

Building resilient tourism destination futures in a world of uncertainty

Assessing destination vulnerability in Khao Lak, Patong and Phi Phi Don, Thailand to the 2004 Tsunami

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Abstract

The vulnerability of tourism destinations to compounding shocks and stressors is an ongoing concern for researchers, industry stakeholders, and local operators. The impact of the 2004 tsunami on the three Thai tourism destinations of Khao Lak, Patong, and Phi Phi Don, serves as a striking reminder of the vulnerability of tourism-dependent destination communities. However, the causal factors contributing to destination vulnerability are under-researched and there are few theoretical parameters for assessing destination vulnerability. To redress these fundamental gaps, this thesis:

- i. combines theoretical advances from vulnerability approaches, resilience thinking, sustainability science, and tourism studies with geographical theories of place, scale and time to develop a new and innovative Destination Sustainability Framework; and
- ii. applies this framework to guide a case-study based comparative destination vulnerability assessment (DVA) of the tsunami-affected destinations of Khao Lak, Patong, and Phi Phi Don to better understand destination vulnerability and its evolution in different places and developmental contexts.

The findings from this thesis indicate that destination vulnerability is created and perpetuated by a combination of multiple, dynamic, and interacting factors, including geographical exposure, destination-specific development characteristics, social structures, and governance processes. Underlying these factors and processes are competing stakeholder agendas and actions, historically-embedded cultural norms, institutional preferences, and power structures that entrench and perpetuate unequal access to resources, all of which play out at multiple scales of social organisation. But most importantly, this thesis demonstrates that context matters; it is how the factors combine in a particular place-based setting that matters the most in determining destination vulnerability.

Through the unique combination of current systems approaches with geographical theories of relational scale, place and time, this thesis makes several important empirical and conceptual contributions to the analysis of vulnerability in the context of sustainable tourism development.

Candidate's statement

This work has not been submitted for a higher degree to any other university or institution. Ethics approval for this research was obtained from the Macquarie University Ethics Review Committee (Reference: HE24NOV2006-D04943)

Emma Calgaro

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As the last words are written, the spelling and formatting re-checked, the mind turns to the journey, the triumphs and the deepest lows, all of which have played a part in getting me to this point. To now.

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List of Acronyms

ADB	Asian Development Bank
ADPC	Asian Disaster Preparedness Centre
AICST	Asia-Pacific Economic Community International Centre for Sustainable Tourism
AIT	Asian Institute of Technology
APEC	Asia-Pacific Economic Corporation
APELL	Awareness and Preparedness for Emergencies at Local Level
ATRC	Andaman Tsunami Relief Centre
ATRP	Andaman Tourism Recovery Plan
AusAid	Australian Agency for International Development
BBC Framework	Bogardi Birkmann Cardona Framework
BOT	Bank of Thailand
BSAC	British Sub Aqua Club
CBO	Community-based Organisation
CCT	Chaos-complexity Theory
CMAS	World Underwater Federation
CR	Critical Realism
CULT	The Credit Union League of Thailand
DART	Deep Ocean Assessment and Reporting of Tsunamis
DANIDA	Danish International Development Agency
DASTA	Designated Areas of Sustainable Tourism Administration
DPTCP	Department of Public Works and Town and Country Planning
DDPM	Department for Disaster Prevention and Mitigation
DFID	UK Department for International Development
DSF	Destination Sustainability Framework
DVA	Destination Vulnerability Assessment
ECOT	Employers Confederation of Thailand
EIA	Environmental Impact Assessment
EPA	Environmental Protected Area
ETC	Ecotourism Training Centre
EWS	Early Warning System
FGD	Focus Group Discussion
FTUB	Federation of Trade Unions of Burma
GDP	Gross Domestic Product
GSB	Government Savings Bank

Hi Phi Phi	Help International Phi Phi
HREIB	Human Rights Education Institute of Burma
IBLF	International Business Leaders Forum
IEE	Initial Environmental Examination
IFRC	International Federation of Red Cross and Red Crescent Societies
ILO	International Labour Organisation
IOM	International Organisation for Migration
IPCC	Intergovernmental Panel on Climate Change
ITB	Internationale Tourismus Börse Berlin
kPa	kilopascals
KTA	Krabi Tourism Association
LTU	Lufttransport-Unternehmen GmbH
MAP Foundation	Foundation for the Health and Knowledge of Ethnic Labour
MLR	Minimum Loan Rate
mm	millimetres
MONRE	Department of Coastal and Marine Resources
MoTS	Ministry of Tourism and Sports
NAUI	National Association of Underwater Instructors
NDWC	National Disaster Warning Centre
NGO	Non-Governmental Organisation
NOAA	US National Oceanic and Atmospheric Administration
ONEP	Office of Natural Resource and Environmental Policy and Planning
PADI	Professional Association of Diving Instructors
PAO	Provincial Administrative Office
PAP	Phuket Action Plan
PAR Model	Pressure and Release/Access Model
PATA	Pacific Asia Travel Association
PFHLS	Phuket Federation of Hotel and Labour Services
PNTA	Phang Nga Tourism Association
PPGA	Phuket Professional Guide Association
PPTC	Phi Phi Tourism Club
PRC	Phuket Recovery Centre
PTA	Phuket Tourism Association
PTRMS	Phuket Provincial Tourism Risk Management Strategy
PTSD	Post-traumatic Stress Disorder
RC	Reinforced concrete
RTF	Raks Thai Foundation
RTG	Royal Thai Government
SARF	Social Amplification of Risk Framework
SEI	Stockholm Environment Institute
SL Framework	Sustainable Livelihoods Framework

SME	Small and Medium Enterprise
SMF	Swedish Microcredit Foundation
SMS	Short Message Service
SRDP	Sub-regional Development Plan for the tsunami affected Andaman Region
SRSA	Swedish Rescue Service Agency
SNV	Netherlands Development Organisation
TAG	Tsunami Action Group for Migrants
TAO	Tambon Administration Organisation
TAT	Tourism Authority Thailand
THB	Thai Baht
TUI AG	Touristik Union International Aktiengesellschaft
TVC	Tsunami Volunteer Centre
UN	United Nations
UNDP	United Nations Development Program
UNDP-GEF	United Nations Development Program Global Environment Facility
UNEP	United Nations Environment Program
UN-WTO	World Tourism Organisation
USD	United States dollars
US-IOTWS	U.S. Indian Ocean Tsunami Warning System Program
UTC	Coordinated Universal Time

Glossary of key terms and concepts

There are numerous definitions for each of the key terms that are used throughout this thesis, some of which are very contentious. However, the definitions listed below are those that have been adopted for the purposes of this thesis.

Adaptation: adaptation encompasses a dynamic set of decisions and decision-making processes along with corresponding actions that are undertaken to maintain a household's, population's or system's capacity to deal with future changes to a socio-ecological system without losing function, structure, and identity (Nelson et al., 2007).

Adaptive capacity: the preconditions that are necessary to enable a system to adapt to disturbances and are determined by the set of available resources, social structures, and human agency (Nelson et al., 2007).

Community: a discrete bounded spaces populated by people with shared social networks and/or modes of expression and identity (see Johnston, 2000a; Pain et al., 2001).

Destination vulnerability: destination vulnerability refers to the vulnerability of destination communities that host and deliver the tourist experience in a given place. Destination vulnerability includes more than the vulnerability of the industry sector. Destination vulnerability sees the industry as part of a wider system that spans destinations, tourist supply countries and the various businesses that promote and compile tour packages and those that transport tourists to destinations (Calgaro et al., 2009b).

Disaster: a disaster is a complex, place-oriented product of a hazardous event and the historical outcomes of socio-political and economic forces (distinct from environmental forces) that have shaped societal structures and society's capacity to respond effectively to the hazard (Wisner et al., 2004). Disasters occur when a significant number of vulnerable people experience a hazard (or series of hazards) and sustain severe damage to their livelihoods and social system to such an extent that recovery is improbable without external aid (Wisner et al., 2004).

Exposure: the degree to which an exposure unit (who or what) comes into contact with stressors or shocks (Clark et al., 2000).

Exposure unit: any system, sub-system, population, group, household that may be vulnerable to a shock or stressor. Exposure units include identifiable assemblages of people and things people value and need to be clearly bounded in space and time (Polsky et al., 2007: 477)

Hazard: a potential threat to humans and their welfare (Smith, 1995: 6).

Human-environment system: the term coupled human-environment system acknowledges the fact that humans, as users, actors and managers of the biophysical environment in which we live are not detached from it but are co-creators of our environment and its evolution over space and time (Schröter et al., 2004). Recognising that human activity and biophysical processes are inextricably linked demands that equal attention in sustainability research be given to how society shapes the environment and how environmental change shapes society (Clark and Dickson, 2003).

Human security: human security in relation to global environmental change is defined as the condition whereby individuals and communities a) have the options necessary to mitigate and adapt to risks to their human, environmental, and social rights, b) have the capacity and freedom to exercise these options, and c) actively participate in attaining these options (GECHS, 1999).

Power: the term power is a contentious term but is used here to mean influence and can be expressed in two ways: a) power as an inscribed capacity within a social context which can be used by an individual, network or organisation to control or manipulate the actions of others; and b) power as an autonomous resource or „power to“ that is used by an individual to pursue and achieve goals (see Allen, 1997; Galtung, 1973; Howitt, 2001; Johnston, 2000b).

Resilience: the capacity of a system to absorb disturbance and reorganise throughout volatile periods of change whilst retaining function, structure and identity (Folke, 2006; Walker et al., 2004).

Risk: the calculated likelihood of an event or change taking place and negatively impacting an exposure unit resulting from a decision or course of action (Smith, 1995; Smith, 2000a).

Sensitivity: the degree to which a household or group are affected by exposure to any set of stresses (Clark et al., 2000).

Shocks: rapid onset events which evolve largely outside the location in question (Turner et al., 2003).

Social-ecological system: a system that includes societal (human) and ecological (biophysical) subsystems in mutual interaction (Berkes and Folke, 2000).

Stressors: slow-onset events that are often manifestations of human-environment interactions and place increasing pressure on the localised system over time (Turner et al., 2003).

Surprise: a function of uncertainty and unpredictability, surprise refers to any discontinuity between social or ecological processes and the processes and events that were expected to occur (Kates and Clark, 1996; Nelson et al., 2007).

Sustainability: viewed as as a dynamic journey and pathsustainability is defined as the improvement of the quality of human life while living within the carrying capacity of supporting eco-systems so that the ability of future generations to meet their own needs is not compromised (IUCN et al., 1991; World Commission on Environment and Development, 1987).

System adaptiveness: a dynamic state in which a population or system is effective in responding to environmental change that incorporates adaptive capacity, short-term responses to an event, and longer-term adjustments and adaptation responses (adapted from Nelson et al., 2007).

Systems approach: inclusive in nature, systems approaches characteristically look at all the components that make up a system, analyse the functionality of each component, and explores the dynamics of their interdependency along with the causal relationships and the feedback consequences of change (see Hay, 2006).

Tipping point: a tipping point or threshold refers to a breakpoint between two regimes of a system (Walker and Meyers, 2004). It is the critical point in an evolving situation that, once breached, leads to a new and irreversible shift in the system brought about by the destabilisation and collapse of the existing regime.

Uncertainty: the possibility of more than one outcome resulting from a particular course of action, whereby the form of each possible outcome is known but the chance or probability of one particular outcome being unknown (Smith, 2000b: 863).

Vulnerability: the degree to which an exposure unit [human groups, ecosystems and communities] is susceptible to harm due to exposure to a perturbation or stress, and the ability (or lack thereof) of the exposure unit to cope, recover, or fundamentally adapt (Kasperson et al., 2001: 7).