for sustainable management.<sup>157</sup> Technical assistance to develop and strengthen local organisational capacities and support sustainable management and conservation, together with appropriate credit programs, is essential.<sup>158</sup> Similarly, the FAO suggests that development of appropriate policy and legislation combined with education, training and opportunities for collaboration between communities, commercial interests and government may lead to the sustainable management of resources.<sup>159</sup> It is argued that a multi-stakeholder approach is essential; no single actor, whether government or civil, can solve the serious social, economic and ecological threat of forest fires.<sup>160</sup>

---

<sup>149</sup> Moniaga, above n 87, 120.

<sup>150</sup> Ibid 124.

<sup>151</sup> Ibid.

<sup>152</sup> Ibid.

<sup>153</sup> Suhardi Suryadi, 'Community Forestry Institutionalized: Never or Ever: The Community Forestry Program at Sesaot Village in Nusa Tenggara Barat Province of Indonesia' (Paper presented at the Enabling Policy Frameworks for Successful Community Based Resource Management Initiatives: Eighth workshop on Community Management of Forest Lands, Hawaii, 2001) <<http://www2.eastwestcenter.org/environment/CBFM/Suhardi.pdf>>165.

<sup>154</sup> Lynch, above n 91.

<sup>155</sup> Ibid.

<sup>156</sup> Ibid.

<sup>157</sup> Ibid.

<sup>158</sup> Ibid.

<sup>159</sup> FAO, above n 3.

<sup>160</sup> Ganz and Moore, above n 47, 8.

## 5.7. Legal Framework for CBFiM

All fire management activities should be based on a legal framework and be supported by clear policy and procedures including the regulation of CBFiM.<sup>161</sup> The FAO argues that adequate policy and legislation is directly related to the successful implementation of CBFiM.<sup>162</sup> In addition, government should provide the legal and policy framework necessary for a successful sustainable natural resources and landscape management program.<sup>163</sup> Community approaches can only be effective if the institutional setting in a given location has policies, laws, regulations and fire management agencies in place that provide a contextual framework for participatory approaches, rights and benefits.<sup>164</sup> In addition, the FAO suggests that at the national level, policies and support should create an environment that enables CBFiM and makes it attractive to local communities.<sup>165</sup> The legislation may consist of empowering the community by the recognition of a community committee and decision groups, allowing the community to participate actively in a variety of fire management activities and providing adequate incentives.<sup>166</sup> Lynch argues that local community involvement in fire management often results in those communities being more informed and more likely to use fire in a careful manner in adherence to local policy and legal regulations.<sup>167</sup> In this regard, the FAO argues that legislation may include provisions that allow local communities to use fire for certain activities and under specific requirements.<sup>168</sup> Further, the FAO argues that the prohibition on the use of fire in many instances is not effective and may even be counterproductive.<sup>169</sup>

There is no specific law in Indonesia regarding CBFiM. The legal framework that deals with community participation in preventing and controlling land/forest fires is in lower legislation such as government regulation. The government regulations that recognise the role of community in forest prevention and control of forest fires are set out in the following sub-sections.

---

<sup>161</sup> FAO, above n 3, 20.

<sup>162</sup> Ibid.

<sup>163</sup> Ibid 19.

<sup>164</sup> Ibid.

<sup>165</sup> Ibid.

<sup>166</sup> Ibid.

<sup>167</sup> Ibid 20.

<sup>168</sup> Ibid.

<sup>169</sup> Ibid.

### **5.7.1. Government Regulation No. 4/2001 Concerning Control of Environment Degradation and/or Pollution Related to Forest and/or Land Fires**

Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires is directed to controlling land/forest fires. This regulation is expected to be a legal basis for CBFiM. Unfortunately, this regulation only regulates community participation in a general way. In particular, it focuses on the rights of community to access to information related to land/forest fires, such as the location and size of land/forest fires, maps of fire prone areas and the impact of land/forest fires on the community (Article 43-46). The model of participation in this regulation is limited to community being informed of management decisions and designated roles and responsibilities by the government.<sup>170</sup> According to the FAO, this kind of community participation is not considered as CBFiM. The only significant provision related to CBFiM is article 42(2), which states that the governor should develop the local community values, institutions and customary *adat* laws that support the protection of forests.

### **5.7.2. Ministry of Forestry Regulation No. P12/Menhut-II/2009 on the Control of Forest Fires**

Ministry of Forestry Regulation No. P12/Menhut-II/2009 on the Control of Forest Fires recognises the role of the community in controlling land/forest fires. Although this regulation could become a positive means of support from government and provide legal support for CBFiM, it has many weaknesses and inconsistencies, as well as a limited application, as it only regulates CBFiM for communities near protected forests. This regulation was initiated to establish a village fire brigade community (MPA) in the context of strengthening the capacity of the community. This regulation can be considered as the adoption of article 9 of the AATHP, which suggests that ‘each Party should strengthen local fire management and firefighting capability and coordination to prevent the occurrence of land and/or forest fires’.<sup>171</sup> The regulation defines a MPA as a community that is voluntary and trained to control land/forest fires

---

<sup>170</sup> Ibid.

<sup>171</sup> ASEAN Agreement on Transboundary Haze Pollution, opened for signature 10 June 2002 (entered into force 25 November 2003) art 9.

(article 1(12)).<sup>172</sup> Based on this definition, this kind of community involvement cannot be categorised as CBFiM because these groups are volunteers and are focused on firefighting with very little reference to prevention. Referring to the FAO's definition of CBFiM as 'a fire management approach based on a strategy to include local communities in the proper application of land-use fires, wildfire prevention, and in preparedness and suppression of wildfires', it clear that a MPA cannot be categorised as CBFiM. In addition, its voluntary basis will limit the overall effectiveness of the program, as there are no incentives to keep the community engaged with the program and activities.

In regards to prevention, the government aims to establish collaboration with the community in preventing fires (article 5(c)). However, the prevention of forest fires is not conducted at the lowest level, at the village level. Article 4 states that prevention of forest fires is conducted at:

- a. national level;
- b. provincial level;
- c. regency/city level;
- d. forest conservation, production forest, protected forest;
- e. concession forest, private and conservation forest.<sup>173</sup>

This regulation provides for the establishment of a *Manggala Agni*, an institution considered as fostering collaboration with the local community. Article 1(8) states that a *Manggala Agni* is a group of forest fire controllers of which the personnel are government employees and communities already trained to control land/forest fires.<sup>174</sup> Further, article 20 states that the Ministry of Forestry should establish *Manggala Agni* at the central level, provincial level, regency and city levels and unit of forest.<sup>175</sup> Noticeably, no *Manggala Agni* are established at the village level, which is the level at which the community live. However, considering that *Manggala Agni* are established to prevent and control land/forest fires in conservation areas managed by the Ministry of Forestry, this lack of inclusion of the village level makes sense.

In addition, the community involved and recruited for the MPA is limited to the villages near the conservation forest. Article 6 further provides that the form of collaboration with the community be by conducting monitoring prevention coordination, the development of a model of opening

---

<sup>172</sup> Ministry of Forestry Regulation No. P12/Menhut-II/2009 on The Control of Forest Fires (Indonesia) art 1(12).

<sup>173</sup> Ibid art 4.

<sup>174</sup> Ibid art 1(8).

<sup>175</sup> Ibid art 20.

land without burning, and the establishment and assistance of a MPA.<sup>176</sup> However, multiple stakeholder involvement is absent in this regulation, and there is no collaboration with private companies. It has been argued that the opportunity for collaboration between communities, commercial interests and government may lead to the sustainable management of resources. Bompard and Guizol argue that cooperation between village communities and many other stakeholders is a prerequisite if fire prevention is to be effective.<sup>177</sup> In addition, more recently, policy makers and theorists have increasingly focused on new environmental governance: an enterprise involving collaboration between a diversity of private, public and non-government stakeholders, acting together towards commonly agreed goals that they hope to achieve collectively rather than individually. This new environmental governance: 'relies heavily on participatory dialogue, and deliberation, devolved and decentralized decision making, flexibility, inclusiveness, knowledge generation and process learning, transparency and institutionalized consensus building practices'.<sup>178</sup>

#### ***5.7.2.1 Top-down and Bottom-up Approaches***

The establishment of a MPA in this regulation is a top-down approach because it is initiated at the national level (article 36(2)).<sup>179</sup> Arguably, a top-down approach can be questioned as to its effectiveness and sustainability in the long term. CBFiM is more of a bottom-up approach whereby local-scale fire management is conducted in which traditional or indigenous knowledge plays the major role. For this reason, it is debatable whether the top-down approach in this regulation can be categorised as CBFiM, in which the essential feature is the community as decision maker. Moore suggests that modes of management that do not allow for community input but do allow for community involvement are not considered as CBFiM.<sup>180</sup> However, Moore points out that, although there is some emphasis on whether the system is initiated internally or externally, the initiation is not as important as the amount of credibility given to local decision making.<sup>181</sup> Although the researcher agrees with Moore's argument that local decision making is important, the researcher would argue that internally initiated decision making supported by an

---

<sup>176</sup>Ibid, art 6.

<sup>177</sup> Bompard and Guizol, above n 107.

<sup>178</sup> Dedi Supriadi Adhuri, 'Between Village and *Marga*, A Choice of Structure: The Local Elites' Behaviour in Lahat Regency ' (2002) Special Volume *Antropologi Indonesia* 44.

<sup>179</sup> *Ministry of Forestry Regulation No. P12/Menhut-II/2009 on the Control of Forest Fires*, art 36(2).

<sup>180</sup> FAO, above n 3.

<sup>181</sup> Ibid.

externally sponsored system with collaboration and partnership is more effective than initiation from an externally sponsored system. This is due to the sense of ownership of the project that internally initiated local decision making is likely to instil to a higher degree than is initiation from an externally sponsored system.

Sense of ownership is an essential part of CBFiM. Externally supported forest fire management is concerned with the shifting of responsibility from government departments to local communities.<sup>182</sup> This shifting of responsibility is important, as beneficiaries are often not identified and it remains unclear whether local communities obtain fair access to the resources they are protecting.<sup>183</sup> It is argued that the best way to reduce land/forest fires is through community-based integrated management, which involves all stakeholders, using a bottom-up approach.<sup>184</sup> For example, the Canadian-funded 'Climate Change, Forest and Peatlands' project in Berbak Sembilang Conservation area, Indonesia, used this approach to assist the community to reduce forest fires and rehabilitate the land.<sup>185</sup> The wetlands international group is working together with villagers, PT Putra Duta Indah Wood and the National Parks Office to rehabilitate the burned forests, close inappropriate canals, provide alternative incomes and limit community activities in the peat swamp forests.<sup>186</sup> The project also gives attention to the development of local institutions, conservation management plans, environment awareness, funding and rewards for communities, clear land ownership, and community-based fire patrols and suppression.<sup>187</sup>

#### *5.7.2.2 Strengthening Community Capacity*

For a community to be involved in decision making, it is essential that it have sufficient tenure. However, land tenure problems remain a major challenge in Indonesia. Technical assistance is also needed to develop and strengthen local organisational capacities, and is considered as another essential element for the success of CBFiM. Further, Ministry of Forestry Regulation No. P12/Menhut-II/2009 on the Control of Forest Fires does not place CBFiM in the context of land-

---

<sup>182</sup> Kharki, above n 102, 27.

<sup>183</sup> Ibid.

<sup>184</sup> Unna Chokkalingam and Suyanto, 'Summary of Workshop Results: Kebakaran di lahan rawa/gambut di Sumatera: Masalah dan solusi: Prosiding semiloka' (10–11 Desember 2003)  
<[http://www.cifor.org/publications/pdf\\_files/Books/CChokkalingam0302E0.pdf](http://www.cifor.org/publications/pdf_files/Books/CChokkalingam0302E0.pdf)> 27.

<sup>185</sup> Ibid

<sup>186</sup> Ibid.

<sup>187</sup> Ibid.

use planning and natural resources management, which the World Wildlife Fund (WWF) states is essential for CBFiM to be most effective.<sup>188</sup> However, the strength of Regulation No. P12/Menhut-II/2009 is that in it the government provides for strengthening community capacity. Article 35 states that the strengthening of community capacity should be conducted through: a) education and training, b) strengthening of institutions, c) facilities, and d) campaigns and awareness raising.<sup>189</sup> Further, article 36 provides the forms of education and training activities. These include: a) basic training on controlling land/forest fires, and b) training on opening land without using fires through charcoal briquettes and composting.<sup>190</sup> As discussed, a zero burning law is difficult to enforce because of the vastness and remoteness of the wetland concessions, communities' limited resources and expertise, lack of company cooperation, and lack of field insurance for investigators.<sup>191</sup>

The establishment and development of a MPA is conducted with the collaboration of three Ministries; namely, the Ministry of Agriculture, the Ministry of Forestry and the Ministry of Environment. The 2010–2014 strategic plan of the Ministry of Environment gives their annual target as to establish community awareness groups in 300 villages, with five groups in every village.<sup>192</sup> The government also provides free productive plants to give away to the community as an incentive for opening land without using fire.<sup>193</sup> Based on a pilot project in East Kalimantan on community-based fire management, there are two criteria for the success of CBFiM: CBFiM should be part of a community-development process that benefits communities and provincial and district government should be required to support these community efforts.<sup>194</sup>

Traditional CBFiM does exist in Indonesia. CBFiM operates on the perspective that fire is consciously used to meet a specific objective; namely, to maintain the livelihood of the community.<sup>195</sup> Using fire for land preparation for farmers provides several benefits. Layers of ash are an important source of plant nutrients, and fire can reduce debris, insect pests, diseases and

---

<sup>188</sup> WWF/IUCN, above n 69.

<sup>189</sup> *Ministry of Forestry Regulation No. P12/Menhut-II/2009 on the Control of Forest Fires* (Indonesia) art 35.

<sup>190</sup> *Ibid.*

<sup>191</sup> Unna Chokkalingam and Suyanto, above n 184, 23.

<sup>192</sup> The Ministry of Environment, 'Renstra 2010-2014 (Usulan Kegiatan Rencana Aksi Nasional Pengendalian Kebakaran Hutan dan Lahan serta Pencemaran Asap Lintas Batas' (2010).

<sup>193</sup> *Ibid.*

<sup>194</sup> FAO, above n 46.

<sup>195</sup> Suyanto et al, above n 143, 6.

weeds.<sup>196</sup> In a case study of CBFiM in Lampung Sumatera, the farmers in the village of Trimulyo followed community norms and understanding when using fire for land clearance.<sup>197</sup> Rules included the requirement to construct firebreaks prior to burning their plots;<sup>198</sup> burning wood residue in the middle of the field, considering wind direction and starting at noon;<sup>199</sup> and informing neighbouring farmers of the intention to burn, to prevent fires from spreading beyond the plot site. In the event of the fire damaging neighbouring fields, the farmer should pay compensation in the form of money, labour or seed.<sup>200</sup> However, this fine is negotiable and not strictly enforced. Villagers of Tenganan, Bali Indonesia, for example, have to follow customary law or *awig-awig desa*, which includes a provision for punishment for fire damages. If one of the villagers burns bush or garbage that causes other trees to be burnt, he or she will be fined in accordance with the damage done and is required to perform a religious purification ceremony.<sup>201</sup> Traditional *adat* law clearly already has a system of penalties that are imposed on farmers who mismanage fires and destroy a neighbour's field.<sup>202</sup> However, there is no incentive for communities or individuals to control the spread of fires into natural forests or national parks.<sup>203</sup>

### **5.7.3. Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires**

Presidential Instruction No. 16 /2011 provides the legal foundation for relevant ministries and institutions to better coordinate to improve controlling land/forest fires; improve the participation of communities and other stakeholders in controlling land/forest fires; and improve law enforcement measures. This Presidential Instruction mentions all relevant government institutions involved in land/forest fires and outlines their roles and responsibilities.<sup>204</sup> It serves to clarify the

---

<sup>196</sup> Ibid.

<sup>197</sup> Ibid.

<sup>198</sup> Ibid.

<sup>199</sup> Ibid.

<sup>200</sup> Ibid.

<sup>201</sup> Kharki, above n 102, 14.

<sup>202</sup> Suyanto, Applegate and Tacconi, above n 2, 27.

<sup>203</sup> Ibid.

<sup>204</sup> These include the Coordinating Ministry of People's Welfare, the Ministry of Forestry, the Ministry of Environment, the Ministry of Agriculture, the Ministry of Research and Technology, the Ministry of Home Affairs, the Ministry of Foreign Affairs, the Ministry of Finance, the Ministry of National Planning and Development, the General Attorney, the Commander of the National Army, the Chief of Police of the Republic of Indonesia, the Head of the National Agency for Disaster Management and the Governor/Regent/Mayor.



involvement of different sectoral institutions and the roles and responsibilities in addressing land/forest fires of government institutions from central to local government. However, this regulation remains unclear and does not explicitly mention the institutions responsible for improving the capacity of CBFiM or the MPA. It only assigns responsibility to improve human resources in controlling land/forest fires in general.

Three Ministries are given responsibilities to improve the quality of human resources; namely, the Ministry of Forestry, the Ministry of Agriculture and the Ministry of Environment. However, the instruction does not state specifically the target of these human resources. The Ministry of Forestry in this Presidential Instruction has a duty to improve and strengthen the quality and quantity of human resources in controlling land/forest fires; that is, to improve the *Manggala Agni*. However, this instruction does not also give a mandate to improve CBFiM or the MPA. The Ministry of Agriculture has duties to improve the quality and the quantity of human resources in controlling land/agriculture fires and to facilitate the implementation of technology in agriculture to control fires. Unfortunately, it is not clear which human resources specifically need to be improved and strengthened; the instruction does not state whether the human resources that need to be improved are the farmers or the MPA.

At the local level, the Governor has duties to establish regulations for controlling land/forest fires.<sup>205</sup> These regulations require local government to have their own regulations to control land/forest fires.<sup>206</sup> Others duties of the Governor are to optimise the role and function of the BPBD as a coordinator in controlling land/forest fires, and to allocate a budget for the implementation for controlling land/forest fires in provincial areas. The Regent/Mayor has a duty to establish Regent/Mayor regulations for controlling land/forest fires.<sup>207</sup> The regency and city level are also mandated by this instruction to enact regulations to control land/forest fires in their own areas.<sup>208</sup> Others duties are to control land/forest fires in their working area; to allocate a budget to control land/forest fires; to impose an obligation on agricultural industries to provide human resources and facilities in controlling land/forest fires and to control land/forest fires when they occur; and to impose strict sanctions on persons responsible for agricultural businesses if

---

<sup>205</sup> Ibid.

<sup>206</sup> Ibid.

<sup>207</sup> Ibid.

<sup>208</sup> Ibid.

they are not conducting their responsibilities in controlling land/forest fires and do not report the result of their implementation in controlling land/forest fires to the Governor.<sup>209</sup>

#### **5.7.4. Ministry of Environment Regulation No. 10/2010 on the Mechanism to Prevent Pollution and/or Damage to the Environment Related to Land and/or Forest Fires**

Ministry of Environment Regulation No. 10/2010 on the Mechanism to Prevent Pollution and/or Damage to the Environment related to Land and/or Forest Fires aims to prevent pollution or damage related to land/forest fires. It does not specifically refer to CBFiM. However, mention is made of the local community or *adat* community, which is defined as ‘a group or community by generation who live in a specific geographical location because of ancestral relationships, a strong relationship with the environment and a value system which decides economic, political, social, and legal institutions’ (article 1(9)). The scope of this regulation includes opening land without burning, management of water in peatland areas, monitoring and reporting (article 2). This regulation adopts a zero burning policy where the person responsible for a business has an obligation to open the land without burning. However, it also adopts controlled burning and states that the local *adat* community that conducts the burning of land to a maximum of 2 hectares per family for planting local varieties is obliged to report this activity to the head of the village (article 4(1)). The village head is required to report this activity to the institution responsible for protecting and managing the environment in the district or city. The burning activities are not allowed to occur in conditions of rain precipitation below normal, a long dry season and/or a dry climate. The definition of this long dry season is elaborated in a non-ministerial institution publication on metrology and geophysics (article 4(4)).

In this regulation, the government has adopted both zero burning and controlled burning, although controlled burning is only for the local community. This is the only regulation that specifically discusses controlled burning. Other regulations, such as Government Regulation No. 4/2001, adopt a zero burning policy that forbids controlled burning. This inconsistency in policy creates confusion in implementation at the local level.

---

<sup>209</sup> Ibid.

## **5.8. CBFiM Case Studies in South Sumatera and Central Kalimantan Provinces**

CBFiM in both South Sumatera and Central Kalimantan is mostly based on a top-down approach. There is no genuinely bottom-up approach to CBFiM in these two provinces. In addition, most CBFiM is because of a pilot project approach with the support of international donors. For example, the South Sumatera Forest Fire Management Project, which was started in 2003 and finished in 2008, was funded by the EU to support CBFiM in South Sumatera. The Central Kalimantan Peatlands Project (CKPP) was funded by the Dutch Ministry of Foreign Affairs to support CBFiM in Central Kalimantan. However, in both cases, at the end of the project, there was no continuity to the program. The groups established and trained for firefighting are no longer active, and the equipment given by these projects has often been damaged or there is no budget for its operation. The lack of continued funding of the project, lack of a sense of stewardship or ownership and lack of community decision making indicates the failure of these types of CBFiM projects. The following sub-sections detail these projects to identify their strengths and weaknesses.

### **5.8.1. CBFiM in South Sumatera**

CBFiM typically takes a top-down approach, where the local government establishes *regu desa* (village groups) containing 10 local people in particularly fire prone villages and trains them. There are 210 villages in fire prone areas in South Sumatera, mostly in the Musi Banyu Asin, Banyuasin and Ogan Komering Ilir regency's areas, and 2500 local community members have already been trained.<sup>210</sup> Decentralization could contribute to the successful and advance CBFiM. Local government should establish clear policy and procedures including the regulations supporting CBFiM and provide funding and incentives for local communities that successfully prevent land/forest fires. Despite, the mandate in Presidential Instruction No. 16/2011 that the local government should enact Local Regulations to address land/forest fires, there is not yet any local regulation to address land/forest fires in South Sumatera Province. In addition, there is no village regulation to address land/forest fires as a foundation of CBFiM. Hasanuddin states there

---

<sup>210</sup> Laely Nurhidayah, Interview with Achmad Taufik, Head of UPTD *Pengendalian Kebakaran Hutan dan Lahan* South Sumatera Province (Palembang, 11 September 2012).

was an initiative by several villages, including Riding and Tanjung Lubuk villages, to enact a village regulation on controlled burning.<sup>211</sup> However, this initiative was stopped because of conflict with higher legislation, which adopts a zero burning policy.<sup>212</sup> The only local regulation to date is a *maklumat* imposing criminal sanctions for the burning of forest or bush. This *maklumat* is released during dry spells or forest fire incidents. It is signed by the governor, local head of police, local head of army and head of attorney. The criminal sanctions of this *maklumat* are derived from the Criminal Code, Agriculture Law, Forestry Law and Environmental Law.

#### **5.8.1.1 Sustainable Livelihood Approach**

The problem is that, as discussed above, without funding there is no continuity to CBFiM activity. Projects that do not address the underlying causes of the recurrence of land forest fires in South Sumatera (that is, *inter alia*, poverty and poor knowledge of appropriate technologies in the villages) are bound to fail.<sup>213</sup> One project that used a sustainable livelihood program was the South Sumatera Forest Fires Management Project (SSFFMP). The SSFFMP recognised that the prevention of forest fires was the most important measure in fire management, and sought to secure the participation of, and give roles to, rural communities and stakeholders.<sup>214</sup> The project recognised that the underlying cause of land/forest fires was the low education and incomes of rural people.<sup>215</sup> These people do not have any other alternatives besides fire as a simple, cheap and efficient method for land clearing.<sup>216</sup> Therefore, the SSFFMP adopted a community-development program with the overall goal of establishing a model for the rational and sustainable management of land/forest resources.<sup>217</sup> Thirteen villages from three fire prone districts in South Sumatera were chosen for the pilot project.<sup>218</sup> The output of the pilot project was to establish 13 field-level examples of participatory multi-stakeholder land/resource use planning that included both effective fire management and gender aspects.<sup>219</sup> The main activities of this community-development program were to introduce income-generating activities or

---

<sup>211</sup> Laely Nurhidayah, Interview with Hasanuddin, the Head of Operational Section of UPTD *Pengendalian Kebakaran Hutan dan Lahan* South Sumatera Province (Palembang, 13 September 2012).

<sup>212</sup> Ibid.

<sup>213</sup> Dodi Supriadi and Karl-Heinz Steinmann, *Summary Report of Results and Achievements 2003–2007* (South Sumatra Forest Fire Management Project, 2007) 22.

<sup>214</sup> Djoko Setyono, *Summary Report of Results and Achievements Community Development* (SSFFMP, 2007), 1.

<sup>215</sup> Ibid.

<sup>216</sup> Ibid.

<sup>217</sup> Ibid.

<sup>218</sup> Ibid.

<sup>219</sup> Ibid.

livelihood alternatives to ‘sonor’ paddy cultivation (which involves paddy cultivation in peatland areas using burning practices), for instance, fishery, cattle breeding, water buffalo fattening, integrated coconut processing, goat breeding, clone rubber plantation and compost production.<sup>220</sup> However, according to Hasanuddin, marketing these alternative livelihood programs is difficult and the program is not working.<sup>221</sup>

#### **5.8.1.2 The Causes of Land/Forest Fires in South Sumatera**

According to an interview conducted by the researcher during fieldwork with local government officials in UPTD *Pengendalian Kebakaran Hutan dan Lahan* (fire agency) Hasanuddin,<sup>222</sup> it seems that, because commodity prices for rubber, pulp and oil palm products have risen since 2004 and the upward trend is continuing, both local community/smallholders and companies are interesting in investing in these sectors. This has resulted in additional land clearing and massive burning of new areas for plantations.<sup>223</sup> In addition, Hasanuddin states that during prolonged dry seasons, local villagers seek additional income by practicing ‘sonor’ paddy cultivation in peatland areas, which results in a good and abundant harvest for low maintenance costs.<sup>224</sup> During the rainy season, peatland is wetland. However, during the dry season, these areas become dry and easy to burn. Before 2000, the local government supported ‘sonor’ practices, providing seeds to the community for this type of agriculture through the agricultural agency.<sup>225</sup> However, after becoming aware of the impact of these practices on the environment, the government began discouraging the practice of ‘sonor’.<sup>226</sup> According to Hasanuddin (UPTD *Pengendalian Kebakaran Hutan dan Lahan*), in the long dry season, local people usually burn *adat* land and sell it for a period for ‘sonor’ cultivation. The money from the sale becomes village revenue.<sup>227</sup> Therefore, the local community eagerly awaits the *El Nino* season, so they can start opening the land for ‘sonor’ cultivation.<sup>228</sup>

---

<sup>220</sup> Ibid.

<sup>221</sup> Laely Nurhidayah, Interview with Hasanuddin, the Head of Operational Section of UPTD *Pengendalian Kebakaran Lahan dan Hutan* South Sumatera Province (Palembang, 13 September 2012).

<sup>222</sup> Ibid.

<sup>223</sup> Ibid.

<sup>224</sup> Ibid.

<sup>225</sup> Ibid.

<sup>226</sup> Ibid.

<sup>227</sup> Ibid.

<sup>228</sup> Ibid.

### 5.8.1.3 Local Knowledge

Villagers do have local knowledge, particularly on the suitability of land for cultivation.<sup>229</sup> However, local practices focus only on short-term socio-economic purposes, without taking into account the preservation of natural resources and environment protection.<sup>230</sup> Fires occur due to uneven distribution of knowledge in the community and a general lack of equipment and budget.<sup>231</sup>

According to Hasanuddin, the long-existent local knowledge has disappeared or has been degraded.<sup>232</sup> For example, ‘*Simbur Cahaya*’ written customary laws, which regulated farming, were inherited from the Palembang Kingdom. Based on this law, whenever the members of the village proposed to conduct burning practices they were required to give notice to everybody in the village. The notice was delivered by *hitting a kentongan*, which produces a distinctive sound. A fine of 12 Ringgit was imposed if the villager violated this regulation. If the fire leapt into the forest and caused damage, the offender was also given a fine of 12 Ringgit.<sup>233</sup> However, according to Purna, a forestry official in South Sumatera Province, this customary law is no longer in effective use.<sup>234</sup>

### 5.8.2. CBFiM in Central Kalimantan

CBFiM in Central Kalimantan has a similar pattern to CBFiM in South Sumatera, where CBFiM mostly takes a top-down approach, initiated by local government or initiated and funded by projects. The failure of the project-based approach, as seen in South Sumatera, is that there is no continuity on the ground after the project ends.<sup>235</sup> Similarly, CBFiM established by local governments appears ineffective, as community fire brigades are voluntary, and a continued supply of funding is needed to support the communities’ livelihood. According to an interview

---

<sup>229</sup> Eris Achyar and Paul Kimman, *Summary Report of Results and Achievements Land Use Planning* (South Sumatra Forest Fire Management Project, 2007) 29.

<sup>230</sup> Ibid.

<sup>231</sup> Ibid.

<sup>232</sup> Laely Nurhidayah, Interview with Hasanuddin, the Head of Operational Section of UPTD *Pengendalian Kebakaran Lahan dan Hutan* Dinas Kehutanan Provinsi Sumatera Selatan (Palembang, 13 September 2012).

<sup>233</sup> Ibid.

<sup>234</sup> Laely Nurhidayah, Interview with Purna, Staff in BKSDA South Sumatera Province (Palembang 11 September 2012).

<sup>235</sup> The members of the village fire brigade are not active anymore and the equipment is damaged or rarely used as there is no budget for its operation.

conducted with the head of Jabiren Village, Syahrir by the researcher during fieldwork, the community prefers to earn money rather than doing voluntary tasks.<sup>236</sup> Every village has 10 volunteers, but there is no budget for these activities.<sup>237</sup> Lack of incentives for locals to engage and lack of resources, particularly funding, are among the factors that contribute to the failure to ensure the long-term success of the project.

Local government is mandated by Presidential Instruction No. 16/2001 to enact local regulation to address land/forest fires. Compared to South Sumatera Province, Central Kalimantan Province is more advanced in its legal framework in addressing land/forest fires. The local government has enacted Local Government Regulation No. 5/2003 concerning Controlling Land/Forest Fires and Governor Regulation No. 52/2008 on the Guidance of Opening Land and Yards for the Local Community in Central Kalimantan. Governor Regulation No. 52/2008 allows controlled burning, which conflicts with the spirit of Government Regulation No. 4/2001 higher in the legislation hierarchy, which adopts a zero burning policy. In any case, these regulations seem poorly implemented and enforced, and land/forest fires continue on a yearly basis. Based on the researcher's interviews with the community, local people are unaware of this Governor Regulation.

One of the projects in Central Kalimantan that supported a CBFiM approach was the CKPP, which was conducted in 2006 under a consortium of NGOs and academics. In 2006, the Cooperative for Assistance and Relief Everywhere worked together with Palangkaraya University (UNPAR) as part of the consortium, to train and equip 25 fire brigades (one per village).<sup>238</sup> A total of 399 people joined these brigades.<sup>239</sup> Villagers were also trained in the development of deep wells to provide water for both firefighting and other uses during the dry season.<sup>240</sup>

---

<sup>236</sup> Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012).

<sup>237</sup> Ibid.

<sup>238</sup> CKKP Consortium, *Provisional Report of the Central Kalimantan Peatland Project* (CKKP Consortium, 2008).

<sup>239</sup> Ibid.

<sup>240</sup> Ibid.

### 5.8.2.1 An Evaluation of CBFiM in Central Kalimantan

The failure of CBFiM lies in the lack of engagement of the community with the program. Community decision making and a sense of ownership are important aspects of CBFiM, but are missing in the current approach. The communities are busy earning money to support their livelihood.<sup>241</sup> Syahrir, Head of Jabiren Village, states that if they do not work, they will not eat for the next day.<sup>242</sup> It is clear that there is a linkage between poverty and the lack of engagement of the community in CBFiM. In addition, there is a linkage between peatland degradation and poverty.<sup>243</sup> The communities are located far from markets and trapped in poverty.<sup>244</sup> In Central Kalimantan, an average 70 per cent of household income is from farming and forestry, and some 57 per cent of households farm solely for subsistence purposes.<sup>245</sup> Local people use fire in opening land for agriculture or livelihood strategies.<sup>246</sup> Therefore, any change that affects agriculture such as blocking canals or restricting the use of fire is critical for them.<sup>247</sup> For this reason, providing alternative sources of income and food is important in convincing farmers to switch to more sustainable practices.<sup>248</sup>

It is observed that poverty rates in peatland areas are much higher than elsewhere in Indonesia, and without alternative sustainable development options local communities will be forced to over-exploit the remaining peatlands, increasing the fire risk.<sup>249</sup> In addition, the lack of awareness of local people is contributing to the failure of current action to eliminate forest fires. Based on interviews with local peoples in Central Kalimantan,<sup>250</sup> many local people are unaware of how their actions contribute to the problem, and adequate preparations for early fire control are generally not in place.<sup>251</sup> Adding to the problem, local government policies favour gaining

---

<sup>241</sup> Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012).

<sup>242</sup> Ibid.

<sup>243</sup> Ibid.

<sup>244</sup> Ibid.

<sup>245</sup> Cooperative for Assistance and Relief Everywhere (CARE) Consortium, *Provisional Report of the Central Kalimantan Peatland Project* (November 2008).

<sup>246</sup> Ibid

<sup>247</sup> Ibid.

<sup>248</sup> Ibid.

<sup>249</sup> Mark E Harrison, Susan E Page and Suwido H Limin, 'The Global Impact of Indonesian Forest Fires ' (2009) 56(3) *Biologist* 156, 161.

<sup>250</sup> Laely Nurhidayah, Interview with Unjung, Secretary of Village (Tanjung Taruna, 20 September 2013); Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012); Laely Nurhidayah, Interview with Deni, Local People (Taruna Village Palangkaraya, 20 September 2012).

<sup>251</sup> See also comments in Harrison, Page and Limin, above n 249, 161.



economic benefit in the short term rather than prioritising environmental protection, which further contributes to the failure of forest fire reduction. Harisson et al suggests that, while the government is vocal about their intentions to reduce and combat forest fires, many of its policies, such as the ex-Mega Rice Project and oil palm expansion, have contributed to increased fire frequency.<sup>252</sup>

According to Folke, the government should implement adaptive governance, which involves multiple stakeholders, multi-level governance or a self-organised social network. In the context of the land/forest fire reduction effort, adaptive governance from the researcher's perspective is a combination of State control and binding legislation, a top-down approach<sup>253</sup> and a bottom-up approach. However, a community-based approach that empowers local people and involves them in decision making (a bottom-up approach)<sup>254</sup> may be preferable to a top-down approach. The initiative from local communities supported by various organisations at different levels in resources management to prevent land/forest fires reflects a sense of stewardship of the community in protecting the environment. This would improve the chance of success of fire prevention programs as compared to top-down approaches because the government cannot directly control the behaviour of local people in using fires. The local community are the actors in practicing opening land using fires. Therefore, regulations initiated and broadly supported at the local level would be more effective than regulations imposed at a provincial level. In addition, raising the awareness of local people to the risks and consequences of land/forest fires is important in preventing land/forest fires. From the field research observation in two villages in Central Kalimantan, Tanjung Taruna and Jabiren, some scenarios were revealed. In Jabiren village, there were peatland fires; while in Tanjung Taruna, peatland fires did not occur. Based on an interview with a local community member, this was because in Jabiren village, the community lacked awareness of the impact of peatland fires; while in Tanjung Taruna, the community was aware of their impact. Thus, education about the impact of these fires can clearly have a major impact on community practices.

---

<sup>252</sup> Ibid.

<sup>253</sup> John B Davis, 'Finding the Balance: Strengthening MPA Governance by Mixing Top-Down, Bottom-Up, and Other Approaches' (2011) 12(6) *MPA News: International News and Analysis on Marine Protected Areas*.

<sup>254</sup> Ibid.

### *5.8.2.2 The Causes of Land/Forest Fires in Central Kalimantan*

One of the questions asked of the community, local government and NGOs as part of this research was their opinion about the cause of land/forest fires. Based on the answers and observation, there were similarities and differences between the perceived causes of land/forest fires in Sumatera and Kalimantan. Both are caused by local community and company practices in clearing land by using fire. However, in South Sumatera, one of the triggers of peatland fires is the practice of 'sonor' cultivation in peatland areas; while in Kalimantan, land/forest fires are triggered by shifting cultivation practices and the clearing of land by local people seeking to claim ownership of the land. Conversely, according to Arie Rompas, executive director of Walhi, an NGO concerned with environment in Central Kalimantan, forest fires are not owing to the practices of local people at all.<sup>255</sup> He suggests that government policy has created the environmental disaster.<sup>256</sup> He states that there are three main problems:<sup>257</sup>

1. Forest degradation from forest conversion. During 1997, a massive conversion of peatland into a one million hectare Mega Rice Project ended up as a failure and ecological disaster. This ex-Mega Rice Project was located in a peatland area where fires reoccur every year because the area is already open. It is clear that the community is not to blame for this disaster; before this project, the Dayak community practiced slash-and-burn activities, causing no land/forest fires until recent times. Expansion of land clearing by companies is the major cause of haze pollution and forest fires.
2. Lack of Law enforcement. Companies that open land using fire are rarely brought to justice, as there is generally not enough evidence to prove that the company is guilty of conducting burning activities. In fact, Arie Rompas argues that companies employ local people to conduct the burning activities to manipulate the evidence.<sup>258</sup> Similarly, environmental law analyst Mas Achmad Santosa points out that the lack of investigators

---

<sup>255</sup> Laely Nurhidayah, Interview with Arie Rompas, Executive Director of Walhi Central Kalimantan (Palangkaraya 17 September 2012).

<sup>256</sup> Ibid.

<sup>257</sup> Ibid.

<sup>258</sup> Ibid.

to handle environmental cases prevents the Environment Ministry from enforcing the law in a timely manner.<sup>259</sup>

3. Rehabilitation is not conducted properly. This problem is similar in Sumatera. It is suggested that reforestation has never reached its targets and is far below the area logged and cleared.<sup>260</sup> The same applies in Kalimantan, according to an interview the researcher conducted with Adi Suseno, a local government official in Palangkaraya. Despite Presidential Instruction No. 2/2007 on Acceleration of Rehabilitation of the ex-Mega Rice Project in Central Kalimantan, implementation is very slow.<sup>261</sup> Suseno further argues that there is a lack of funding for this rehabilitation,<sup>262</sup> suggesting that the central government is not committed to supporting it.<sup>263</sup> According to the head of village for Jabiren Shahrir, rehabilitation is also not conducted properly.<sup>264</sup> It is conducted in forestry areas only, while open peatland areas are not yet being rehabilitated.<sup>265</sup>

For these reason Walhi suggests a 'common platform' as a recommendation for the government to do the following activities:<sup>266</sup>

1. Stop granting licences for forest utilization and stop conversion of forest.
2. Improve forest management.
3. Improve law enforcement.
4. Protect ecology conservation areas.
5. Recognise people's ownership.

Similar points are made by Bihokda, a secretary of the forest agency in Central Kalimantan.<sup>267</sup> He points out that too many licenses are given to plantation and mining companies by local government, which has resulted in environmental damage.<sup>268</sup>

---

<sup>259</sup> Fidelis E Satriastanti, 'Fires to Clear Forests Still Vogue in Indonesia', *Jakarta Globe* (Jakarta), 27 August 2012 <<http://www.thejakartaglobe.com/nvironment/fires-to-clear-forests-still-in-vogue-in-indonesia/540463>>.

<sup>260</sup> Laely Nurhidayah, Interview with Arie Rompas, Exeutive Director of Walhi Central Kalimantan (Palangkaraya 17 September 2012).; Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012).

<sup>261</sup> Laely Nurhidayah, Interview with Adi Suseno, Official at Provincial Forest Agency of Central Kalimantan (Palangkaraya 20 September 2012).

<sup>262</sup> Ibid.

<sup>263</sup> Ibid.

<sup>264</sup> Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012).

<sup>265</sup> Ibid.

<sup>266</sup> Laely Nurhidayah, Interview with Arie Rompas, Exeutive Director of Walhi Central Kalimantan (Palangkaraya 17 September 2012).

<sup>267</sup> Laely Nurhidayah, Interview with Bihokda, Secretary at Provincial Forest Agency of Central Kalimantan (Palangkaraya, 19 September 2012 ).

In interviews conducted by the researcher with several local government, NGO and local community stakeholders in Central Kalimantan, many different opinions and perspectives as to the causes of peatland fires and the environmental disaster in Central Kalimantan were elicited. NGOs considered blame should be laid with government policy and companies who conduct burning practices.<sup>269</sup> They did not consider the community to blame. By contrast, local government officials believed that local people are mostly responsible for causing the problem. They tended to reject the NGO opinion that companies are a main cause of land/forest fires.<sup>270</sup> To some extent, it seems that every sectoral institution is defending itself and does not want to be blamed for the failure to respond to land/forest fires. Local people themselves seemed quite unsure about the causes of land/forest fires. Some stated that the cause of fires is people from outside their village; others thought the fires originated from other villages.<sup>271</sup> They could not identify the persons who conducted the burning or the source of the fire due to the vastness and remoteness of the area.<sup>272</sup> The head of the village of Jabiren Syahrir gave the cause as the ignorance of local people of the impact of using fire in clearing land.<sup>273</sup> There is no sense of stewardship. He further stated that these fires are both intentional and accidental, such as from the activities of farmers clearing land for rice fields using fire and/or discarding cigarettes butts without extinguishing them.<sup>274</sup>

### **5.8.2.3 Land Tenure Security and CBFiM**

One of the fieldwork research aims of this research is to establish whether land tenure security contributes to implementing CBFiM successfully. There is an interesting case in Central Kalimantan that shows the relationship between the ownership of land and sustainable management and reducing land/forest fires. It can be concluded from this case study that security of tenure itself is not the only condition for successful CBFiM. This case confirms the argument

---

<sup>268</sup> Ibid.

<sup>269</sup> Laely Nurhidayah, Interview with Arie Rompas, Executive Director of Walhi Central Kalimantan (Palangkaraya 17 September 2012).

<sup>270</sup> Laely Nurhidayah, Interview with Mursid Marsono, Head of Provincial Environmental Protection Agency of Central Kalimantan/Member of Provincial REDD+ Commission (Palangkaraya, 19 September 2012).

<sup>271</sup> Laely Nurhidayah, Interview with Deni, Local People (Taruna Village, Palangkaraya, 20 September 2012).

<sup>272</sup> Ibid.

<sup>273</sup> Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012).

<sup>274</sup> Ibid.

by Lynch that ownership is a necessary but insufficient condition for sustainable management.<sup>275</sup> This is demonstrated by an incident in Jabiren village in Central Kalimantan. The owner of a rubber plantation sued a farmer who set fires for clearing land for rice farming. The fire spread to the rubber plantation and caused damage. The owner of the rubber plantation sued the rice farmer for compensation of 40 million rupiah. The case is under police investigation. Both parties had ownership of their respective lands. From this case, it seems that property rights alone do not provide adequate incentive or the conditions for sustainable management.<sup>276</sup> Technical assistance to develop and strengthen local organisational capacities and support sustainable management and conservation, together with appropriate credit programs, is essential.<sup>277</sup> Aswin Usup, Head of the CKKP, argues that productive land such as that planted with rubber plantations will be protected by owners from land/forest fires, while unproductive land will not be protected and is likely to be the source of land/forest fires.<sup>278</sup> He suggests three actions the government can take to reduce land/forest fires: improve the incomes of local people; utilise abandoned land as a source of income, using technology or agriculture to open the land; and educate the local community.<sup>279</sup>

CBFiM in Central Kalimantan takes the form of individual or group efforts to prevent and control peatland fires on their own land (for example, on plantations). Community fire brigades, established by the local government to put out peatland fires, are slow to act. In Central Kalimantan, particularly in Pulang Pisau district, in Jabiren, Pilang and Taruna villages, many local communities own rubber plantations. When the fires spread during the dry season, the land/plantation is protected by the owner.<sup>280</sup> They do their own monitoring and try to extinguish the fires by themselves, as individuals or in groups.<sup>281</sup> The community usually asks for help from *Manggala Agni*, but this rarely comes.<sup>282</sup> According to the Directorate General Forest Protection and Conservation Decree No. 21 & 22/KPTS/DJ-IV/2002 concerning Structure and Guidelines of/for the Fire Brigades for Fire Control and Prevention, *Manggala Agni* is to be deployed to help with firefighting on community land after an official request by the head of the village, but not at

---

<sup>275</sup> Ibid.

<sup>276</sup> Ibid.

<sup>277</sup> Ibid.

<sup>278</sup> Laely Nurhidayah, Interview with Aswin Usup, Head of Central Kalimantan Peatlands Project (CKKP) UNPAR (Palangkaraya).

<sup>279</sup> Ibid.

<sup>280</sup> Laely Nurhidayah, Interview with Deni, Local People (Taruna Village, Palangkaraya, 20 September 2012).

<sup>281</sup> Laely Nurhidayah, Interview with Asok, Local People (Pilang Village, Palangkaraya, 20 September 2012); Laely Nurhidayah, Interview with Deni, Local People (Taruna Village, Palangkaraya, 20 September 2012).

<sup>282</sup> Laely Nurhidayah, Interview with Asok, Local People (Pilang Village 20 September 2012).

the request of the individual.<sup>283</sup> This Decree conflicts with Governor Regulation No. 52/2008 on the Guidance of Opening Lands and Yards for the Community in Central Kalimantan, which suggests that every person has the right to ask for assistance from firefighters or the nearest *Manggala Agni* in the case of uncontrolled land/forest fires.<sup>284</sup> However, according to Syahrir, there is no mechanism in the village to report a fire disaster.<sup>285</sup> Moreover, no meetings are held at the village level regarding overcoming these fires.<sup>286</sup> Syahrir argued that the spirit of *gotong royong* (that is, reciprocity or mutual aid) has been degraded.<sup>287</sup> An important feature of CBFiM is local community decision making. Communities should call or arrange their own meetings and invite experts on the issue of fire prevention and management that they think will be of use for their location considering their available resources.<sup>288</sup> This will only happen if fire management is integrated with communities' production and livelihood systems.<sup>289</sup> Currently, there does not appear to have been any initiative by the village to hold this kind of meeting to overcome the problem.<sup>290</sup>

Forest fires in peatland are very quick to spread, creating massive burnt areas. According to the community, every year these peatland fires occur, and some of their rubber plantation land is burnt.<sup>291</sup> The problem is that it is impossible to identify the source of the fire or the person responsible.<sup>292</sup> Fires can spread from one village to other villages nearby.<sup>293</sup> The winds contribute to the speed of fires as they burn underground peatland areas.<sup>294</sup> The owners of rubber plantations usually hire people to help put out and monitor fires to save the plantation.<sup>295</sup> Usually, five people are hired.<sup>296</sup> These workers are paid and given food,<sup>297</sup> and can be expected to work for three or

---

<sup>283</sup> Directorate General Forest Protection and Conservation Decree No. 21 & 22/KPTS/DJ-IV/2002 concerning Structure and Guidelines of for the Fire Brigades for Fire Control and Prevention.

<sup>284</sup> Governor Regulation No. 52/2008 on the Guidance of Opening Lands and Yards for the Community in Central Kalimantan (Indonesia), art 5(c).

<sup>285</sup> Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012).

<sup>286</sup> Ibid.

<sup>287</sup> Ibid.

<sup>288</sup> FAO, above n 3.

<sup>289</sup> Ibid.

<sup>290</sup> Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012).

<sup>291</sup> Laely Nurhidayah, Interview with Asok, Local People (Pilang Village 20 September 2012).; Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012); Laely Nurhidayah, Interview with Deni, Local People (Taruna Village, Palangkaraya, 20 September 2012).

<sup>292</sup> Laely Nurhidayah, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012); Laely Nurhidayah, Interview with Asok, Local People (Pilang Village 20 September 2012).

<sup>293</sup> Laely Nurhidayah, Interview with Asok, Local People (Pilang Village 20 September 2012).

<sup>294</sup> Ibid.

<sup>295</sup> Ibid.

<sup>296</sup> Ibid.

five days, depending on the nature of the fire.<sup>298</sup> Rubber farmers also buy their own firefighting equipment, such as water pumps, fire hoses and hose reels, or they use traditional equipment such as water buckets. No help comes from the village or government institutions.<sup>299</sup>

When fires become big, it is impossible to depend on the community fire brigade, as this can endanger lives. Only rain or the local government asking the central government for help in making artificial rain in the areas of burning can help in putting out fires. However, based on the interview with Adi Suseno, making artificial rain is very expensive. The budget for operations to produce artificial rain could reach 100 million rupiah.<sup>300</sup> Thus, government responses to forest fires have focused on suppression or costly technological solutions.<sup>301</sup> For this reason, educating the local community is the cheapest option to deal with the land/forest fires problem. Further, the researcher contends that the *adat* institutional framework and customary law (if it exists at village level) is important in preventing land/forest fires.

#### **5.8.2.4 Local Knowledge**

The Dayak community, the original population of Central Kalimantan, does have traditional knowledge. Sidik Usop, an expert on the Dayak community in Central Kalimantan, notes that the original values of local people centred on their concern for the environment.<sup>302</sup> However, this value system has been destroyed by the government, and the Dayak identity is being ignored.<sup>303</sup> Neither the government, nor the companies opening land for plantations, are really aware of, or concerned about, local values or culture.<sup>304</sup> Thus, these cultural values are not being effectively used in preventing land/forest fires. Some scholars, including Antlov (1995), Suwondo (1997), Kato (1989) and Zakaria (2000), argue that traditional leadership systems are marginalised by Law No. 5/1979 on village administration.<sup>305</sup> Sidik Usop states that the Dayak people have a

---

<sup>297</sup> Ibid.

<sup>298</sup> Ibid.

<sup>299</sup> Ibid; Laely Nurhidayah, Interview with Deni, Local People (Taruna Village, Palangkaraya, 20 September 2012).

<sup>300</sup> Laely Nurhidayah, Interview with Adi Suseno, Official at Provincial Forest Agency of Central Kalimantan (Palangkaraya 20 September 2012).

<sup>301</sup> Peter Moore Et Al (Eds), *Communities In Flames: Proceedings of an International Conference on Community Involvement in Fire Management* (2002) <[ftp://ftp.fao.org/docrep/fao/005/ac798e/ac798e00.pdf](http://ftp.fao.org/docrep/fao/005/ac798e/ac798e00.pdf)> v.

<sup>302</sup> Laely Nurhidayah, Interview with Sidik R Usop, Vice Dean I of the Political Science Faculty, the University of Palangka Raya (UNPAR) (Palangkaraya 19 September 2012).

<sup>303</sup> Ibid.

<sup>304</sup> Ibid.

<sup>305</sup> Adhuri, above n 178, 45.

ceremony called *Manyanggar* that reflects the precautionary principle in managing or opening the land.<sup>306</sup> *Manyanggar* is a traditional ceremony requesting a permit from the ancestral spirits for land clearing outside the *Pahewan* (sacred forest) area core zone. The Dayak community believes that a supernatural guardian protects the *Pahewan* zone, which can be regarded as a conservation area.<sup>307</sup> Usop argues that activating and revitalising *adat* institutions will be an important aspect in improving protection of the environment.<sup>308</sup>

Local government claims to recognise Dayak *adat* institutions in Local Government Regulation No. 16/2008 concerning Institution of Dayak Community in Central Kalimantan and Governor Regulation No. 13/2009 on the Rights of *Adat* Community. This recognition of *adat* forest is an improvement on legal recognition from the Central Kalimantan local government. The recognition of customary *adat* territories at national level recently began to show a favourable approach to indigenous people. In 2012 the decision of Constitutional court No 35/PUU-X/2012 in relation to the customary forest ruling strengthened the ownership of indigenous people over land territories. According to this decision, customary forests are no longer State forests. To implement this decision the Ministry of Forestry issued a Circular Letter from the Ministry of Forestry No. E.1/Menhut-II/2013 on the Constitutional Court Decision No. 35/PUU-X/2012 which states that customary forest will be released from designation as State forest only if indigenous peoples have been recognized by local regulation.

However, according to Sidik Usop, these regulations only serve to pacify the Dayak community.<sup>309</sup> *Adat* rights are not yet fully recognised and there is no budget from the local government to identify *adat* land and *adat* rights.<sup>310</sup> Usop states an important problem as the sale of *adat* lands to companies.<sup>311</sup> Article 11 of Governor Regulation No. 13/2009 on the Rights of *Adat* Community states that it is prohibited to transfer the ownership of *adat* land or *adat* rights except for development in the local region or at the will of the community or individual. Thus, land tenure reform has clearly not been fully implemented in Central Kalimantan.

---

<sup>306</sup> Laely Nurhidayah, Interview with Sidik R Usop, Vice Dean I of the Political Science Faculty, the University of Palangka Raya (UNPAR) (Palangkaraya 19 September 2012).

<sup>307</sup> Ibid.

<sup>308</sup> Ibid.

<sup>309</sup> Laely Nurhidayah, Interview with Sidik R Usop, Vice Dean I of the Political Science Faculty, the University of Palangka Raya (UNPAR) (Palangkaraya 19 September 2012).

<sup>310</sup> Ibid.

<sup>311</sup> Ibid.



## 5.9. Conclusion

CBFiM is one possible approach in addressing land/forest fires. While the community is blamed as an actor in causing land/forest fires, they are also part of the solution to the problem. Indeed, the approach in addressing land/forest fires should move from centralised policies towards policies that approach the issue from the grassroots level.<sup>312</sup> CBFiM offers one of the most sustainable, adaptive approaches for managing fire, especially for prevention.<sup>313</sup> CBFiM is not only an effective approach to fire management, but also for climate change mitigation.<sup>314</sup> However, there are different points of views on the definition of CBFiM, particularly as regards what it meant by CBFiM. Therefore, CBFiM still suffers from a lack of clarity and institutional support.<sup>315</sup> In addition, CBFiM should be placed in the context of overall land-use planning and natural resources management rather than having a separate identity.<sup>316</sup> The consideration in placing CBFiM in the context of land-use planning and natural resources management is because security of land tenure increases the sense of ownership of local communities to protect land/forests and practice sustainable forest management. However, based on the case study in Central Kalimantan, land tenure security itself is not sufficient. Technical assistance to develop and strengthen local organisational capacities, together with appropriate credit programs, is needed to make CBFiM successful.

The role of the community in preventing and controlling land/forest fires has been recognised both in the AATHP and in Indonesian national law, particularly in Government Regulation No. 4/2001. However, as shown by the two case studies in South Sumatera and Central Kalimantan Provinces, CBFiM in Indonesia is still in its infancy. The current CBFiM approach, which is focused on fire suppression, does not seem effective. It should focus more on prevention and include the alleviation of poverty in the community. In addition, CBFiM in Indonesia suffers from a lack of funding sustainability. CBFiM mostly takes a top-down approach. There is no genuinely bottom-up approach to CBFiM in either Central Kalimantan or South Sumatera. The weakness of the project-based or top-down approach is that there is no continuity of CBFiM after

---

<sup>312</sup> Suryadi, above n 153; Elinor Ostrom, *Governing the Commons* (Cambridge University Press, 1990), 1.

<sup>313</sup> FAO, above n 46.

<sup>314</sup> FAO, above n 3.

<sup>315</sup> Project Firefight South East Asia and the Regional Community Forestry Training Center, above n 20.

<sup>316</sup> Ibid.

the project has ended. The members of the village fire brigade are no longer active and the equipment is damaged or rarely used, as there is no budget for operations. As the case studies have shown, the failure of current CBFiM approaches is that there is no engagement of the community in the program. The important features of CBFiM; namely, community decision making and a sense of ownership, are missing in the current approach. Moreover, the traditional knowledge on maintaining and protecting the environment has been degraded.<sup>317</sup> To improve communities' sense of stewardship, it is necessary to activate and revitalise *adat* institutions to improve local knowledge on protection of the environment.

Ministry of Forestry Regulation No. P12/Menhut-II/2009 on the Control of Forest Fires, which is a positive sign of government support for CBFiM, has many weaknesses and inconsistencies. First, according to the definition of CBFiM by the FAO, the CBFiM proposed by this regulation cannot be categorised as true CBFiM, as it is voluntary and focused on firefighting with little mention of prevention. Further, this regulation does not place CBFiM in the context of land-use planning and natural resources management, but rather imbues it with a separate identity. This inconsistency is shown in article 5(c) on collaboration with the community in preventing fires. Although, this regulation aims to establish collaboration with local people, the prevention of forest fires is not conducted at the village level. Multi-stakeholder collaboration is also absent from this regulation. A multi-stakeholder approach involving government, community and private companies is essential, as no single actor, whether government or civil, can solve the serious social, economic and ecological threats of forest fires.<sup>318</sup> The research in this chapter has shown that Indonesia can improve its legal framework in addressing transboundary haze pollution by enacting specific regulations on CBFiM. These regulations should include incentives for the participation of local people if they are to be successful in preventing and controlling land/forest fires.

---

<sup>317</sup> Laely Nurhidayah, Interview with Sidik R Usop, Vice Dean I of the Political Science Faculty, the University of Palangka Raya (UNPAR) (Palangkaraya 19 September 2012).; Laely Nurhidayah, Interview with Hasanuddin, Head of Operational Section of UPTD *Pengendalian Kebakaran Hutan dan Lahan* Palembang (Palembang, 13 September 2012).

<sup>318</sup> Ganz and Moore, above n 47.



## Chapter 6: The REDD+ Program and its Implications for Forest Fire Reduction Efforts in Indonesia

### 6.1. Introduction

Efforts to reduce land/forest fires seem to be gaining momentum with the implementation of the REDD+ program. The momentum is emerging as considerable attention is given by climate negotiators to the role of terrestrial forests in climate mitigation strategies, and various projects and readiness activities are currently underway.<sup>1</sup> Forest fires are considered responsible for forest degradation and are a direct cause of GHG emissions that should be avoided. Therefore, REDD+ is considered to be part of the solution in reducing land/forest fires, and able to encourage better forest fire management. REDD+ provides incentives for developing countries to avoid deforestation and forest degradation. The significant share of financial resources attached to this mechanism, and which will be received by Indonesia, will be a significant driver for the government to change their law and policy to improve the effort to reduce land/forest fires.

According to a World Bank report, Indonesia is in the world's top three GHG emitters, after the United States and China, because of deforestation, peatland degradation and forest fires.<sup>2</sup> Emissions from deforestation and forest fires are five times higher than are those from non-forestry emissions.<sup>3</sup> In addition, according to the Ministry of Environment's Indonesia Second National Communication, LULUCF contribute around 47 per cent to emissions, while peat fires contribute 13 per cent.<sup>4</sup> The total contribution from LULUCF and peat fires to GHGs is thus quite significant, at 60 per cent. Therefore, it is clear that the government should make improvements in the forestry sector a priority in the effort to reduce GHGs. Despite the fact that Indonesia does not have any binding obligations under the Kyoto Protocol, Indonesia has

---

<sup>1</sup>The Ministry of Environment, 'Indonesia Second National Communication under the United Nations Framework on Climate Change (UNFCCC)' (Government report, 2010) <[http://unfccc.int/files/national\\_reports/non-annex\\_i\\_natcom/submitted\\_natcom/application/pdf/indonesia\\_snc.pdf](http://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/indonesia_snc.pdf)> 1; FAO, *Fire Management Global Assessment 2006: A Thematic Study Prepared in the Framework of the Global Forest Resource Assessment 2005* (FAO, 2007) <<ftp://ftp.fao.org/docrep/fao/009/a0969e/a0969e00.pdf>>.

<sup>2</sup> Agus P Sari et al, Indonesia and Climate Change (Working paper on Current Status and Policies, DFID and World Bank, March 2007) 1.

<sup>3</sup> Ibid.

<sup>4</sup> The Ministry of Environment, above n 1, II-7.

voluntarily adopted an emissions reduction target.<sup>5</sup> In September 2009, at the G-20 Meeting, the President of Indonesia announced an ambitious goal to reduce GHGs voluntarily by around 26 per cent<sup>6</sup> from BAU levels by 2020, or by 41 per cent with international support (for example, from REDD+). About 50 per cent of this proposed reduction will be met from LULUCF activities. The commitment made by Indonesia is part of the Copenhagen Accord; and as part of this commitment, the Ministry of Environment and the Ministry of Forestry have set a target to reduce forest fire hotspots by 20 per cent annually.

In May 2010, the government of Indonesia signed the Letter of Intent between Indonesia and Norway for the transfer of US \$1 billion in funding as a bilateral arrangement to contribute to significant reductions in GHG emission from deforestation, forest degradation and peatland conversion.<sup>7</sup> Emissions reduction initiatives with the greatest impact in Indonesia; namely, fire suppression, peatland rehabilitation and sustainable logging, are more cost effective than most other options for reducing GHG emissions.<sup>8</sup> Cost effective in this sense means that Indonesia can reduce CO<sub>2</sub> emissions quicker and more substantially than is possible in other countries.<sup>9</sup> As part of the Letter of Intent REDD mechanism with Norway, Indonesia committed to a two-year moratorium on granting new concessions for conversion of rain forest and peat forest from 2011. This was given effect by enacting Presidential Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance. Although fire is an important issue in REDD, little attention has been given to address the issue of peatland fires in Indonesia's legal framework. Presidential Instruction No. 11/2011, which is considered a key regulation as part of the Indonesia–Norway bilateral agreement, focuses principally on the logging of primary forests and peatland conversion, rather than on fires.

---

<sup>5</sup> The principle embedded in the 1992 United Nations Framework Convention on Climate Change and in the 1997 Kyoto Protocol set binding targets only for developed countries.

<sup>6</sup> Susilo Bambang Yudhoyono, 'Intervention on Climate Change' (Speech delivered at the G-20 Leaders Summit, Pittsburgh USA, 25 September 2009) <<http://forestclimatecenter.org/files/2009-09-25%20Intervention%20by%20President%20SBY%20on%20Climate%20Change%20at%20the%20G-20%20Leaders%20Summit.pdf>>.

<sup>7</sup> Budy P Resosudarmo et al, 'Forest Land Use Dynamics in Indonesia' (Working paper in Trade and Development No. 2012/01, Crawford School of Economics and Government, ANU College of Asia and the Pacific, February 2012) <[http://www.crawford.anu.edu.au/acde/publications/publish/papers/wp2012/wp\\_econ\\_2012\\_01.pdf](http://www.crawford.anu.edu.au/acde/publications/publish/papers/wp2012/wp_econ_2012_01.pdf)> 14.

<sup>8</sup> *Fact Sheet Norway–Indonesia Partnership REDD+* <<http://www.norway.or.id/PageFiles/404362/FactSheetIndonesiaGHGEmissionMay252010.pdf>>.

<sup>9</sup> Ibid.

This chapter will examine the REDD+ initiative and its implication for forest fire reduction in Indonesia. A holistic fire management approach must be an integral strategy of REDD+ to address forest degradation and reduce emissions.<sup>10</sup> However, Barlow et al argues that integrating forest fire reduction into REDD+ also presents many challenges.<sup>11</sup> It requires:

changes in agricultural practices that take place outside the remaining forests; the monitoring and prediction of spatio-temporal patterns of forest fires across whole biomes; guarantees of additionality; avoiding leakage of fire dependent agriculture; ensuring that responsibilities for fire management are fairly distributed; protection for rural livelihoods; and new activities that result in positive outcomes for local people.<sup>12</sup>

The role of the legal framework in effectively implementing REDD+ by creating a holistic fire management framework is crucial. Therefore, this chapter will examine the adequacy of the legal framework in Indonesia in implementing REDD+, especially in the context of land/forest fire reduction and whether this reduction effort is already integrated into the REDD+ strategy.<sup>13</sup>

## 6.2. REDD

### 6.2.1. Background

The REDD initiative is a carbon governance instrument for developing countries to help them to protect their forests. Developed countries contribute the funds or purchase REDD credits, which count towards their obligation to reduce emissions. The basic idea of this instrument is to set up economic incentives so those local, national and international actors have a greater interest in protecting forest.<sup>14</sup> The latest development of this mechanism is REDD+,<sup>15</sup> first referred to in the Bali Action Plan. This revised mechanism not only compensates to avoid deforestation and degradation, but also provides incentive for sustainable forest management, a reduction in the

---

<sup>10</sup> Felician Kilahama, 'Integrated Fire Management and Reduced Emissions through Deforestation and Degradation Program (REDD Plus)' (Fire management working paper, FAO FM/27/E, Presented at the Vth International Wildland Fire Conference Sun City, South Africa, 9–13 May 2011) <<http://www.fao.org/docrep/014/am663e/am663e00.pdf>> 22.

<sup>11</sup> Jos Barlow et al, 'The Critical Importance of Considering Fire in REDD+ Programs' (2012) *Biological Conservation* 1, 1.

<sup>12</sup> Ibid.

<sup>13</sup> A list of legislation relevant to REDD+ and its implications for land/forest fire reduction examined in this chapter is set out in Appendix III to this thesis.

<sup>14</sup> FAO, above n 1, 30.

<sup>15</sup> The term REDD+ refers to Bali Action Plan Paragraph 1(b). The term was first used by the Ad Hoc Working Group on Long Term Cooperative Action under the Convention, at the Sixth session in Bonn, 1–12 June 2009.

mismanagement of tropical forests and the alleviation of poverty. The goals of the REDD+ mechanism include reducing emissions from deforestation and forest degradation, protecting biodiversity, respecting the rights of indigenous peoples and vulnerable communities, and ensuring the equitable distribution of benefits both within and between countries.<sup>16</sup>

REDD is designed to address the issue of deforestation and forest degradation, which, through agricultural expansion, land/forest conversion, infrastructure development, destructive logging and fires, contribute 20 per cent of global emissions.<sup>17</sup> Two countries, Brazil and Indonesia, are responsible for two-thirds of the world's annual forest cover loss.<sup>18</sup> According to the FAO, deforestation, mainly from conversion of forest to agricultural land, is occurring at an alarming rate.<sup>19</sup> This deforestation results in the immediate release of CO<sub>2</sub> into the atmosphere, increasing GHGs. Therefore, it is imperative that this source of emissions is addressed.<sup>20</sup> The Intergovernmental Panel on Climate Change (IPCC) has suggested that reducing and/or preventing deforestation will bring the largest and quickest carbon stock impact per hectare in the short-term.<sup>21</sup> REDD includes strategies to reduce CO<sub>2</sub> emission through carbon sequestration.

### **6.2.2. REDD Scheme in the UNFCCC<sup>22</sup>, Kyoto Protocol<sup>23</sup> and Beyond**

REDD + is broader than the CDM, The forest activity in CDM must fall into the afforestation and reforestation category including: agroforestry, mono culture or mixed industrial plantations; forest landscape restoration projects, community forest projects and other afforestation and reforestation projects.<sup>24</sup> While REDD is more focused on avoiding deforestation which is not included in the CDM mechanism under the Kyoto Protocol, REDD+ includes afforestation,

---

<sup>16</sup> Claire Stockwell, Bill Hare and Kirsten Macey, 'Governing REDD: The TDERM Triptych' (Paper presented at the Climate Law in Developing Countries Post-2012: North and South Perspectives, Ottawa, Canada, 26–28 September 2008) <[www.iucnael.org/zh/.../doc.../264-stockwell-governing-redd-.html](http://www.iucnael.org/zh/.../doc.../264-stockwell-governing-redd-.html)> 6.

<sup>17</sup> UN-REDD Program, *About REDD+* <<http://www.un-redd.org/AboutREDD/tabid/582/Default.aspx>>.

<sup>18</sup> Ministry of Environment, above n 1, 152.

<sup>19</sup> UNFCCC, *Reducing Emissions from Deforestation in Developing Countries* <[http://unfccc.int/methods\\_and\\_science/lulucf/items/4123.php](http://unfccc.int/methods_and_science/lulucf/items/4123.php)>.

<sup>20</sup> Ministry of Environment, above n 1, 151.

<sup>21</sup> IPCC, *Climate Change 2007: Working Group III: Mitigation of Climate Change* (IPCC) <[http://www.ipcc.ch/publications\\_and\\_data/ar4/wg3/en/ch9s9-4-2-1.html](http://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch9s9-4-2-1.html)>.

<sup>22</sup> *United Nations Framework Convention on Climate Change*, signed 9 May 1992 (entered into force 28 June 1994) <[http://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf)>.

<sup>23</sup> *Kyoto Protocol*, adopted 11 December 1997 (entered into force 16 February 2005) <<http://unfccc.int/resource/docs/convkp/kpeng.pdf>>.

<sup>24</sup> Rowena Maguire, *Global Forest Governance Legal Concepts and Policy Trends*, Edward Elgar (2013), 158.

poverty alleviation, biodiversity conservation and improved forest governance.<sup>25</sup> Despite REDD+ promoting co-benefits for biodiversity conservation and poverty alleviation for developing countries, REDD has been criticised by NGOs who claim that prioritising REDD in the Cancun Agreement will create a loophole in the international climate regime.<sup>26</sup> They argue that REDD will enable countries like Australia to keep polluting by buying offsets in forest nations such as Indonesia.<sup>27</sup> CIFOR also argues that a REDD mechanism will fail unless policy makers are able to identify the root causes of deforestation and provide a different solution to address this.<sup>28</sup>

In fact, no climate policies exist to reduce emissions from deforestation or forest degradation in developing countries under the UNFCCC or Kyoto Protocol.<sup>29</sup> The UNFCCC itself provides neither a mandate nor an incentive for reducing emissions from deforestation. The UNFCCC refers to LULUCF, but goes no further. According to article 4 paragraph 1(a):

Parties should develop, periodically update, publish and make available to the Conference of the Parties, in accordance with article 12, national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using methodologies to be agreed upon the Conference of the Parties.<sup>30</sup>

In addition, article 4, paragraph 1(d) requires:

Parties to promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all GHGs not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems.<sup>31</sup>

---

<sup>25</sup> Ibid.

<sup>26</sup> Takver, *REDD Forestry Practices Under Fire –Forest Carbon Storage and Indigenous People* (2011) <<http://www.climateimc.org/en/original-news/2011/01/28/redd-forestry-practices-under-fire-forest-carbon-storage-and-indigenous>>.

<sup>27</sup> Ibid.

<sup>28</sup> Ministry of Environment, above n 1. 4; Greg Clough and Jeff Haskins, *New Report Warns Failure to Understand Root Causes of Deforestation Imperils New Efforts to Curb Forest-Based Carbon Emissions* (CIFOR) <<http://www.cifor.org/mediamultimedia/newsroom/press-releases/new-report-warns-failure-to-understand-root-causes-of-deforestation-imperils-new-efforts-to-curb-forest-based-carbon-emissions.html>>.

<sup>29</sup> IPCC, above n 21.

<sup>30</sup> *United Nations Framework Convention on Climate Change*, signed 9 May 1992 (entered into force 28 June 1994) <[http://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf)> art 4 para 1(a).

<sup>31</sup> Ibid art 4.



The Kyoto Protocol also lacks specific means to deal with deforestation.<sup>32</sup> The Kyoto Protocol is more focused on afforestation and reforestation, without addressing the drivers of deforestation. Article 2(1)(a)(ii) of the Kyoto Protocol states that:

each Party included in the Annex I in achieving emission reduction shall implement and further elaborate policies such as protection and enhancement of sinks and reservoir of GHGs not controlled by the Montreal Protocol, promotion of sustainable forest practices, afforestation and reforestation.<sup>33</sup>

Stern argues that deforestation in developing countries will continue to increase and contribute to GHG emissions unless appropriate policy intervention is put in place.<sup>34</sup>

The agenda item ‘Reducing emissions from deforestation in developing countries and approaches to stimulate action’ was first introduced onto the COP agenda at its eleventh session, in Montreal Canada, in 2005.<sup>35</sup> The document, submitted by Papua New Guinea and Costa Rica, highlights the large contribution of deforestation in developing countries to global GHG emissions.<sup>36</sup> Despite some uncertainty as to precise location, tropical deforestation is the second leading cause of climate change behind fuel combustion.<sup>37</sup> Forests help to slow global warming by storing and sequestering carbon. In the absence of forest revenue, local communities and governments in developing countries have little incentive to prevent deforestation. It is estimated that protecting tropical forests from deforestation could reduce CO<sub>2</sub> emissions by 1.5 Gt, and generate billions of dollars in conservation and climate change–mitigation revenue.<sup>38</sup>

REDD or REDD+ was formally included in the negotiation for future climate change outcomes in COP 13 in Bali with the adoption of a decision on ‘Reducing emissions from deforestation in developing countries: Approaches to stimulate action’. The decision provides a mandate for Parties to take action to reduce emissions from deforestation and forest degradation in developing

---

<sup>32</sup> Manuel Estrada Porrúa, Esteve Corbera and Katrina Brown, ‘Reducing Greenhouse Gas Emissions from Deforestation in Developing Countries: Revisiting the Assumptions’ (Working paper 115, Tyndall Centre for Climate Change Research, 2007) <<http://www.tyndall.ac.uk/sites/default/files/wp115.pdf>>.

<sup>33</sup> *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, opened for signature 11 December 1997, (entered into force 15 February 2005).

<sup>34</sup> *Stern Review: The Economics of Climate Change* (30 October 2006) <[http://www.hm-treasury.gov.uk/d/Executive\\_Summary.pdf](http://www.hm-treasury.gov.uk/d/Executive_Summary.pdf)> i.

<sup>35</sup> UNFCCC (COP 11), *Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action Submissions from Parties*, 11th sess, Agenda Item 6 of the provisional agenda (2005).

<sup>36</sup> *Ibid.*

<sup>37</sup> *Ibid.*

<sup>38</sup> *Ibid.*

countries, such as by demonstration activities to address drivers of deforestation and enhancing forest carbon stock through sustainable forest management. In addition, at the thirteenth session of the COP in Bali 2007, Norway launched its International Climate and Forest Initiative, whereby it committed up to three billion Norwegian Krone per year to the REDD effort in developing countries for a period of five years.<sup>39</sup>

In Copenhagen, negotiators and Heads of State made progress on the REDD+ issue. Copenhagen Accord made decision 4/CP.15 on methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.<sup>40</sup> While the conference failed to set GHG emissions limits, it did succeed in putting a larger focus on slowing deforestation under the REDD+ program.<sup>41</sup> Wealthier countries such as the United States, Australia, France, Japan, Britain and Norway agreed to commit \$3.5 billion in funds for the period 2010–2012 to save forests.<sup>42</sup> The Copenhagen Accord notes that they recognise the crucial role of reducing emissions from deforestation and forest degradation, the need to enhance GHG emissions reductions through the protection of forests, and the need to provide incentives to such actions through the immediate establishment of a mechanism such as REDD+ to enable the mobilisation of financial resources from developed countries.<sup>43</sup> The Accord also requested developing country Parties to identify drivers of deforestation and forest degradation resulting in emissions and the means to address these.<sup>44</sup>

Further, the Cancun Agreement of COP 16 provides clarification on the nature and process required by REDD+ activities.<sup>45</sup> It encourages developing country Parties to contribute to

---

<sup>39</sup> Stephen Dovers and Robin Connor, 'Institutional and Policy Change for Sustainability' in Benjamin J Richardson and Stepan Wood (eds), *Environmental Law for Sustainability* (Hart Publishing, 2006), iv.

<sup>40</sup> UNFCCC, Decision 4/C.P.15, Methodological guidance for activities relating to for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries, FCCC/CP/2009/11/Add.1  
<<http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf>>

<sup>41</sup> Norway is considered as the first and largest donor of the UN-REDD programme since the program was launched in September 2008.

<sup>42</sup> 'Norway Hopes to Unlock Climate Cash to Fight Tropical Deforestation', *Guardian* (UK), 26 May 2010  
<<http://www.unep.org/cpi/briefs/2010May27.doc>>.

<sup>43</sup> UNFCCC (COP 15), *Draft Decision -/CP.15: Proposal by the President Copenhagen Accord*, FCCC/CP/2009/L.7, 15th sess, Agenda Item 9 (18 December 2009).

<sup>44</sup> UNFCCC (COP 16), *Decision 4/CP.15: Methodological Guidance for Activities Relating to Reducing Emissions from Deforestation and Forest Degradation and the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries*, FCCC/CP/2009/11/Add.1 (2009).

<sup>45</sup> Rowena Maguire, above n 24, 167

mitigation actions<sup>46</sup> in the forestry sector, through a reduction in emissions from deforestation and forest degradation, conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks (paragraph 70).<sup>47</sup> It is suggested that the first mentioned activities refer to REDD, while the others constitute the plus of REDD+. The Cancun Agreement also encourages all Parties to find effective ways to reduce the human pressures on forests that contribute to GHG emissions, including by addressing the drivers of deforestation (paragraph 68).<sup>48</sup> In conducting the REDD activities, the Cancun Agreement of COP 16 states some safeguards that should be promoted, including:

- a. That actions complement or are consistent with the objectives of national forest programme and relevant international Conventions and Agreements;
- b. Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
- c. Respect for knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations;
- d. Full and effective participation of relevant stakeholders including in particular indigenous people and local communities.<sup>49</sup>

REDD was also mentioned in the Rio+20 conference,<sup>50</sup> although, to some activists, Rio+20 delivered a disappointing result, particularly as regards REDD+.<sup>51</sup> Lang states that Rio+20 had nothing to say about REDD+.<sup>52</sup> Greenpeace describes Rio+20 as an epic failure and considers the draft text on ‘The Future We Want’, particularly the forest text, as an overwhelming embarrassment.<sup>53</sup> Four paragraphs on forests comprise the final draft text of Rio+20, and REDD is only mentioned in one sentence about sustainable forests, as given below:

---

<sup>46</sup> The mitigation action of developing countries depends on the provision of finance, technology and capacity building support by developed country Parties.

<sup>47</sup> UNFCCC (COP 16), *Decision 1/CP.16: The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long Term Cooperative Action under the Convention*, FCCC/CP/2010/7/Add.1 (2010) para 70.

<sup>48</sup> Ibid para 68.

<sup>49</sup> UNFCCC *Decision 1/CP.16: Appendix I: Guidance and Safeguards for Policy Approaches and Positive Incentives on Issues Relating to Reducing Emissions from Deforestation and Forest Degradation in Developing Countries; and the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries*, FCCC/CP/2010/7/Add.1 (15 March 2011).

<sup>50</sup> The Rio+20 conference was attended by Head of States, government representatives and other representatives to mark the twentieth anniversary of the 1992 United Conference on Environment and Development, which produced the Rio Declaration.

<sup>51</sup> Wanda Troszczynska-Van Genderen and Valerie Ramet, *Much Ado about Nothing: The Rio+20 Conference* (European Union, 25 July 2012 )

<<http://www.europarl.europa.eu/committees/es/deve/studiesdownload.html?languageDocument=EN&file=74811>>.

<sup>52</sup> Chris Lang, *Rio+ Has Nothing to Say on REDD (And Not Much on Anything Else)* (21 June 2012 )

<<http://www.redd-monitor.org/2012/06/21/rio-20-has-nothing-to-say-on-redd-and-not-much-on-anything-else>>.

<sup>53</sup> Ibid.

We note the importance of ongoing initiatives such as reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and the enhancement of forest carbon stocks in developing countries.<sup>54</sup>

In the document 'The Future We Want—Zero draft of the outcome document', the section on forests is further reduced to only two paragraphs. Still, support for REDD+ was clearly stated, as follows:

We support policy frameworks and market instruments that effectively slow, halt, and reverse deforestation and forest degradation and promote the sustainable use and management of forests, as well as their conservation and restoration. We call for the urgent implementation of Non Legally Binding Instruments on all Types of Forest (NLBI).<sup>55</sup>

The negotiation of REDD+ made significant progress at COP 18 in Doha Qatar (26 November to 7 December) in 2012, where the concept of REDD+ was nearly finalised.<sup>56</sup> Decision 1/CP 18 Agreed outcome pursuant to Bali Action consists of policy approaches and positive incentives relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable forests and enhancement of forest carbon stocks in developing countries.<sup>57</sup> It is expected to be finalised in 2015, at which point countries will be able to use REDD+ credits to meet a portion of their national emissions reduction.<sup>58</sup> At COP 18, the Parties made major decisions on REDD+, including that REDD+: 1) is a voluntary mitigation mechanism, 2) has to be part of the overall mitigation efforts in the UNFCCC, 3) requires strong environmental and social safeguards, and 4) has the goal to slow, halt and reverse deforestation.<sup>59</sup> Agus P Sari suggested that the negotiation of REDD+ at Doha would include the following topics: 1) REDD+ is expected to be financed through result-based action, where emissions reductions need to be demonstrated and verified before financing takes place; 2) a national forestry monitoring system needs to be agreed upon; 3) protected and expanded forest is good for the

---

<sup>54</sup> 'Rio+20 "Future We Want" Draft Text—Exclusive Copy of the Document', *Guardian*, June 2012 <<http://www.guardian.co.uk/environment/2012/jun/19/rio-20-future-we-want-draft-text>>.

<sup>55</sup> *The Future We Want –Zero Draft of the outcome document*, para 90 <<http://www.uncsd2012.org/futurewewant.html>>.

<sup>56</sup> Gus Silva Chavez, *REDD+ Almost the Finish Line: Doha Preview* (21 November 2011) EDF Talks Global Climate <<http://blogs.edf.org/climatetalks/2012/11/21/redd-almost-at-the-finish-line-doha-preview>>.

<sup>57</sup> UNFCCC, Decision 1/CP. 18 Agreed outcome pursuant to the Bali Action Plan , FCCC/CP/2012/8/Add.1

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

ecosystem, including humans, in adapting to climate change; 4) full implementation of REDD+ requires new institutions; and 5) financing, which is the most controversial issue.<sup>60</sup> Finance is critical because it incentivises action in developing countries. It is expected that a newly established Green Climate Fund will be launched which anticipates funds of at least \$100 billion per year by 2020.<sup>61</sup> A cumulative contribution of USD 4,298 million was established in December 2012 by the Governments of Australia, Finland, Netherland, Korea and Sweden. At COP 19 at Poland the Parties stressed the need to achieve full operationalization of a Green Climate Fund as soon as possible which is ready for capitalization in the second half of 2014.<sup>62</sup> At COP 19 at Poland the Parties stressed the need to achieve full operationalization of Green Climate Fund as soon as possible which is ready for capitalization in the second half of 2014.<sup>63</sup> In the Warsaw Outcomes, the rulebook for reducing emissions from deforestation and forest degradation was agreed together with measures to bolster forest preservation and a result based payment system to promote forest protection.<sup>64</sup> COP 19 held in Warsaw Poland adopted 7 decisions of the Warsaw Framework for REDD plus including:

- Decision 9/CP 19: Work programme on results-based finance to progress the full implementation of the activities referred to in decision 1/CP.16, paragraph 70
- Decision 10/CP 19 : Coordination of support for the implementation of activities in relation to mitigation actions in the forest sector by developing countries, including institutional arrangements
- Decision 11/CP 19: Modalities for national forest monitoring systems
- Decision 12/CP 19 : The timing and the frequency of presentations of the summary of information on how all the safeguards referred to in decision 1/CP.16, appendix I, are being addressed and respected
- Decision 13/CP 19: Guidelines and procedures for the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels
- Decision 14/CP 19: Modalities for measuring, reporting and verifying
- Decision 15/CP 19: Addressing the driver of deforestation and forest degradation

In Doha Qatar, Indonesia made the statement that REDD+ is more than just a tool for decreasing GHG emissions. It moves beyond carbon to sustainable development, where it seeks to improve

---

<sup>60</sup> Agus P Sari, 'Agenda in Doha', *The Jakarta Post* (Jakarta), 30 November 2012  
<<http://www.thejakartapost.com/news/2012/11/30/redd-agenda-doha.html>>.

<sup>61</sup> Ibid.

<sup>62</sup> United Nations Framework Convention on Climate Change, *Green Climate Fund*,  
<[http://unfccc.int/cooperation\\_and\\_support/financial\\_mechanism/green\\_climate\\_fund/items/5869.php](http://unfccc.int/cooperation_and_support/financial_mechanism/green_climate_fund/items/5869.php)>.

<sup>63</sup> United Nations Framework Convention on Climate Change, *Green Climate Fund*,  
<[http://unfccc.int/cooperation\\_and\\_support/financial\\_mechanism/green\\_climate\\_fund/items/5869.php](http://unfccc.int/cooperation_and_support/financial_mechanism/green_climate_fund/items/5869.php)>.

<sup>64</sup> UNFCCC, Warsaw Outcomes, <[http://unfccc.int/key\\_steps/warsaw\\_outcomes/items/8006.php](http://unfccc.int/key_steps/warsaw_outcomes/items/8006.php)>.

forest governance and alleviate poverty.<sup>65</sup> REDD+ uses a ‘no regrets policy’ to improve forest governance, alleviate poverty and strengthen law enforcement. Indonesia has shifted its strategies towards encouraging the local community to protect forests, providing the incentive of alternative livelihoods.<sup>66</sup> Mangkusbroto states that REDD+ is a way for Indonesia to meet its goal for sustainable growth and equity.<sup>67</sup> He further states that there is a shift of paradigm with REDD+ away from cutting trees for revenue, towards revenues being received and people’s welfare improved from leaving trees standing.<sup>68</sup>

There are three key issues in the REDD mechanism: financing, activities and liability. Financing is a central focus of REDD attention and debate. Even after COP 16 in Cancun, global and national institutional architecture and financing mechanisms remain unclear.<sup>69</sup> Regarding financing, issues include whether the financing mechanism should be derived from market or non-market sources, to whom money will be paid, when it will be transferred and how much is required.<sup>70</sup> Figure 6 below describes the financing of REDD, including the multi-level (international, national and sub-national) payments for the environmental services (PES) scheme. Payment for Ecosystem Services “(PES) is a framework for environmental management where REDD+ falls within the broad framework of PES.”<sup>71</sup> The PES scheme definition developed by Wunder must include “a voluntary transaction where well-defined environmental service is bought by at least one service buyer from an environmental service provider, with payment conditional on provision of environmental service”.<sup>72</sup> Current legislation in Indonesia that addresses environmental services is Law No 41/1999, articles 26 and 28 and Law No 32/2009 on Environment Protection and Management.<sup>73</sup>

---

<sup>65</sup> Yogita Tahilramani, *Indonesia and the Redd+ at Doha: Moving Beyond Carbon to Sustainable Development* (27 November 2012) Forest News CIFOR <<http://blog.cifor.org/11903/indonesia-and-redd-at-doha-moving-beyond-carbon-to-sustainable-development/#.ULgxYN5Fsa4>>.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid.

<sup>68</sup> Ibid.

<sup>69</sup> IUCN, UNEP and WWF, *Caring for The Earth A Strategy for Sustainable Living* (IUCN/UNEP/WWF, 1991), 31.

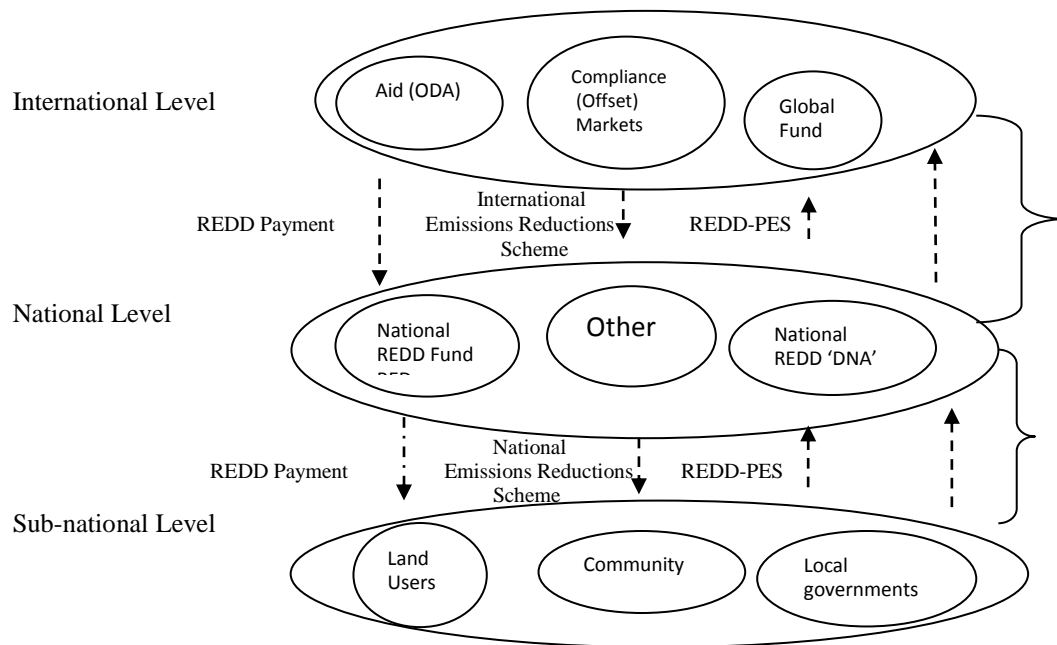
<sup>70</sup> Ministry of Environment, above n 1, 156.

<sup>71</sup> Jeff Neilson and Beria Lemona, Payments for Ecosystem Services and Environmental Governance in Indonesia, in Rosemary Lyster, Catherine Mackenzie Constance McDermott, *Law, Tropical Forest and Carbon The Case of REDD+*, Cambridge University Press, (2013), 207.

<sup>72</sup> Ibid 212.

<sup>73</sup> Ibid 220

Figure 6. Conceptual Model of the Multi-level REDD Payments for environmental service scheme



Source: Arild Angelsen, Sheila Wertz-Kanounnikoff, 2008.

REDD activities require action at a number of levels (national, regional and local) and involve numerous actors (indigenous people, landholders, local communities, private investors and municipal governments).<sup>74</sup> The mechanism requires national governments to coordinate and delegate all REDD activities within territories to allow sub-national actors to implement the activities. However, national government remains responsible for interaction with the international mechanism. Overall reductions must be measured at the national level to minimise leakage. Liability is concerned with who should be held liable to ensure the forest area is saved today and will not be destroyed tomorrow.<sup>75</sup> The major concern in REDD is the debate over the permanence of emissions reductions. In the forestry sector, it is hard to control carbon storage even under best management practices. Fires have the potential to undo years of carbon uptake within weeks or months.<sup>76</sup> Fires thus threaten long-term carbon stocks in undisturbed primary forests, logged forest and forest regeneration and reforestation projects.<sup>77</sup> In this regard, liability takes effect if storage permanence is not maintained.

<sup>74</sup> Ibid.

<sup>75</sup> Michael Dutschke and Arild Angelsen, 'How Do We Ensure Permanence and Assign Liability' in Arild Angelsen (ed), *Moving Ahead with REDD Issues, Options and Implications* (CIFOR, 2008) 77.

<sup>76</sup> Ibid., 77.

<sup>77</sup> Barlow et al, above n 11, 2.

### 6.2.3. REDD+ and the Issue of Land/Forest Fires

There is a close link between the REDD+ program, forest fires, biodiversity and agriculture. At international level, there is awareness on the nexus between forest fire management and biodiversity.<sup>78</sup> The current REDD projects in Brazil, for example, take into account biodiversity issues and the need to manage fires properly.<sup>79</sup> Despite the importance of forest fire issues in REDD+, to date they have received very little attention in REDD+ negotiations, capacity building and pilot work.<sup>80</sup> For example, the UN REDD program strategy 2011–2015 does not refer to fire, and fire reduction has not been identified as an explicit REDD+ activity.<sup>81</sup> In addition, very few national REDD activities incorporate fire management. Although Indonesia has recognised the importance of fire reduction in their REDD project,<sup>82</sup> legal initiatives to address peatland fires have been slow, as legislation to address land/forest fires proposed in 2008 has yet to be enacted.

It is suggested that the international community should use a financial mechanism such as REDD to promote biodiversity-sensitive forest fire management schemes and the reduction of land/peatland/forest fires.<sup>83</sup> It is also important to consider fire as part of REDD+ programs. Forest fires are undermining the potential of sustainable forest management and could hinder the success of the REDD program. Avoiding forest fires can also have additional benefits for biodiversity conservation and human health and livelihood.<sup>84</sup>

Forest fire prevention is fundamental to the success of REDD+ because it helps to guarantee the permanence of carbon stocks, reduces risks inherent in forest regeneration projects and the sustainable management of forest timber, prevents biodiversity loss and protects the livelihoods of forest-dependent people.<sup>85</sup> One significant effort needed in REDD+ activities is to reduce the threat from agricultural fires. Improving management of agriculture through training and enforcing legislation is necessary to reduce land/forest fires. REDD projects can be used to

---

<sup>78</sup> Alex Hoover, 'Using REDD To Promote Biodiversity-sensitive Forest Fire Management Schemes' (2010) 10(3) *Sustainable Development Law & Policy* 34, 34.

<sup>79</sup> Ibid 34.

<sup>80</sup> Barlow et al, above n 11, 1.

<sup>81</sup> Ibid.

<sup>82</sup> Ibid.

<sup>83</sup> Ibid

<sup>84</sup> Ibid.

<sup>85</sup> Ibid.



modify the behaviour of smallholders. In the longer term, REDD+ payments could provide the capital and technical investments necessary to facilitate the shift towards fire-free agricultural practices, such as mechanised land preparation, slash-and-mulch, perennial agriculture or intensive pasture management.<sup>86</sup>

However, these activities may face challenges, particularly where technology and non-fire alternatives are difficult to deliver, and where there is a lack of secure land tenure, which is required for the payment of monetary incentives.<sup>87</sup> Altering agricultural management to adopt non-fire agriculture techniques is also not an easy task, as fire is a cheap method of land clearing, and agricultural intensification may have a negative impact on the environment due to the increased need to use fertilizers and pesticides.<sup>88</sup> Indeed, a holistic fire management approach, which is an integral strategy of REDD+, faces many challenges, as it requires changes in agricultural practices, the development of monitoring and verification processes, and very careful consideration of the livelihoods of rural people living in a tropical forest landscape.<sup>89</sup>

#### **6.2.4. REDD, Forest Fires and Community-based Participation**

There is a close link between REDD+, forest fires and community. It is expected that REDD+ will develop strategies which can better monitor, manage and prevent large scale forest fires in Indonesia. One of the activities supported by REDD+ is community based fire management. The community often triggers land/forest fires by using fire in clearing land for agriculture. The driver to this behaviour is poverty among indigenous people and forest-dependent communities. It has been argued by many scholars that unless these communities are properly safeguarded, REDD activities may further impoverish the poor.<sup>90</sup> There is a fear that REDD+ could harm forest communities by undermining tenure rights, disempowering local decision making, limiting local livelihoods in the name of conservation and promoting the elite to capture lands for carbon payments.<sup>91</sup> The Bali Road Map on REDD+ recognises that the needs of local and indigenous

---

<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

<sup>90</sup> Promode Kant, Swati Chaliha and Wu Shuirong, 'The REDD Safeguards of Cancun' (IGREC Working paper 2010) <[http://www.fao.org/fileadmin/user\\_upload/rome2007/docs/REDD\\_Safeguards\\_of\\_Cancun.pdf](http://www.fao.org/fileadmin/user_upload/rome2007/docs/REDD_Safeguards_of_Cancun.pdf)> 1.

<sup>91</sup> Anne Larson, 'Forest Tenure Reform in the Age of Climate Change: Lesson for REDD+' (2011) 21 *Global Environmental Change* 540, 540.

communities should be addressed when action is taken to reduce emissions from deforestation and forest degradation in developing countries.<sup>92</sup> The Cancun Agreement also sets guidance and safeguards for policy approaches and positive incentives on issues relating to REDD.<sup>93</sup> Poffenberger and Hanssen argue that forest protection can only be secured through meaningful engagement with local communities.<sup>94</sup> Yet, despite the significant role of the local community in restoring and conserving local forest, these authors doubt that communities will be able to secure fair and equitable benefit from REDD+ projects.<sup>95</sup> Aside from these reservations, the benefit of REDD+ projects for communities could include strengthened security of forest tenure rights through legal recognition under national legislation and international agreements, and increased revenues and/or grant funds, which could support a range of forest management and community-development activities, such as a sustainable agricultural program and the empowerment of local communities.<sup>96</sup>

The success of the REDD+ program, and a community-based REDD+ program, will be determined by the community's capacity to control the powerful drivers of deforestation and forest degradation. The fundamental strategy to slow down deforestation involves supporting grassroots community efforts to conserve forests, as emerged before the REDD+ project was identified.<sup>97</sup> Community supports required include the legal recognition of forest management rights and responsibilities, technical capacity building and financial assistance.<sup>98</sup> Regarding land/forest fires, REDD+ should support community based fire management. In Cambodia, for example, REDD+ supports several local activities including forest patrols, fire control, sustainable agriculture intensification and livelihood strategies. In Cambodia, it has been shown that community-based activities can effectively control fires, poaching, illegal tree felling and encroachments within a confined area.<sup>99</sup>

---

<sup>92</sup> United Nations, *Decision -/CP.13: Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action* (2007).

<sup>93</sup> UNFCCC (COP 16), *Decision 1/CP.16: The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long Term Cooperative Action under the Convention*, FCCC/CP/2010/7/Add.1 (2010).

<sup>94</sup> Mark Poffenberger and Kathryn Smith Hanssen, *Forest Communities and REDD Climate Initiatives* (2009) <<http://www.eastwestcenter.org/sites/default/files/private/api091.pdf>> 3.

<sup>95</sup> Ibid.

<sup>96</sup> Ibid 4.

<sup>97</sup> Ibid 5.

<sup>98</sup> Ibid 5.

<sup>99</sup> Ibid 5.

### 6.2.5. REDD+ Indonesia

Since 2007, Indonesia has invested its energy in establishing the country as a laboratory for the REDD scheme.<sup>100</sup> As mentioned, in 2009, Indonesia made a commitment to reduce its GHG emissions by 26 per cent from BAU levels by 2020, or by 41 per cent if provided with international funding. Several regulations have been enacted to give effect to this commitment, such as Presidential Regulation No. 61/2011 on National Action Plan on Reduction of GHG and Presidential Regulation No. 71/2011 on National GHGs Inventory. In addition, several collaborations on the REDD+ scheme have been established with the UN REDD program and bilateral undertakings with countries such as Australia and Norway. As a result, Indonesia received a large amount of international funding as an incentive to reduce GHG emissions; for example, in March 2009, US\$5.6 million in funding for Indonesia was approved by the Policy Board of the UN REDD program.<sup>101</sup> In addition, under the World Bank Forest Carbon Partnership Facility scheme, Indonesia received US\$3.6 million support for the readiness process.<sup>102</sup> Norway will support Indonesia to reduce GHG emissions with up to one billion US dollars, based on Indonesia's performance using the US\$30 million already transferred as an initial contribution for phase 1 of this partnership.<sup>103</sup> The Indonesia–Australia Forest Carbon Partnership will also support Indonesia's REDD initiative with an AUD\$10 million package to support sustainable peatland management in particular.<sup>104</sup>

#### 6.2.5.1 Indonesia National REDD+ Strategy

The REDD strategy is the first step in the implementation of the REDD policies and measures that act like a roadmap towards desired future scenarios of reduced forest-based GHG emissions.

---

<sup>100</sup> Lily Morrissey, *Seeing REDD in Indonesia* (2 June 2011) Climate Spectator <<http://www.climatespectator.com.au/commentary/seeing-redd-indonesia>>.

<sup>101</sup> UN-REDD Indonesia, *UN-REDD Indonesia National Programme Final Evaluation Terms of Reference* (February 2013) UN REDD Program.

<sup>102</sup> Jim Stephenson, *Indonesia REDD+ Capacity Building Service Assessment* (RECOFTC/UNEP/UN-REDD, 2012), 5.

<sup>103</sup> Ian Scoones, 'Sustainable Rural Livelihoods: A Framework for Analysis' (IDS Working paper 72, Institute of Development Studies, 1998) 5.

<sup>104</sup> Australia Government Department of Climate Change Energy and Efficiency, *Indonesia-Australia Forest Carbon Partnership* <<http://www.climatechange.gov.au/government/initiatives/international-forest-carbon-initiative/~media/publications/international/indonesia-australia.pdf>>.

Priority will be given to the LULUCF and agricultural sectors. Within the LULUCF sector, priority will be given to peatland and forestland.<sup>105</sup> The Indonesian government has already drafted a national REDD+ strategy with which it aims to fulfil the preconditions for the application of REDD+ and set the framework to improve the management of forestry and supporting sectors such as agriculture and mining.<sup>106</sup>

Many documents have been published by different sectoral ministries on climate change and the REDD+ strategy. Some of these documents explicitly mention land/forest fire control in their strategies, while others do not. In the draft National Strategy of REDD+ published by Bappenas, five strategies are adopted. These were identified as a response to the drivers of deforestation and forest degradation, such as poor spatial planning, conflict in tenurial access rights, ineffective forest management, inconsistency in sectoral policies and lack of compliance with laws/weak law enforcement.<sup>107</sup> These strategies are:<sup>108</sup>

- Strategy 1: Revision of land/spatial planning;
- Strategy 2: Improving control and monitoring;
- Strategy 3: Improving forest governance;
- Strategy 4: Improving stakeholders participation;
- Strategy 5: Improving law enforcement.

In the context of land/forest fire control, the National Strategy of REDD+ does not explicitly mention forest fire control. Instead, through Ministry Forestry Decree No. 70/Menhut-II/2009, forest fire control is adopted as one of eight policy strategies for the forestry sector, as part of the basic forestry activities to be conducted in 2009–2014, as follows:

1. Area establishment,
2. Forest rehabilitation and improvement of the carrying capacity of watershed area,
3. Forest protection and forest fire control,
4. Conservation of biodiversity,

---

<sup>105</sup> Ministry of Environment, above n 1, II-31.

<sup>106</sup> The REDD Desk, *Draft National REDD Strategy for Indonesia* (12 September 2010) <[http://www.theredddesk.org/plan/draft\\_national\\_redd\\_strategy\\_for\\_indonesia](http://www.theredddesk.org/plan/draft_national_redd_strategy_for_indonesia)>.

<sup>107</sup> Novia Widyaningtyas, 'Indonesia's REDD+: Framework and Experience towards Good Governance' (Paper presented at the National Inception Workshop on REDD+: Building Capacity for Decision Makers and the Way Forward, Kuala Lumpur, 13–14 February 2012) <[http://www.undp.org.my/files/editor\\_files/files/PDF%20presentations/Microsoft%20PowerPoint%20-%202020INDON~1.pdf](http://www.undp.org.my/files/editor_files/files/PDF%20presentations/Microsoft%20PowerPoint%20-%202020INDON~1.pdf)>.

<sup>108</sup> Bappenas, *Rancangan Strategy Nasional REDD+ Revisi tanggal* (18 November 2010) <[http://www.unredd.net/index.php?option=com\\_docman&task=doc\\_view&gid=7536&tmpl=component&format=raw&Itemid=53](http://www.unredd.net/index.php?option=com_docman&task=doc_view&gid=7536&tmpl=component&format=raw&Itemid=53)> 16–17.

5. Revitalisation of forest utilisation and forestry industries,
6. Empowerment of forest community and forest industries,
7. Mitigation and adaptation of climate change for the forestry sector,
8. Strengthening the forestry institutions.

In the Ministry of Forestry's 'National Strategy: REDD in Indonesia, readiness phase 2009', several strategies for REDD implementation at all levels were adopted. At the national level, the focus is on addressing the drivers of deforestation and degradation in protected areas, including by establishing conservation forests and protection forests, delimiting production forests and areas for oil palm cultivation, and regulating the use of peatland.<sup>109</sup> At the provincial and district levels, the focus is on demonstration activities.<sup>110</sup> However, strategies for controlling land/forest fires are noticeably absent from the Ministry's strategy.

Another document that contains a mitigation strategy is Bappenas' 'Indonesia Climate Change Sectoral Road Map: Synthesis report', which states a number of activities proposed by the Ministry of Forestry to support sustainable forest management and emissions reduction from the forestry sector. It is obvious that reforestation is the main strategy. The key mitigation measures are summarised as follows:<sup>111</sup>

- Sink Enhancement
  1. Forest rehabilitation activities mostly on protecting forest and watershed.
  2. Development of industrial Plantation (HTI), plantation with private entrepreneurs and communities (HTR) on production forests.
  3. Stimulate plantations outside forestland for rehabilitation or wood production.
  4. Management of natural secondary forests in production, protection and conservation forests.
- Emissions Reduction
  1. Improve silviculture and logging activities in productive natural forest.
  2. Reducing emissions from forestland conversion particularly on peat forestland.
  3. Reducing emission from illegal logging and fire.

From these activities, the key field activities are: 1) plantations for rehabilitation, 2) plantations for wood production (HTI and HTR) and 3) the development of forest management units.

---

<sup>109</sup> Ministry of Forestry, *National Strategy REDD in Indonesia Readiness Phase Draft August 2009* <[www.dephut.go.id/.../REDDI\\_Strategy\\_draft%20August09\(english\).doc](http://www.dephut.go.id/.../REDDI_Strategy_draft%20August09(english).doc)> II-31.

<sup>110</sup> Ibid.

<sup>111</sup> Bappenas, *Indonesia Climate Change Sectoral Roadmap—ICCSR Synthesis Report* (Bappenas, Republic of Indonesia, 2009) <<http://bappenas.go.id/get-file-server/node/11431/>> 49.

The ‘Indonesia Second National Communication under the UNFCCC: Summary for policy makers’ also contains measures to mitigate climate change in the forestry sector. It states that to increase carbon stocks back to 1990 levels, the rate of land rehabilitation through reforestation, afforestation, timber plantations and biomass energy plantations and restoration of production forests through enrichment planting should be increased by 68 per cent and 35 per cent, respectively.<sup>112</sup> Illegal logging should be reduced by 43 per cent, and the rate of shifting cultivation should be reduced by 17 per cent from historical levels.<sup>113</sup> It is obvious that reforestation is the key mitigation strategy planned in the forestry sector. Forest fire control is not mentioned, and is clearly not a priority in this document.

Another document containing a mitigation strategy is the ‘National Action Plan Addressing Climate Change’ published by the Ministry of Environment in 2007. This plan states that, during 2005–2009, the mitigation efforts in the forestry sector focused on five priority policies as follows:<sup>114</sup>

1. Preventing illegal logging that will contribute to the reduction of CO<sub>2</sub> concentration in the atmosphere;
2. Forest and land rehabilitation with a conservation effort;
3. Restructuring the forestry sector particularly the industry and accelerate the development of plantation forest (HTI and HTR);
4. Empowerment of the community around the forest;
5. Strengthening the forest area by clarifying the forest status and boundary with its institution.

Beside these mitigation efforts, the following policies were pursued:

1. Incentive and disincentive mechanisms for local government in increasing the forest vegetation coverage, with monitoring and evaluation;
2. Tackling and preventing forest fire;
3. Sustainable peatland management.

In this report, the prevention of fires is included as mitigation action in the LULUCF sector. It sets targets to reduce forest fire hotspots from 2006 levels incrementally, such that for 2007–2009, prevention of land/forest fires was to aim to reduce such fires by 50 per cent by shifting

---

<sup>112</sup> Ministry of Environment, above n 1, 26.

<sup>113</sup> Ibid.

<sup>114</sup> Ministry of Environment, *National Action Plan Addressing Climate Change* (2007)

<<http://www.uncsd2012.org/rio20/content/documents/Indonesia%20National%20Action%20Plan%20Addressing%20Climate%20Change.pdf>> 45–50.

away from slash-and-burn agriculture practices, with the responsible institutions being the Ministry of Forestry, the Ministry of Environment and Local Government. From 2009–2012, preventive measures were to increase to reduce hotspots by 75 per cent, and then 95 per cent between 2012 and 2025. Finally, from 2025 to 2050, it aimed to maintain fire reduction. This figure is slightly different to the target given in Presidential Regulation No. 61/2011 on National Action Plan on Reduction of GHG, which aimed at a reduction of 20 per cent annually in forest fire hotspots between 2010–2014 in Kalimantan, Sumatera and Sulawesi, based on 2005–2009 figures and with a target percentage of success of 67.2 per cent.<sup>115</sup>

Finally, Satgas REDD+ (REDD+ Task Force) formulated the REDD+ National Strategy, which comprises five strategic pillars, as shown in Figure 7.

**Figure 7. REDD+ National Strategy**



Source: Satgas REDD+, June 2012

<sup>115</sup> Presidential Regulation of the Republic of Indonesia No.61 Year 2011 on the National Action Plan for Greenhouse Gas Emissions Reduction 2011 (Indonesia).

### 6.2.5.2 Coordination and Synergy Issues

Based on the discussion in the above section on the strategies and plans being used to implement REDD, it is apparent that there is no synergy or coordination between the different ministries in setting the agenda of the national strategy and action plan. The lack of coordination among government officials is confirmed as a barrier to carrying out the climate change agenda by Susilo Bambang Yudhoyono, the President of Indonesia.<sup>116</sup> He considers that this lack of coordination and synergy between central and local government, companies and communities is a significant problem, hindering efforts to achieve emissions reduction targets.<sup>117</sup>

Implementing the REDD+ program is a complex issue. It needs collaboration and cooperation from inter-sectoral institutions both local and national. In regards to the institutional framework, 10 authorities have been charged with implementing REDD+. These are:

- The President's Delivery Unit for Development Monitoring and Oversight (UKP4) to monitor the implementation of REDD;
- A REDD+ Task Force (Satgas REDD) to monitor adherence to moratorium and participate in the periodic revision of forest cover and peatland thematic mapping; establishing a permanent REDD+ agency; devising a REDD national strategy; preparing the funding mechanism to disperse REDD+ funds; Performing REDD+ activities and defining the selection criteria for the second pilot province.<sup>118</sup>
- The Ministry of Forestry to suspend granting of licences, refine forest governance, improve land management and revise forest cover mapping;
- The Ministry of Environment to improve forest and peatland governance through EIA;
- The Ministry of Home Affairs to conduct coaching and supervision of the Governor/Regent/Mayor in implementing the Presidential Instruction;
- The National Land Agency to suspend granting of licences and participate in periodic revisions on forest cover and peatland thematic map;
- The BKPRN (Spatial Plan Agency) which has a duty to improve governance especially to accelerate the suspension map into the spatial planning map revision as part of the land use governance reform;

---

<sup>116</sup> Nani Afrida, 'President Calls for Better Synergy to Meet Climate Change Target', *The Jakarta Post*, 1 October 2011 <<http://www.thejakartapost.com/news/2011/10/01/president-calls-better-synergy-meet-climate-change-targets.html>>.

<sup>117</sup> Ibid.

<sup>118</sup> Simon Butt, Beatriz Garcia, Jemma Parsons, Brazil and Indonesia Brazil and Indonesia: REaDD+Y or not? In Rosemary Lyster, Catherine MacKenzie, Constance McDermott, *Law, Tropical Forests and Carbon The case of REDD+*, Cambridge (2013), 266.



- The Bakosurtanal (Mapping Agency) which has a duty to lead the update periodic revisions of forest cover and peatland thematic map;
- Governor/Regent/Mayor who has a duty in suspending the licences.<sup>119</sup>

### 6.2.6. International Funding

It is worth considering the international funding scheme of REDD, which has already been established in Indonesia. International funding provides incentives to support the REDD+ project in Indonesia and could trigger changes of law and policy in Indonesia towards a reduction of deforestation and forest degradation. For example, Presidential Instruction No. 2/2007 on Acceleration of Rehabilitation of the ex-Mega Rice Project in Central Kalimantan was enacted as a result of the Australia–Indonesia Kalimantan Forest and Climate Partnership (KFCP). Even though this regulation is intended only to apply in the specific area of the pilot project (that is, Central Kalimantan), it shows that there is an awareness and recognition at local, national and international levels of the urgency of halting and reversing the degradation of peat swamp forests.<sup>120</sup> Moreover, the Indonesia–Norway Partnership on REDD+ has triggered changes of policy in Indonesia. Presidential Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance was enacted because of the signing of a Letter of Intent between Indonesia and Norway on the REDD+ scheme. This regulation is intended to slow deforestation and forest degradation in Indonesia.

#### 6.2.6.1 Indonesia–Australia KFCP

The KFCP is a cooperative scheme between the governments of Australia and Indonesia that is implementing and developing a REDD pilot project in seven villages in the Kapuas District of Central Kalimantan.<sup>121</sup> It is considered as one of the first large-scale REDD demonstration activities in Indonesia.<sup>122</sup> However, Senator Christine Milne considers this project a total

---

<sup>119</sup> Presidential Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Governance of Natural Primary Forest and Peatland (Indonesia).

<sup>120</sup> Global Restoration Network, *Case Study Detail, Indonesia Central Kalimantan Restoration Project* (18 January 2009) <<http://www.globalrestorationnetwork.org/database/case-study/?id=252>>.

<sup>121</sup> Forest Peoples Program, Pusaka and Yayasan Petak Danum Kalimantan Tengah, *Central Kalimantan: REDD+ and the Kalimantan Forest Carbon Partnership (KFCP)* (2011) <<http://www.forestpeoples.org/sites/fpp/files/publication/2011/10/central-kalimantan-briefing-2.pdf>>.

<sup>122</sup> Australia–Indonesia Partnership, *Kalimantan Forests and Climate Partnership (KFCP) Design Document* (2009) <[http://www.aid.gov.au/Publications/Pages/7610\\_8464\\_9778\\_3906\\_689.aspx](http://www.aid.gov.au/Publications/Pages/7610_8464_9778_3906_689.aspx)> 2.

failure.<sup>123</sup> Milne believes that the KFCP objectives ‘have been quietly but drastically scaled back; the progress on the ground is very slow; and deforestation and peatland conversion continue at rapid rate in Indonesia’.<sup>124</sup> It is suggested by Erik Olbrei and Stephen Howes that the prospect of the large scale of REDD funds to provide an incentive to tackle deep-seated drivers of deforestation at the current time is too distant and uncertain.<sup>125</sup> The drivers of deforestation in Indonesia are both powerful and deep including poor governance, corruption, a powerful industry lobby and strong economics of oil palm.<sup>126</sup> The objective of the KFCP is to reduce GHG emissions from deforestation and forest degradation. The Indonesia–Australia Forest Carbon Partnership is focused on three key areas:

- Policy development and capacity building to support participation in international negotiations and future carbon markets;
- Technical support for Indonesia to develop its national forest carbon accounting and monitoring system;
- Further development of demonstration activities, and the provision of related enabling assistance, to trial approaches to reduce emissions from deforestation and forest degradation.<sup>127</sup>

Moreover, the KFCP emphasises four key components to achieve its goal: 1) reducing GHGs through incentives to local people and technical means; 2) developing methods and capacity to measure and monitor GHG emissions; 3) developing and testing equitable and practicable payment mechanisms to channel financial payments to those people and organisations that contribute to achieving emissions reductions; and 4) building institutional and technical readiness on the part of local government and villages to implement REDD on a sustainable basis.<sup>128</sup>

The majority of the KFCP demonstration site is part of the National Forest Estate, which is under the authority of the Ministry of Forestry.<sup>129</sup> This location is recognised as a hotspot of conflict

---

<sup>123</sup> Chris Lang, *This Project Has Been a Total Failure*, says Australian Senator Christine Milne about the Kalimantan Forests and Climate Partnership (4 June 2012) <<http://www.redd-monitor.org/2012/06/04/this-project-has-been-a-total-failure-says-australian-senator-christine-milne-about-the-kalimantan-forests-and-climate-partnership>>.

<sup>124</sup> Ibid.

<sup>125</sup> Erik Olbrei and Stephen Howes, *A very Real and Practical Contribution? Lesson from the Kalimantan Forests and Climate Partnerships*, ANU Discussion Paper 16, March 2012, Development Policy Center, Crawford School of Public Policy, Australia National University, 37.

<sup>126</sup> Ibid.

<sup>127</sup> Australia–Indonesia Partnership, above n 122, 1.

<sup>128</sup> Ibid.

<sup>129</sup> Ibid 3.

over land use rights.<sup>130</sup> Dayak communities have lived within the site for generations and claim land within five kilometres of their villages based on customary law.<sup>131</sup> The main activities of this demonstration activity are *inter alia* to reduce and prevent fires, and to undertake reforestation and rehabilitation of peatland areas, which were heavily degraded during the Mega Rice Project, which covered 1,445,000 hectares of land.<sup>132</sup> The Project to convert peatland for rice production was a failure and resulted in drought and an increase in forest fires in this area. Ten thousand people reportedly live in the seven villages of the KFCP site, most of whom are members of the Dayak Ngaju indigenous people. The KFCP contributes to REDD to produce co-benefits in terms of providing livelihood options and cash payments for REDD services to target villages, conserve biodiversity, reduce health impacts and economic losses from smoke, and clarify the land tenure and property rights of the communities, thereby providing a basis for economic security while also reducing the threat of conflict.<sup>133</sup> In regards to preventing fire in peatland areas, the project is introducing livelihood intervention whereby incentives are provided for local communities to adopt farming techniques or other livelihood options equally accessible by women and men that do not require the use of fire in peatland or depend on illegal logging.<sup>134</sup> Under this project, if the communities are doing well in managing fire at priority times and places, they will receive a performance-based incentive payment in a transparent and gender equitable manner.<sup>135</sup>

The approach of the KFCP is to provide an incentive to encourage sustainable land use and forest protection, developed, offered and accepted by people in affected communities.<sup>136</sup> Thus, village engagement and the gaining of support from all segments of communities in the demonstration sites is a precondition for emissions reduction.<sup>137</sup> However, gaining support from local people is taking time, as local people see the climate change threat and the potential financial benefits from carbon credits as remote compared to livelihood threats.<sup>138</sup> A further problem in the implementation of REDD in Indonesia is the land tenure issue. If this issue is not resolved, the REDD payments system will be flawed. To be effective, REDD incentives must both target actors whose practices have caused deforestation and forest degradation, and act as an economic

---

<sup>130</sup> World Commission on Environment and Development, *Our Common Future* (Oxford University Press, 1987), 1.

<sup>131</sup> *Ibid* 3.

<sup>132</sup> Forest People's Program, Pusaka and Yayasan Petak Danum Kalimantan Tengah, above n 112.

<sup>133</sup> *Ibid*.

<sup>134</sup> Australia–Indonesia Partnership, above n122.

<sup>135</sup> *Ibid*.

<sup>136</sup> *Ibid* 4.

<sup>137</sup> *Ibid* 5.

<sup>138</sup> *Ibid* 5

and policy driver.<sup>139</sup> Incentives should target resource users to drive a change in land use and forest management towards sustainability. The district could be provided with incentives for land use and development planning that could reduce deforestation and forest degradation.<sup>140</sup> However, there are concerns that the implementation of the KFCP project in some sub-districts has failed to respect the rights of the affected communities to give or withhold their free, prior and informed consent to the proposed developments.<sup>141</sup>

#### **6.2.6.2 Indonesia–Norway REDD+ Partnership**

In May 2010, Indonesia signed a Letter of Intent with Norway on cooperation on reducing GHG emissions from deforestation and forest degradation. The aim of this partnership, as stated in the preamble to the Letter of Intent, was to contribute to significant reductions in GHG emissions from deforestation, forest degradation and peatland conversion through:

- a. Conducting a policy dialogue on international climate change policy, in particular international policy on REDD+; and
- b. Collaboration in supporting the development and implementation of Indonesia's REDD+ strategy.<sup>142</sup>

The principles and approach to be taken into consideration in this cooperation are *inter alia* to give all relevant stakeholders, including indigenous peoples, local communities and civil society, subject to national legislation, and where applicable, international instruments, the opportunity of full and effective participation in REDD+ planning and implementation and to ensure coordination with all REDD activities, including the UN REDD program, the Forest Carbon Partnership Facility, the Forest Investment Program and other bi- and multilateral REDD+ initiatives taking place in Indonesia.<sup>143</sup>

The partnership is in three phases: preparation, transformation and contributions for verified emissions reduction.<sup>144</sup> Preparation involves completing the national REDD+ strategy, which also

---

<sup>139</sup> Ibid 6

<sup>140</sup> Ibid 6.

<sup>141</sup> Forest People's Program, above n 121.

<sup>142</sup> *Letter of Intent between the Government of the Kingdom of Norway and the Government of the Republic of Indonesia on Cooperation on REDD* (2010) <[http://www.unorcid.org/upload/doc\\_lib/Norway-Indonesia-LoI.pdf](http://www.unorcid.org/upload/doc_lib/Norway-Indonesia-LoI.pdf)>.

<sup>143</sup> Ibid.

<sup>144</sup> Ibid.

addresses all key drivers of forest- and peatland-related emissions; establishing a special agency reporting directly to the President to coordinate the effort in development and implementation of REDD+; establishing an independent institution for a national monitoring, reporting and verification system; and selecting a province-wide REDD+ pilot.<sup>145</sup> The transformation phase, which was conducted in 2011–2012, focuses on national-level capability building, policy development and implementation, legal reform and law enforcement, and one or more full-scale province-level REDD+ pilots.<sup>146</sup> The transformation phase includes identifying, developing and implementing appropriate Indonesia-wide policy instruments, including a two-year suspension and all new concessions for conversion of peatland and natural forest; establishing a degraded land database; enforcing existing laws against illegal logging and trade in timber, and taking appropriate measures to address land tenure conflicts and compensation claims. In the third phase, a national contribution for a verified emissions reductions mechanism will be implemented.<sup>147</sup>

Central Kalimantan was chosen by the President of Indonesia as a pilot province for Indonesia's REDD+ project in December 2010, to be funded by the government of Norway. This province was also chosen for the demonstration activities project funded by the Indonesia–Australia partnership. The governor and provincial government of Central Kalimantan has issued several regulations and policies to support the pilot program plan in the province, including a Governor Decree on the status, position and function of *Kedamangan* institutions, which are traditional inter-village institutions involved in natural resources governance; a Provincial Regulation on the determination of *Kadamangan* territory and the obligations of the head of *Damang*; a Provincial Regulation on the customary institutions of Dayak communities; and a Governor Decree on customary land and customary rights to land.<sup>148</sup>

### 6.3. Legal Framework

Indonesia has ratified the UNFCCC through Law No. 6/1994 and the Kyoto Protocol through Law No. 17/2004. In addition, Indonesia has specific laws regarding REDD+, which are mostly in the form of decrees and regulations or sub-legislations. There is no national statute on REDD+.

---

<sup>145</sup> Ibid.

<sup>146</sup> Ibid.

<sup>147</sup> Ibid.

<sup>148</sup> Forest People's Program, Pusaka and Yayasan Petak Danum Kalimantan Tengah, above n 132.

Simon Butt et al argue that without a national statute on REDD+ there will be uncoordinated regulatory efforts at national level and local level.<sup>149</sup> Indonesia has taken a leading role among developing countries in developing a national framework for REDD.<sup>150</sup> However, the legislation in Indonesia is still fragmented. In terms of a regulatory framework in supporting GHG emissions reduction, the Government of Indonesia needs to mainstream the issue of climate change into the regulatory framework.<sup>151</sup> While forest fire control is considered as one of eight policy strategies for the forestry sector, there is no specific regulation intended to integrate the issues of forest fires, climate change and REDD+ in the existing legal framework. In addition, although addressing forest fires is listed as one of the mitigation efforts in the Indonesia National Action Plan, the new legislation on addressing land forest fires has not been enacted. The effort in reducing land/forest fires is still based on Government Regulation No. 4/2001 concerning Environmental Damage and/or Environmental Pollution Related with Forest and/or Land Fires, which has been shown as inadequate in addressing the issue. The focus of the current regulation relating the REDD+ implementation is avoiding deforestation by the suspension of granting new licences in primary forests and peatland. Wright argues that Indonesia's domestic legal framework is wholly inadequate in implementing REDD+ effectively and in protecting the rights of indigenous people.<sup>152</sup> The researcher agrees with Wright's argument for four reasons. Firstly, the implementation of REDD is mostly regulated by lower legislation or sub-legislation, which is based on a hierarchy of laws and is considered weak. Secondly, most of the REDD implementation measures focusing on addressing deforestation give very little attention to forest degradation, such as is caused by forest fires. The failure to address forest degradation probably reflects the speech of the Indonesian President, which laid out the vision of reduction of emissions to be achieved through LULUCF, primarily through a reforestation rather than a deforestation and forest degradation–reduction approach.<sup>153</sup> In fact, based on the Climate Change Action Plan in the forestry sector, three REDD activities are to be focused on: 1) reduction in the rate of deforestation and forest degradation by avoiding/reducing forest conversion for other uses, illegal logging, forest fires and human encroachment into forests; 2) a carbon sequestration

---

<sup>149</sup> Simon Butt et al, Brazil and Indonesia Brazil and Indonesia: REaDD+Y or not? In Rosemary Lyster, Catherine MacKenzie, Constance McDermott, *Law, Tropical Forests and Carbon The case of REDD+*, 267.

<sup>150</sup> Australia–Indonesia Partnership, above n 122.

<sup>151</sup> Widyaningtyas, above n 107.

<sup>152</sup> Glen Wright, 'Indigenous People and Customary Land Ownership Under Domestic REDD+ Frameworks: A Case Study of Indonesia' (2012) 7(2) *Law Environment and Development (LEAD)* 119, 120.

<sup>153</sup> Frank Ellis, 'Household Strategies and Rural Livelihood Diversification' (1998) *The Journal of Development Studies* 1, 1.

program that includes forest restoration, social forestry and community forest establishment; and 3) sustainable forest management, including of peat forests. Thirdly, the regulation of REDD+ is separated across many forms of regulation; more adequate and holistic regulation is needed. Fourthly, there is a need to mainstream the issue of climate change into the existing regulatory framework, particularly as regards addressing the drivers of deforestation and forest degradation. For this reason, the revision of some regulations is needed, to increase legislative support for the implementation of climate change mitigation and forest fire reduction.

There are a number of existing sub-legislations that have been enacted to support the implementation of REDD in Indonesia and could reduce future carbon emissions. These include:

- \*President Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance;
- \*Presidential Regulation No. 61/2011 on National Action Plan on Reduction of GHG;
- Presidential Regulation No. 71/2011 on National GHGs Inventory;
- Ministry of Forestry Regulation No. P.30/2009 on Reduction of Emissions from Deforestation and Forest Degradation;
- Ministry of Forestry Regulation No. P.36/2009 on Procedures for Licensing of Commercial Utilization of Carbon Sequestration and/or Storage Production Forests and Protected Forests;
- Ministry of Forestry Decree establishing the Ministry of Forestry Working Group on Climate Change/WG-FCC (SK.13/Menhut-II/2009);
- Ministry of Forestry Regulation No. P.68/2008 on the Implementation of Demonstration Activities of REDD;
- \*Presidential Instruction No. 2/2007 on Acceleration of Rehabilitation of the ex-Mega Rice Project in Central Kalimantan;
- Presidential Instruction No. 4/2005 on Combating Illegal Logging;
- Ministry of Forestry Decree (Kepmen) No. 260/Kep-II/1995 on Guidelines for Prevention and Control of Forest Fire, supplemented with implementation guidelines;
- Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires;
- Director General of Forest Protection and Nature Conservation (PHPA) Decree No. 243/Kpts/DJ.VI/1995 on Technical Guidelines for Forest Fire Prevention and Control in Concession Areas and Other Land Use;
- Director General of Estate Crops Decree No. 38/KB.110/DJ.BUN/05.95 on Technical Guidelines for Land Clearance Without Burning to Develop Plantations.

Note that, from the lists of regulations above, only the three regulations marked with an asterisk will be examined below.

### 6.3.1. Presidential Instruction No. 10/2011 Concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance

President Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance is a significant regulation that reflects the changes in policy in the forestry sector that have resulted from the REDD+ program. Since the issuance of this instruction, Presidential Instruction No. 6/2013 on the Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance has mandated to continue the moratorium program with an extension of two years. The implication of these regulations for forest fire reduction is that, by stopping the conversion of forests to other uses, less forest fires can be expected to occur, as forest fires are usually the result of forest conversion, particularly of peatland forest. The government claims that moratorium will protect 64 million hectares of forest.<sup>154</sup> Over the last four decades, forestry sector policy has proven unsustainable, with permanent natural forests having been reduced on a large-scale, particularly for plantations and agriculture.<sup>155</sup> The moratorium on conversion of primary forest and peatland for two years, and extended for another two years, is the current policy in the forestry sector working to slow the rate of deforestation in Indonesia. To some scholars, this policy is not categorised as policy reform at all, as the characteristics of this policy are only temporary. What will happen at the end of the four-year moratorium remains uncertain. CIFOR argues that, even though this policy is an important step towards meeting Indonesia's voluntary commitment to reduce emissions, it has serious flaws and failures, especially as it fails to include secondary forests and over-logged forests in the moratorium, losing the opportunity to protect at least 467 Mha of forest rich in carbon and biodiversity.<sup>156</sup> However, CIFOR remains optimistic that the moratorium can lead to forest policy reform in Indonesia.<sup>157</sup> Similarly, Wells and Paoli suggest that Presidential Instruction No. 10/2011 serves as a cornerstone of Indonesia's emerging policy reform efforts to place the economy on a path towards sustainable low-emission

---

<sup>154</sup> Simon Butt, et al, Brazil and Indonesia: REaDD+Y or not? In Rosemary Lyster, Catherine MacKenzie, Constance McDermott, *Law, Tropical Forests and Carbon The case of REDD+*, p266

<sup>155</sup> Ministry of National Development Planning/National Development Planning Agency, *Guideline for Implementing Green House Gas Emission Reduction Action Plan* (2011) <[ur-bsef.cirad.fr/.../1717,Guideline-on-the-implementation-of-.pdf](http://ur-bsef.cirad.fr/.../1717,Guideline-on-the-implementation-of-.pdf)> 32.

<sup>156</sup> William Solesbury, 'Sustainable Livelihoods: A Case Study of the Evolution of DFID Policy' (Working paper, Overseas Development Institute, 2003) <<http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/172.pdf>> 1.

<sup>157</sup> Chris Lang, *New CIFOR Report Points Out the Flaws in Indonesia's Forest Moratorium* (2011) <<http://www.redd-monitor.org/2011/11/01/new-cifor-report-points-out-the-flaws-in-indonesias-forest-moratorium/>>.



development.<sup>158</sup> However, they point out that this Presidential Instruction does not guarantee the fundamental changes to planning, coordination and transparency required to achieve the reduction emission goal of 26 per cent.<sup>159</sup>

President Instruction No. 10/2011 provides a mandate to government institutions and agencies to take the necessary steps to support the suspension on granting new licences in primary natural forests and peatland; conservation forests; protected forests; limited, regular and permanent production forests; conversion forests; and areas of other uses, as given in the Indicative Map for the Suspension on New Licences in the Appendix to the Presidential Instruction. However, there are exceptions to this license suspension, which may undermine the moratorium. These exceptions include applications granted with ‘in principle’ approval from the Ministry of Forestry; implementations vital to national development (for example, for geothermal, oil and natural gas, electricity, land for rice and sugarcane projects); extensions of existing permits for forest exploitation and/or forestry area utilisation provided the business licence remains valid; and ecosystem restoration. Moreover, it seems that the moratorium is only being half-heartedly implemented. CIFOR also considers that this Presidential Instruction is weak, as there are no legal sanctions for breaches of the moratorium.<sup>160</sup> The exceptions reflect the success of powerful forestry interests, who have lobbied to have the moratorium narrowly defined. Thus, while Norway has pushed for a moratorium on all forest areas,<sup>161</sup> the moratorium excludes vast areas of secondary forests as well as existing concessions in peatland and primary forests for mining and energy development projects and some crops.

It is doubtful that this moratorium will have a significant impact on reducing Indonesia’s GHG emissions given the temporary and limited size of the forest estate to which it applies.<sup>162</sup> In addition, a key underlying problem is that there is no single coherent map of Indonesia’s forestland and licenses.<sup>163</sup> Uncertainty also derives from the different laws used by the different

---

<sup>158</sup> Philip Wells and Gary Paoli, *An Analysis of Presidential Instruction No. 10, 2011 Moratorium on Granting of New Licenses and Improvement of Natural Primary Forest and Peatland Governance* <[http://www.daemeter.org/wp-content/files/Daemeter\\_Moratorium\\_Analysis\\_20110527\\_FINAL.pdf](http://www.daemeter.org/wp-content/files/Daemeter_Moratorium_Analysis_20110527_FINAL.pdf)>.

<sup>159</sup> Ibid.

<sup>160</sup> Ibid.

<sup>161</sup> Mongabay, *Norway: Indonesia’s Forest Moratorium Isn’t Enough to Meet Emissions Reduction Target* (23 May 2012) <<http://news.mongabay.com/2012/0523-norway-indonesia-moratorium.html>>.

<sup>162</sup> IUCN, UNEP and WWF, above n 69, 30.

<sup>163</sup> Julian Caldecott et al, *Indonesia–Norway REDD+ Partnership: First Evaluation of Deliverables* (2011) <[www.unredd.net/index.php?option=com\\_docman&task=doc...](http://www.unredd.net/index.php?option=com_docman&task=doc...)> 18.

line ministries involved.<sup>164</sup> Comprehensive reviews of all existing licences are needed to determine their legality and compliance with forest management rules.<sup>165</sup> This review can be used to revoke inappropriate licences located in protected areas.<sup>166</sup> Peatland receives special attention in the moratorium because of its significant role in storing carbon and provision of other environmental services.<sup>167</sup>

Another worrying indication as to the likely impact of the moratorium is that the private sector seems unhappy and unsupportive of the conservation focus in the Letter of Intent and moratorium.<sup>168</sup> This is shown by representatives of oil palm plantations, the pulpwood industry and other private sectors voicing concerns that suggest the moratorium will have a negative effect on job creation, the welfare of the labour force and infrastructure development.<sup>169</sup>

### **6.3.2. Presidential Regulation No. 61/2011 on National Action Plan on Reduction of GHG**

Presidential Regulation No. 61/2011 on National Action Plan on Reduction of GHG aims to give legal effect to the Bali Action Plan of COP 13, COP 15 in Copenhagen and COP 16 in Cancun. It also aims to give effect to the commitment made by the Indonesian President at the G-20 Summit, held in September 2009, to reduce GHG emissions by 26 per cent in 2020 from BAU levels by its own efforts, and by 41 per cent with international funding. This Action Plan also provides a policy framework for central government, local government, private sector and other key stakeholders for implementing actions to reduce GHG emissions. There are two types of action plan: a National Action Plan and a Local Action Plan. The Local Action Plan must refer to the National Action Plan, and is regulated by the Governor Regulation. Article 2 of Presidential Regulation No. 61/2011 states that the National Action Plan covers five priority sectors, as follows:

- a. Agriculture;
- b. Forestry and peatland;

---

<sup>164</sup> Dave Currey et al, 'Above the Law Corruption, Collusion and Nepotism and the Fate of Indonesia's Forests' (Report of the Environmental Investigation Agency & Telapak Foundation, 2003) <<http://eia-global.org/news-media/above-the-law-corruption-collusion-nepotism-and-the-fate-of-indonesias-fore>> 18.

<sup>165</sup> Caldecott et al, above n163, 18.

<sup>166</sup> Ibid.

<sup>167</sup> Solesbury, above n 156, 7.

<sup>168</sup> IUCN, UNEP and WWF, above n 69, 31.

<sup>169</sup> Ibid 31.

- c. Energy and transportation;
- d. Industry;
- e. Waste management;
- f. Other supporting activities.

One of the activities planned for the forestry and peatland sector, as stated in Appendix I of the Regulation, is controlling land/forest fires. The target is to achieve a reduction of forest fire hotspots in Kalimantan, Sumatera and Sulawesi of around 20 per cent annually between 2010 and 2014 from 2005–2009 figures, with a percentage of success of 67.2 per cent. The target locates emissions reductions of 21.77 million tons of CO<sub>2</sub> in 11 provinces, including North Sumatera, Riau, Kepri, Jambi, North Sumatera, Kalbar, Kalteng, Kalsel, Kaltim and Sulbar. The Ministry of Forestry was given responsibility for this task. From this regulation, it can be seen that addressing land/forest fires is already incorporated into the REDD+ strategy. However, the details on how to achieve the reduction targets are not clearly set out in the regulation.

### **6.3.3. Presidential Instruction No. 2/2007 on Acceleration of Rehabilitation and Revitalisation of the ex-Mega Rice Project in Central Kalimantan**

Presidential Instruction No. 2/2007 on Acceleration of Rehabilitation of the ex-Mega Rice Project in Central Kalimantan provides a legal basis to accelerate the rehabilitation and revitalisation of the ex-Mega Rice Project in Central Kalimantan. The Mega Rice Project encompassed an area of 726 km<sup>2</sup> of previously forested peatland, which was drained and converted into agricultural land by Presidential Decree in 1995. The project was a failure, as each dry season the peat becomes dry and highly vulnerable to fire.

The Presidential Instruction provides a mandate for several institutions to take necessary steps to accelerate the rehabilitation and revitalisation of the ex-Mega Rice Project area in Central Kalimantan.<sup>170</sup> In taking the necessary steps, the institutions should be guided by the programs listed in the Appendix of this regulation. One of the programs listed is controlling land/forest fires. Actions listed for controlling land/forest fires include:

---

<sup>170</sup> The Ministry Coordinator on the economic sector, the Ministry of Forestry, the Ministry of Public Works, the Ministry of Agriculture, the Ministry of Transmigration and Work Force, the Ministry of Home Affairs, the Ministry of Finance, the Ministry of Environment, the Ministry of Research and Technology, the Ministry of National Planning and Development/Head of Bappenas, the Governor of Central Kalimantan, the Mayor of Palangkaraya and the Regent of Kapuas.

1. Rearranging organizations and institutions in charge of controlling land/forest fires.
2. Improving and refining working systems and coordination on prevention and control of land/forest fires.
3. Monitoring of the hotspots.
4. The establishment of a fire brigade which involves stakeholders and community.<sup>171</sup>

The outputs expected from this program are a legal framework of organisations and institutions for controlling land/forest fires, an approximately 5 per cent reduction in the frequency of land/forest fires, information on the location of hotspots, and control of fires in peatland forests.<sup>172</sup> The Institutions and Authorities involved in this task are the Ministry of Environment, the Ministry of Forestry, the Ministry of Research and Technology, and the Governor of Central Kalimantan.<sup>173</sup> Despite the clear action plan in controlling land/forest fires included in this Presidential Instruction, it seems that implementation has been slow, due to lack of funding, particularly for the rehabilitation of peatland.<sup>174</sup>

#### 6.4. Demonstration Activities

Demonstration activities, as stated in article 2 of the Ministry of Forestry Regulation No. P 68/Menhut-II/2008 concerning Demonstration Activities, aim to test and develop methodologies, technologies and institutions for conducting sustainable forest management to reduce carbon emissions.<sup>175</sup> Article 4 of the Ministry of Forestry Regulation No. P 68/Menhut-II/2008 concerning Demonstration Activities states that demonstration activities are implemented by proponents who may be assisted by partners.<sup>176</sup> Proponents could be forest-timber license holders, holders of rights to forests, or managers of customary forests.<sup>177</sup> Partners could be governments, international organisations, private entities or individuals. The maximum period of demonstration activities is five years.<sup>178</sup>

---

<sup>171</sup> *Presidential Instruction No. 2/2007 on Acceleration of Rehabilitation of the ex-Mega Rice Project in Central Kalimantan*, Appendix I.

<sup>172</sup> *Ibid.*

<sup>173</sup> *Ibid.*

<sup>174</sup> Laely Nurhidayah, Interview with Adi Suseno, Official at Provincial Forest Agency of Central Kalimantan (Palangkaraya 20 September 2012).

<sup>175</sup> *Ministry of Forestry Regulation No. P 68/Menhut-II/2008 concerning Demonstration Activities* (Indonesia).

<sup>176</sup> *Ibid.*

<sup>177</sup> *Ibid.*

<sup>178</sup> *Ibid.*

Demonstration activities are essential to establish a basic stock of practical experiences related to REDD.<sup>179</sup> Various REDD+ demonstration activities offer important lessons for the development of a national REDD+ system on issues such as forest reference-emission levels, monitoring, reporting and verification, measures to counter drivers of deforestation and degradation, and ways of engaging indigenous people and local communities.<sup>180</sup> It is worth examining demonstration activities, particularly as concerns how the community is involved in fire management. It has been suggested by the Forest Carbon Partnership Facility Technical Advisory Committee on National Strategy<sup>181</sup> that a current shortcoming in the implementation of REDD+ is the need to engage and increase participation by local and indigenous communities.<sup>182</sup> Two case studies of demonstration activities being conducted in Sumatera and Kalimantan that involve the community in fire management are discussed in the following sub-sections.

#### 6.4.1. Merang REDD Pilot Project

Merang is the last swamp forest in South Sumatera.<sup>183</sup> Illegal logging and forest fires are the main threat to this area.<sup>184</sup> The Merang REDD Pilot Project aims to contribute to sustainable natural resources management in peatland and the reforestation of degraded peatland in South Sumatera. The project proponent is the Ministry of Forestry, with the co-implementing agency being the government of South Sumatera Province and Musi Banyuasin District.<sup>185</sup> The donor is Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (The Federal Environment Ministry, Germany).<sup>186</sup> One of the Merang project components is integrated community forest protection, which includes CBFiM.<sup>187</sup> Community Forest Rangers have been created and trained as part of this project.<sup>188</sup> Krantz suggests that REDD+ has the potential to increase the recognition of customary land rights, encourage the

---

<sup>179</sup> UNFCCC, *Demonstration Activities*,

<[http://unfccc.int/methods\\_science/redd/demonstration\\_activities/items/4536.php#kalimantan](http://unfccc.int/methods_science/redd/demonstration_activities/items/4536.php#kalimantan)>.

<sup>180</sup> Henry Schevyvens and Agus Setyarso, *Development of a National REDD-Plus System in Indonesia* (2010) IGES <<http://redd-database.iges.or.jp/redd/download/link?id=2>>.

<sup>181</sup> Ibid.

<sup>182</sup> Ibid.

<sup>183</sup> *Merang REDD Pilot Project*, (September 2009) <<http://redd-database.iges.or.jp/redd/download/project?id=59>>.

<sup>184</sup> Ibid.

<sup>185</sup> MRPP Team, *Merang REDD Pilot Project (MRPP): Approach to Reduce Illegal Logging at South Sumatra, Indonesia* (25 February 2013) <<http://www.asiaforests.org/media/document/afp9/WG2%20-%20Karl-Heinz%20Steinmann%20-%20GTZ.pdf>>.

<sup>186</sup> Ibid.

<sup>187</sup> Ibid.

<sup>188</sup> Ibid.

participation of local people in forest management and provide financial resources for continued development and poverty reduction.<sup>189</sup>

#### **6.4.2. Mawas Peatland Conservation Area Project**

The Mawas Peatland Conservation Area Project is a carbon emission avoidance, biodiversity conservation and poverty alleviation project, targeting 24,000 hectares of peat swamp forest in Southern Borneo, at the site of the failed Mega Rice Project.<sup>190</sup> The project proponent is the Borneo Orang-utan Survival Foundation.<sup>191</sup> Mawas Program is a joint with the Central Kalimantan Peatland Project (CKPP) (2006-2009), the Kalimantan Forests and Climate Partnership (KPCP) (Ongoing since 2010), the Kapuas District Government, and the Central Kalimantan Provincial Government.<sup>192</sup> Two components of emissions mitigation are to be carried out in this project: avoiding emissions from deforestation and land use change, and stopping or reducing anthropogenic fires.<sup>193</sup> Local communities are to receive economic benefits through employment for fire training, to prevent and control fires.<sup>194</sup> A bonus may be implemented for communities in which no fires occur.<sup>195</sup>

### **6.5. REDD+ implementation in Central Kalimantan**

It is important to look at the REDD+ implementation at the local level to examine the challenges it faces. In Central Kalimantan, the causes of deforestation and forest degradation are mostly because of illegal logging, forest fires and land use change owing to the opening of land for plantations, mining, transmigration and by the local community.<sup>196</sup> In addition, intensive silviculture is indicated as a cause of forest degradation, such as by the conversion of peatland

---

<sup>189</sup> Lasse Krantz, 'The Sustainable Livelihood Approach to Poverty Reduction: An Introduction' (Swedish International Development Cooperation Agency, 2001)  
<[http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans\\_asset\\_202603.pdf](http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans_asset_202603.pdf)>  
> viii.

<sup>190</sup> *Mawas Peatlands Conservation Area Project*, <<http://redd-database.iges.or.jp/redd/download/project?id=13>>.

<sup>191</sup> Ibid.

<sup>192</sup> The Borneo Orang Utan Survival Foundation, *Mawas Peatland Rehabilitation Program*, (10 March 2013)  
<<http://orangutan.or.id/mawas-peatland-rehabilitation-program/>>.

<sup>193</sup> Ibid.

<sup>194</sup> Ibid.

<sup>195</sup> Ibid.

<sup>196</sup> Komda REDD +, *Strategy Daerah (Strada) REDD+ Provinsi Kalimantan Tengah* (Komda REDD +, 2012).

forests for rice cultivation.<sup>197</sup> The LULUCF sector is closely connected with poverty and human development in developing countries, since it represents a potential source of food, income and energy for some of the most marginalised communities and individuals in these countries.<sup>198</sup> The province itself is considered a challenging venue for REDD+, as it has problems with governance, technical issues<sup>199</sup> and densely packed existing land concessions.<sup>200</sup> The number of licences for plantations in Central Kalimantan currently stand at around 368 units (5,064,389 ha) and the licences for mining are at around 632 units (3,850,409 ha) in 2012.<sup>201</sup> In addition, the concept of REDD+ remains poorly understood despite socialisation efforts by Kemitraan (a multi-stakeholder organisation established to promote governance reform in the Province).<sup>202</sup>

Central Kalimantan has been chosen as the first pilot province for the implementation of the REDD+ Project because Central Kalimantan contributes to increased GHG emissions because of the peatland fires that occur every year in this province. The aim of the implementation of REDD+ is to improve the welfare of the community in Central Kalimantan while also conserving the area's forests.<sup>203</sup> To be effective, REDD+ incentives must both target actors whose practices are proximate causes of deforestation and degradation, and act as an economic and policy driver.<sup>204</sup>

#### **6.5.1. Governor Regulation No. 10/2012 concerning Local Strategy and Action Plan for REDD+ (Central Kalimantan)**

Governor Regulation No. 10/2012 concerning Local Strategy and Action Plan for REDD+ serves as guidance for the implementation of REDD+ activities in Central Kalimantan. In addition, this local strategy of REDD+ is an important document as an assessment of the readiness of Central Kalimantan as a pilot province in implementing REDD+. The local strategy of REDD+ identifies and reviews development activities that influence or cause deforestation and land degradation in

---

<sup>197</sup> Ibid.

<sup>198</sup> Porrúa, Corbera and Brown, above n 32.

<sup>199</sup> This potential conflict arises in the governance of forests and peatland, as provincial spatial plans are close to final.

<sup>200</sup> Caldecott et al, above n 163.

<sup>201</sup> Komda REDD+, above n183, II-59.

<sup>202</sup> Caldecott et al, above n 163.

<sup>203</sup> Komda REDD+, above n196, I-4.

<sup>204</sup> Australia–Indonesia Partnership, above n 122, 6.

Central Kalimantan. In addition, it identifies strategic issues and all aspects relating to the province's readiness for the implementation of REDD+.

Based on the Governor Regulation, many problems for the local government clearly remain in the implementation of REDD+. For example, in the forestry sector, the Ministry of Forestry has already set out its strategic plan in its Regulation No. P.08/Menhut-II/2010, which gives eight policies to support the REDD+ program, including:

1. The stabilisation of forest areas.
2. Rehabilitation of forests and watersheds.
3. Forest security and control of forest fires.
4. Revitalisation and utilisation of forests and forestry industry.
5. Community empowerment of those living near forests.
6. Mitigation and adaptation of the forestry sector.
7. Strengthening forestry institutions.

The local government has identified many issues that need to be addressed to implement those central government policies above at the local level. These include:

1. Inconsistency and overlap between the implementation of Law No. 41/1999 on Forestry with other sectoral laws on mining, plantation and infrastructure. The current approach in the granting of licences to a company does not consider the local community interest. For this reason, there are overlapping and conflicting interests between local people and companies.
2. Inconsistency between rules and regulations in central government and local government.
3. The lack of involvement of local community in the conservation and rehabilitation program. For this reason, it is doubtful that this program will become a primary source of income for the community.
4. Management of land/forest for environment services tends to be dominated by companies; the local community has become a watcher.
5. Distribution, access and benefits of natural resources are not significantly adding value to the locality and community in Central Kalimantan.

Despite the problems faced in implementing REDD+, the role and active participation of the community is already recognised in this REDD+ strategy document, particularly as regards local knowledge that supports sustainable conservation, such as management of forests and land/forest fire control.<sup>205</sup> In regards to the REDD+ program, the local Dayak community have expressed their desire to the government that the local community should be given full responsibility as the

---

<sup>205</sup> Ibid.



main actor in the development program and all activities involving the management of natural resources.<sup>206</sup> The Dayak community bases this aspiration on the fact that they already practice conservation of natural resources.<sup>207</sup> The community already knows how to choose the location for farming (rice),<sup>208</sup> and they conduct burning with traditional methods without causing damage to other parties. In conducting burning activities, they usually work in groups (*gotong royong*). This prevents fire spreading to other farms. They argue that the current allegation that shifting cultivation is causing land/forest fires is not true.<sup>209</sup> The Dayak community practices shifting cultivation. They open land for rice cultivation for a period of three years, after which time they plant long-term crops in these area, such as rubber, fruits, rattan, *jelutung*, *gaharu* or other long-term crops.<sup>210</sup>

The aspiration of the local community to be more involved and have active participation in the management of the natural resources in their area is understandable because they feel marginalised, claiming that their *adat* land has been taken by companies for plantations. As a result, there are land conflicts between companies and the local community, and land tenure problems. According to the data, until March 2012, 372 land dispute cases in Central Kalimantan had been recorded by the Plantation Office and Land Dispute of Central Kalimantan Province.<sup>211</sup> Despite local government already having recognised the Dayak *adat* institution and community with Local Government Regulation No. 16/2008 concerning Institution of Dayak Community in Central Kalimantan and Governor Regulation No. 13/2009 on the Rights of *Adat* Community, it seems that these rights have not yet been identified, and no budget from the local government exists to do so.<sup>212</sup> Moreover, there have not yet been any mappings to identify the ownership of local *adat* community land and sacred sites, nor have there been any studies to discern the local knowledge or wisdom of the Dayak community.<sup>213</sup> The land tenure problems particularly will hinder the effective implementation of REDD+.

---

<sup>206</sup> Ibid I-5.

<sup>207</sup> Ibid.

<sup>208</sup> Ibid.

<sup>209</sup> Ibid I-5.

<sup>210</sup> Ibid.

<sup>211</sup> Siun Jarias, 'Land Conflict and Offered Solutions in Central Kalimantan ' (Speech delivered at the Paparan Sekda, Central Kalimantan 2012).

<sup>212</sup> Laely Nurhidayah, Interview with Sidik R Usop, Vice Dean I of the Political Science Faculty, the University of Palangka Raya (UNPAR) (Palangkaraya 19 September 2012).

<sup>213</sup> Komda REDD+, above n 196, III-14.

Despite there being so many things that need to be done to increase the active participation of the local community in REDD+, the vision and mission of the REDD+ strategy in Central Kalimantan is clear. The vision is to conserve forests and peatland for the welfare of the community in Central Kalimantan.<sup>214</sup> The mission is to maintain and improve the quality and quantity of peatland areas, to improve the welfare of the community who manage forest resources and peatland wisely, and to increase the independence of the local community in managing natural resources and funding.<sup>215</sup> To achieve this mission and vision, strategies have been adopted including operationalising the REDD+ institution, reducing the inconsistency of many regulations in the management of forests and peatland, reducing the rate of land conversion and land clearing, starting to greatly increase the forest and peatland carbon stock, activating the measurement reporting and verification (MRV) system, opening the access of the community to the REDD+ program and funding, and strengthening *adat* land rights and other *adat* rights over land.<sup>216</sup>

The regulation also sets action plans for REDD+, including revoking un-procedural permits; harmonising regulations in forestry, plantation, agriculture, mining and fisheries; allocating forest areas to local institutions, such as the *adat* community, to implement REDD+; temporarily stopping giving permits for the utilisation of forests and peatland areas; managing high conservation value forests in mining, plantation and timber plantation areas; managing protected forests in *adat* conservation areas; establishing Local Regulations on the collaborative management of conservation areas and protected areas; establishing and maintaining a team of firefighters from the local community; establishing and developing non-timber livelihoods for the community living around the forest; planting and enriching logged and degraded forests in partnership with the local community; implementing and operationalising Local Government Regulation No. 16/2008 concerning Institution of Dayak Community in Central Kalimantan and Governor Regulation No. 13/2009 on the Rights of *Adat* Community; and improving CBFM.<sup>217</sup>

From the action plan for the implementation of REDD+, it is apparent that the government seeks the active participation of the local community, such as by supporting CBNRM, particularly for

---

<sup>214</sup> Ibid.

<sup>215</sup> Ibid.

<sup>216</sup> Ibid.

<sup>217</sup> Ibid.

forest and peatland areas. However, the activities in this category largely involve establishing alternative livelihoods for the community, and having the community plant trees in ex-mining and degraded areas. There is no explicit mention of land tenure reforms in the action plan. Land tenure reform is important in the REDD+ program. According to Larson, tenure reform involves at least three stages: 1) the granting of statutory rights; 2) the implementation of rights in practice; and 3) the development of specific measures accompanying reforms that enable communities to derive benefits from new rights, such as capacity building and facilitation of market access.<sup>218</sup> In Central Kalimantan, *adat* rights are already recognised through Governor Regulation No. 13/2009 on the Rights of *Adat* Community. However, these rights are yet to be implemented. The delay in, and obstacles for, the implementation of *adat* rights is particularly owing to a lack of funding, and competing interests in forest resources between local communities, loggers, land grabbers, private industries and conservation organisations.<sup>219</sup> The CBNRM model should thus include complete ownership of land and natural resources by local communities, and either a shift in power from the State to the communities, or to co-management models. However, currently, it seems that local people are not the subject or decision makers in this action plan.

Local government acknowledges that the involvement of the community in the forestry sector is not yet maximised, which means that the program will not provide primary income for the community.<sup>220</sup> Currently, the management of forests and environmental services is monopolised by investors, with the community only as an observer.<sup>221</sup> Thus, it is understandable that there is a fear that REDD+ could harm forest communities by undermining tenure rights, disempowering local decision making, limiting local livelihood in the name of conservation, and promoting elite capture of lands and carbon payments.<sup>222</sup> This fear might be well founded, as the community tends to sell their *adat* lands to investors.<sup>223</sup> According to Sidik Usop, because REDD+ is a complex concept, the community are questioning when they will get the money.<sup>224</sup> From a community perspective, the time for payment of compensation for conserving land/forest is too

---

<sup>218</sup> Larson, above n 91, 544.

<sup>219</sup> Ibid 540.

<sup>220</sup> Komda REDD +, above n 196, III-4.

<sup>221</sup> Ibid.

<sup>222</sup> Larson, above n 91, 540.

<sup>223</sup> Laely Nurhidayah, Interview with Sidik R Usop, Vice Dean I of the Political Science Faculty, the University of Palangka Raya (UNPAR) (Palangkaraya 19 September 2012).

<sup>224</sup> Ibid.

distant and uncertain.<sup>225</sup> Thus, many consider it is better to sell their *adat* land to get money instantly. The problem is poverty. Communities near forests are often living in poverty; a quarter live on less than \$2 a day.<sup>226</sup>

In addition, it seems that the action plan has failed to integrate forest fire reduction into REDD+. There is no action plan that specifically and holistically addresses land/forest fires. Instead, the action plan only mentions the establishment of a fire patrol and fire brigades by the community in protecting forests. This is clearly not adequate. Fire management must be an integral part of REDD+ activities (that is, sustainable forest management, conservation and community-based efforts) to reduce a major driver of deforestation and forest degradation, to enhance and protect forest carbon stocks.<sup>227</sup> The role of CBFiM as an adaptive and sustainable mechanism should be recognised in the local legal framework.<sup>228</sup> CBFiM also deserves incentives for the carbon benefit it brings.<sup>229</sup>

Further, REDD+ can be used to modify the behaviour of smallholders. REDD+ requires a move away from unsustainable forest practices, such as practices that release carbon like swidden or shifting cultivation.<sup>230</sup> To reduce the incidence of fire, local attitudes and the manner in which local communities use and manage fire must be changed.<sup>231</sup> In the longer term, REDD+ payments could provide the capital and technical investments necessary to facilitate the shift towards fire-free agricultural practices such as mechanised land preparation, slash-and-mulch, perennial agriculture or intensive pasture management.<sup>232</sup>

## 6.6. Conclusion

Despite the commitment of the government of Indonesia to a target of reducing emissions by 26 per cent from BAU levels, or by 41 per cent with international funding, and despite cooperative agreements with international funding already established in Indonesia, the legal frameworks on

---

<sup>225</sup> Ibid.

<sup>226</sup> Tahilramani, above n 65.

<sup>227</sup> Kilahama, above n 10, 22.

<sup>228</sup> FAO, above n 25, xi.

<sup>229</sup> Ministry of Forestry and IFCA, *REDD Implementation on Peatlands: Policy and Implementation Briefing Major Finding on REDD and Peatlands in Indonesia*, 53.

<sup>230</sup> Larson, above n 91, 541.

<sup>231</sup> Kilahama, above n 10, 18.

<sup>232</sup> Larson, above n 91, 540.

climate change and REDD+ remain fragmented, inconsistent and unclear. The laws are fragmented, as climate change and REDD is regulated in many sectoral regulations. The inconsistencies in the regulation of the REDD program are shown particularly in the moratorium policy. Indonesia is committed to a moratorium on logging primary and peatland forests. However, regulations on the moratorium are being half-heartedly implemented, and there are too many exceptions and exclusions to bring success.

In addition to this, existing regulations are unclear and lack detailed guidance and plans, including on how to achieve the target of reducing forest fire hotspots by 20 per cent annually. In addition, various ministries have published their own documents and studies on REDD+ strategies and action plans, which need to be synthesised if emissions reduction targets are to be reached. Fire management and the involvement of the community in fire management have been included in demonstration activities in some pilot projects. However, in terms of a legal framework to address land/forest fires, no new legislation has been enacted. The legal basis for controlling land/forest fires is still based on Government Regulation No. 4/2001. There is no legal framework yet that integrates the issue of land/forest fires and REDD+.

The REDD+ scheme and incentives provide opportunities to improve efforts further in reducing land/forest fires. A holistic fire management approach must be an integral strategy of REDD+ to address forest degradation and reduce emissions. This momentum should be used by the Indonesian government to improve the legal framework in addressing land/forest fires. However, based on the case study in Central Kalimantan, the action plan has failed to integrate forest fires reduction into REDD+. It is expected that the REDD+ project can be used to modify the behaviour of smallholders; and in the longer term, it is expected that REDD+ payments could provide the capital and technical investments necessary to facilitate the shift towards fire-free agricultural practices, such as mechanised land preparation, slash-and-mulch, perennial agriculture or intensive pasture management.<sup>233</sup> However, these efforts are still missing in the Local Action Plan and little attention has been given to address the drivers of peatland fires.

---

<sup>233</sup> Barlow et al, above n 11, 1.



## **Chapter 7: Conclusions and Recommendations**

### **7.1. The Context**

Transboundary haze pollution from land/forest fires is a major environmental problem in the ASEAN region, the effects of which are felt locally, nationally, regionally and internationally. This haze pollution is the result of land/forest fires, mostly originating in Indonesia and caused by human activities in clearing land for agriculture or plantations. These fires are significant, not only causing damage to biodiversity, health and the economy at the national and local level in Indonesia, but also causing transboundary environmental harm to other countries in the ASEAN region, such as Malaysia and Singapore, and affecting the global climate. The research question posed in this thesis was ‘How adequate are the existing legal and policy frameworks in Indonesia in addressing transboundary haze pollution?’

It is obvious that haze pollution from land/forest fires has four dimensions: local, national, regional and international. It is established in the literature that addressing transboundary haze pollution requires both international and domestic law. However, transnational pollution can be addressed more effectively through the domestic legal system. For these reasons, this thesis commenced by first discussing the theory, developments and gaps in the international legal framework in addressing transboundary haze pollution. It then discussed the regional ASEAN legal framework and finally focused on the domestic legal system in Indonesia in Chapters 4–6. Even though this thesis examines the international and regional framework, the focus is on assessing the adequacy of the domestic legal system in Indonesia in addressing land/forest fires.

Haze pollution from land/forest fires is a complex problem. It involves economics, natural resources management and livelihood security and transects many interests, sectors, stakeholders, communities, nations and regions. This thesis argues that a well-structured integrated legal framework is crucial in addressing land/forest fires. In developing this framework, it is important to incorporate international environmental law and policy and to observe the regional legal framework. In addition, addressing the problem at ground level in Indonesia is crucial. The underlying causes of land/forest fires are company practices and local community activities in

opening lands for plantation and agriculture. For these reasons, this thesis discusses not only the adequacy of legal and institutional frameworks in addressing haze pollution in Indonesia, but also ground level action by the community through CBFiM. This thesis argues that although local communities may be blamed as part of the problem for causing land/forest fires, they are also part of the solution. This thesis also discusses the current initiative from the climate change regime in reducing deforestation and forest degradation through the REDD+ program and its implications in addressing land/forest fires.

## **7.2. Strengthening the Legal Frameworks**

This thesis examines the adequacy of the existing legal and policy frameworks in Indonesia in addressing transboundary haze pollution. It can be concluded from Chapter 4 that the Indonesian legal framework is not adequate. Therefore, this thesis proposes the strengthening of the legal framework as a solution to improve Indonesia's capacity to address transboundary haze pollution. One way to strengthen the legal framework is to adopt the international legal framework or to observe the regional legal framework. However, as shown in the analysis in Chapters 2 and 3, there are also weaknesses in the international and regional legal frameworks in addressing the issue of transboundary haze pollution. Therefore, these international and regional legal frameworks also need to be strengthened. Despite these weaknesses, international law and the regional legal framework provide lessons for Indonesia in reforming its national legal framework. International law principles on the prevention of transboundary environmental harm should be adopted in Indonesia's legal framework. In addition, it is important for Indonesia to ratify the AATHP and observe the regional legal framework in addressing transboundary haze pollution.

### **7.2.1. International Framework (Chapter 2)**

The basic concept of international law regarding transboundary haze pollution discussed in Chapter 2 of the thesis is that embodied in Principle 21 of the Stockholm Declaration 1972 and Principle 2 of the Rio Declaration 1992, which is considered as customary international law. Principle 2 of the Rio Declaration states that States have 'the sovereign right to exploit their own resources pursuant to their environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction do not cause damage to the environment of other



States'.<sup>1</sup> From this principle, scholars extrapolate that States first have a duty to prevent transboundary environmental harm, and second have the obligation to pay compensation for the harm they do cause. In addition, from the hard laws and soft laws of international law, the thesis concludes that the trend in addressing transboundary pollution is through two approaches: the principle of prevention and the principle of cooperation. These two principles are then transformed into binding obligations.<sup>2</sup> The principles of prevention can benefit the Indonesian legal framework, particularly in tightening the due diligence principle to prevent transboundary environmental harm and improve good governance.

International law does provide frameworks and mechanisms for responding to transboundary pollution problems such as the state responsibility principle, which is considered as international customary law, and some MEAs on atmosphere and biodiversity such as the UNFCCC, the CBD and the Ramsar Convention, which can be used as an indirect framework to combat forest fires at the national level. However, as outlined in Chapter 2, there is the problem of enforcing the rules of state responsibility. The limitation is rooted in the vagueness of the rules the violation of which triggers state responsibility.<sup>3</sup> In fact, a customary norm itself does not provide a precise standard for these rules.<sup>4</sup> In this matter, the rules on state responsibility are not yet well developed and accepted as treaties. Another, difficulty in enforcing state responsibility is the reluctance of States to cede their sovereignty to judicial settlement. In seeking compensation or remedies in the environmental field, the first difficulties lie particularly in proving causation, identifying the polluters and evaluating the claim for damages. There is a problem of scientific uncertainty, particularly with the complexity of environmental problems. Further, several factors have caused State reluctance to enforce state responsibility. Firstly, the rules in treaties are often not well developed, which causes great uncertainty for any Parties to a specific dispute.<sup>5</sup> Secondly, the jurisdiction or authority of the formal dispute resolution mechanisms may be inadequate to ensure a meaningful remedy.<sup>6</sup> Thirdly, formal dispute resolution mechanisms can be slow and costly, and formal dispute procedures may simply be inappropriate for reaching

---

<sup>1</sup> *Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992).

<sup>2</sup> Winfrid Lang, *UN-Principles and International Environmental Law* <[http://www.mpil.de/shared/data/pdf/pdfmpunyb/lang\\_3.pdf](http://www.mpil.de/shared/data/pdf/pdfmpunyb/lang_3.pdf)>.

<sup>3</sup> Jutta Brunee, 'The Responsibility of States for Environmental Harm in a Multinational Context-Problems and Trends' (1993) 34(3) *Les Cahiers de Droit* 827, 845.

<sup>4</sup> *Ibid.*

<sup>5</sup> David Hunter, James Salzman and Durwood Zaelke, *International Environmental Law and Policy* (Foundation Press, 2nd ed, 2002) 488.

<sup>6</sup> *Ibid.*

effective and practical solutions to the technical and difficult issues frequently posed by environmental treaties.<sup>7</sup> Hoffman argues that the use of public international law for redress of injuries due to transboundary pollution is burdensome and has great potential to jeopardise the harmony of nations.<sup>8</sup> Moreover, Brunee argues that the traditional state responsibility principle often does not adequately cover the true ecological costs.<sup>9</sup>

This thesis suggests that the definition of state responsibility requires strengthening in the legal framework at the international level. The lack of a clear definition on state responsibility and liability creates confusion and uncertainty. Some scholars define state responsibility in broad terms, while others define it narrowly. Some argue state responsibility implies the obligation of a State to prevent transboundary environmental harm and to pay compensation for damages. Some international organisations<sup>10</sup> separate the terms state responsibility and state liability, with the first referring to the wrongful conduct of a State, and the second being where no wrongful conduct is involved. In addition, there should be more coherence and synergy between the international Conventions directly or indirectly related to addressing land/forest fires, such as the UNFCCC, the CBD and the Ramsar Convention.

Coherence and synergy can be expected to strengthen the institutional and legal framework in Indonesia to address transboundary haze pollution. Compliance with the aims of the UNFCCC, the CBD and the Ramsar Convention will indirectly assist in this objective. The main task that needs to be addressed by the Indonesian government to reach coherence and synergy is to address the gap, overlaps and conflicts in the country's legislation and policy. The ASEAN initiative on synergy and inter-linkages among multilateral agreements may also help to identify and solve the barriers to the implementation of MEAs.

### **7.2.2. Regional Measures (Chapter 3)**

Chapter 3 discussed the transboundary haze pollution from Indonesian forest fires that affects neighbouring countries in ASEAN as a regional problem. As in the international legal regime, the

---

<sup>7</sup> Ibid.

<sup>8</sup> Kenneth B Hoffman, 'State Responsibility in International Law and Transboundary Pollution Injuries' (1976) 25 International and Comparative Law Quarterly 509.

<sup>9</sup> Brunee, above n 3, 845.

<sup>10</sup> The International Law Commission (ILC).

approaches in addressing haze pollution in the regional framework favour prevention and cooperation. The AATHP has been praised by the UNEP as a global role model for tackling transboundary issues, particularly haze. This Agreement is considered as the first legally binding ASEAN regional environmental accord. However, it has been criticised by scholars, who regard it as a prime example of the failure of regional cooperation and the crisis of regional identity and credibility within ASEAN.<sup>11</sup> The criticisms of the AATHP include its superficiality, lack of a legal enforcement mechanism for non-compliance and its weak dispute resolution mechanism. As discussed in Chapters 1–3, environmental cooperation in ASEAN is constrained by the doctrine of state sovereignty, which is reflected in the ASEAN Way. ASEAN is more reliant on prevention and cooperation rather than establishing a liability regime or adopting formal legal instruments to protect the environment. Indeed, the ASEAN Way does complicate measures to prevent and control land/forest fires.

Chapter 3 examined the regional measures taken to address transboundary haze pollution in the ASEAN region. Significant measures include the ASEAN Cooperation Plan on Transboundary Pollution 1995, the RHAP 1997, the Zero Burning Policy 1999, the Controlled Burning Policy 2003, the APMI 2003 and the APMS 2006. Measures comprise both hard and soft laws, but in keeping with the ASEAN Way, there is a strong preference for soft laws in the region.

In addition to these measures, the ACNNR and the AATHP provide legally binding Agreements for addressing transboundary pollution. A framework of cooperation in addressing transboundary pollution is a key feature in the concept of regional environmental governance. However, it is clear that the transboundary haze–pollution problem is ongoing. This thesis proposes that strengthening the regional legal framework and improving cooperation is the solution to this issue. Arguably, a more concrete and precise agreement with a strong dispute resolution mechanism is needed to ensure that land/forest fires do not recur repeatedly. Further, cooperation, which is central to the AATHP, should not be half-hearted and it should be improved in the future. Even as smoke haze pollution has become a common concern in the region, in terms of financial cooperation, the AATHP has elected to have voluntary rather than mandatory contributions. The result is that no single country in the region wants to bear the cost by contributing large amounts of money annually to solve the problems. To make the regional legal

---

<sup>11</sup> Parudee Nguitragool, *Environment Cooperation in Southeast Asia ASEAN's Regime for Transboundary Haze Pollution* (Routledge, 2011) 83.

framework effective, implementation at the national level is crucial. A zero burning policy should be adopted and enforced strictly in the domestic legal framework of participating States. Although, Indonesia has not yet ratified the AATHP, it has already adopted a zero burning policy in its domestic legal framework. Unfortunately, it has failed to implement this policy effectively, as companies that conduct slash-and-burn practices are rarely sanctioned and prosecuted. Improving law enforcement is currently the main task for the Indonesian government.

It is important for Indonesia to ratify the AATHP for several reasons. Firstly, entering the regional legal framework in addressing land/forest fires (the AATHP) would improve the country's credibility and goodwill in addressing land/forest fires together with other members in the region. Second, it gives an advantage for Indonesia, especially in terms of regional haze funding, which can be used to implement the AATHP at the national level.

### **7.2.3. Indonesian Legal Framework (Chapter 4)**

From a national context, to address transboundary haze pollution, the role of the domestic legal framework is crucial. The adequacy of the Indonesian legal framework was analysed in Chapter 4. For this analysis, the researcher adopted a holistic approach that considered not only the legislation and regulations specifically addressing land/forest fires, but also those in other sectors relating to land/forest fires, such as forestry law, agricultural law, environment protection law, regional law and disaster management law. This broader approach aimed to examine the gaps, overlaps and conflicts between these sectoral and horizontal legislations. It was observed that conflicting or overlapping legislation in other sectors limits the effectiveness of the legislation intended specifically to address land/forest fires.<sup>12</sup> Based on empirical observations, it is suggested that fire prevention and suppression are often hampered by unclear lines of institutional responsibilities and conflicting policies and legislation.<sup>13</sup> It is suggested that a clear assignment of responsibility to central, regional and local government is a precondition for effective forest fire management.<sup>14</sup>

---

<sup>12</sup> Elisa Morgera and Maria Teresa Cirelli, *Forest Fires and the Law: A Guide for National Drafters Based on the Fire Management Voluntary Guidelines* (FAO, 2009), ix.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

Chapter 4 outlines the national legal framework in Indonesia. Indonesia has adopted a zero burning policy with Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution related to Forest and/or Land Fires. This regulation specifically addresses land/forest fires, but has many weaknesses, and has proven ineffective, as land/forest fires continue to occur regularly. The main weakness in this government regulation is unclear lines of institutional responsibilities and unclear inter-institutional coordination in controlling land/forest fires. The involvement of different sectoral institutions or multi-level governance, as well as clear coordination and a plan integrated across different sectors is crucial in the management of forest fires. However, the involvement of different institutions is missing in this regulation. The enactment of Presidential Instruction No. 16/2011 shows that there has been a significant improvement in efforts to address land/forest fires, particularly as regards the institutional framework. This Presidential Instruction is an attempt to use a multi-level governance and disaster management approach. The leading institutions appointed by this instruction are the BNPB at the national level and the BPBD at the local level, which, considering their capacity and mandate as compared to other institutions or Ministries, seems logical. However, the BPBD still lacks the capacity and financial and technical resources to operate effectively, which remains a major challenge in preventing and controlling land/forest fires. Moreover, the uncertainty of ownership of land and natural resources and vast areas of burning makes firefighting activities difficult. Government Regulation No. 4/2001 is also too general. It does not specify and differentiate the different sources and types of fires. Fires in peatland areas are indicated as a major source of haze pollution. However, there are no provisions to address peatland fires specifically in the regulation or in any other legislation. For these reasons, stronger regulation in the form of a statute/act/law is required to address land/forest fires. This thesis proposes that the areas that need to be strengthened in any future legislation to respond to land/forest fires in Indonesia are institutional arrangements, coordination, planning, participatory community-based approaches and law enforcement.

In the broader framework of legislation related to land/forest fires, there should be harmonisation vertically and horizontally between the sectoral laws and central and local legislation. From the analysis, it is clear that there are some inconsistencies, conflicts and gaps horizontally between sectoral laws, and vertically between higher legislation and its sub-legislation, between local government legislation and central government legislation. It can be said the conflict is between

the spirit of environmental protection and economic development. There are conflicts between the zero burning policy, which has been adopted at the central government level, and the controlled burning policy adopted by local regulation. An integrated, inter-sectoral, multi-stakeholder holistic approach and proactive fire management are needed in the legal framework in Indonesia. Other sectoral legislation concerned with management of natural resources should also incorporate environmental protection issues.

The policy of government to give preference to economic benefits and revenue over environmental protection remains a major problem. 'Corruption, collusion and nepotism' as the continuing legacy from the previous regime continues to influence government decisions, legislation development and law enforcement at all levels, and is a major challenge in integrating the management of natural resources, achieving sustainable forest management and reducing land/forest fires.

#### **7.2.4. CBFiM (Chapter 5)**

In Chapter 5, two case studies were considered in relation to land/forest fires in the South Sumatera and Central Kalimantan Provinces. Based on interviews conducted by the researcher with a range of stakeholders, including local government officials, local community members, academics and NGOs in South Sumatera and Central Kalimantan, several findings and conclusions were drawn. First, land/forest fires will continue to occur every year as long as there are no changes to the practice of companies and the community in opening land in the dry season by using fire. Second, there has been an improvement in the institutional framework to address land/forest fires. However, this improvement has been inadequate to address the underlying causes of land/forest fires at the community level (that is, poverty). Third, CBFiM can be considered as one possible approach in addressing land/forest fires. However, several conditions should be met to make CBFiM effective. These conditions are *inter alia* that CBFiM should be placed in the context of overall land-use planning and natural resources management. This is because the important feature of CBFiM is community decision making.

Further, security of land tenure increases the sense of ownership of local communities, making them more likely to protect their land/forests and practice sustainable forest management.

However, land tenure security itself is not sufficient. Technical assistance to develop and strengthen local organisational capacities, together with appropriate credit programs, is needed to make CBFiM successful. Project-based or top-down approaches have failed because there is no continuity of the CBFiM program after the project has ended. For these reasons, communities' sense of stewardship should be improved by activating and revitalising *adat* institutions. Currently, there is no legislation in Indonesia specifically regulating CBFiM. The weakness of current regulations is that they do not place CBFiM in the context of land-use planning and natural resources management, but rather imbue it with a separate identity. This thesis proposes that Indonesia can improve its legal framework in addressing transboundary haze pollution by enacting specific regulations on CBFiM. These regulations should also include incentives for local people if they are to be successful in preventing and controlling land/forest fires.

#### **7.2.5. REDD+ and Opportunities for Indonesia (Chapter 6)**

In Chapter 6 on REDD+ and its implications for forest fire reduction, a case study in Central Kalimantan was considered. Several conclusions were drawn. First, despite the commitment of the government of Indonesia to a target of reducing emissions by 26 per cent from BAU levels, or by 41 per cent with international funding, which is already well established in Indonesia, the legal frameworks on climate change and REDD remain fragmented, inconsistent and unclear. Synthesising regulations and the REDD+ strategy and action plan is needed to overcome this problems. Second, although forest fire prevention and control has been included in the action plan by targeting a 20 per cent annual reduction of fires (hotspots) to reduce emissions, as listed in the Appendix of Presidential Regulation No. 61/2011 on National Action Plan on Reduction of GHG, the method by which this should be achieved is not clearly outlined. Third, a holistic fire management approach must be an integral strategy of REDD+ to address forest degradation and reduce emissions. However, based on the case study in Central Kalimantan, the action plan has failed to integrate forest fire reduction into REDD+. This thesis proposes that the REDD+ project should be used to modify the behaviour of smallholders; and in the longer term, it is expected that REDD+ payments could provide the capital and technical investments necessary to facilitate the shift towards fire-free agricultural practices. These efforts are still missing in the Local Action Plan. There is no legal framework yet that integrates the issue of land/forest fires and REDD+. It is expected that the commitment of Indonesia to reduce GHG emissions by 26 per cent, in

combination with the REDD+ incentive, will be a significant factor in triggering the Indonesian government to act to improve the legislation in addressing land/forest fires.

### **7.3. Synergetic, Adaptive and Integrated Approach**

The approach to addressing land/forest fires proposed as a recommendation by this thesis is a 'synergetic, integrated and adaptive approach'. 'Synergy' means that there should be coherence between the international, regional, national and local frameworks in addressing haze pollution. 'Integration' requires that in addressing transboundary haze pollution, there should be multiple stakeholders involved, and that efforts should be conducted in a holistic and coordinated way. A multi-stakeholder approach involving government, community and private companies is essential, as no single actor, whether government or civil, can solve the serious social, economic and ecological threats of forest fires.<sup>15</sup> Finally, to be 'adaptive' in their approach, the government must continuously adapt and adjust policy to anticipate changes to the environment. This approach also involves the devolution of management rights and power sharing, to promote participation from all stakeholders, including the community.<sup>16</sup>

Parallel to the 'synergy, adaptive and integrative approach' are four key strategies essential to improve management and efforts in combating land/forest fires at the national level. These are multi-level governance, sustainable development, community participation and a sustainable livelihood framework. Presidential Instruction No. 16/2011 is an attempt to apply a multi-level governance approach to improve efforts to address land/forest fires. This approach is expected to improve coordination between sectoral institutions. Regarding forest fire reduction, fire prevention and suppression are often hampered by unclear lines of institutional responsibilities and conflicting policies and legislation. The vertical dimension of multi-level governance recognises that the national government cannot effectively implement national forest fire reduction strategies without working closely with regional and local governments.<sup>17</sup> The horizontal dimension of multi-level governance is associated with improving coordination across

---

<sup>15</sup> David Ganz and Peter Moore, 'Living with Fire: Summary of Communities in Flames International Conference' in Peter Moore et al (eds), *Communities in Flames: Proceeding of an International Conference on Community Involvement in Fire Management* (Fire Fight South East Asia, 2002).

<sup>16</sup> Carl Folke et al, 'Adaptive Governance of Social-Ecological Systems' (2005) 30 *Annual Review of Environment and Resources* 441.

<sup>17</sup> J. Corfee-Morlot et al, 'Cities, Climate Change and Multilevel Governance' (Environment Working paper No 14, OECD, 2009) <<http://www.oecd.org/environment/climatechange/44242293.pdf>> 8.



national line ministries, to help in implementing efforts to prevent and control land/forest fires.<sup>18</sup> The main challenge to the implementation of a multi-level governance approach is the inherent sectoral approach between government institutions (for example, the Ministry of Forestry, Ministry of Agriculture and Ministry of Environment), which creates gaps, overlaps and conflict in the policy framework.

Sustainable development is an approach to integrate environment and development.<sup>19</sup> There are four central imperatives in sustainability: the precautionary principle, policy integration, multiple scales of policy and governance, and public participation.<sup>20</sup> These four central imperatives in sustainability remain a great challenge in Indonesia. The ‘chronic issues that persist in hampering implementation and enforcement of the legal framework, such as lack of funding, training, and staffing, coupled with mismanagement and corruption’ are major obstacles in effectively combating land/forest fires.<sup>21</sup> In addition, sustainable development requires a change of attitudes at every level, including among governments, companies and the community.<sup>22</sup> One of the systemic problems facing Indonesia is endemic corruption in every level of government. Therefore, anti-corruption measures need to be tightened and enforced.

The ‘sustainable livelihood approach’ is an attempt to achieve poverty reduction, while also achieving environment protection. The sustainable livelihood framework was introduced by the Brundtland Commission on Environment and Development and the 1992 United Nations Conference on Environment and Development.<sup>23</sup> Local people use fire in opening land for agriculture or livelihood strategies. Providing and promoting alternative sources of income and food is a crucial aspect in convincing farmers to switch to more sustainable practices besides promoting controlled or ‘no burning’ farming techniques.

---

<sup>18</sup> Ibid.

<sup>19</sup> Report of the World Commission on Environment and Development, 42nd sess, Agenda item 83(e), UN Doc A/42/427 (4 August 1987).

<sup>20</sup> Ibid 53.

<sup>21</sup> Jason M Patlis, 'The Role of Law and Legal Institutions in Determining the Sustainability of Integrated Coastal Management Projects in Indonesia' (2005) 48 *Ocean & Coastal Management* 450, 452.

<sup>22</sup> World Commission on Environment and Development, *Our Common Future*, Ch 2, Paragraph 72 <<http://www.un-documents.net/ocf-02.htm>>.

<sup>23</sup> Ibid.

## **7.4. Implications and Significance of the Research**

This research has several implications, as well as significance generally for enhancing the literature and knowledge in international environmental law and regional ASEAN environmental law, particularly in regards to legal reform and policy development in Indonesia. The implication of this research for research and literature on international environmental law is that it discusses the theory, developments and gaps in addressing transboundary pollution in international law. The discussion on principles (for example, sovereignty, state responsibility and non-intervention), relevant ASEAN documents and MEAs (for example, the CBD, Ramsar and the UNFCCC) has provided an important addition to the existing literature. Study of this area is very important, as the problem of transboundary environmental harm is a prominent issue in this global and interconnected world. This is particularly apparent in relation to increasing problems involving air and water pollution and climate change. This research also has implications for the further development of the state responsibility principle.

This research also has important implications for the improvement of the regional legal framework in the ASEAN region. The result of the analysis presented in Chapter 3 can contribute to the improvement of regional environmental governance in ASEAN in the future and to reforms of the AATHP. This thesis contends that regional environmental governance in ASEAN lacks civil society engagement in decision making at the regional level. This thesis suggests that the AATHP should address the underlying causes of haze pollution and improve cooperation to address this issue.

As the emphasis of this research is on examining the domestic legal system in Indonesia, the implications and significance of this research are mainly recommendations for policy makers in Indonesia. The recommendations include improvements to the legal framework to address land/forest fires, particularly in terms of coordination and clear lines of institution, roles and responsibility in preventing and controlling land/forest fires, and the public participation and community involvement framework. This research also contributes to identifying the gaps and overlaps in the legislation, which create uncertainty and confusion, and argues that the current legislation reflects an unsustainable pattern of development. In addition, this research has implications for the improvement of CBFiM in Indonesia due to discussing the theory of CBFiM

and presenting case studies on the implementation of CBFiM in South Sumatera and Central Kalimantan Provinces. Many difficulties at the local level in combating land/forest fires were identified through these case studies, showing that the local level is the main level to which the government should direct its attention. Finally, this thesis has significance for the improvement of the REDD+ program currently underway in Indonesia to help the effort in reducing land/forest fires.

## **7.5. Issues for Further Research and Policy Development**

This research has identified several issues that could become a focus for further research. A particularly important issue is the question of enforcement action against companies that allegedly conduct burning, which is prohibited by law. This lack of enforcement against companies that illegally use fire to open land clearly needs further research. Another issue that needs further research is how to strengthen the local community institutional framework, particularly the role of *adat* institutions in promoting and supporting the prevention and controlling of land/forest fires. This thesis endorses the view of Sidik Usop that the role of village and *adat* institutions is crucial, and that activating and revitalising *adat* institutions is essential to improving the protection of the environment.

Another crucial issue is ‘corruption, collusion and nepotism’ related to forestry sectors and other land-use planning. It has been suggested that although poverty, economic collapse, provincial autonomy and many other factors contribute to forest destruction, these are not the core of the problem.<sup>24</sup> Rather, forests are being destroyed because Indonesia is one of the most corrupt countries in the world. The failure of authorities to prosecute the senior officials and timber barons is no surprise, as there is also corruption in the police and judicial system.<sup>25</sup> The issue of corruption is prominent, as it also surrounds the issue of REDD+. Indigenous people are sceptical as to whether they will get any benefit from the REDD+ funding for conserving and preserving the forest. Butler argues that corruption is only one of the concerns that conservationists and

---

<sup>24</sup> Dave Currey et al, 'Above the Law Corruption, Collusion and Nepotism and the Fate of Indonesia's Forests' (Report of the Environmental Investigation Agency & Telapak Foundation, 2003) <<http://eia-global.org/news-media/above-the-law-corruption-collusion-nepotism-and-the-fate-of-indonesias-fore>>.

<sup>25</sup> *ibid*.

outside donors have about forest preservation schemes in Indonesia.<sup>26</sup> Another issue is concern about taking on vested interests.<sup>27</sup>

The other issue that needs further research is the role of integration between stakeholders such as scientists, policy makers, community and companies. The role of scientists in assisting in preventing and controlling land/forest fires, such as implanting an early warning system and helping and assisting the local community in opening land without burning is beyond the scope of this thesis and has not been dealt with in this research.

## 7.6. The Way Forward

The issue of preventing and controlling land/forest fires is a complex issue. It involves diverse stakeholders from the local and national (governments, communities, companies, NGOs, scientists, academics), regional and international levels. It also involves a range of sectors (forestry, agriculture, plantation, mining), and is affected by issues of livelihood security and poverty. It is indeed a multi-dimensional and complex issue. Therefore, the improvement and strengthening of the legal framework, particularly the national legal framework, is one way to improve the effort in combating land/forest fires. The Indonesian government already acknowledges that the current legal framework is not adequate to address the issue of land/forest fires, and is already enacting supporting regulation such as Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires. However, Indonesia needs to enact new legislation to address land/forest fires specifically, and it is showing its good will to tackle future haze pollution by ratifying the AATHF. These measures will not solve the problem overnight, but they are a step in the right direction.

The research in this thesis suggests that the best way to address land/forest fires is to improve all measures, including the legal and institutional framework, public participation and law enforcement. The strengthening of the legal framework in Indonesia has already begun, although progress is slow and additional pressure and incentives are required from regional and international funding and commitments. Land/forest fires are a complex issue for which there is

---

<sup>26</sup> Rhett Butler, *Indonesia Corruption Legacy Clouds A Forest Protection Plan* (2010)  
<[http://e360.yale.edu/feature/indonesias\\_corruption\\_legacy\\_clouds\\_a\\_forest\\_protection\\_plan/2353/](http://e360.yale.edu/feature/indonesias_corruption_legacy_clouds_a_forest_protection_plan/2353/)>.

<sup>27</sup> Ibid.

no single solution. However, as this research has shown, there are measures available to be taken by government, community, company and other stakeholders to find a way forward to improve the effort in combating land/forest fires.



## Appendices

### Appendix I. List of Laws/Regulations Relevant in Addressing Land/Forest Fires as discussed in Chapter 4

No.	Laws	Description
1.	Environmental Law No. 32/2009	This is the new law regarding environment protection in Indonesia which replaced previous Law No 23/1997.
2.	Forestry Law No 41/1999	This law is intended as main law in managing and protecting forest which replaced Law No. 5 of 1967
3.	Agriculture Law No. 18/2004	This is the legislation governing agriculture and plantation. It aims to increase community income, government revenue and foreign exchange, to provide employment opportunities, to increase productivity and competitiveness, to supply consumption needs domestically, and to maximize the sustainable management of natural resources.
4.	Law No. 5/1990	This is the law as a framework for the conservation and sustainable use of living resources and their ecosystems.
5.	Law No. 32 year 2004 on Local Government	This is the legislation concerning decentralisation. This law replaced Law No. 22/1999.
6.	Law No. 33/2004 on Financial Balance	This is the legislation concerning Financial balance between central government and local government to revise Law No. 25/1999
8.	Law No. 24/2007 concerning Disaster Management	This regulation provides provisions on disaster management including policies and development with disaster risk, disaster prevention, emergency response and rehabilitation.
No	Specific Regulations	Description
1.	Government Regulation (PP) No. 4/2001	This regulation is the specific regulation aims to prevent, control and rehabilitate and monitor land/forest fires. In the hierarchy of laws this regulation has lower hierarchy.
2.	Presidential Instruction No. 16/2011 concerning	This is the current regulation enacted

	Improvement of Controlling Land/Forest fires	by the government to improve efforts in controlling land/forest fires particularly the institutional set up and coordination.
No.	<b>Laws/Regulations/Subordinate/Implementing regulations</b>	Descriptions
1.	Laws No. 10/2004	concerning the Establishment of Laws and Regulations
2.	MPRS Decree No. XX/MPRS/1966	concerning the Source of Laws and Hierarchy of Laws
3.	Government Regulation as substitute of the Law No. 1/2004	This is the regulation a substitute of Forestry Law No. 41/1999 particularly to regulate that all mining licences in forestry area will remains to be valid until the end of the licences term.
4.	Government Regulation No 34/2002	concerning Forest Management and Forest Plan and Development, Utilization of Forest and the Use of Forest
5.	Presidential Regulation No. 28/2011	This is the regulation concerning the use of protected forest for underground mining.
6.	Presidential Instruction No 10/2011	concerning Moratorium of Forest and Peatland Conservation
7.	Presidential Regulation No 8/2008	concerning BNPB (National Agency for Disaster Management)
8.	The Ministry of Forestry Regulation No. P.55/Menhut-II/2008	This regulation is mentioned in this chapter is the regulation on the master plan on the rehabilitation and conversion of peatlands development area in Central Kalimantan as further implementation of Presidential Decree No. 80/1999 on the general guidelines on planning and management of peatland in Central Kalimantan and Presidential Instruction No 2/2007
9.	Ministry of Agriculture Decree No 14/Permentan/PL.110/2009	This regulation is mentioned as sub-legislation as Guideline on Oil Palm Plantation on Peatland areas.
10.	Local Government Regulation Central Kalimantan No 5/2003	concerning Controlling Land/Forest Fires
11.	Governor Regulation Central Kalimantan No. 52/2008	concerning the Guidance of Opening Lands and Yards for the Community in Central Kalimantan.



## Appendix II. List of Regulations Relevant in Examining Community Based Fire Management as discussed in Chapter 5

No	Main Regulations	Description
1.	Government Regulation No. 4/2001 concerning Control of Environmental Degradation and/or Pollution Related to Forest and/or Land Fires.	This regulation is the specific regulation aims to prevent, control and rehabilitate and monitor land/forest fires. In the hierarchy of laws this regulation has lower hierarchy. It also provides provisions on public participation.
2.	The Ministry of Forestry Regulation No. P12/Menhut-II/2009 concerning the Control of Forest Fires	This regulation was initiated to establish a village fire brigade community (MPA) in the context of strengthening of capacity of the community.
3.	Presidential Instruction No. 16/2011 concerning the Improvement on Controlling Land and Forest Fires	This is the current regulation enacted by the government to improve efforts in controlling land/forest fires particularly the institutional set up and coordination.
4.	Ministry of Environment Regulation No. 10/2010 concerning the Mechanism to Prevent Pollution and/or damage on the Environment Related to Land and/or Forest Fires	This regulation aims prevent pollution or damage related to land and/or forest fires effective
No	Supporting Laws/Regulations	Description
5.	Basic Agrarian Law No. 5/1960 (BAL)	This is the main legislation governing land tenure in Indonesia.
6.	Forestry Law No. 41/1999	This law is intended as main law in managing and protecting forest which replaced Law No. 5 of 1967
7.	Directorate General Forest Protection and Conservation Decree No. 21 & 22/KPTS/DJ-IV/2002	concerning Structure and Guidelines of/for the Fire Brigades for Fire Control and Prevention.

### Appendix III. List of Relevant Legislation/Regulations in Chapter 6.

No.	Laws/regulations	Description
1.	President Instruction No. 10/2011	concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance
2.	Presidential Regulation No. 61/2011	concerning National Action Plan on Reduction of GHG Emissions
3.	Ministry of Forestry Regulation No. P 68/Menhut-II/2008	concerning Demonstration Activities
4.	Governor Regulation Central Kalimantan No. 10/2012	concerning Local Strategy and Action Plan of Reducing Emission form Degradation and Deforestation-Plus
5.	Local Government Regulation No. 16/2008	concerning Institution of Dayak Community in Central Kalimantan
6.	Governor Regulation No. 13/2009	concerning the Rights of <i>Adat</i> Community

#### Appendix IV.

Central Kalimantan Governor Instruction No. 188.44/228/2012 concerning Integrated Institutional Structure in Central Kalimantan in Controlling Land/Forest Fires.

No	Main Position	Position in team
1	Governor Central Kalimantan	Team Leader
2	Head of House Representative Central Kalimantan	Steering Committee/Adviser
3	Chief of Police Central Kalimantan	Adviser
4	Chief of Army Panju Panjung	Adviser
5	Head of Attorney Central Kalimantan	Adviser
	<b>Main Team</b>	
1	Vice Governor Central Kalimantan	Chairman
2	Secretary of Region Central Kalimantan	Daily Chairman
3	Assistant Economic and Development Central Kalimantan	Vice Chairman
4	Assistant Government and Welfare	Vice Chairman
5	Assistant General Administration Setda Central Kalimantan	Vice Chairman
6	Head of <i>Dinas Pertanian dan Peternakan</i> (Agriculture and Husbandry) Central Kalimantan	Coordinator in implementing Opening the land without burning and controlling land fires in agriculture land, horticulture and husbandry areas
7	Head of <i>Dinas Perkebunan</i> (Plantation) Central Kalimantan	Coordinator in implementing opening land without burning and controlling land fires in big plantation areas and community plantation
8	Head of Environment Agency Central Kalimantan	Coordinator in implementing campaign and controlling air quality
9	Head of Regional Disaster Management Agency (BPBD) Central Kalimantan	Secretary
10	Head of Prevention and Preparedness section BPBD Central Kalimantan	Vice Secretary
11	Head of Communication and Information Central Kalimantan	Member
12	Head of Health Service Central Kalimantan	Member
13	Head of Public Work Service Central Kalimantan	Member

14	Head of Food Security Agency Central Kalimantan	Member
	<b>Coordinator</b>	
A	<b>Early Warning System</b> <ol style="list-style-type: none"> <li>1. Head of Meteorology Agency (BMKG)</li> <li>2. Coordinator Center of Environment Information Environment Agency</li> <li>3. Head of ORARI</li> <li>4. Element of Korem (Army)</li> <li>5. Element of Police</li> </ol>	Coordinator Member  Member Member Member
B	<b>Fire-fighting forest, land and yard</b> <ol style="list-style-type: none"> <li>1. Head of Forest Service</li> <li>2. Head of BKSDA</li> <li>3. Head of Social Service</li> <li>4. Brigdalkar Polda (Police)</li> <li>5. Brigdalkar KOREM (Army)</li> <li>6. Kabid Emergency and logistic BPBD</li> <li>7. Manggala Agni (Fire Brigade)</li> <li>8. Tagana</li> <li>9. Brigdalkar Bandara Tjilik Riwut</li> <li>10. Brigdalkar Forest Service</li> <li>11. Brigdalkar General Biro Setda Kalimantan Tengah</li> <li>12. Cintrop Unpar</li> <li>13. WWF Central Kalimantan</li> <li>14. CARE Central Kalimantan</li> <li>15. BOS Mawas Central Kalimantan</li> <li>16. KFCP Kalimantan Tengah</li> <li>17. Walhi Kalimantan Tengah</li> <li>18. MADN Kalimantan Tengah</li> </ol>	Coordinator Member Member Member Member Member Member Member Member Member Member Member Member Member Member Member Member
C	<b>Law Enforcement</b> <ol style="list-style-type: none"> <li>1. Director Reskrim (Crime Investigation) Polda</li> <li>2. Forestry Service Kalimantan Tengah</li> <li>3. Environment Agency</li> <li>4. BKSDA Kalimantan Tengah</li> <li>5. Law Biro Setda Kalteng</li> <li>6. Element of Attorney Kalteng</li> <li>7. Element from Army Korem 102</li> <li>8. Element of Court</li> <li>9. Element of Police Pamong Praja</li> </ol>	Coordinator Member Member Member Member Member Member Member Member
D	<b>Publication and Documentation</b> <ol style="list-style-type: none"> <li>1. Head of Biro Community relations and protocolled</li> </ol>	Coordinator

	setda Kalteng 2. Head of TVRI Station 3. Head of RRI Radio station 4. PWI Kalteng	Member Member Member
--	--	----------------------------



## Appendix V. Ethics Approval



LAELY NURHIDAYAH <laely.nurhidayah@students.mq.edu.au>

---

### **Ethics - Conditions Met Final Approval - Ref. Nurhidayay\_Alam\_5201100936(D)[1]**

---

**Faculty of Arts Research Office** <artsro@mq.edu.au>

Mon, Jan 16, 2012 at 2:53  
PM

To: Dr Shawkat Alam <shawkat.alam@mq.edu.au>

Cc: Faculty of Arts Research Office <artsro@mq.edu.au>, E/Prof Zada Lipman  
<zada.lipman@mq.edu.au>, Ms Laely Nurhidayah <laely.nurhidayah@students.mq.edu.au>

Ethics Application Ref: (5201100936) - Final Approval

Dear Dr Alam,

Re: ('Transboundary Haze Pollution in the ASEAN Region: An assessment of the adequacy of the National Legal Framework in Indonesia')

Thank you for your recent correspondence. Your response has addressed the issues raised by the Faculty of Arts Human Research Ethics Committee and you may now commence your research.

The following personnel are authorised to conduct this research:

Dr Shawkat Alam  
Ms Laely Nurhidayah  
Prof. Zada Lipman

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports. Your first progress report is due on 16 January 2013.

If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/forms](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms)

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/forms](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms)

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/policy](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy)

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of Final Approval to an external organisation as evidence that you have Final Approval, please do not hesitate to contact the Faculty of Arts Research Office at [ArtsRO@mq.edu.au](mailto:ArtsRO@mq.edu.au)

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely

Dr Mianna Lotz

Chair, Faculty of Arts Human Research Ethics Committee



## Appendix VI. Interviews Guidelines

### 1. Government Officials (Central Government)

#### Ministry of Forestry

##### General Questions

1. What are the causes of land/forest fires?
2. What are the impacts of these land/forest fires?
3. Where do these land and forest fires usually occur?

##### Legal Framework

1. Is there any law and policy in the forestry sector addressing haze pollution and forest fires?
2. What is policy of forestry sector in addressing forest fires?
3. How effective is the policy of forestry sector in addressing forest fires?
4. What is the policy of REDD?
5. How effective is the policy of REDD contribute to the reduction of forest fires and haze pollution?
6. How effective is the Government Regulation No. 4/2001 in reducing land/forest fires?
7. Why is the Government Regulation No. 4/2001 not effective?
8. How effective is the Government regulation No. 4/2001 enforced?
9. What is your recommendation to make this regulation effective?
10. What is the regulation on land conversion?
11. Does the regulation on conversion triggered land/forest fires?

##### Institutional

1. What is the Ministry of Forestry's role and responsibility in preventing and managing forest fires?
2. In the case of forest fires in a local region who is responsible for handling this?
3. Who is responsible in tackling forest fire in conservation area, plantation area?
4. How does the coordination work between sectoral institutions (Ministries of Agriculture, Ministry of Mining, and Ministry of Environment) and local government in preventing and controlling forest fires?
5. How effective is the coordination?
6. Which others institutions should be involved in handling the problems?
7. What are the challenges to this coordination?
8. How can coordination between sectoral institutions, central government and local government be improved?

## Ministry of Environment

### General Questions

1. What are the causes of land/forest fires?
2. What are the impacts of these land/forest fires?
3. Where do usually these land and forest fires occur?

### Legal Framework

1. Is there any specific regulation in preventing land/forest fires?
2. To what extent the Law No. 32/2009 on Environment Protection addressing haze pollution problem?
3. How effective is the Government Regulation No 4/2001 in reducing land/forest fires?
4. Why is the Government Regulation No. 4/2001 not effective?
5. How is the regulation enforced?
6. What is your recommendation to make this regulation effective?
7. What is the regulation on peatlands conversion?
8. Is there any EIA for this land/peatlands conversion?
9. How effective is EIA?

### Institutional Framework

1. What are the roles and responsibility and authorities of the Ministry of Environment in preventing and managing forest fires?
2. In case of forest fires in local region who is responsible for handling this?
3. How does coordination work between sectoral institutions (Ministries of Agriculture, Ministry of Forestry, and Ministry of Environment) and local government?
4. What are the challenges to this coordination?
5. Which others institutions should be involved in handling the problems?
6. How can coordination between sectoral institutions, central government and local government be improved?

### Community Participation

1. What is the role of the community in preventing and managing land/forest fires?
2. How is the community involved in addressing land/forest fires?
3. How effective is community involvement in preventing and controlling land/forest fires?
4. What are the challenges to this participation?

## **2. Local Government South Sumatera and Central Kalimantan Province**

- Environment Agency South Sumatera Province and Central Kalimantan Province

### **Legal Framework**

1. Is there any specific local legislation to address land/forest fires?
2. How effective is the Government Regulation No. 4/2001 in reducing land/forest fires?
3. Why is the Government Regulation No. 4/2001 not effective?
4. How effective is the law enforcement of this regulation?
5. What is your recommendation to make this regulation effective?

### **Institutional Framework**

1. What is the role and responsibility of local government in preventing and managing forest fires (the role and responsibility of environment agency)?
2. How does the coordination work between central government and local government in case of forest fires?
3. How does the coordination work between institutions in local government in preventing and controlling forest fires?
4. What are the challenges to this coordination?
5. How can coordination between sectoral institutions, central government and local government be improved?

### **Community Participation**

1. What is the role of the community in preventing and managing land/forest fires?
2. What mechanism is available for community involvement in addressing land/forest fires?
3. What are the challenges to this participation?
4. How effective of this community participation in addressing forest fires

- Forestry Agency South Sumatera Province and Central Kalimantan Province

### **Legal Framework**

1. Is there any specific local legislation to address land/forest fires?
2. How effective is the Government Regulation No 4/2001 in reducing land/forest fires?
3. Why is the Government Regulation No. 4/2001 not effective?
4. How is the regulation enforced?
5. What is your recommendation to make this regulation effective?

### Institutional Framework

1. What is the role and responsibility of local government in preventing and managing forest fires (the role and responsibility of forestry agency)?
  2. How does the coordination work between central government and local government in case of forest fires?
  3. How does the coordination work between institutions in local government in preventing and controlling forest fires?
  4. What are the challenges to this coordination?
  5. How can coordination between sectoral institutions, central government and local government be improved?
- Environment Agency in regency/district level

### Legal Framework

1. Is there any specific local legislation in addressing land/forest fires?
2. How effective is the Government Regulation No 4/2001 on reducing land/forest fires?
3. Why is the Government Regulation No. 4/2001 not effective?
4. How is regulation enforced?
5. What is your recommendation to make this regulation effective?

### Institutional Framework

1. What is the role and responsibility of local government in preventing and managing forest fires (the role and responsibility of environment agency)?
2. How does the coordination work between central government and local government in case of forest fires?
3. How does the coordination work between institutions in local government in preventing and controlling forest fires?
4. What are the challenges to this coordination?
5. How can coordination between sectoral institutions, central government and local government be improved?

### 3. Community Level/village (Jabiren Village, Tanjung Taruna, Taruna) Central Kalimantan

1. What are the causes of land/forest fires?
2. What are the impacts of these land/forest fires?
3. Where do usually these land and forest fires occur?

### Legal Framework

1. Do you know about the regulation on zero burning policy?
2. Is there any specific village regulation to respond to forest fires?
3. Is there any traditional knowledge use to prevent forest fires?

### Institutional Framework

1. Is there any initiative from local people/institution to prevent and manage forest fires?
2. Is there any assistance from local/central government (technical, funding, capacity building)?
3. What are the challenges to this initiative if any?

### Public Participation

1. What mechanism is available for community involvement in addressing land/forest fires
2. Who is involved in this initiative?
3. How does the community involvement process work?
4. What are the challenges to this participation?

## Appendix VII. Table of gaps and overlaps in Indonesia Legislation

No	Name of legislation	Strengths	Gaps/overlaps	Recommendations
1.	Law No. 32/2009 on Environmental Protection and Management	<p>-clearly recognises the right of a healthy environment as part of human rights (article 3)</p> <p>-uses holistic stages in protecting the environment, as the scope of the law covers planning, utilisation, control, preservation, supervision and law enforcement.</p> <p>-contains enhanced prevention instruments such as strategic environment assessment, spatial planning, environmental quality standards, environmental damage criteria, EIAs, environment</p>	<p>-this legislation does not have any specific chapter to regulate and address land/forest fires.</p> <p>-still there is no clarity as to the role and responsibility of the Ministry of Environment in the overall framework of forest fire management</p>	<p>-Should contain specific regulation to address land/forest fires</p> <p>Clarify the role and responsibility of Ministry of Environment in the overall framework of forest fires management</p>

		<p>management and environment monitoring plans, licenses, economic instruments, environmental audits and budgeting based on the environment (article 14)</p> <p>-proposes the eco-region approach in preventing and protecting the environment.</p> <p>-empowers the Ministry of Environment with the authority to revoke the business license of any company that violates the legislation: a power that was lacking in the previous legislation.</p> <p>Zero burning policy</p>		
2	Government Regulation No. 4/2001 Concerning Control of Environmental Degradation and/or Pollution Related to Forest and/or Land Fires	Zero burning policy	the unclear lines of institutional responsibilities in controlling land/forest fires	<i>Coordination and --- Clear Lines of Institutional Responsibility</i>

			<p>being too general in its proscription of burning activities.</p> <p>the Ministry of Forestry is the leading institution in controlling land/forest fires</p>	<p>-Public participation and community involvement in forest fire prevention, control and management</p>
3	Presidential Instruction No. 16/2011 on Improvement in Controlling Land/Forest Fires	<p>-This regulation uses a disaster risk–reduction approach to address land/forest fires.</p> <p>-it improves the institutional framework.</p> <p>-contains a specific mandate to each government institution listed in the regulation.</p> <p>-framework of multilevel governance approach’</p>	<p>-The leading institutions appointed by this regulation are the BNPB at the national level and Regional Disaster Management Agency (BPBD) at the local level.</p>	
4	Law No. 41/1999 on Forestry		<p>-Forestry remains vague, comprising only a few provisions on the matter and leaving most details of implementation to regulations,</p>	<p>The certainty of ownership of land and natural resources to makes firefighting activities easier.</p>



			<p>decrees and other measures at the central and local government level</p> <p>-Law No. 41/1999 on Forestry has delineated the responsibility of areas to be managed and protected from forest fires</p> <p>-The uncertainty of ownership of land and natural resources makes firefighting activities difficult</p> <p>-peatland forest protection. Only forest in general is regulated.</p>	
5	Agriculture Law No. 18/2004	spatial planning for agriculture	Agricultural Law is silent on regulating peatland areas.	the Agriculture Law should also regulate and provide incentives to industry for protecting peatland areas.
6	Ministry of Agriculture Decree No. 14/Permentan/PL.110/2009 on the Guidelines for the Utilisation of Oil Palm Plantation on Peatland Areas.		Allow peatland conversion. having a depth of less than 3 meters	Should be revoked
7	Presidential Instruction No. 10/2011 concerning Suspension of Granting New Licences and Improvement of Natural Primary Forest and Peatland Governance		Not allow peatland conversion	
8	Law No. 5/1990		-the Government	

	Concerning the Conservation of Living Resources and Their Ecosystems		Regulation as Substitute of Forestry Law No. 1/2004 on the changes to Law No. 41/1999 on Forestry, which allows the continuity of existing permits and contracts for mining in protected forests	
9	Ministry of Environment Regulation No. 10/2010 on the Mechanism to Prevent Pollution and/or Damage to the Environment Related to Land and/or Forest Fires		Controlled burning  Zero burning	Clarify the zero burning and controlled burning in act/statute.
10	Local government regulation of Central Kalimantan No 5/2003		Controlled burning	

# Bibliography

## **Books and Book Chapters**

Birnie, Patricia W and Alan Boyle, *International Law & the Environment* (Oxford University Press, 2nd ed, 2002)

Birnie, Patricia W and Alan Boyle, *International Law and the Environment* (Clarendon Press Oxford, 1992 )

Boer, Ben, Ross Ramsay and Donald Rothwell, *International Environmental Law in the Asia and Pacific* (Kluwer Law International, 1998)

Boyle, A.E, 'Globalising Environmental Liability: The Interplay of National and International Law' in Gerd Winter (ed), *Multilevel Governance of Global Environment Change: Perspective from Science, Sociology and the Law* (Cambridge University Press, 1st ed, 2006) 559

Bratspies, Rebecca M and Russel A. Miller (eds), *Transboundary Harm in International Law Lessons from the Trail Smelter Arbitration* (Cambridge University Press, 2006)

Butt, Simon, Garcia, Beatriz, Parsons, Jemma, Brazil and Indonesia: REaDD+Y or not? In Rosemary Lyster, Catherine MacKenzie, Constance McDermott, *Law, Tropical Forests and Carbon The case of REDD+*, 267.

Chasek, Pamela S, *Earth Negotiations: Analyzing thirty years of environmental diplomacy*, United Nations University Press, (2001), 234-235.

Crawford, James, *The International Law Commissions's Article on State Responsibility Introduction, Text and Commentaries* (Cambridge University Press, 2002)

Development, World Commission on Environment and, *Our Common Future* (Oxford University Press 1987)

Dovers, Stephen and Robin Connor, 'Institutional and Policy Change for Sustainability' in Benjamin J Richardson and Stepan Wood (eds), *Environmental Law for Sustainability* (Hart Publishing, 2006)

Dupuy, Pierre, 'Due Dilligence in the International Law of Liability', *Legal Aspect of Transfrontier Pollution* (OECD, 1977) 369

Dupuy, Pierre, 'International Liability of States for Damage Caused by Transfrontier Pollution', *Legal Aspects of Transfrontier Pollution* (OECD, 1977) 345-368

Dupuy, PM, '*International Liability for Transfrontier Pollution*' in Michael Bothe (ed), *Trend in Environmental Policy and Law* (International Union for Conservation of Nature and Natural Resources ) vol 15, 363 1980.

Elliot, Lorraine and Shaun Beslin (eds), *Comparative Environment Regionalism* (Routledge, 2011)

Fowler, Robert, 'The Role of Marine 'Forests' and Soils as Carbon Sinks: Enhanced Bio-Sequestration as a Mitigation Strategy to Help Avoid Dangerous Climate Change' in Benjamin J.

Maguire, Rowena, *Global Forest Governance Legal Concepts and Policy Trends*, Edward Elgar, 2013

Hunter, David, James Salzman and Durwood Zaelke, *International Environmental Law and Policy* (Foundation Press, 2nd ed, 2002)

Hunter, David, James Salzman and Durwood Zaelke, *International Environmental Law and Policy* (Foundation Press, 3rd ed, 2007)

Jacobs, Jack, 'A New Look at Environmental Impact Assessments: Using Customary Law to Prevent Domestic and Transboundary Environmental Damage' in Michael Faure and Song Ying (eds), *China International Environmental Liability Legal Remedies for Transboundary Pollution* (Edward Elgar Publishing Limited, 2009)

Kheng-Lian, Koh, *ASEAN Environmental Law, Policy and Governance selected Document* (Volume I) (British Library Cataloguing -in Publication Data 2009 )

Kiss, Alexander and Dinah Shelton, *International Environmental Law* (Martinus Nijhoff, 1991)

Larrson, Marie-Louise, *The Law of Environmental Damage* (Liability and Reparation) (Kluwer Law International, 1999)

Lian, Koh Kheng (ed), *ASEAN Environmental Law, Policy and Governance* (World Scientific Publishing 2009 ) vol I

Lyster, Rosemary, MacKenzie, Catherine, McDermott, Constance, *Law Tropical Forests and Carbon The Case of REDD+*, Cambridge University Press, (2013).

McCaffrey, Stephen C, *The Law of International Watercourses: Non Navigational Uses* (Oxford University Press, 2001)

Mushkat, Roda, *International Environmental Law and Asian Values: Legal Norms and Cultural Influences* (UBCPress, 2004)

Nguitragool, Paruedee, *Environment Cooperation in Southeast Asia ASEAN's Regime for Transboundary Haze Pollution* (Routledge, 2011)

Neilson, Jeff and Lemona, Beria, Payments for Ecosystem Services and Environmental Governance in Indonesia, in Rosemary Lyster, Catherine Mackenzie Constance McDermott, Law, *Tropical Forest and Carbon The Case of REDD+*, Cambridge University Press, (2013), 207.

Nordbeck, Ralf, 'Pan-European environmental Cooperation Achievements and Limitations of the "Environment for Europe" Process' in Lorraine Elliot and Shaun Breslin (eds), *Comparative Environmental Regionalism* (Routledge, 2011)

OECD, *Legal Aspects of Transfrontier Pollution* (OECD, 1977)

Ostrom, Elinor, *Governing the Commons* (Cambridge University Press, 1990)

Pisillo-Mazzeschi, Riccardo, 'Forms of International Responsibility for Environmental Harm' in Francesco Francioni and Tullio Scovazzi (eds), *International Responsibility for Environmental Harm* (Graham & Trotman Limited, 1991) 15

Richardson et al (eds), *Climate Law and Developing Countries Legal and Policy Challenges for the World Economy* (Edward Elgar, 2009)

Richardson, Benjamin J and Stepan Wood (eds), *Environmental Law for Sustainability A Reader* (Hart Publishing, 2006 )

Secretariat, OECD, '*Observations on the Concept of the International Responsibility of States in Relation to the Protection of the Environment*', *Legal Aspects of Transfrontier Pollution* (OECD, 1977) 380

Smets, H, '*The OECD Approach to the Solution of Transfrontier Pollution*' in Jolanta Nowak (ed), *International and Comparative Aspects A Symposium* (The British Institute of International and Comparative Law, 1976) 1

Springer, Alan L, *The International Law of Pollution Protecting the Global Environment in a World of Sovereign States* (Quorum Books, 1983)

Stephen Dovers and Robin Connor, '*Institutional and Policy Change for Sustainability*' in Benjamin J Richardson and Stepan Wood (eds), *Environmental Law for Sustainability* (The Osgoode Readers, 2006) 21, 32

Techera, Erika J, *Marine Environmental Governance From International Law to Local Practice* (Routledge 2012)

Vogler, John, 'European Union Environmental Policy' in Lorraine Elliot and Shaun Breslin (eds), *Comparative Environment Regionalism* (Routledge, 2011) 19

Woods, Kevin (ed), *Transboundary Environmental Governance in the Mekong River Basin: Civil Society Spaces for Transboundary Participation* (2003)

Zemanek, Karl, 'State Responsibility and Liability' in W Lang, H Neuhold and K Zemanek (eds), *Environment Protection and International Law* (Graham & Trotman, 1991) 187

Zemanek, Karl, 'State Responsibility and Liability' in Winfried Lang, Hanspeter Neuhold and Karl Zemanek (eds), *Environmental Protection and International Law* (Graham & Trotman/Martinus Nijhoff, 1991) 187

### **Journal Articles**

Adhuri, Dedi Supriadi, 'Between Village and Marga, A Choice of Structure: The Local Elites' Behaviour in Lahat Regency ' (2002) *Special Volume Antropologi Indonesia* 44

Armitage, Derek, 'Adaptive Capacity and Community Based Natural Resources Management' (2005) 35 *Environmental Management* 703

Balsiger, Jörg and Bernard Debarbieux, 'Major Challenges in Regional Environmental Governance Research and Practice' (2011) 14 *Procedia Social and Behavioral Sciences* 1

Balsiger, Jorg and Stacy D VanDeveer, 'Regional Governance and Environmental Problems' in Robert A Denemark (ed), *The International Studies Encyclopedia* (Blackwell Publishing 2010) vol 9, 6179

Barlow, Jos et al, 'The Critical Importance of Considering Fire in REDD+ Programs' (2012) *Biological Conservation* 1

Beeson, Mark, 'ASEAN's Way: Still Fit for Purpose? ' (2009) 22(3) *Cambridge Review of International Affairs* 333

Blaikie, Piers, 'Is Small Really Beautiful? Community Based Natural Resources Management in Malawi and Botswana ' (2006) 34 *World Development* 1942

Bodansky, Daniel and John R Crook, 'Symposium: The ILC's State Responsibility Articles Introduction and Overview' (2002) 96 773

Bodansky, Daniel, 'Customary (and Not So Customary) International Environmental Law ' (1995) *Global Legal Study* 105

Boyle, Alan E, 'State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction' (1990) 39 *International and Comparative Law Quarterly* 1

Brockhaus, Maria et al, 'An Overview of Forest and Land Allocation Policies in Indonesia: Is the Current Framework Sufficient to Meet the Needs of REDD+?' [30] (2012) 18 *Forest Policy and Economics* 30

Brune, Jutta, 'Of Sense and Sensibility: Reflections on International Liability Regimes as Tools for Environment Protection' (2004) 53(2) *The International and Comparative Law Quarterly* 351

Brune, Jutta, 'The Responsibility of States for Environmental Harm in a Multinational Context-Problems and Trends' (1993) 34(3) *Les Cahiers de Droit* 827

Capistrano, Doris, 'Decentralisation and Forest Governance in Asia and the Pacific: Trends, Lessons and Continuing Challenges' in C.J.P. Colfer, R.D. Dahal and D. Capistrano (eds), *Lessons from Forest Decentralization: Money, Justice and the Quest for Good Governance in Asia-Pacific*. (Earthscan, 2008) 209

Chang, Li Lin and Ramkishan S Rajan, 'Regional Versus Multilateral Solutions to Transboundary Environmental Problems: Insights from the Southeast Asian Haze' (2001) *The World Economy* 1

Collins, Alan, 'A-People Oriented ASEAN: A Door Ajar or Closed for Civil Society Organizations?' (2008) 30 *Contemporary Southeast Asia: A Journal of International and Strategic Affairs* 313

Dennis, Rona A et al, 'Fire, People and Pixels: Linking Social Science and Remote Sensing to Understand Underlying Causes and Impacts of Fires in Indonesia' (2005) 33 *Human Ecology* 456

Dupuy, Pierre Marie, 'The International Law of State Responsibility: Revolution or Evolution' (1989-1990)(11) *Michigan International Law* 105

Duthy, Stephen and Bernadette Bolo-Duthy, 'Empowering People's Organizations in Community Based Forest Management in the Philippines: The Community Organizing Role of NGOs' (2003) *Annals of Tropical Research* 13

Elliot, Lorraine, 'ASEAN and environmental Cooperation: Norms, Interests and Identity' (2003) 16(1) *Pacific Review* 29

Elliot, Lorraine, 'ASEAN's Environmental Regime: Pursuing Sustainability in Southeast Asia' (2000) 10 *Global Environmental Change* 237

Elliott, Lorraine, 'ASEAN and Environmental Governance: Rethinking Networked Regionalism in Southeast Asia' (2011) 14 *Procedia Social and Behavioral Sciences* 61

Ellis, Frank, 'Household strategies and rural livelihood diversification' (1998) *The Journal of Development Studies* 1

Farell, Mary, 'EU Policy Towards Other Regions: Policy Learning in the External Promotion of Regional Integration' (2009) 16(8) *Journal of European Public Policy* 1165

Faure, Michael G, 'Defining Harmonization, Codification and Integration' (2000) *European Environmental Law Review* 174

Florano, Ebinizer R, Assessment of the "Strengths" of the New ASEAN Agreement on Transboundary Haze Pollution, *International Review for Environmental Strategies*, Vol 4 No 1 (2003), 127, 127.

- Folke, Carl et al, 'Adaptive Governance of Social-Ecological Systems' (2005) 30 *Annual Reviews Environment Resources* 441
- Forner, Claudio et al, 'Keeping the Forest for the Climate Change's Sake: Avoiding Deforestation in Developing Countries under the UNFCCC' (2006) 6 *Climate Policy* 1
- Gaines, Sanford E, 'International Principles for Transnational Environmental Liability: Can Developments in Municipal Law Help Break the Impasse?' (1989) 30(2) *Harvard International Law Journal* 311
- Hall, Noah D, 'Transboundary Pollution: Harmonizing International Law and Domestic Law' (2007) 40(4) *University of Michigan Journal of Law Reform* 681
- Harrison, Mark E, Susan E Page and Suwido H Limin, 'The Global Impact of Indonesian Forest Fires ' (2009) 56(3) *Biologist* 156
- Hoare, Peter, 'A Process for Community and Government Cooperation to Reduce the Forest Fire and Smoke Problem in Thailand ' (2004) 104 *Agriculture, Ecosystems & Environment* 35
- Hoffman, Kenneth B, 'State Responsibility in International Law and Transboundary Pollution Injuries' (1976) 25 *International and Comparative Law Quarterly*
- Hoover, Alex, 'Using REDD to Promote Biodiversity -Sensitive Forest Fire Management Schemes' (2010) 10(3) *Sustainable Development Law & Policy*
- House, Alfred E White and Asep AS Mulyana, 'Coal Fires in Indonesia ' (2004) 59 *International Journal of Coal Geology*
- Hung, Lin Cun, 'ASEAN Charter: Deeper Regional Integration under International Law?' (2010) *Chinese Journal of International Law* 821
- Jordan, Andrew, 'The European Union: An Evolving System of Multi-Level Governance...or Government? ' (2001) 29 *Policy and Politics* 193
- Jr., Robert Perry Barnidge, 'The Due Diligence Principle Under International Law' (2006) 8(1) *International Community Law Review* 81
- Kheng-Lian, Koh and Nicholas A. Robinson, 'Strengthening Sustainable Development in Regional Inter-Governmental Governance: Lessons from the 'ASEAN WAY'' (2002) *Singapore Journal of International & Comparative Law* 640
- Koh, Kheng-Lian, 'ASEAN Environmental Protection in Natural Resources and Sustainable Development:Convergence versus Divergence?' (2007 ) 4 *Macquarie Journal International Comparative Environmental Law* 43
- Larson, Anne, 'Forest Tenure Reform in the Age of Climate Change: Lesson for REDD+' (2011) 21 *Global Environmental Change* 540



- Leach, Melissa, Robin Mearns and Ian Scoones, 'Environmental Entitlements: Dynamics and Institution in Community Based Natural Resources Management ' (1999) 2 *World Development* 225
- Lederer, Markus, 'From CDM to REDD+ -What Do We know for Setting up Effective and Legitimate Carbon Governance?' (2011) 70 *Ecological Economics*
- Li, Tania Murray, 'Engaging Simplifications: Community-Based Resource Management, Market Processes and State Agendas in Upland Southeast Asia ' (2002) 30(2) *World Development* 265
- Mahanty, Sango et al, 'Reducing Poverty through Community Based Forest Management in Asia' (2006) 5(1) *Forest and Livelihood* 78
- Malone, Linda, 'The Chernobyl Accident: A Case Study in International Law Regulating State Responsibility for Transboundary Nuclear Pollution' (1987) *Colum Journal Environmental Law* 203
- Mayer, Judith, 'Transboundary Perspectives on Managing Indonesia's Fires' (2006) *The Journal of Environment and Development* 202
- McDowell, Mark A, 'Development and Environment in ASEAN' (1989) 62 *Asia Pacific Affairs, University of British Columbia* 307
- Mollicone, D et al, 'Elements for the Expected Mechanism on "Reduced Emissions from Deforestation and Degradation, REDD" under UNFCCC ' (2007) 2 *Environmental Research Letter* 1
- Newig, Jens and Oliver Fritsch, 'Environmental Governance: Participatory, Multi-Level and Effective' (2009) 19 *Environmental Policy and Governance* 197
- Nissel, Alan, 'The ILC Articles on State Responsibility: Between Self Help and Solidarity, (2006) 38, *International Law and Politics*, 355,356
- Nurhidayah Laely, Lipman, Zada, Alam, Shawkat, 'Regional Environmental Governance: An Evaluation of the ASEAN Legal Framework for Addressing Transboundary Haze Pollution, (2014) 15 *Australian Journal of Asian Law* 14.
- Palmer, Charles and Stefanie Engel, 'For Better or for Worse? Local Impacts of the Decentralization of Indonesia's Forest Sector ' (2007) 35 *World Development* 2131
- Patlis, Jason M, 'The Role of Law and Legal Institutions in Determining the Sustainability of Integrated Coastal Management Projects in Indonesia ' (2005) 48 *Ocean & Coastal Management* 450

Razali, Rodziana Mohamed, 'The Shortcomings of the ASEAN's Legal Mechanism to Address Tranboundary Haze Pollution and Proposals for Improvement' (2011) *Chinese Society of International Law* 1

Resosudarmo, Ida Aju Pradjna, 'Closer to People and Trees: Will Decentralisation Work for People and the forest of Indonesia? ' (2004) 16(1) *European Journal of Development Research* 110

Robinson, Nicholas A, 'Forest Fires as a Common International Concern: Precedents for the Progressive Development of International Environmental Law' (2001) 18 *Pace Environmental Law Review* 459

Rosenstock, Robert, 'The ILC and State Responsibility' (2002) 96 *The American Journal of International Law* 792

Rossa, Allan, 'Issues of State Liability for Tranboundary Environmental Damage' (1991) 29(60) *Nordic Journal International Law* 29

Rubin, Alfred P, 'Pollution by Analogy: The Trail Smelter Arbitration ' (1971) 50 *Oregon Law Review* 259

S, Suyanto et al, 'Land Tenure, Agroforestry Adoption, and Reduction of Fire Hazard in a Forest Zone: A Case Study from Lampung, Sumatera, Indonesia' (2005) 65 *Agroforestry System* 1

Suyanto, S et al, 'The Role of fire in Changing Land Use and Livelihood in Riau Sumatera' (2004) *Ecology and Society Ecological Economics*

Tan, Alan Khee-Jin, 'Forest Fires of Indonesia: State Responsibility and International Liability' (1999) 48(4) *The International and Comparative Law Quarterly* 826

Tan, Alan Khee-Jin, 'The ASEAN Agreement on Transboundary Haze Pollution: Prospects for Compliance and Effectiveness in Post-Suharto' (2005) 13 *New York University Environmental Law Journal* 647

TAY, Simon C., 'South East Asian Forest Fires: Haze over ASEAN and International Environmental Law' (1998) 7(2) *South East Asian Fires* 202

Wright, Glen, 'Indigenous People and Customary Land Ownership Under Domestic REDD+ Frameworks: A Case Study of Indonesia ' 7(2) *Law Environment and Development* (LEAD) 119

### **Working Papers, Discussion Paper, Conference Papers**

Anderson, Ivan P and M Roderick Bowen, 'Fire Zone and the Threat to the Wetlands of Sumatera, Indonesia (October 2000) ' <[http://www.phap.dephut.net/Halaman/Perlindungan%20Dan%20Konservasi/FFPCP/PDF/Firez\\_one\\_and\\_the\\_threat\\_to\\_the\\_wetlands\\_of\\_Sumatra.PDF](http://www.phap.dephut.net/Halaman/Perlindungan%20Dan%20Konservasi/FFPCP/PDF/Firez_one_and_the_threat_to_the_wetlands_of_Sumatra.PDF)>

Baker, Susan, 'Environmental Governance in the EU' (Working Paper Series Cardiff University, (2001) <<http://www.cardiff.ac.uk/socsi/resources/wrkpaper12.pdf>>

Bank, World, 'Environmental, Economic, and Social Impacts of Oil Palm in Indonesia: A Synthesis of Opportunities and Challenges ' (Discussion Paper 2010  
<[http://www.ifc.org/ifcext/agriconsultation.nsf/AttachmentsByTitle/WB+discussion+paper/\\$FILE/WB\\_Oil+Palm+SynthesisDiscussionPaperMay2010.pdf](http://www.ifc.org/ifcext/agriconsultation.nsf/AttachmentsByTitle/WB+discussion+paper/$FILE/WB_Oil+Palm+SynthesisDiscussionPaperMay2010.pdf)>

Borzal, Tanza A and Thomas Risse, 'The Rise of (Inter-) Regionalism: The EU as a Model of Regional Integration 13, 2009 <[papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1450391](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1450391)>

Chokkalingam, Unna and Suyanto, 'Summary of Workshop Results' (2004)<[http://www.cifor.org/publications/pdf\\_files/Books/CChokkalingam0302E0.pdf](http://www.cifor.org/publications/pdf_files/Books/CChokkalingam0302E0.pdf)>

Corfee-Morlot, J. et al, 'Cities, Climate Change and Multilevel Governance ' (Environment Working Paper No 14, OECD (2009)  
<<http://www.oecd.org/environment/climatechange/44242293.pdf>>

Cotton, James, 'ASEAN and The Southeast Asian "Haze": Challenging the Prevailing Modes of Regional Engagement ' (Working Paper Australian National University, 1999  
<<https://digitalcollections.anu.edu.au/handle/1885/41011>>

Dermawan, Ahmad Petkova, Elena, Sinaga, Ana, Muhajir, Mumu,Indriatmoko,Yayan, Preventing the Risk of Corruption in REDD+ in Indonesia, Working Paper 80, CIFOR, 2011,  
<[www.u4.no/recommended-reading/...the...of-corruption...redd.../2732](http://www.u4.no/recommended-reading/...the...of-corruption...redd.../2732)>

Ganz, David, Fisher R.J and P.F Moore, 'Further Defining Community Based Fire Management: Critical Elements and Rapid Appraisal Tools' , 3–6 October 2003(Paper presented at the Third International Wildland Fire Conference, Sydney, Australia)  
<<http://www.tssconsultants.com/Files/340.pdf>>

Green, Keith Decentralization and good governance: The Case of Indonesia, Munich Personal RePEc Archive paper No 18097, 28 February 2005 <[http://mpra.ub.uni-muenchen.de/18097/1/MPRA\\_paper\\_18097.pdf](http://mpra.ub.uni-muenchen.de/18097/1/MPRA_paper_18097.pdf)>

Hilman, Massnellyarti, 'Policy on Peat and Climate Change in Indonesia' (Paper presented at the Workshop on Options for Carbon Financing to Support Peatland Management, Pekanbaru, Riau)  
Kant, Promode, Swati Chaliha and Wu Shuirong, 'The REDD Safeguards of Cancun' (IGREC Working Paper 2007  
<[http://www.fao.org/fileadmin/user\\_upload/rome2007/docs/REDD\\_Safeguards\\_of\\_Cancun.pdf](http://www.fao.org/fileadmin/user_upload/rome2007/docs/REDD_Safeguards_of_Cancun.pdf)>

Kilahama, Felician, 'Integrated Fire Management and Reduced Emissions through Deforestation and Degradation Program (REDD Plus)' 10 May, 2011 (Fire management Working Paper FAO FM/27/E at the Vth International Wildland Fire Conference Sun City, South Africa

Koh, Kheng Lian, 'Asean Agreement on the Conservation of Nature and Natural Resources , 1985: A study in Environmental Governance ' (Paper presented at the WPC Opening Plenary Symposium B: Managing with Change, Durban )

Lai, Chun K, Delia C. Catacutan and Agustin R Mercado Jr, 'Decentralizing Natural Resources Management: Emerging Lessons from ICRAF Collaboration in Southeast Asia' (Paper presented at the International Seminar on Decentralization and Devolution of Forest Management in Asia and the Pacific, Davao Philippines, 30 Nov-4 December 1998) <<http://sanrem.cals.vt.edu/1010/DecentralizingNatural.pdf>>

Manuel Estrada Porrúa, Esteve Corbera and Katrina Brown, 'Reducing Greenhouse Gas Emissions From Deforestation In Developing Countries: Revisiting The Assumptions' (Working Paper 115 Tyndall Centre for Climate Change Research, 2007 <[www.tyndall.ac.uk/sites/default/files/wp115.pdf](http://www.tyndall.ac.uk/sites/default/files/wp115.pdf)>

Maraseni, Tek Narayan, Geoff Cockfield and Armando Apan, 'Community Base Forest Management Systems in Developing Countries and Eligibility for CDM' (Livelihood Paper USQ, 2005 <[eprints.usq.edu.au/568/1/Livelihood\\_Paper-Final.pdf](http://eprints.usq.edu.au/568/1/Livelihood_Paper-Final.pdf)>

Martua, Sirait, 'The Emergence of Forest Land Redistribution in Indonesia' (Working Paper no 85 World Agroforestry Center, 2009 <<http://www.worldagroforestry.org/sea/Publications/files/workingpaper/WP0122-09.PDF>>

Moniaga, Sandra, 'Advocating For Community Based Forest Management in Indonesia's Outer Islands: Political and Legal Constraints and Opportunities ', IGES International Workshop on Forest Conservation Strategies for the Asia and Pacific Region (IGES, 1998) 120

Moore, Peter et al (eds), *Communities in Flames: Proceedings of an International Conference on Community Involvement in Fire Management* (2002)

Murphy, Sean D, Book Review of *The Law of International Responsibility* (James Crawford, Allain Pellet, and Simon Olleson, eds. Oxford University Press, 2010), Public Law and Legal Theory Paper No. 2012-74 , 3.

Olbrei, Erik and Howes, Stephen, A Very Real and Practical contribution? Lessons from the Kalimantan Forests and Climate Partnership, ANU Discussion Paper 16, March 2012 , Development Policy Center Crawford School of Public Policy, Australia National University 4 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2041832&download=yes](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2041832&download=yes)>.

Rasyid, M Ryaas, 'The Policy of Decentralisation in Indonesia' (Paper presented at the GSU Conference: Can Decentralization Help Rebuild Indonesia?, Atlanta, Georgia) May 2-3, 2002, <[http://aysps.gsu.edu/isp/files/ISP\\_CONFERENCES\\_INDONESIA\\_RASYID\\_PAPER.pdf](http://aysps.gsu.edu/isp/files/ISP_CONFERENCES_INDONESIA_RASYID_PAPER.pdf)>

Resosudarmo, Budy P. et al, 'Forest Land Use Dynamics in Indonesia' (Working Papers in Trade and Development No. 2012/01 Crawford School of Economics and Government ANU College of Asia and the Pacific, <[http://www.crawford.anu.edu.au/acde/publications/publish/papers/wp2012/wp\\_econ\\_2012\\_01.pdf](http://www.crawford.anu.edu.au/acde/publications/publish/papers/wp2012/wp_econ_2012_01.pdf)>

SARI, Agus P et al, Indonesia and Climate Change: Working Paper on Current Status and Policies, World Bank 2007  
<<http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1170911056314/3428109-1174614780539/PEACEClimateChange.pdf>>

Scoones, Ian, 'Sustainable Rural Livelihoods: A Framework for Analysis ' (IDS Working Paper 72 Institute of Development Studies 1998  
<[graduateinstitute.ch/.../Sustainable%20Rural%20Livelihoods%20-%20Sc..](http://graduateinstitute.ch/.../Sustainable%20Rural%20Livelihoods%20-%20Sc..)>

Siscawati, Mia, 'Underlying Causes of Deforestation and Forest Degradation in Indonesia: A Case study on Forest Fire' (Paper presented at the IGES International Workshop on Forest Conservation Strategies for the Asia and Pacific Region Hayama, Kanagawa, Japan ) 23 Jul , 1998<[enviroscope.iges.or.jp/modules/envirolib/upload/.../1ws-7-mia.pdf](http://enviroscope.iges.or.jp/modules/envirolib/upload/.../1ws-7-mia.pdf)>

Solesbury, William, 'Sustainable Livelihoods:A Case study of the Evolution of DFID Policy' (Working Paper Overseas Development Institute, June 2003. <<http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/172.pdf>>

Stockwell, Claire, Bill Hare and Kirsten Macey, 'Governing REDD: THE TDERM TRIPTYCH' (Paper presented at the Climate Law in Developing Countries Post-2012: North and South Perspectives, Ottawa, Canada, 26-28 September, 2008) <[www.iucnael.org/zh/.../doc.../264-stockwell-governing-redd-.html](http://www.iucnael.org/zh/.../doc.../264-stockwell-governing-redd-.html)>

Suryadi, Suhardi, 'Community Forestry Institutionalized:Never or Ever:The Community Forestry Program at Sesaot Village in Nusa Tenggara Barat Province of Indonesia' (Paper presented at the Enabling policy frameworks for successful community based resource management initiatives: Eighth workshop on community management of forest lands., Hawaii) 2001<<http://www2.eastwestcenter.org/environment/CBFM/Suhardi.pdf>>

Suryanti, Yulia, 'Indonesia's National Climate Change action Plan and MRV' (Paper presented at the 18th Asia Pacific Seminar: "Architecture of an Effective Future Regime, Hanoi ) 2-3 March 2009  
<[http://www.env.go.jp/en/earth/ap-net/documents/seminar/18th/2-5\\_Indonesia\\_Ms.YuliaSuryanti.pdf](http://www.env.go.jp/en/earth/ap-net/documents/seminar/18th/2-5_Indonesia_Ms.YuliaSuryanti.pdf)>

Tacconi, Luca, 'Fires in Indonesia: Causes, Costs and Policy Implementation ' (Occasional Paper No 38, CIFOR, 2003<[http://www.cifor.org/publications/pdf\\_files/OccPapers/OP-038.pdf](http://www.cifor.org/publications/pdf_files/OccPapers/OP-038.pdf)>

Tacconi, Luca, Frank Jotzo and R Quentin Garfton, 'Local Causes, Regional Cooperation and Global Financing for Environmental Problems: The case of Southeast Asian Haze Pollution ' (The Australian National University Economic and Environment Networking Paper 2006  
<[http://een.anu.edu.au/download\\_files/een0613.pdf](http://een.anu.edu.au/download_files/een0613.pdf)>

## **Reports**

Abberger, Hartmut M, Bradford M Sanders and Helmut Dotzauer, 'The Development of A Community-Based Approach for an Integrated Forest Fire Management System in East Kalimantan, Indonesia' (2002)

Achyar, Eris and Paul Kimman, Summary Report of Results and Achievements Land Use Planning (South Sumatra Forest Fire Management Project, 2007)

Agency, Ministry of National Development Planning/National Development Planning, Guideline for Implementing Green House Gas Emission Reduction Action Plan 2011 <<http://www.paklim.org/wp-content/uploads/downloads/2012/05/Guideline-for-the-implementation-of-GHG-emission-reduction-action-plan.pdf>>

Anderson, Ivan P and M Roderick Bowen, 'Fire Zone and the Threat to the Wetlands of Sumatera, Indonesia ' November 2000 <[http://www.phap.dephut.net/Halaman/Perlindungan%20Dan%20Konservasi/FFPCP/PDF/Firezone\\_and\\_the\\_threat\\_to\\_the\\_wetlands\\_of\\_Sumatra.PDF](http://www.phap.dephut.net/Halaman/Perlindungan%20Dan%20Konservasi/FFPCP/PDF/Firezone_and_the_threat_to_the_wetlands_of_Sumatra.PDF)>

Angelsen, Arild (ed), Moving Ahead with REDD Issues, Options and Implications (CIFOR, 2008)

Asia, Project Firefight South East and The Regional Community Forestry Training Center, 'Critical Elements in CBFiM: A Workshop to Further Define Community-Based Fire Management' (Report from Workshop 8 October 2003 <<http://www.myfirecommunity.net/discussionimages/NPost8217Attach1.doc>>

Bapennas, Rancangan Strategy Nasional REDD+ Revisi tanggal 18 November 2010 <[http://www.unredd.net/index.php?option=com\\_docman&task=doc\\_view&gid=7536&tmpl=component&format=raw&Itemid=53](http://www.unredd.net/index.php?option=com_docman&task=doc_view&gid=7536&tmpl=component&format=raw&Itemid=53)>

BAPPENAS, *Indonesia Climate Change Sectoral Roadmap - ICCSR Synthesis Report* <<http://bappenas.go.id/get-file-server/node/11431/>>

BAPPENAS, 'Planning for Fire Prevention and Drought Management Project' (Working Paper 1 Asian Development Bank(1998)

Bompard, Jean Marie and Phillipe Guizol, Land Management in the Province of South Sumatra , Indonesia. Fanning the Flames: The Institutional Causes of Vegetation Fires (European Union) Sep 15, 1999

Bowen, M.R. et al, Anthropogenic Fires in Indonesia: A View from Sumatera (Government Indonesia . (June 2000)

Caldecott, Julian et al, Indonesia Norway REDD + Partnership: First Evaluation of Deliverables, Gaia No (2011)

Cartin, Megan et al, Mekong River Basin Mobilising Grassroots Engagement and Facilitating High-Level Dialogue for Transboundary Water Management (IUCN, 2012)

Change, National Council on Climate, National Economic, Environment and Development Study (NEEDS) for Climate Change Indonesia Country Study, National Council on Climate Change Republic of Indonesia No (2009)

Chokkalingam, Unna and Suyanto, Fire Brief, Fire, Livelihoods and Environmental Degradation in the Wetlands of Indonesia: A Vicious Cycle CIFOR No (2004)

Chokkalingam, Unna and Suyanto, 'Summary of Workshop Results' 2004<[http://www.cifor.org/publications/pdf\\_files/Books/CChokkalingam0302E0.pdf](http://www.cifor.org/publications/pdf_files/Books/CChokkalingam0302E0.pdf)>

Consortium, CKKP, Provisional Report of the Central Kalimantan Peatland Project (CKKP Consortium, 2008)

Contreras-Hermosilla, Arnold and Chip Fay, Strengthening Forest Management in Indonesia through land tenure reform: Issues and Framework for Action (Forest Trends, 2005)

Currey, Dave et al, 'Above the Law Corruption, Collusion and Nepotism and the Fate of Indonesia's Forests' (Report Environmental Investigation Agency & Telapak Foundation, (2003) <<http://eia-global.org/news-media/above-the-law-corruption-collusion-nepotism-and-the-fate-of-indonesias-fore>>

Dutschke, Michael and Arild Angelsen, 'How Do We Ensure Permanence and Assign Liability' in Arild Angelsen (ed), Moving Ahead with REDD Issues, Options and Implications (CIFOR, 2008)

Environment, Ministry of, Case Study of Indonesian Efforts in Dealing with Transboundary Haze Pollution Caused by Forest and Land Fires  
<[cleanairinitiative.org/portal/sites/default/files/SP12\\_4.ppt](http://cleanairinitiative.org/portal/sites/default/files/SP12_4.ppt)>

Environment, Ministry of, Case Study of Indonesian Efforts in Dealing with Transboundary Haze Pollution Caused by forest and Land Fires 2006  
<[cleanairinitiative.org/portal/sites/default/files/SP12\\_4.ppt](http://cleanairinitiative.org/portal/sites/default/files/SP12_4.ppt)>

Environment, Ministry of, Fourth National Report The Convention on Biological Diversity, Ministry of Environment No (2009)

Environment, Ministry of, Indonesia Third National Report to CBD, Ministry of Environment No (2005 )

Environment, Ministry of, Indonesia-Singapore Collaboration to deal with the land and forest fires in Jambi Province 2008 <[haze.asean.org/docs/1272361130/Jambi+Collaboration.../view](http://haze.asean.org/docs/1272361130/Jambi+Collaboration.../view)>

Environment, State Ministry of, Summary for Policy Makers: Indonesia Second National Communication Under The United Nations Framework Convention on Climate Change (UNFCCC) (2009)

Environment, The Ministry of, 'Renstra 2010-2014 (Usulan Kegiatan Rencana Aksi Nasional Pengendalian Kebakaran Hutan dan Lahan serta Pencemaran Asap Lintas Batas' (2010)

FAO, Community Based Fire Management (CBFiM)  
<<http://www.fao.org/docrep/015/i2495e/i2495e02.pdf>>

FAO, Community- Based Fire Management A Review (FAO, 2011)

FAO, Fire Management Global Assessment 2006 A thematic study prepared in the framework of the Global Forest Resource Assessment 2005  
<<ftp://ftp.fao.org/docrep/fao/009/a0969e/a0969e00.pdf>>

FAO, 'Fire Management: Voluntary Guidelines Principles and Strategic actions' (Fire Management Working Paper No 17, FAO, (2006)  
<<http://www.fao.org/forestry/firemanagement/35853/en/>>

Fey, Chip, Review of Legal Frameworks for Community-Based Natural Resources Management in Selected Asian (World Agroforestry Center 2007)

Galudra, Gamma et al, Hot Spot of Emission and Confusion: Land Tenure Insecurity, Contested Policies and Competing Claims in the Central Kalimantan Ex-Mega Rice Project Area World Agro Forestry Center No (2010)

Ganz, David and Peter Moore, 'Living with Fire: Summary of Communities in Flames International Conference' in Peter Moore et al (eds), Communities in Flames: Proceeding of An International Conference on Community Involvement in Fire Management (Fire Fight South East Asia, 2002)

Ganz, David, Fisher R.J and P.F Moore, 'Further Defining Community Based Fire Management: Critical Elements and Rapid Appraisal Tools' (Paper presented at the Third International Wildland Fire Conference, Sydney, Australia) , 3–6 October 2003<<http://www.tssconsultants.com/Files/340.pdf>>

Ganz, David, Framing Fires: A Country by Country Analysis of Forest and Land Fires in the ASEAN Nations (Project FireFight South East Asia, 2002)

Ganz, David, Peter Moore and Dominique Reeb, Community-based Fire Management Case Studies from China, The Gambia, Honduras, India, Lao People's Democratic Republic and Turkey <<http://www.fao.org/docrep/006/AD348E/ad348e04.htm>>

(HABITAT, United Nations Center for Human Settlement, 'Inter-Agency Report on Indonesian Forest and Land Fires and Proposals for Risk Reduction in Human Settlements' June 2000<<http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=1861>>

Indonesia, Ministry of Forestry Republic of, Consolidation Report Reducing Emissions from Deforestation and Forest Degradation in Indonesia (2008)



Indonesia, Ministry of Forestry Republic of, National Strategy REDD in Indonesia Readiness Phase Draft August 2009  
<[www.dephut.go.id/.../REDDI\\_Strategy\\_draft%20August09\(english\)....](http://www.dephut.go.id/.../REDDI_Strategy_draft%20August09(english)....)>

Indonesia, State Ministry of Environment Republic of, National Action Plan Addressing Climate Change 2007<<http://www.uncsd2012.org/rio20/content/documents/Indonesia%20National%20Action%20Plan%20Addressing%20Climate%20Change.pdf>>

Indonesia, The Ministry of Environment Republic, Indonesia Second National Communication under the United Nations Framework Convention on Climate Change 2010<[http://unfccc.int/files/national\\_reports/non-annex\\_i\\_natcom/submitted\\_natcom/application/pdf/indonesia\\_snc.pdf](http://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/indonesia_snc.pdf)>

Indonesia, The Ministry of Forestry Republic and IFCA, REDD Implementation on Peatlands: Policy and Implementation Briefing Major Finding on REDD and Peatlands in Indonesia  
Indonesia, UN-REDD, UN-REDD Indonesia National Programme Final Evaluation Terms of Reference (February 2013) UN REDD Program

Inter-Agency Mission on Forest Fires and Human Settlements in Indonesia, June 2000,  
<[http://www.fukuoka.unhabitat.org/docs/project\\_reports/project\\_b/08/ForestFiresSum-e.htm](http://www.fukuoka.unhabitat.org/docs/project_reports/project_b/08/ForestFiresSum-e.htm)>

IPCC, Climate Change 2007: Working Group III: Mitigation of Climate Change IPCC

IPCC, Summary for Policy Makers in: Climate Change 2007: The Physical Science Basis (2007)

IUCN, UNEP and WWF, Caring for The Earth A Strategy for Sustainable Living (IUCN/UNEP/WWF, 1991)

Kanounnikoff, Sheila Wertz and Metta Kongphan apirak, Emerging REDD+ A Preliminary Survey of Demonstration and Readiness Activities, CIFOR No (2009)

Kharki, Sameer, Community Involvement in and Management of Forest Fires in South East Asia (PPFSEA, IUCN,WWF, 1986)

Komda REDD+, Strategy Daerah (Strada) REDD+ Provinsi Kalimantan Tengah (Komda REDD +, 2012)

M, Nicholas and Hairul Pansah, Summary Report of Result and Achievements, Fire Prevention and Suppression, (SSFFMP, 2007)

McCarthy et al, Origins and Scope of Indonesia's Decentralization laws. In Decentralization of Forest Administration in Indonesia. Implications for Forest Sustainability, Economic Development and Community Livelihood (CIFOR, 2006)

Metz, B et al (eds), Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge University Press, 2007)

Moniaga, Sandra, 'Advocating For Community Based Forest Management in Indonesia's Outer Islands: Political and Legal Constraints and Opportunities ', IGES International Workshop on Forest Conservation Strategies for the Asia and Pacific Region (IGES, 1998) 120

Morgera, Elisa and Maria Teresa Cirelli, Forest Fires and the Law A Guide for National Drafters Based on the Fire Management Voluntary Guidelines (Food and Agriculture Organization of the United Nations, 2009)

Mudiyarso, Daniel et al, Indonesia's Forest Moratorium A Stepping Stone to Better Forest Governance?, CIFOR No (2011)

Nellemann, Christian et al (eds), Rapid Response Assessment The Last Stand of Orang Utan State of Emergency: Illegal Logging, Fire and Palm Oil in Indonesia's National Park (UNEP/Grid Arendal, 2007)

OECD, OECD Reviews of Regulatory Reform INDONESIA Government Capacity to Assure High Quality Regulation (OECD, 2012)

Partnership, Australia Indonesia, Kalimantan Forests and Climate Partnership (KFCP) Design Document (Australia Indonesia Partnership 2009)

Peichert, Henrike, 'International Environment Governance' (Draft Report: Workshop Royal Institute of International Affairs 26 - 27 July 2007 <<http://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/260707ieg1.pdf>>

The Ramsar Secretariat, *The Ramsar Convention Manual: a Guide to the Convention on Wetlands* (Ramsar, Iran, 1971), 6th ed., 2013, p 1 < <http://www.ramsar.org/pdf/lib/manual6-2013-e.pdf>>.

RECOFTC, The Role of Social Forestry in Climate Change Mitigation and Adaptation in the ASEAN Region (2010)

Rhee, Steve et al, Report on Biodiversity and Tropical Forests in Indonesia USAID No (2004)

Secretariat, ASEAN, ASEAN Peatland Management Initiative (ASEAN, 2005)

Secretariat, ASEAN, ASEAN Peatland Management Strategy (ASEAN, 2007)

Secretariat, ASEAN, ASEAN Socio Cultural Community Blue Print 2009 <<http://www.asean.org/archive/5187-19.pdf>>

Secretariat, ASEAN, Guidelines for the implementation of Controlled Burning Practices (ASEAN, 2004)

Secretariat, ASEAN, Guidelines for the Implementation of the ASEAN Policy on Zero Burning (ASEAN, 2003)

Setyono, Djoko, Summary Report of Results and Achievements Community Development (SSFFMP, 2007)

Somehswar, Shiv, Rizaldi Boer and Esther Conrad, 'Managing Fire Risk in Central Kalimantan Indonesia ' (World Resources Report Case Study World Resource Report, <[http://www.wri.org/sites/default/files/uploads/wrr\\_case\\_study\\_managing\\_peatland\\_fire\\_risk\\_in\\_donesia.pdf](http://www.wri.org/sites/default/files/uploads/wrr_case_study_managing_peatland_fire_risk_in_donesia.pdf)>

Stephenson, Jim, Indonesia REDD+ Capacity Building Service Assessment (RECOFTC/UNEP/UN-REDD, 2012)

Supriadi, Dodi and Karl-Heinz Steinmann, Summary Report of Results and Achievements 2003-2007 (South Sumatra Forest Fire Management Project, 2007)

Suyanto, S, Grahame Applegate and Luca Tacconi, 'Community-based fire management, land tenure and conflict: Insights from Sumatera, Indonesia' in Peter Moore et al (eds), Communities in Flame: Proceedings of an International Conference on Community Involvement in Fire Management (FAO, 2002) 27

Tacconi, Luca, 'Fires in Indonesia: Causes, Costs and Policy Implementation ' (Occasional Paper No 38, CIFOR, 2003 <[http://www.cifor.org/publications/pdf\\_files/OccPapers/OP-038.pdf](http://www.cifor.org/publications/pdf_files/OccPapers/OP-038.pdf)>

Under The United Nations Framework on Climate Change (UNFCCC)' (Government Report 2010<[http://unfccc.int/files/national\\_reports/non-annex\\_i\\_natcom/submitted\\_natcom/application/pdf/indonesia\\_snc.pdf](http://unfccc.int/files/national_reports/non-annex_i_natcom/submitted_natcom/application/pdf/indonesia_snc.pdf)>

UNEP, Sustainable Use of Natural resources in Indonesia in the Context of Trade Liberalization and Export Growth in Indonesia, A Study on the Use of Economic instruments in the Pulp and Paper Industry 2005<<http://www.unep.ch/etb/publications/Indonesia.pdf>>

UNEP, Synergy and Cooperation A status Report on Activities promoting synergies and cooperation between Multilateral Environmental Agreements in particular biodiversity related conventions and related mechanism (UNEP 2004 )

Verchot, LouisV et al, Reducing Forestry Emissions in Indonesia CIFOR No (2010)

Wells, Philip and Gary Paoli, Key Address to The Business for The Environment Summit 28/04/2011, An analysis of Presidential Instruction No.10, 2011, Daemeter consulting No (2011)

### **Legislation and Regulations**

*Agriculture Law No. 18/2004* (Indonesia)

*Basic Agrarian Law (BAL) 1960* (Indonesia)

*Disaster Management Law No. 24/2007 (Indonesia)*

*Government Regulation No. 4/2001 concerning Control of Environment Degradation and/or Pollution Related to Forest and/or Land Fires (Indonesia)*

*Governor Regulation No. 52/2008 on the Guidance of Opening Lands and Yards for the Community in Central Kalimantan (Kalimantan Selatan (Indonesia))*

*Law No. 10/2004 concerning the Formulation of Laws and Regulations (Indonesia)*

*Law No. 5/1990 concerning Conservation of Living Resources and their Ecosystems (Indonesia)*

*Local Government Regulation Central Kalimantan No 5/2003 concerning Controlling Land/Forest Fires (Indonesia)*

*Mining Law No 4/2009 (Indonesia)*

*Ministry of Forestry Regulation No. P 68/Menhut-II/2008 (Indonesia)*

*Ministry of Forestry Regulation No. P 68/Menhut-II/2008 concerning Demonstration Activities (Indonesia)*

*Presidential Instruction No. 16/2011 concerning Improvement in Controlling Land/Forest Fires (Indonesia)*

*Presidential Regulation No 8/2008 concerning BNPB (Indonesia)*

*Presidential Regulation of the Republic of Indonesia No.61 Year 2011 on the National Action Plan for Greenhouse Gas Emissions Reduction (Indonesia)*

*The Law No 32/2004 on Local Government (Indonesia)*

*The Law No 41/1999 on Forestry (Indonesia)*

*The Law No. 32/2009 on Environment Protection and Management (Indonesia)*

*The Ministry of Forestry Regulation No. P12/Menhut-II/2009 on The Control of Forest Fires (Indonesia)*

### **Treaties, Declarations, Agreements, Accords**

*Agreement on the Conservation of Nature and Natural Resources Signed 9 July 1985, (not yet entered into force ) ('ACNRR')*

*ASEAN Cooperation Plan on Transboundary Pollution*, Kuala Lumpur, adopted June 1995, online: ASEAN website <<http://environment.asean.org/asean-cooperation-on-transboundary-haze-pollution/>>.

*ASEAN Agreement on Transboundary Haze Pollution*, (signed and entered into force 10 June 2002 and 25 November 2003)

*ASEAN VISION 2020*, signed 15 December 1997

*Cartagena Protocol on Biosafety to the Convention on Biological Diversity* (entered into force 29 January 2000)

*Convention on the Protection of the Marine Environment of The Baltic Sea Area*, signed 1974 (entered into force 3 May 1980) ('HELSINKI CONVENTION')

*Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters*, signed 25 June 1998 (entered into force 30 October 2001)

*Convention on Wetland of International Importance especially as Waterfowl Habitat*, Ramsar, Iran, 2 February 1971, came into force in 1975. <[http://www.ramsar.org/cda/en/ramsar-home/main/ramsar/1\\_4000\\_0\\_](http://www.ramsar.org/cda/en/ramsar-home/main/ramsar/1_4000_0_)>.

*Declaration of the United Nations Conference on the Human Environment*, 16 June 1972, ('Stockholm Declaration')

*Directive 2004/35/CE of the European Parliament and of the Council 2004*

*Kyoto Protocol to the United Nations Framework Convention on Climate Change*, opened for signature 11 Desember 1997, (entered into force 15 February 2005)

*Manila Declaration* adopted Manila, 30 April 1981 <<http://environment.asean.org/manila-declaration-on-the-asean-environment/>>.

*Protocol to The 1979 Convention on Long-Range Transboundary Air Pollution To Abate Acidification, Eutrophication and Ground-Level Ozone*, signed 30 November 1999

*Regional Haze Action Plan*, Adopted in Singapore, 23 December 2007, online: ASEAN Website <<http://haze.asean.org/info/history-rhap>>.

*Resolution on Environment and Development*, signed in Singapore 18 February 1992 <<http://environment.asean.org/resolution-on-environment-and-development-2/>>.

*Rio Declaration on Environment and Development*, UN Doc E.73.II.A 14 (3–14 June 1992) art 11.

*Singapore Declaration 1992* signed in Singapore on 28 January 1992 <<http://environment.asean.org/resolution-on-environment-and-development-2/>>.

*The Singapore Resolution on Environment and Development (1992)*

*The ASEAN Declaration on Environmental Sustainability* (2007)

*The Convention on Biological Diversity* (CBD), signed 5 June 1992, (entered into force 29 December 1993)

*The Kuala Lumpur Accord on Environment and Development* signed 19 June 1990,

*The United Nations Convention to Combat Desertification* (UNCCD), adopted June 1994 (entered into force 26 December 1996)

*The United Nations Framework Convention on Climate Change* (UNFCCC) signed June 12, 1992, (entered into force 21 March 1994)

*Treaty of Amity and Cooperation in Southeast Asia*, adopted, Indonesia, 24 February 1976. <<http://www.asean.org/news/item/treaty-of-amity-and-cooperation-in-southeast-asia-indonesia-24-february-1976-3>>

UNECE, *The Convention on Long-Range Transboundary Air Pollution*, signed 13 November 1979, (entered into force 16 March 1983)

## **Newspapers**

Agence France Presse, Indonesia Set to Ratify Haze Treaty by Early 2014, *Jakarta Globe*, 17 July 2013, <<http://www.thejakartaglobe.com/news/indonesia-set-to-ratify-haze-treaty-by-early-2014/>>

Afrida, Nani, 'President Calls for Better Synergy to Meet Climate Change Target', *The Jakarta Post*, 10 January 2011 <<http://www.thejakartapost.com/news/2011/10/01/president-calls-better-synergy-meet-climate-change-targets.html>>

Aritonang, Margaret S, RI Ratifies Haze Treaty, *The Jakarta Post*, 17 September 2014, <<http://www.thejakartapost.com/news/2014/09/17/ri-ratifies-haze-treaty.html>>

Baradan Kuppusamy, 'Skies Free of Haze but Burning Need to Solve Problem of Annual Fires Remains', *The Star Online* (Kuala Lumpur 15 July, 2013) <[www.thestar.com.my](http://www.thestar.com.my/News)> News>

'Dinanti, UU Kebakaran Hutan', *Kompas* (Jakarta) 6 September 2011 <<http://oase.kompas.com/read/2011/09/06/0342080/Dinanti.UU.Kebakaran.Hutan>>

Dukung KPK dalam Pengusutan Mafia Perizinan di Kalimantan Tengah', *Banjarmasin Post*, 2 March 2011 <[http://www.koranpagonline.com/index.php?option=com\\_content&view=article&id=1271:dukung-kpk-dalam-pengusutan-mafia-perizinan-di-kalteng&catid=79:borneo&Itemid=422](http://www.koranpagonline.com/index.php?option=com_content&view=article&id=1271:dukung-kpk-dalam-pengusutan-mafia-perizinan-di-kalteng&catid=79:borneo&Itemid=422)>

Goh Chin Lian, ASEAN Haze Watch System “Delayed by Others”, *The Strait Times Singapore*, March 7, 2007 <<http://www.straittimes.com/the-big-story/asia-report/health-environment/story/asean-haze-watch-system-delayed-others-20140306>>.

Hasnita A Majid, 'Haze Back in Singapore as 50 Hot spots Detected in Sumateras Appear Hands Off ', *Channel News Asia*, 6 September 2009  
<<http://wildsingaporenews.blogspot.com.au/2009/08/haze-back-in-singapore-as-50-hot-spots.html#.UeUxpI2XR8E>>

Martin Abbugao, ASEAN Urges Indonesia to Ratify Haze Fact, *Foxnews*, June 30, 2013, <<http://www.foxnews.com/world/2013/06/30/asean-urges-indonesia-to-ratify-haze-pact>>/

No Civil Suits for haze pollution:Official, *The Jakarta Post*, 11 August 2014, <<http://www.thejakartapost.com/news/2014/08/11/no-civil-suits-haze-pollution-official.html>>

Nur Aini, DPR Tunda Ratifikasi Perjanjian Kabut Asap, *Tempo*, 15 October 2006, <<http://www.tempo.co/read/news/2006/10/15/05586097/DPR-Tunda-Ratifikasi-Perjanjian-Kabut-Asap>>

Pitakasari, Ajeng Ritzki, 'Draft Inpres dinilai tak hentikan Deforestasi 7,5 Juta Ha Hutan Alam', *Republika* 9 February, 2011< [www.republika.co.id/.../163171-draf-inpres-dinilai-tak...](http://www.republika.co.id/.../163171-draf-inpres-dinilai-tak...)>

Rio+20 'Future We Want' Draft Text - Exclusive Copy of the Document', *Guardian* 19 June 2012<<http://www.guardian.co.uk/environment/2012/jun/19/rio-20-future-we-want-draft-text>>

Sari, Agus P, 'Agenda in Doha', *The Jakarta Post* (Jakarta), 30 November 2012 <<http://www.thejakartapost.com/news/2012/11/30/redd-agenda-doha.html>>

Satriastanti, Fidelis E., 'Fires to Clear Forests still Vogue in Indonesia', *Jakarta Globe* (Jakarta), 27 August, 2012. <<http://www.thejakartaglobe.com/nvironment/fires-to-clear-forests-still-in-vogue-in-indonesia/540463>>

Simamora, Adianto P, 'No Amdal No Coal Mining in Kalimantan: Ministry', *Jakarta Post* (Jakarta), 26 January 2010 <<http://www.thejakartapost.com/news/2010/01/26/no-amdal-no-coal-mining-kalimantan-ministry.html>>

Simanjuntak, Yeni, 'Mentan: Stop Pemberian Izin Pengolahan Lahan Gambut', *Bisnis Indonesia*

## **Websites**

Agren, Christer, *Long Range Transboundary Air Pollution Encyclopedia of Life Support Systems* <<http://www.eolss.net/Sample-Chapters/C14/E1-44-02-08.pdf>>

Angela Dewan, Indonesia Struggles to clean up corrupt forestry sector, *AFP*, 1 January 2014, <<http://phys.org/news/2014-01-indonesia-struggles-corrupt-forestry-sector.html>>.

ASEAN, *ASEAN Agreement on Transboundary Haze Pollution* <<http://haze.asean.org/hazeagreement/>>

ASEAN, *Controlled Burning* <[haze.asean.org/docs/1094633658/Controlled+Burning+01.pdf/view](http://haze.asean.org/docs/1094633658/Controlled+Burning+01.pdf/view)>

ASEAN, *Overview* <<http://www.asean.org/asean/about-asean>>

ASEAN, 'The ASEAN Agreement on Transboundary Haze Pollution' (Press Release, 11 June 2002) <[http://www.fire.uni-freiburg.de/iffn/iffn\\_31/14-IFFN-31-ASEAN-Agreement-2.pdf](http://www.fire.uni-freiburg.de/iffn/iffn_31/14-IFFN-31-ASEAN-Agreement-2.pdf)>

Bank, World, *Preliminary Assessment of the State of AMDAL* <<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/INDONESIAEXTN/0,,contentMDK:20821202~menuPK:382288~pagePK:1497618~piPK:217854~theSitePK:226309,00.html>>

Best, Edward, *Supranational Institutions and Regional Integration* <<http://www.eclac.cl/brasil/noticias/paginas/2/22962/BEST-SUPRANATIONAL%20INSTITUTIONS%20AND%20REGIONAL%20INTEGRATION.pdf>>

Butler, Rhett, *Indonesia Corruption Legacy Clouds a Forest Protection Plan* <[http://e360.yale.edu/feature/indonesias\\_corruption\\_legacy\\_clouds\\_a\\_forest\\_protection\\_plan/2353/](http://e360.yale.edu/feature/indonesias_corruption_legacy_clouds_a_forest_protection_plan/2353/)>

Caldecott, Julian et al, *Indonesia-Norway REDD+ Partnership: First Evaluation of Deliverables* <[www.unredd.net/index.php?option=com\\_docman&task=doc...](http://www.unredd.net/index.php?option=com_docman&task=doc...)>

Chavez, Gus Silva, 'REDD + Almost the Finish Line: Doha Preview' on *EDF Talks Global Climate* (21 November 2012 ) <<http://blogs.edf.org/climatetalks/2012/11/21/redd-almost-at-the-finish-line-doha-preview>>

Clough, Greg and Jeff Haskins, *New Report Warns Failure to Understand Root Causes of Deforestation Imperils New Efforts to Curb Forest-Based Carbon Emissions* CIFOR <<http://www.cifor.org/mediamultimedia/newsroom/press-releases/new-report-warns-failure-to-understand-root-causes-of-deforestation-imperils-new-efforts-to-curb-forest-based-carbon-emissions.html>>

Convention on Biological Diversity, *Expanded Programme of Work on Forest Biological Diversity*, <<http://www.cbd.int/forest/PE1.shtml>>.

Currey, Dave et al, 'Above the Law Corruption, Collusion and Nepotism and the Fate of Indonesia's Forests' (Report Environmental Investigation Agency & Telapak Foundation, <<http://eia-global.org/news-media/above-the-law-corruption-collusion-nepotism-and-the-fate-of-indonesias-fore>>



Denmark, Ministry of Foreign Affairs of, '*Community -Based Natural Resource Management*' (Technical Note Danida, <<http://curis.ku.dk/ws/files/33236991/Technicalnotemarts2007CommunityBasedNaturalResourceManagement.pdf>>

Desk, The REDD, *Draft National REDD Strategy for Indonesia*<[http://www.theredddesk.org/plan/draft\\_national\\_redd\\_strategy\\_for\\_indonesia](http://www.theredddesk.org/plan/draft_national_redd_strategy_for_indonesia)>

Development, International Bank for Reconstruction and and The World Bank, 'The International Workshop on Community Based Natural Resources Management' (Paper presented at the International CBNRM Workshop, Washington DC, 10-14 May 1998) <[http://info.worldbank.org/etools/docs/library/97605/conatrem/conatrem/documents/May98Workshop\\_Report.pdf](http://info.worldbank.org/etools/docs/library/97605/conatrem/conatrem/documents/May98Workshop_Report.pdf)>

DPR, Komisi VII Setujui RUU Persetujuan ASEAN tentang Pencemaran Asap Lintas Batas, 3 September 2014, <http://www.dpr.go.id/id/berita/komisi7/2014/sep/03/8652/komisi-vii-dpr-setujui-ruu-persetujuan-asean-tentang-pencemaran-asap-lintas-batas>

Efficiency, Australia Government Department of Climate Change Energy and, *Indonesia-Australia Forest Carbon Partnership* <<http://www.climatechange.gov.au/government/initiatives/international-forest-carbon-initiative/~media/publications/international/indonesia-australia.pdf>>

Environment, Ministry of, *Indonesia-Singapore Collaboration to Deal with the Land and Forest Fires in Jambi Province* <[haze.asean.org/docs/1272361130/Jambi+Collaboration.../view](http://haze.asean.org/docs/1272361130/Jambi+Collaboration.../view)>

Fact Sheet Norway-Indonesia Partnership REDD+, <<http://www.norway.or.id/PageFiles/404362/FactSheetIndonesiaGHGEmissionMay252010.pdf>>

Genderen, Wanda Troszczynska-Van and Valerie Ramet, 'Much a do about Nothing: The Rio+20 conference' European Union, <<http://www.europarl.europa.eu/committees/es/deve/studiesdownload.html?languageDocument=EN&file=74811>>

Goh Chin Lian, ASEAN Haze Watch System "Delayed by Others", *The Strait Times Singapore*, March 7, 2007 <<http://www.straitstimes.com/the-big-story/asia-report/health-environment/story/asean-haze-watch-system-delayed-others-20140306>>.

Guy W Cole, *et al*, *The Neglected Greenhouse Source: Curbing Emissions from Uncontrolled Coal Fires through Carbon Credit Sales*, policy report from the Environmental Policy Workshop, Spring (2008). ONLINE:<[test.publicpolicy.umd.edu/.../...](http://test.publicpolicy.umd.edu/.../...)>

Issue, ITS Global Consultants on Global, *The Economic Contribution of Indonesia's Forest Based Industries Annex: The Impact of Campaigns Against Indonesia's Forest Sector* <[http://www.itsglobal.net/sites/default/files/itsglobal/120111\\_ITS\\_ECON\\_REPORT\\_ANNEX.1.pdf](http://www.itsglobal.net/sites/default/files/itsglobal/120111_ITS_ECON_REPORT_ANNEX.1.pdf)>

Kalbar, Rumah Hijau, '*Ancaman Pembukaan Hutan Gambut untuk Perkebunan Sawit*' on (26 August 2010) <[http://walhiwestborneo.blogspot.com.au/2010/08/ancaman-pembukaan-hutan-gambut-untuk\\_26.html](http://walhiwestborneo.blogspot.com.au/2010/08/ancaman-pembukaan-hutan-gambut-untuk_26.html)>

Karyaatmadja, Basoeki, *Indonesia Law and Forest Tenure*  
<[http://www.rightsandresources.org/documents/files/doc\\_1767.pdf](http://www.rightsandresources.org/documents/files/doc_1767.pdf)>

Kato, Kazu and Yohei Harashima, *Improving Environment Governance in Asia A Synthesis of Nine Country Studies* (IGES, 2000)

Krantz, Lasse, 'The Sustainable Livelihood Approach to Poverty Reduction An Introduction' Swedish International Development Cooperation Agency,  
<[http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans\\_asset\\_202603.pdf](http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans_asset_202603.pdf)>

Krantz, Lasse, 'The Sustainable Livelihood Approach to Poverty Reduction An Introduction' Swedish International Development Cooperation Agency,  
<[http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans\\_asset\\_202603.pdf](http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans_asset_202603.pdf)>

Lang, Chris, *New CIFOR Report Points out the Flaws in Indonesia's Forest Moratorium*  
<<http://www.redd-monitor.org/2011/11/01/new-cifor-report-points-out-the-flaws-in-indonesias-forest-moratorium/>>

Lang, Chris, *On the Eve of Logging Moratorium, Indonesia's Ministry of Forestry issued Almost Three Million Hectares of Concessions* <<http://www.redd-monitor.org/2011/01/26/on-the-eve-of-the-logging-moratorium-indonesias-ministry-of-forestry-issued-almost-three-million-hectares-of-concessions/>>

Lang, Chris, *Rio + has Nothing to Say on REDD (and not much on anything else)* (21 June 2012 )  
<<http://www.redd-monitor.org/2012/06/21/rio-20-has-nothing-to-say-on-redd-and-not-much-on-anything-else>>

Lang, Chris, *This Project has been a Total Failure," says Australian Senator Christine Milne about the Kalimantan Forests and Climate Partnership* (4th June 2012) <<http://www.redd-monitor.org/2012/06/04/this-project-has-been-a-total-failure-says-australian-senator-christine-milne-about-the-kalimantan-forests-and-climate-partnership>>

Lang, Winfrid, *UN-Principles and International Environmental Law*  
<[http://www.mpil.de/shared/data/pdf/pdfmpunyb/lang\\_3.pdf](http://www.mpil.de/shared/data/pdf/pdfmpunyb/lang_3.pdf)>

Letter of Intent between the Government of the kingdom of Norway and the Government of the Republic of Indonesia on Cooperation on REDD,  
<[http://www.unorcid.org/upload/doc\\_lib/Norway-Indonesia-LoI.pdf](http://www.unorcid.org/upload/doc_lib/Norway-Indonesia-LoI.pdf)>

Lynch, O.J., 'Law, Pluralism and the promotion of Sustainable Community-based Forest Management' (1998) 49 *Unasylva* 194

*Mawas Peatlands Conservation Area Project*, <<http://redd-database.iges.or.jp/redd/download/project?id=13>>

May-Ann, Tay and Lim, 'Assessment and Overview: ASEAN and Regional Involvement of Civil Society' (Paper presented at the ASEAN Secretariat (ASEC) Symposium on Methods of Stakeholder Engagement in Regional Organisations, Jakarta, 23 to 25 November 2009) <<http://library.fes.de/pdf-files/bueros/indonesien/07912.pdf>>

Merang REDD Pilot Project, <<http://redd-database.iges.or.jp/redd/download/project?id=59>>  
Merriam-webster, Definition of Integration <<http://www.merriam-webster.com/dictionary/integration>>

Mongabay, Norway: *Indonesia's Forest Moratorium isn't Enough to Meet Emissions Reduction Target* (23 May 2012) <<http://news.mongabay.com/2012/0523-norway-indonesia-moratorium.html>>

*Moratorium on Granting of New Licenses and Improvement of Natural Primary Forest and Peatland Governance* <[http://www.daemeter.org/wp-content/files/Daemeter\\_Moratorium\\_Analysis\\_20110527\\_FINAL.pdf](http://www.daemeter.org/wp-content/files/Daemeter_Moratorium_Analysis_20110527_FINAL.pdf)>

Morrisey, Lily, *Seeing Redd in Indonesia Climate Spectator* <<http://www.climatespectator.com.au/commentary/seeing-redd-indonesia>>

*Network, Community-Based Natural Resource Management*, <[http://cbtnrm.net/resources/terminology/terms\\_cbtnrm.html](http://cbtnrm.net/resources/terminology/terms_cbtnrm.html)>

Network, Global Restoration, *Case Study Detail, Indonesia Central Kalimantan Restoration Project* <<http://www.globalrestorationnetwork.org/database/case-study/?id=252>>

News, *International Forest Fires, Community-Based Fire Management: The South Kalimantan Experience* <[http://www.fire.uni-freiburg.de/iffn/country/id/id\\_36.htm](http://www.fire.uni-freiburg.de/iffn/country/id/id_36.htm)>

Nilsson, Sten and David Pitt, *Protecting the Atmosphere The Climate Change Convention and its Context* (1994)

Norway Embassy, *Indonesia Launched Multidoor Approach to address Natural Resources – Related Crimes*, 29-5-2013, <[http://www.norway.or.id/Norway\\_in\\_Indonesia/Environment/Indonesia-Launched-Multidoor-Approach-to-Address-Natural-Resources-related-Crimes-/#.U-maToFdW8A](http://www.norway.or.id/Norway_in_Indonesia/Environment/Indonesia-Launched-Multidoor-Approach-to-Address-Natural-Resources-related-Crimes-/#.U-maToFdW8A)>.

'Norway Hopes to Unlock Climate Cash to Fight Tropical Deforestation', *Guardian* (UK), 26 May 2010 <<http://www.unep.org/cpi/briefs/2010May27.doc>>

Novaeny Wulandary, UKP4: *Segera Data Kepemilikan Lahan dan Hutan di Riau*, *PortalKBR*, 28 June 2014, <[http://www.portalkbr.com/berita/nasional/3300093\\_4202.html](http://www.portalkbr.com/berita/nasional/3300093_4202.html)>.

online, Haze action, *ASEAN's Response* <<http://haze.asean.org/info/history-response>>

Online, Haze, *Indonesia-Malaysia Collaboration to Deal with the Land and Forest Fires in Riau Province* <<http://haze.asean.org/info/indo-my>>

Organization, ASEAN Law, *Legal System*  
<<http://www.aseanlawassociation.org/papers/LegalSystem.pdf>>

Parrish, Austin L, 'Sovereignty's Continuing Importance? Traces of Trail Smelter In The International Law Governing Hazardous Waste Transport' (2005/2006) [Transboundary Harms in International Law: Lessons from the Trail Smelter Arbitration (Rebecca Bratspies & Russel Miller eds)]

Partnership, Australia-Indonesia, Kalimantan Forests and Climate Partnership (KFCP) Design Document <[http://www.ausaid.gov.au/Publications/Pages/7610\\_8464\\_9778\\_3906\\_689.aspx](http://www.ausaid.gov.au/Publications/Pages/7610_8464_9778_3906_689.aspx)>

Peace, Green, Bad Influence How McKinsey Inspired Plans Lead to Rainforest Destruction  
<[http://www.greenpeace.org/belgium/Global/belgium/report/2011/Greenpeace\\_BadInfluence\\_Report.PDF](http://www.greenpeace.org/belgium/Global/belgium/report/2011/Greenpeace_BadInfluence_Report.PDF)>

Poffenberger, Mark and Kathryn Smith Hanssen, Forest Communities and REDD Climate Initiatives <<http://www.eastwestcenter.org/sites/default/files/private/api091.pdf>>

Prodi, Romano, 'Europe and Global Governance' (Speech delivered at the 2nd COMECE Congress, Brussels, 31/03/2000)

Program, Forest Peoples, Pusaka and Yayasan Petak Danum Kalimantan Tengah, Central Kalimantan: REDD+ and the Kalimantan Forest Carbon Partnership (KFCP)  
<<http://www.forestpeoples.org/sites/fpp/files/publication/2011/10/central-kalimantan-briefing-2.pdf>>

Rhodes, R.A.W, 'Unitary State ' (Pt Elsevier) (2002 ) International Encyclopedia of the Social & Behavioural Sciences

Schevyvens, Henry and Agus Setyarso, Development of a National REDD-Plus System in Indonesia IGES <<http://redd-database.iges.or.jp/redd/download/link?id=2>>

Secretariat, ASEAN, ASEAN Socio Cultural Community Blue Print  
2009<<http://www.asean.org/archive/5187-19.pdf>>

Severino, Rodolfo C, 'Regional Integration in Europe and Asia: Past, Presents and Futures' (Speech delivered at the The joint conference of INSEAD and the Asia-Europe Foundation Singapore, 7-8 July 2003)

Stern, STERN Review: The Economics of Climate Change 2006<[http://www.hm-treasury.gov.uk/d/Executive\\_Summary.pdf](http://www.hm-treasury.gov.uk/d/Executive_Summary.pdf)>

Tahilramani, Yogita, 'Indonesia and the Redd+ at Doha: Moving Beyond Carbon to Sustainable Development' on Forest News CIFOR (27 November 2012)

<<http://blog.cifor.org/11903/indonesia-and-redd-at-doha-moving-beyond-carbon-to-sustainable-development/#.ULgxYN5Fsa4>>

Takver, REDD Forestry Practices Under Fire –Forest Carbon Storage and Indigenous People  
<<http://www.climateimc.org/en/original-news/2011/01/28/redd-forestry-practices-under-fire-forest-carbon-storage-and-indigenous>>

TAY, Simon S.C. (ed), Fires and Haze in Southeast Asia (Japan Center for International Exchange 2002)

Team, MRPP, Merang REDD Pilot Project (MRPP) Approach to Reduce Illegal Logging at South Sumatra, Indonesia <<http://www.asiaforests.org/media/document/afp9/WG2%20-%20Karl-Heinz%20Steinmann%20-%20GTZ.pdf>>

UP4 Anti Corruption, Causes of Corruption in Indonesia, <[www.u4.no/publications/causes-of-corruption-in-indonesia/.../2890](http://www.u4.no/publications/causes-of-corruption-in-indonesia/.../2890)>

UNEP, *Training Manual on International Environmental Law*  
<[http://www.unep.org/environmental-governance/Portals/8/documents/training\\_Manual.pdf](http://www.unep.org/environmental-governance/Portals/8/documents/training_Manual.pdf)>

UNDP, UN REDD Programme, Participatory Governance Assessment : The 2012 Indonesia Forest, Land, and REDD+ Governance Index, UNDP Indonesia 2013 , 27  
<<http://www.undp.org/content/dam/indonesia/docs/envi/PGA%20Report%20English%20Final.pdf>>

Wang, Charleston C.K, 'Legal Pluralism in Indonesia: Anachronism or an Idea whose Time has Come?' on <<http://www.wanglaw.net/files/indonesia1.pdf>>

Wells, Philip and Gary Paoli, An Analysis of Presidential Instruction No. 10, 2011 Moratorium on Granting of New Licenses and Improvement of Natural Primary Forest and Peatland Governance  
[http://www.daemeter.org/wp-content/files/Daemeter\\_Moratorium\\_Analysis\\_20110527\\_FINAL.pdf](http://www.daemeter.org/wp-content/files/Daemeter_Moratorium_Analysis_20110527_FINAL.pdf)

Widyaningtyas, Novia, 'Indonesia's REDD+ : Framework and Experience Towards Good Governance' (Paper presented at the National Inception Workshop on REDD +: Building Capacity for Decision Makers and the way forward, Kuala Lumpur, 13 -14 February 2012. )  
<[http://www.undp.org.my/files/editor\\_files/files/PDF%20presentations/Microsoft%20PowerPoint%20-%20202INDON~1.pdf](http://www.undp.org.my/files/editor_files/files/PDF%20presentations/Microsoft%20PowerPoint%20-%20202INDON~1.pdf)>

World Bank, *Different Forms of Decentralization*,  
<[http://www.ciesin.org/decentralization/English/General/Different\\_forms.html](http://www.ciesin.org/decentralization/English/General/Different_forms.html)>

Yudhoyono, Susilo Bambang, 'Intervention on Climate Change ' (Speech delivered at the G-20 Leaders Summit, Pittsburgh USA, 25 September 2009) <<http://forestclimatecenter.org/files/2009-09-25%20Intervention%20by%20President%20SBY%20on%20Climate%20Change%20at%20the%20G-20%20Leaders%20Summit.pdf>>

WHO, *Emergency and Humanitarian Action Country Report, Indonesia*, (2010) 53.  
<[http://www.searo.who.int/LinkFiles/EHA\\_CP\\_Indonesia.pdf](http://www.searo.who.int/LinkFiles/EHA_CP_Indonesia.pdf)>.

## **Interviews**

Nurhidayah, Laely, Interview with Unjung, Secretary of Village Tanjung Taruna Village (Tanjung Taruna village, 20 September 2013)

Nurhidayah, Laely, Interview with Junaidi, Secretary of BNPB (Palembang, South Sumatera, 13 September 2012)

Nurhidayah, Laely, Interview with Mursid Marsono, Head of Provincial Environmental Protection Agency of Central Kalimantan/Member of Provincial REDD+ Commission (Palangkaraya, 19 September 2012)

Nurhidayah, Laely, Interview with Syahrir, Head of Village (Jabiren Village, 20 September 2012)

Nurhidayah, Laely, Interview with Sidik R Usop, Vice Dean I of the Political Science Faculty, the University of Palangka Raya (UNPAR) (Palangkaraya 19 September 2012)

Nurhidayah, Laely, Interview with Purna, Staff in BKSDA South Sumatera Province (Palembang 11 September 2012)

Nurhidayah, Laely, Interview with Hasanuddin, the Head of Operational Section of UPTD Penanggulangan Kebakaran Hutan dan Lahan (Palembang, 13 September 2012)

Nurhidayah, Laely, Interview with Deni, Local People (Taruna Village Palangkaraya, 20 September 2012)

Nurhidayah, Laely, Interview with Bihokda, Secretary at Provincial Forest Agency of Central Kalimantan (Palangkaraya, 19 September 2012 )

Nurhidayah, Laely, Interview with Aswin Usup, Head of Central Kalimantan Peatlands Project (CKKP) UNPAR (Palangkaraya)

Nurhidayah, Laely, Interview with Asok, Local People (Pilang Village 20 September 2012)

Nurhidayah, Laely, Interview with Arie Rompas, Executive Director of Walhi Central Kalimantan (Palangkaraya 17 September 2012)

Nurhidayah, Laely, Interview with Adi Suseno, Official at Provincial Forest Agency of Central Kalimantan (Palangkaraya 20 September 2012)

Nurhidayah, Laely, Interview with Achmad Taufik, Head of UPTD Pengendalian Kebakaran Hutan dan Lahan South Sumatera Province (Palembang 11 September 2012)

## **Thesis**

Siry, Hendra Yusran, *Making Decentralized Coastal Zone Management Work in Indonesia: Case Studies of Kabupaten Konawe and Kabupaten Pangkajene and Kepulauan* Australian National University, 2009)

Techera, Erika, *Law, Custom and Conservation: The Role of Customary Law in Community-Based Marine Management* in the South Pacific Macquarie University, 2009)

## **United Nations Documents**

*Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries*, 53rd session, UN Doc A/56/10 (2001).

Kyoto Protocol to The United Nations Framework Convention on Climate Change, adopted in Kyoto, Japan, on 11 December 1997, entered into force on 16 February 2005, article 2 (1) (a) (iii).

Report of the World Commission on Environment and Development, 42nd sess, Agenda item 83(e), UN Doc A/42/427 (4 August 1987).

'Report of the International Law Commission on the Work of its Forty-Seventh Session' (2 May–21 July 1995) [1995] II(2) Yearbook of the International Law Commission.

*Responsibility of States for Internationally Wrongful Acts*, 56/83, 53rd session, UN Doc A/56/49 (Vol. I)/Corr. 4 (2001).

*Statute of the International Law Commission* 1947

UNFCCC (COP 11), *Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action Submissions from Parties*, 11th sess, Agenda Item 6 of the provisional agenda (2005).

UNFCCC, Decision -/CP.13: *Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action* (2007).

UNFCCC (COP 15), Draft Decision -/CP.15: Proposal by the President Copenhagen Accord, FCCC/CP/2009/L.7, 15th sess, Agenda Item 9 (18 December 2009).

UNFCCC Decision 1/CP.16: Appendix I: *Guidance and Safeguards for Policy Approaches and Positive Incentives on Issues Relating to Reducing Emissions from Deforestation and Forest Degradation in Developing Countries; and the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries*, FCCC/CP/2010/7/Add.1 (15 March 2011).

UNFCCC (COP 16), Decision 4/CP.15: *Methodological Guidance for Activities Relating to Reducing Emissions from Deforestation and Forest Degradation and the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries*, FCCC/CP/2009/11/Add.1 (2009).

UNFCCC (COP 16), Decision 1/CP.16: *The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long Term Cooperative Action under the Convention*, FCCC/CP/2010/7/Add.1 (2010) para 70.

UNFCCC, *Report of The Conference of the Parties on the Second Part of its Sixth Session*, held at BONN from 16 TO 27 July 2001, FCCC/CP/2001/5,

United Nations, *Draft principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, with commentaries*, 58th session, UN Doc A/61/10 (2006).

United Nations, *International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law*, Agenda Item 3, UN Doc A/CN.4/481 and Add.1 (14 April and 6 May 1997)

United Nations, *Report of the International Law Commission on the work of its forty-seventh session*, 2 May -21 July 1995, Official Records of the General Assembly, Fiftieth session, Supplement No.10, A/50/10,

World Commission on Environment and Development, *Our Common Future*, Decision 14/14 of the Governing Council, (16 June 1987)

### **Cases (Indonesia)**

- Rawa Tripa Case (Ministry of Environment v PT Kalista Alam) ) in District Court of Meulaboh 2012(2012) No 12/PDT.G/2012/PN-MBO.
- Eksponen 66 dkk v APhi dkk in the district court of Medan in 1998 (District Court of Medan No 425/Pdt.G/1997/PN.Mdn 15 Juni 1998).
- *PT ADEI Plantation v KLH* (2013) Court file No PDM-79/PKL.CI/12/2013.
- PT Adei Plantation in District Court of Bangkinang (Court Decision No 19/Pid-B/2001/PN.BKN, 1 October 2001)