Linking Corporate Social Responsibility, Tourism and Climate Change to Build Tourism Community Adaptive Capacity to Climate Change in Bali

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Abstract

The emerging body of literature has reported the impact of climate change on tourism destination. Although it is recognized that tourism-dependent destination communities will be heavily affected by climate change, very little research has been undertaken in developing countries. Moreover, our understanding of how CSR of tourism businesses plays a role in building community adaptive capacity to climate change remains limited. To address these fundamental gaps, this thesis:

i. Combines theoretical advances from climate change, CSR and adaptive capacity research to develop a conceptual framework; and
ii. Uses this framework to guide a case study to allow a better understanding of how CSR practices can enhance tourism community adaptive capacity to climate change.

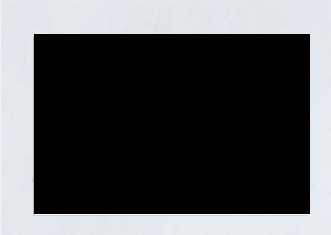
This research takes a qualitative case study approach. A total of 14 semi-structured interviews and two focus group discussions were conducted with Bali tourism stakeholders including businesses, government, community and non-profit organizations.

The key findings of this study can be divided into two parts. The first part is the development of a conceptual framework on CSR, tourism and climate change. The proposed framework provides a tool that assists researchers to understand the tourism sector's vulnerability to climate change and develop mitigation and adaptation measures through CSR initiatives. The second part provides some empirical findings: (1) Bali tourism and communities are already impacted by climate change through sea-level rise, frequent storms, floods, landslides and water shortage during the dry season; (2) Some of the tourism businesses in Bali have provided respectable examples on how the tourism industry can integrate CSR obligation to tackle climate change; (3) Harmonizing CSR and mitigation and adaptation strategies can build community adaptive capacity, (4) Government's role is important in harnessing CSR initiatives to achieve greater positive impact for the community to enhance its adaptive capacity to climate change.

Declaration

I, Putu Indah Rahmawati, declare that the PhD thesis entitled *Linking Corporate Social Responsibility, Tourism and Climate Change to Build Tourism Community Adaptive Capacity to Climate Change in Bali* is no more than 100,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Signature



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Publications Associated with This Thesis

The research undertaken as part of this thesis has resulted in several publications including:

Conference Papers:

- Rahmawati, DeLacy & Jiang. (2015). A Conceptual Framework to Link Corporate Social Responsibility and Climate Change Strategies in Tourism to Build Community Adaptive Capacity. In *Proceedings of the 25th Annual CAUTHE [Council for Australasian University Tourism and Hospitality Education] Conference held in Southern Cross University, Gold Coast, 2-5 February 2015:302-3013.* Australia: School of Business and Tourism, Southern Cross University.

- Law, A., Rahmawati, P.I., &DeLacy, T., (2016). "Spirituality and corporate social responsibility in tourism: a view from lesser developed countries". Presentation at BEST EN Think Tank XVI: Corporate Responsibility in Tourism - Standards, Practices and Policies, July 12-15, Berlin, Germany. Retrieved from: http://www.besteducationnetwork.org/14566

Book Chapter:

Rahmawati, P. I., DeLacy, T., & Jiang, M. (2016). Harmonising CSR and Climate Change Mitigation and Adaptation Strategies to Build Community Adaptive Capacity in Bali's Tourism Sector. *Corporate Social Responsibility in the Hospitality and Tourism Industry*, 247. Retrieved from: https://scholar.google.com.au/scholar?cluster=4975102491394001588&hl=en&as_sdt=0,5

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List of Acronyms

ASITA	Associations of Indonesian Tours and Travel Agencies
AR5	The Fifth Assessment Report
Bali-HESG	Bali Human Ecology Study
BAPPENAS	The Ministry of National Development Planning
BAU	Business as Usual
BIRU	Biogas Installation for Communities in Indonesian
BPS	Badan Pusat Statistik [Central Bureau of Statistics]
BPPD	Badan Penanggulan Bencana Daerah [Regional Disaster Management Agency]
BSR	Baltic Sea Region
BTB	Bali Tourism Board
CBA	Community-Based Adaptation
CBNRM	Community-Based Natural Resource Management
CDM	Clean Development Mechanism
CFP	Corporate Financial Performances
CSR	Corporate Social Responsibility
DDRM	Disaster Risk Reduction and Mitigation
EBM	Ecosystem-Based Management
EMS	Environmental Management System
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GRI	The Global Reporting Initiatives
HER	Hilton Environmental Reporting
HHHL	Highest High Hazard Level
ICCSR`	Indonesia Climate Change Sectoral Roadmap
IHRA	Indonesian Hotel and Restaurant Association
IISP	International Institute for Sustainable Development

ISO	International Standard Organisation
IPCC	Intergovernmental Panel on Climate Change
KTO	Korean Tourism Organisation
MDG	Millennium Development Goal
NAMA	Nationally Appropriate Mitigation Actions
NGO	Non-Profit Organisation
PUTRI	Tourists Attraction Organisations
PAWIBA	Bali Tourism Transportation Association
PATA	Pacific Asia Travel Association
RAN-GRK	The National Action Plan of Greenhouse Gas Emissions Reduction
RAN-API	Indonesia National Action Plan on Climate Change Adaptation
REDD	Reduction of Emissions from Deforestation and Forest Degradation
RENAMA	The Renewable Energy NAMA
ROA	Return on Asset
RPJM	Mid-Term Development Plan
RPJP	Long-Term Development Plan [henceforth,
RPJMD	Rencana Pembangunan Jangka Menengah Daerah [Medium Term Development Plan]
SDGs	Sustainable Development Goals
SFM	Sustainable Forest Management
SIPCO	Society of Indonesian Professional Convention Organisers
SES	Sociological Ecology System
SET	Stock Exchange of Thailand
SMAEs	Small and Medium Accommodation Enterprises
SMEs	Small and Medium Enterprises
SLR	Sea Level Rise
SUTRI NAMA	The Sustainable Urban Transport Program Indonesia
TAR	Third Assessment Report
TDRs	Tourist Destination Regions
TGRs	Tourist Generating Regions
TTRs	Transit Route Region

UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNDIKSHA	Universitas Pendidikan Ganesha (Ganesha University of Education)
UNFCCC	United Nations Framework Convention on Climate Change
UK	United Kingdom
WEF	World Economic Forum
UNWTO	United Nations World Tourism Organisation
WBCSD	World Business Council for Sustainable Development
WWF	World Wildlife Fund
WMO	World Meteorological Organization
WTTC	World Travel and Tourism Council

Glossary of Key Terms and Concepts

The definitions listed below are those that have been adopted for the purposes of this thesis.

Adaptation: local or community-based adjustments to deal with changing conditions within the constraints of broader economic-social-political arrangements (Smith & Wandel, 2006, p. 289)

Adaptive Capacity: the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunity, or to cope with the consequences (IPCC, 2007, p. 869).

Adaptive Capacity to Climate Change: the conditions that a system can deal with, accommodate, adapt to, and recover from the impact of climate change (Smith & Wandel, 2006, p. 287).

Climate Change: the mean and range of variability of natural factors such as temperature, rainfall and wind speed (Garnaut, 2008, p. 27)

Corporate Social Responsibility (CSR): the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society (WBCSD, 2000, p. 8).

Mitigation: reducing GHG emissions built up in the atmosphere, which can be done by: using renewable energy, reducing energy use, and carbon sequestration (Becken & Hay 2012).

Prologue

As a reader, you may be asking the question why I choose Bali as a case study and climate change as my topic. Apart from the fact that Bali is a famous tourist destination and highly vulnerable to the impact of climate change, the following will provide a clarification of this title choice.

I choose Bali as a case study because I am from Bali. My family and close relatives are frequently impacted by extreme weather because we live in a coastal area. A few year ago, giant waves damaged my relative's houses and forced them to move to new places. Again, giant waves damaged houses and buildings in the coastal area in June 2016. Moreover, rains often cause flooding and landslides in Bali. This week (mid-February 2017), my own house was damaged by flood due to heavy rains. The main road connecting the north and south of Bali was covered with soil which automatically disturbed tourism activities in the island. At least 12 people died because of these floods and landslide. This strengthens my argument in this thesis that building community adaptive capacity to climate change is important. Building society awareness on climate change and how to adapt is important because the weather is becoming more severe year by year. The IPCC (2013) projected that extreme weathers and climate events will increase both in frequency and intensity. Thus, my family, relatives, friends and all people who live in Bali are at risks.

Tourism as the leading economic sector in Bali is expected to participate to build community awareness to climate change through its CSR initiatives. The tourism industry has the economic capacity to invest in environmental management and use CSR funding to build community resilience to climate change. Several empirical examples are elaborated in this thesis on how CSR of tourism businesses can build community adaptive capacity to climate change. However, government support is needed in harnessing CSR initiatives at the destination level for a greater positive impact for the local community.

I personally hope that all tourism businesses in Bali can be actively involved in building community adaptive capacity to climate change through their CSR initiatives by supporting local environmental initiatives such as: reforestation, coral reef conservation, waste management and build awareness of climate change risks.

1 INTRODUCTION

“Weather can ruin a holiday, climate can ruin a destination”

(Scott & Gössling, 2012, p. 189)

1.1 Introduction

The occurrence of extreme weather observed by scientists since the 1950s has confirmed that the change in the climate system is unequivocal (IPCC, 2013). Climate change is threatening humanity worldwide, including the tourism sector, which is heavily reliant on the nature of the climate (United Nations World Tourism Organization and United Nations Environment Programme [UNWTO & UNEP] 2008; World Economic Forum [WEF] 2009; Scott et al. 2012; Gössling et al. 2013; Hall et al. 2013). There is a growing body of literature that recognises the impact of climate change on tourist destinations and on the host community (Becken & Hay, 2007; Scott et al. 2012; Gössling et al. 2013). However, despite a rapid expansion in the literature on tourism and climate change (Scott & Matthews, 2011; Scott et al. 2012), there is insufficient information on efforts to enhance adaptive capacity of local communities to climate change. This research begins with the argument that building community adaptive capacity to climate change is important because the consequences of climate changes are felt at local levels.Saavedra and Budd (2009, pp.250) argue that “in order to be successful in dealing with climate change it is necessary to consider that mitigation and adaptation strategies should be focused on increasing the capacity of communities to adapt and live with change and surprises”.

As the tourism sector contributes to increasing Greenhouse Gas (GHG) emissions into the atmosphere (UNWTO & UNEP 2008; WEF 2009; Scott et al. 2012), there is growing expectation that the industry should take responsibility to address climate change as part of their Corporate Social Responsibility (CSR). The importance of CSR in tackling local and global environmental problems, including climate change, has been reported by Bohdanowicz (2007). She reported that the Hilton Environmental Reporting (HER) system is an effective tool for measuring and monitoring a firm’s environmental initiatives as well as being a tool for successful implementation of CSR. Similarly, Sheldon and Park

(2011)argue that CSR plays an important role in answering environmental degradation issues, climate change and social and human rights issues. The range of CSR strategies and their impacts on company performance has been well documented in the tourism literature (de Grosbois, 2011; Henderson, 2007; Kabir, 2011; Kang, Lee, & Huh, 2010; Sheldon & Park, 2011; Williams, Gill, & Ponsford, 2007). However, there is relatively little explicit research that has examined the extent to which the CSR of the tourism industry addresses climate change (Wall, 2008). None have sought to link CSR initiatives and climate change mitigation and adaptation strategies within the tourism industry to building community adaptive capacity.

With Bali as a case study, this thesis aims to better understand how best to link climate change mitigation and adaptation strategies, tourism, and CSR to building community adaptive capacity. The findings of this study are expected to contribute not only to the CSR and climate change literature, but also to provide strategic insights and recommendations for managers and policy makers to better implement CSR strategies in promoting climate change mitigation and adaptation practices within both organisations and communities. The logic for this study along with the research aims and objectives are outlined in this introductory chapter.

1.2 Rationale and Knowledge Gap

Climate change is arguably one of the most significant, controversial global issues facing humanity and the earth's ecosystems. The fifth assessment report of the Intergovernmental Panel on Climate Change (IPCC) provides the newest forecast on global climate conditions, noting that by the end of the twenty-first century, the world will face serious problems due to the following projections: snow cover and sea ice in both polar regions are expected to shrink; extreme weather will frequently occur and natural weather disasters will threaten humanity due to more intense cyclones, hurricanes, and typhoons; and, there are very likely to be increases in precipitation at high latitude and, conversely, decreases in precipitation in subtropical latitude land areas (IPCC, 2013). The global sea levels are

likely to rise more than 1 metre by the year 2100 if the GHG emissions are not mitigated (IPCC, 2013; Becken & Hay, 2012).

Moreover, in terms of the monetary cost of climate change, Stern (2007, p. 161) reported that:

> most formal modelling has used a starting point of 2-3◦C warming. In this temperature range, the cost of climate change could be equivalent to around a 0-3% loss in global GDP from what could have been achieved in a world without climate change.

Moreover, this report argues that under "business as usual (BAU)", temperatures may exceed 2-3 degrees by the end of this century and may lead to an average reduction in global per capita consumption of 5% at a minimum. This report clearly argues that the poorest countries will bear the brunt of the impact of climate change. Similarly, Jiang and DeLacy (2014) reported that Pacific countries are highly vulnerable to the impacts of climate change and that such negative impacts may lead to their failure in achieving the Millennium Development Goal (MDG) standards.

The tourism industry's dependence on climate makes it vulnerable to climate change. Climate change might force a down turn in snow tourism due to unreliable snow cover (Anthony & Anthony, 2009; Ceron & Dubois, 2005; Nicholls & Amelung, 2008; Steiger & Stotter, 2013; Valls & Sarda, 2009; Yeoman, 2006). Climate change may also threaten coastal tourism due to rising sea levels, coral bleaching, and frequent and more severe storms (Anthony & Anthony, 2009; Jones & Phillips, 2011; Moreno & Amelung, 2009; Perch-Nielsen, 2010; Scott, Simpson, & Sim, 2012; Sundaresan, 2013; Turton, Hadwen, Wilson, & Cooperative Research Centre for Sustainable Tourism, 2009). Moreover, Scott, Gössling, and Hall (2012) argue that international tourism is also impacted by the changes in tourists' seasonal demands and international mitigation policy, as will be discussed in this and subsequent chapters.

The IPCC's fifth Assessment Report (AR5) provides a new projection of future climate events globally (IPCC, 2013). The frequency and intensity of extreme weather is projected

to increase with more intense cyclones, hurricanes, and typhoons. The catastrophic impact of the Haiyan Typhoon in the Philippines in 2013 can give a clear, albeit extreme, illustration of how humanity can be impacted by climate change. Therefore, delay in acting will put the earth at risk of irreversible damage. Moreover, this thesis argues that action at the grassroots level is vital to make impacted and threatened destinations more resilient to climate change.

However, the tourism sector is not only a victim of climate change; it is also a significant contributor. Patterson, Bastianoni and Simpson name the relationship between tourism and climate change as a "two-way street" (2006, p.341). The tourism industry discharges CO2 emissions and other greenhouse gases into the atmosphere from international flights, local transport at host destinations and varying tourism activities (Mendes & Santos, 2008; Scott et al., 2008; Scott, Gössling et al., 2012). According to the World Economic Forum (WEF), Travel and Tourism (including Aviation) contribute up to 5% of the global GHG emissions and this is predicted to increase by 5% annually (UNWTO, 2007; UNWTO & UNEP 2012). This percentage is increasing and, according to the WEF, the tourism industry might contribute 3164 Mt CO2 by 2035 (Scott & Gossling, 2012). If the tourism industry is a significant contributor to climate change, then the industry should take responsibility for being part of the solution.

Two strategies have been designed and implemented to tackle climate change problems: mitigation and adaptation (Axel, Doris, Rasmus, Hubert, & Frauke, 2013; Becken & Hay, 2012; Parry et al., 2007; Scott et al., 2008; Scott, Hall, & Gossling, 2012). Mitigation involves reducing GHG emissions to minimise the changes to the climate, whilst adaptation involves increasing the ability to cope with hazards, thus reducing vulnerability to climate change impacts.

The World Tourism Organization (UNWTO) through the Davos Declaration calls for the tourism industry to mitigate GHG emissions, adapt to climate change, improve use of technology and secure financial support to help developing countries (UNWTO, 2007). Additionally, UNWTO called on tourism companies, government, communities and tourists to reduce their carbon footprint through "the World Ethics Code for Tourism" (http://ethics.unwto.org/content/global-code-ethics-tourism, 2013). In a similar vein, the

International Standard for CSR, called ISO 26000, obliges businesses to implementappropriate mitigation and adaptation strategies to tackle the climate change problem (International Standards Organization［ISO］, 2010).

Sheldon and Park (2011) contend that CSR plays an important role in answering environmental degradation issues, climate change, and social and human rights issues. Despite the growing literature on CSR, tourism, and climate change, little literature has reported how to link and harmonise CSR strategies and climate change mitigation and adaptation strategies to build community adaptive capacity. “Adaptive capacity is a relatively under-researched topic within the sustainability science and global change communities” (Engle, 2011, p.647). This thesis uses Bali as a case study to fill the gap. The reason for choosing Bali as a case study is established below.

Bali is a small island that is highly vulnerable to climate change impacts. The IPCC (2007) stated with very high confidence - at least a 90% chance of being correct - that small islands are “especially vulnerable to the effects of climate change, sea-level rise, and extreme events” (p. 689) due to several country characteristics such as being exposed to the sea and being on low lying land. Additionally, Mason (2012) argues that the over-dependence of Bali on the tourism industry may lead to an economic crisis in the future. According to Bali Tourism Satellite Account 2007, tourism in Bali contributes more than 40% of the gross domestic product of this province (Badan Pusat Statistik [BPS] and Department of Culture and Tourism [DCT], 2009).As most people in Bali work directly or indirectly in the tourism industry, the impact of climate change on the tourism sector will automatically put entire communities in a vulnerable position.

1.3 Aim of the Study, Research Objectives and Research Questions

The rationales and gaps in the literature that were identified in Section 1.2 led to the central research question – How can CSR build community adaptive capacity to climate change in Bali? To achieve this aim and to provide further guidance for analysis undertaken

throughout this research, two objectives were formulated, followed by more specific research questions addressing each of these objectives. These are:

Research Objective 1: Develop a theoretical framework that allows a better understanding of how CSR practices can enhance tourism community adaptive capacity to climate change.

Research Question:

1a. How much do we already knowabout CSR initiatives and their links to mitigation and adaptation strategies in the tourism sector?

1b. What key components should a framework include that can allow us to better understand how mitigation and adaptation strategies can be integrated in CSR initiatives to build community adaptive capacity to climate change?

Research Objective 2: Use this framework as a tool to guide the investigation and assessment on current CSR practices in Bali, and based on the assessment, to inform future development.

Research Question:

2a. To what extent do we understand the interaction between climate change and Bali tourism system?

2b. To what extent do CSR activities addressclimate change mitigation and adaptation initiatives?

2c. To what extent do CSR activities build community adaptive capacity to climate change?

2d. What are the challenges and strategies for harnessing CSR initiatives for greater positive impact at the destination level?

Further information about the research questions, methods used to gather the data and rationale for choosing the method can be found in Table 1.1.

Table 1.1: Research framework

Research Objectives	What information is needed?	How information is gathered?	Why the method is appropriate	Thesis chapter
1. Develop a theoretical framework that allows a better understanding of how CSR practices can enhance tourism community adaptive capacity to climate change.	1) How much do we already know about CSR initiatives and their links to mitigation and adaptation strategies in the tourism sector?	Literature review	It is pivotal to review existing literature, find the commonalities, the differences and knowledge gaps. Methodologies used by previous researchers guide this study to use an appropriate research method.	2
	2) What key components should a framework include that can allows us to better understand how mitigation and adaptation strategies can be integrated in CSR initiatives to build community adaptive capacity to climate change?	Literature review		3 and 4
2. Use this framework as a tool to guide the investigation and assessment on current CSR practices in Bali, and based on the assessment, to inform future development.	1) To what extent do we understand the interaction between climate change and the Bali tourism system?	Analysis of secondary data In-depth interview Observations noted in field diaries Focus group discussion (FGD)	Not all the government policies, CSR initiatives are documented; therefore, analysis of secondary data is not enough. In-depth interviews, observations and FGDs help in capturing relevant information in achieving research objectives.	5
	2) To what extent do these CSR address climate change mitigation and adaptation initiatives?			6
	3) To what extent do CSR activities build community adaptive capacity to climate change?			7
	4) What are the challenges and strategies for harnessing CSR initiatives for greater positive impact at destination level?			8

Note. Table is adapted from Hancock and Algozzine (2006, p. 58) and Klint (2013, p. 31)

1.4 Significance of the Research

A specific review of climate change adaptation in the tourism sector has been done by Kajan and Saarinen (2013). The following are the key findings of their study: (1) the majority of the research focuses on how tourism businesses adapt to climate change challenges; (2) despite the growing literature regarding the tourists' responses to the changes in climate, the behaviour of future tourists remain unknown; (3) developing countries remain very marginal in terms of the tourism and adaptation topics, with the majority of research discussing developed countries; (4) in terms of policy and framework, they suggest that the climate change research in tourism and adaptation should expand from market-led and business-driven research to community centred adaptation research. Similarly, a systematic review of 459 academic publications by Becken (2013) concluded that: (1) the main themes of the research are impacts and adaptation, mitigation and policy; (2) geographically, research on tourism and climate change is centred on western world tourism destinations, such as Canada, Australia, US, UK, New Zealand, Austria and Switzerland. Research from developing countries is still very limited. The research presented in this thesis fills some of these gaps.

Moreover, a review of CSR literature in Chapter 2 found that most the research is conducted by quantitative methods. Research in the field of CSR with a qualitative approach is limited. Aguinis and Glavas (2012) argue that qualitative approaches can be a fruitful research agenda to uncover what CSR can do for communities and to build a better world. Additionally, most CSR literature is more concerned with environmental responsibility; little research has been undertaken to address social responsibility. This argument is supported by Cowper-Smith and de Grosbois (2010, p. 72), who clearly mention that the "majority of the analysed reports heavily focus on the environmental dimension of CSR and provided less detail regarding the social and economic dimensions". Therefore, this thesis will contribute in filling this knowledge gap to further investigate how the local community could tackle climate change risks and how tourism businesses can build the adaptive capacity of their host community through their CSR initiatives.

The research not only contributes to theoretical knowledge, but also has practical implications. Firstly, it provides a framework suitable for tourism businesses to use CSR as a means for tackling climate change risks and enhancing community adaptive capacity. Secondly, it explores empirical evidence to show how tourism managers can harmonise their

CSR initiatives with climate change mitigation and adaptation strategies for their own business advantages as well as enhancing community adaptive capacity as part of their responsibility as a good citizen. Thirdly, this research brings together different stakeholders in the tourism sector who can develop strategies for expanding the adaptive capacity of the local community to climate change at the destination level.

1.5 Structure of the Thesis

This thesis aims to bring together current understanding on climate change and CSR in the tourism literature and then highlight the role of CSR in enhancement of community adaptive capacity. The thesis is structured into nine chapters.

Chapter 1 introduces the rationale behind this study. Table 1.1 has been designed to provide visual illustration of this research framework.

Chapter 2 provides an overview of the current literature relevant to the study, covering aspects such as CSR frameworks, CSR initiatives, climate change mitigation and adaptation strategies, and community adaptive capacity.

Chapter 3 provides an overview of the methodological design that was applied to this research. This chapter starts out by explaining the research paradigm adopted by this study and then discussing the methodology applied in this research. This includes the data collection, collation, analysis and interpretation.

Chapter 4 reviews the existing frameworks in the CSR, tourism and climate change literature and then develops a conceptual framework that allows a better understanding of how CSR practices can enhance tourism community adaptive capacity to climate change.

Chapters 5 to 8 present the elements of the empirical study to test the conceptual framework developed in Chapter 4.

The scenarios developed by the IPCC are used as a starting point in Chapter 5 and then followed by exploring the views of tourism stakeholders on climate change impacts on tourism in Bali. Future risks of climate change and its impact on the tourism industry in Bali

are also discussed. Chapter 5 also examines government and community initiatives to respond to climate change.

Given that tourism is one of major contributors to GHG emission in Bali, Chapter 6 discusses this sector's response to climate change. This chapter focuses on phase two of the proposed framework which is about understanding how CSR initiatives can be harmonised with climate change mitigation and adaptation strategies.

Chapter 7 assesses the role of CSR in building tourism community adaptive capacity to climate change. This chapter contributes to developing the understanding of how adaptive capacity is developed by CSR initiatives of the tourism industry. Some examples are provided from the tourism industry in Bali to illustrate how CSR enhances community adaptive capacity.

Based on the case study in Bali, Chapter 8 reflects on the research findings to determine what has been done and what need to be done to address climate change risks. Empirical data on challenges in building community adaptive capacity to climate change are presented and followed by some strategic recommendations to address those challenges.

This thesis concludes by presenting a summary of the key findings and explicating the contribution to knowledge made by this study. This chapter also discusses the limitations of the study and identifies opportunities for future research as well as suggesting practical recommendations to government and tourism managers.

2. LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review the past studies relevant to this thesis, including: climate change, community adaptive capacity and CSR. It first provides a broad overview of the science of climate change in the global context, and then it discusses the relationship between climate change and the tourism industry, before moving on to the mitigation and adaptation strategies implemented to tackle the changes of the climate. The second part briefly reviews relevant knowledge regarding community adaptive capacity to cope with the climate change challenges. The third part of this chapter discusses the basic concept of CSR and then highlights the CSR international standardisation called ISO 26000 and finally assesses the CSR practices by tourism industries around the world. The chapter ends with the argument that tourism sectors have powerful capacity to confront the economic and environment challenges worldwide. Therefore, this chapter suggests that undertaking qualitative research in CSR literature is important to uncover the tourism industries' roles in building communities' adaptive capacity to tackle climate change threats.

2.2 Climate Change in the Global Context

Climate change is one of the biggest challenges for humanity. Recent researches on climate change have predicted the human hardships and ecological degradation expected from the changes of the climate (Eliasch, 2012; Gössling et al., 2012; Parry, Canziani, Palutikof, van der Linden, & Hanson, 2007; Solomon et al., 2007; Stern, 2007; Wilkinson, 1996; Zeppel, 2012). Garnaut (2008, pp.27) refers to climate as "described in terms of the mean and range of variability of natural factors such as temperature, rainfall and wind speed". Furthermore, climate change is defined as "a statistically significant variation either in the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer)" (Scott, Hall & Gossling, 2012, pp.18).

The evidence for climate change and its impact on humanity and the ecosystem have been scientifically assessed by the Intergovernmental Panel on Climate Change (IPCC). According to The Fourth Assessment Report (AR4) of the IPCC, by the end of the twenty-first century, the world will face serious problems due to the following projections: snow cover and sea ice in both polar regions are expected to shrink; extreme weather will frequently occur, with more intense cyclones, hurricanes, and typhoons; and, there will be increases in precipitation at high latitude and conversely decreases in precipitation in the subtropical latitude land areas (Parry et al., 2007). The IPCC's Fifth Assessment Report (AR5) provides new evidence of observed extreme weather and climate events globally (IPCC, 2013). Although the IPCC's Fourth Assessment Report (AR4) and AR5 provide the same projection of future climate events on earth, the degree of certainty in the prediction has increased substantially. For example, in the AR4, the occurrence of heat wave frequency was considered with "medium confidence in many (but not all regions)" while in AR5 heat waves are predicted "likely" to occur in the future; increases in occurrence of intense tropical cyclone activity were considered as "low confidence" in AR4, whilst AR5 predicted tropical cyclone as "likely" in some regions (IPCC, 2013). Table 2.1 provides the global scale assessment of recent observed changes, human contribution to the changes and future projections in the 21st century.

Table 2.1: Extreme weather and climate events global-scale assessment of recent observed changes, human contribution to the changes and projected further changes for the early (2016-2035) and late (2081-2100) 21st century

Phenomenon and direction of trend	**Assessment that changes occurred (typically since 1950 unless otherwise indicated)**	**Assessment of a human contribution to observed changes**	**Likelihood of further changes**	
			Early 21st century	Late 21st century
Warmer and/or fewer cold days and nights over most land areas	Very likely Very likely Very likely	Very likely likely likely	Likely	Virtually certain Virtually certain Virtually certain
Warmer and/or more frequent hot days and nights over most land areas	Very likely Very likely Very likely	Very likely likely likely (nights only)	Likely	Virtually certain Virtually certain Virtually certain
Warm spells/heat waves. Frequency and/or duration increases over most land areas	Medium confidence on global scale. Likely in large parts of Europe, Asia and Australia. Medium confidence in many (but not all) regions Likely	Likely Not formally assessed More likely than not	Not formally assessed	Very likely Very likely Very likely
Heavy precipitation events. Increase in the frequency, intensity, and/or amount of heavy precipitation	Likely more land areas with increases than decreases Likely more land areas with increases than decreases Likely over most land areas	Medium confidence Medium confidence More likely than not	Likely over many land areas	Very likely over most of the mid-latitude land masses and over wet tropical regions Likely over many areas Very likely over most land areas
Increases in intensity and/or duration of drought	Low confidence on global scale Likely changes in some regions Medium confidence in some regions Likely in many regions, since 1970	Low confidence Medium confidence More likely than not	Low confidence	Likely (medium confidence) on regional to global scale Medium confidence in some regions Likely
Increases in intense tropical cyclone activity	Low confidence in long term (centennial) changes Virtually certain in North Atlantic since 1970 Low confidence Likely in some regions, since 1970	Low confidence Low confidence More likely than not	Low confidence	More likely than not in the Western North Pacific and North Atlantic More likely than not in some basins Likely
Increased incidence and/or magnitude of extreme high sea level	Likely (since 1970) Likely (late 20th century) Likely	Likely Likely More likely than not	Likely	Very likely Very likely Likely

Source: IPCC (2013, p. 7). Bold indicates where the AR% (black) provides a revised * global scale assessment from SREX (blue) and AR4 (red). Projections for early 21st century were not provided in previous assessment reports. Projections in the AR5 are relative to the reference period of 1986-2005, and use the new Representative Concentration Pathway (RCP) scenario unless otherwise specified.

Other foremost reports on climate change are Stern (2007) and Garnaut (2008). Stern (2007) reviews the economic impacts of climate change on global development. This report concluded that "most formal modelling has used a starting point of 2-3◦C warming. In this temperature range, the cost of climate change could be equivalent to around a 0-3% loss in global GDP from what could have been achieved in a world without climate change" (Stern, 2007, p.161). Moreover, this report argues that under "business as usual (BAU)", temperatures may exceed 2-3 degrees by the end of this century and may lead to an average reduction in global per capita consumption of 5% at a minimum. In similar vein, Garnaut (2008) also affirms the assertions made by IPCC in the context of Australia. This review examined the economic impact of climate change on Australia and provides medium-long term recommendations for policy makers to improve sustainable development.

All regions and sectors will be impacted by climate change to various degrees. The tourism industry, agriculture, human health and other industries are also rigorously threatened by the changes in climate (Parry et al., 2007). Solomon et al. (2007) and Gössling et al. (2012) predict that food and water supply are threatened due to long term drought. This will leave hundreds of millions of people without the ability to produce or purchase food and water. Stern (2007, p.84) argues, "around 800 million people are currently at risk of hunger (~12% of world's population), and malnutrition causes around 4 million deaths annually, almost half in Africa".

Moreover, climate change will increase health problems and mortality due to increases in temperature. Khasnis and Nettleman (2005) found that the epidemiology of infectious diseases and vector-borne diseases will increase. This phenomenon will have negative impacts on a society's economy (Roson & Bosello, 2006). Increases in temperature have been found to impact on mortality through ill health, particularly among the elderly in summer in Italy in the study by Pretti, Lentini, and Maugeri (2007). Additionally, the occurrence of extreme weather such as droughts, floods, heatwaves, and hurricanes could be possible effects of climate change. Stern argues that the "cost of extreme weather alone could reach 0.5-1% of world GDP by the middle of the century, and will keep rising as the world continues to warm" (2007, p.149). Table 2.2 provides a lesson on how humanity is impacted by extreme weather and natural disasters.

Table 2.2: Summary of regional impacts of extreme weathers

Years	Region/nation	Events	Impacts	Source
2013	Philippines	Typhoon	10,000 fatalities and 70-80% of the province destroyed	Ratha, K. C., & Mahapatra, S. K. (2014). de Viana, A. V. (2016). Super typhoon Haiyan approaches Vietnam (2013)
2011	Japan	Tsunami	15,891 fatalities and $300 billion losses	Fujii, Y., Satake, K., Sakai, S. I., Shinohara, M., & Kanazawa, T. (2011). Maeda, T., Furumura, T., Sakai, S. I., & Shinohara, M. (2011).
2010	Haiti: Port-au-Prince, Petionville, Jacmel, Carrefour, Leogane, Petit Goave, Gressier	Earthquake	222,570 fatalities and US$8,000 m overall losses	Munich Re (2015)
2010	Russian Federation: Moscow region, Kolomna, Mokhovoye	Heat wave	56,000 fatalities and US$400 m losses	
2009	Australia	Bushfire	173 fatalities, 414 people injured, US$700m losses	Blanchi, R., Leonard, J., Haynes, K., Opie, K., James, M., & de Oliveira, F. D. (2014). Munich Re. (2015)

Years	Region/nation	Events	Impacts	Source
2008	Myanmar: Ayeyawaddy, Yangon, Bugalay, Rangun, Irrawaddy, Bago, Karen, Mon, Laputta, Haing Kyi	Cyclone Nargis, Storm Surge	140,000 fatalities and US$4000 m losses	Munich Re (2015)
2008	China: Sichuan, Mianyang, Beichuan, Wenchuan, Shifang, Chengdu, Guangyuan, Ngawa, Ya'an	Earthquake	US$84,000 fatalities and 85,000 m losses	
2005	USA	Hurricane Katrina	1300 fatalities and $125 billion losses	Munich Re, 2004 in (Stern, 2007, p. 150)
2005	Pakistan, India, Afghanistan	Earthquake	88,000 fatalities and US$5,200 m losses	Munich Re (2015)
2004	Sri Lanka, Indonesia, Thailand, India, Bangladesh, Myanmar, Maldives, Malaysia	Earthquake, Tsunami	220,000 fatalities and US$11,200 m overall losses	
2003	France, Germany, Italy, Portugal, Romania, Spain, United Kingdom	Heat Wave, Drought	70,000 fatalities and US$13,800 m losses	
2003	Iran: Bam	Earthquake	26,200 fatalities and US$500 m losses	
2003	Europe	Heatwaves	35,000 fatalities and agricultural losses reached $15 billion	(Stern, 2007, p. 138).
1991-1992	Zimbabwe	Drought	Food price increased by 72%, GDP fell by 9% and inflation increased to 46%	IMF, 2003 in Stern (2007, p. 118).

The global sea level rose by 0.19 m from 1901 to 2010 (IPCC, 2013). As a consequence of sea level rise, coral reef and coastal infrastructure will deteriorate, as Wilkinson (1996) pointed out in his earlier research. Moreover, "sea level rise will increase coastal flooding, raise the costs of coastal protection, lead to loss of wetlands and coastal erosion, and increases saltwater intrusion into surface and groundwater" (Stern, 2007, p. 90). Besides that, warming of the oceans might affect the fishery ecosystem, turtles' incubation and sea birds' breeding periods (Zeppel, 2012). As this thesis focuses on the tourism sector, specific discussion on the impact of climate change in the tourism industry will be provided in the next sub-section.

2.3 The Relationship Between Climate Change and the Tourism Sector

Turning to the tourism industry, this sector, as a climate dependent industry, is also very vulnerable to climate change threats. A considerable amount of literature has been published on the impacts of climate change on the tourism industry (Becken, 2013; de Freitas, 2009; Hernandez & Ryan, 2011; Kajan & Saarinen, 2013; Moreno & Becken, 2009). Research on climate change and tourism has included multiple dimensions, such as: climate change impacts, adaptation, mitigation and policy (Becken, 2013). Kajan and Saarinen (2013) divided the current adaptation research into business, customer, destination, policy and framework. Moreover, they resolved that:

> climate change research in tourism and adaptation requires enlargement of its focus from market-led and business-driven research to a more holistic and community-centred adaptation research, which will have a consequential effect on methodologies aiming to examine the complex relations between different actors and scales at the global–local nexus (Kajan & Saarinen, 2013, p.189).

Research on the impact of climate change on winter tourism has been discussed by Ceron and Dubois (2005), Koenig and Abegg (1997), Nicholls and Amelung (2008), Steiger and Stotter (2013), Valls and Sarda (2009), and Yeoman (2006). Ceron and Dubois (2005, p. 135) reveal that "the lack of snow for winter sports is the major direct constraint related to climate change that French tourism would have to face". In

Scotland, shorter seasons and unreliable snow cover also threaten the winter sport businesses (Yeoman, 2006). Likewise, Steiger and Stotter (2013), who assessed ski tourism in Tyrol/Austria, found that ski tourism, which is highly dependent on snow reliability, would be forced to close if the temperature increases by 3 degrees Celsius, not considering the new technology for artificial snow.

Coastal tourism has also been threatened by the impact of climate change. Physically, coastal infrastructure is threatened by rising of the sea levels and more frequent storms (Berger, Fischer, Lema, Schmitz, & Urban, 2013; Wilkinson, 1996). Beaches around the world are suffering accelerated erosion and extensive coastal wetland losses, not only because of the increasing sea level rise but also because of storm surges and high wave events (Becken & Hay, 2007). Research by Scott, Simpson and Sim (2012) found that 50% of coastal property in five countries (Anguilla, Belize, British Virgin Islands, St. Kitts and Nevis, and Turks and Caicos Islands) among Caribbean Community countries deteriorated by inundation losses, and the dependence on the tourism industry would lead to more losses. Moreover, climate change will lead to substantial coral reef mortality (Cinner et al., 2012). Goreau (1948) in Goreau (2007, p. 2) argues that:

> coral reef provides most of marine biodiversity, fisheries, sand, shore protection, tourism and beauty. We treat the priceless economic and environmental services as free goods. Coral reefs are not resilient, they are the most sensitive and fragile ecosystem and we have already lost most of them.

Furthermore, he indicates that massive mortality has been caused by planetary warming and adaptation options are only a short-term tactic while there is urgent demand for climate reversal as a long-term strategy. Thus, reducing pressures on coral reef ecosystems is a fundamental climate change adaptation measure (Becken & Hay, 2007).

According to World Tourism Organization and United Nations Environment Programme［UNWTO & UNEP］(2008, p.28), there are four broad impacts of climate changes on tourism destinations. Firstly, tourism destinations will suffer direct climatic impacts as the changes of the climate directly increase operational costs, such as: heating-cooling systems, insurance, food and water supply, additional emergency

preparedness requirements, business interruptions, and cost of infrastructure damage. Secondly, indirect environmental change impacts tourism destinations as the environment is a critical resource for tourism. Climate change will have a profound effect on tourism at the destination and regional level, e.g. sea level rise, coral bleaching and mortality, flooding and eroding. Thirdly, there are impacts of mitigation policies on tourist mobility. This likely will have an impact on tourist flows. Long-haul destinations can be affected and officials in Southeast Asia, Australia-New Zealand, and the Caribbean have expressed concern that mitigation policies could adversely impact their national tourism economy. Finally, indirect societal change impacts tourism destinations. Associated security risks have been identified in many regions where tourism is highly important to local and national economies.

In similar vein, Scott, Gossling and Hall (2012) argue that international tourism is also impacted by climate change in several ways: (1) it will alter geographical and seasonal tourism demand (e.g. tourists from USA, Canada, Japan, and Northern Europe will tend to choose destinations closer to home as their countries become warmer, whilst the weather in currently warm tropical destinations will become unpredictable and/or extreme, and as a result international tourism for subtropical and tropical countries is predicted to decline); (2) climate change threatens the destination competitiveness of winter sports tourism, coastal tourism and nature-based tourism (e.g. ski tourism business is at risk of reduced natural snow; rising sea levels threaten coastal tourism infrastructure, weakening property values, pricing, insurance and promotion; and nature-based tourism is at risk because of coral bleaching and loss of key species in some tourism destinations); (3) international mitigation policy will influence tourist mobility in the future.

Recent evidence suggests that the impacts of climate change also severely threaten small islands, especially those which depend on the tourism industry (Jiang, DeLacy, & Noakes, 2009; Klint et al., 2012; Moreno & Becken, 2009; Nurse & Moore, 2005; Parry et al., 2007; Pernetta, 1992; Scott et al., 2008; UNWTO, 2007; Viner & Agnew, 1999). Jiang et al. (2009) reported that Pacific countries are highly vulnerable to the impact of climate change and that such negative impacts may lead to their failure in achieving the Millennium Development Goal (MDG) standards. Similar findings are also reported by Klint et al. (2012) in research about climate change risks in Vanuatu.

However, whilst clearly vulnerable to climate change, the tourism industry is also a significant contributor to its cause. Patterson, Bastianoni and Simpson (2006, p. 341) name the relationship between tourism and climate change as a "two-way street", as illustrated in Figure 2.1.

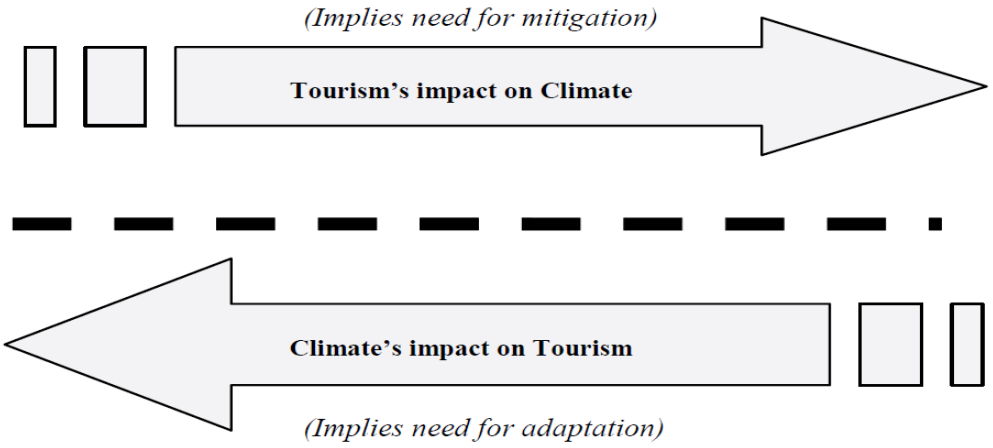


Figure 2.1: The relationship between tourism and climate change system as two-way street

Source: Patterson et al. (2006, p. 341). Used with permission.

The tourism industry discharges CO2 emissions and other greenhouse gases into the atmosphere, leading to higher climate changing GHG concentrations (Gössling et al., 2012; Mendes & Santos, 2008; Scott et al., 2008). The tourism sectors contribute 5% to global greenhouse gas (GHG) emissions and it is expected to grow substantially under a business-as-usual (BAU) scenario (UNWTO & UNEP 2012).

As the tourism industry is a significant contributor to climate change, the industry should take some responsibility for being part of the solution. de Grosbois (2011) argues that over the last few decades, society, consumers, stakeholders and governments have increasingly expected companies to be aware of social and environmental impacts of their businesses. Therefore, the next section will discuss mitigation and adaptation strategies in response to climate change problems.

2.4 Mitigation and Adaptation Strategies

In response to climate change, two strategies need to be implemented: mitigation and adaptation (Becken & Hay, 2012; Berger, Fischer, Lema, Schmitz, & Urban, 2013; Parry et al., 2007; Scott et al., 2008; Scott, Gössling, & Hall, 2012; Scott, Hall, & Gossling, 2012). Mitigation involves reducing GHG emissions to minimise the changes to the climate, whilst adaptation involves increasing the capacity to cope with climate induced hazards (Becken & Hay, 2012; Parry, Canziani, Palutikof, van der Linden, & Hanson, 2007; Scott et al., 2008; Scott, Hall, & Gossling, 2012). The industry can reduce GHG emissions into the atmosphere by: reducing energy use, improving energy efficiency, using renewable energy, and sequestering carbon (UNWTO, 2007; Walmsley, 2011). However, the adaptation strategy needs to be locally designed because the impact of climate change differs depending on the geographic, economic, social and industrial characteristics. The following section will discuss in detail the mitigation and adaptation strategies, both in global and in tourism contexts.

2.4.1 Mitigation

International actions to tackle climate change have been discussed for more than three decades (Gupta, 2010). Kameyama, in Toyota and Fujikura (2012, pp. 20-26) discussed the history of international cooperation in tackling climate change. Table 2.3 presents the brief summaries of international climate change negotiations attended by leaders and climate experts throughout the world.

Table 2.3: History of climate change negotiations

Year	Developments in international negotiations	Key contributions
1988	IPCC established	
1990	The First IPCC Assessment Report	It stressed the severe threats of climate change to human-being and ecosystems.
1994	UNFCCC entered into force	
1995	COP1, Berlin Mandate adopted	

Year	Developments in international negotiations	Key contributions
1997	COP3, Kyoto Protocol adopted	The Kyoto Protocol indicated Annex I countries' commitment to reduce or limit their emissions to the specific levels stipulated in Annex B of the Protocol. The countries could count emissions sequestration in forests and from land-use changes, as well as being allowed to utilise carbon markets, i.e., emissions trading, joint implementation, and Clean Development Mechanisms (CDM).
2001	Withdrawal of the United States from the Kyoto Protocol COP7, Marrakesh Accords adopted	
2005	Kyoto Protocol entered into force COP11, CMP1	
2007	COP13, CMP3, Bali Action Plan adopted	An agreement called the Bali Action Plan (BAP) was agreed on the final day of the COP13. The countries were to negotiate on a wide variety of issues including: a shared vision; mitigation actions for developed countries, including setting emissions reduction targets; nationally appropriate mitigation actions (NAMAs) for developing countries; reducing emissions from deforestation and forest degradation in developing countries (REDD); sectoral approaches adaptation; finance; technology transfer; and capacity building.
2009	COP15, CMP5, Copenhagen Accord adopted	The Copenhagen Accord decided the non-Annex I Parties to the Convention would implement mitigation actions, and information on the actions was to be submitted to the secretariat by the end of January 2010.
2010	COP16, CMP6, Cancun Agreements adopted	Developed countries requested to provide financial and technical support to the least developing countries that have difficulty in fulfilling the adaptation activities.
2011	COP17, CMP7	
2016	COP21	The Paris Agreement 2016. 195 countries signed the commitment to contribute positively to tackle climate change.

Source: Kameyama, in Toyota & Fujikura (2012, pp. 20-26) and http://unfccc.int/paris_agreement/items/9485.php

As can be seen in Table 2.3, the Kyoto Protocol agreement and the Copenhagen Accord were the two most prominent agreement before 2011 (Moore in Chen, Seiner, Suzuki,

&Lackner, 2012). The significant achievement of the Kyoto Protocol is the commitment of 37 industrialised countries and European communities to reduce GHG emissions growth to an average 5% of 1990 emissions level from 2008-2012. In achieving the target, the Kyoto Protocol provides three market-based mechanisms including: GHG emissions trading, joint implementation (JI) and the Clean Development Mechanism (CDM). Likewise, the Copenhagen Accord calls on 180 countries to curb their GHG emissions by investing in clean energy and to develop adaptation strategies to tackle climate change threats. However, the willingness to implement mitigation and adaptation strategies is still in its infancy and debate about who should pay remains the major obstacle to moving forward. Pittel, Rübbelke, and Altemeyer-Bartscher (2012, p. 16) argued that "international policy is stuck in deadlock". They explained that, while climate protection is costly, consumption is free. Thus, every single country wants others to do more and they prefer to contribute less.

A tremendous accomplishment in the international agreement on climate change was achieved in December 2015 at the Paris climate conference (COP21). Finally, 195 countries from around the world agreed to contribute positively to tackle the threat posed to humanity from climate change. In the Paris Agreement, every country agreed to: (1) stem GHG emission to the atmosphere in order to keep global warming below 1.5°C; (2) scaling up action over time; (3) enhanced international support to developing countries to be able to cope with the impact of climate change (http://unfccc.int/paris_agreement/items/9485.php;). In order to achieve these goals, governments agreed to set an ambitious target and report to the public the progress in achieving their goal through a robust transparency and accountability system (http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm).

Worldwide, tourism is responsible for 5% of energy-related CO2 emissions (UNWTO/UNEP 2008). Therefore, the tourism industry is expected to reduce carbon emission to the atmosphere through various carbon management strategies. According to Peeters et al. (2009) and Strasdas (2007), carbon management can be implemented by a combination of strategies or tools, such as: technological, managerial, modal shift, behavioural changes, carbon labelling, and policy. Technological carbon management

can be done by changing the technology use in a company, such as: combustion technology, insulation of pipes/buildings, heat recovery, renewable energies, and automated systems in guest rooms. Managerial strategies in carbon management mean the efforts to reduce GHG emission by optimising logistics or processes, staff management, customer information, traffic management, purchasing, etc. Modal shift can be done by shifting tourist mobility from more energy intensive to less energy intensive modes of transport, i.e. away from automobiles and airplanes to trains, buses, and muscle-powered vehicles. Carbon management in a company needs behavioural changes and development of corresponding travel products that are less energy intensive (especially increased length of stay in exchange for fewer trips and preference of nearby destination with less energy consumption per day of travel). The next carbon management strategy is to provide preference to domestic and nearby regional source market over long haul markets and this should be followed by applying principles of social marketing as a tool to instigate behavioural change and sell climate friendly travel products. Finally, changes in policy are needed to harness carbon management application in a company, such as: emission taxes, cap-and trade systems, building regulations, emission standards for vehicles, etc., financial incentives (e.g. for investment into energy efficiency and renewable energies) and more investments into climate-friendly public infrastructure (railways, bike paths, etc.). This policy should embrace carbon labelling to be used by a company as a communication and management tool.

Similarly, UNWTO and UNEP (2008) have suggested some mitigation strategies to be applied by tourism businesses and accommodation industries. The key mitigation strategies can be listed as follows: (1) energy conservation and efficiency in hotel buildings and tourist attractions; (2) use of alternative fuels (e.g. biodiesel) and renewable energy sources (e.g. wind, photovoltaic, solar, thermal, geothermal, biomass and waste); (3) integrated emission management (including supply chain management) and wider environmental management (e.g. waste), designating manager specified on environmental management systems (EMS) and emission issues; (4) raise awareness on recycling; (5) develop an environmental ‘Code of Ethics’, (checklist or criteria for suppliers to ensure that they provide products or services in an environmentally respectful manner); (6) develop capacity building, and climate change and environment

related education for managers of the accommodation establishments and in related sectors; such as architecture, construction and engineering; (7) develop a network of climate change focal points in the accommodation sector to promote activities proposed in the Davos Report and Declaration; (8) inclusion of energy-efficiency and renewable energy use support programs in national tourism policies and development plans (Agenda 21, guidelines, regulations, incentives, planning, capacity building, stakeholder cooperation); (9) development of links with international policies (e.g. Clean Development Mechanism), cooperation and standards.

2.4.2 Adaptation

Along with mitigation, adaptation is necessary to help the current and future generations to better cope with unpredictable climate change threats. Adaptation to climate change has been defined in several ways. According to Smit and Wandel (2006, p. 289), adaptation to climate change is "local or community-based adjustments to deal with changing conditions within the constraints of the broader economic-social-political arrangements". Similarly, Huq, Smith, and Klein (2003, p. 9) define adaptation as "adjustments in ecological, social and economic systems in response to actual or expected climatic stimuli and their effects or impacts". This latter definition suggests that adaptation involves the effort to reduce risk and vulnerability as well as building the capacity of individuals, communities, businesses, cities and countries to cope with the climate change impacts (Tompkins et al., 2010 in IPCC (2013)).

Many research studies have been undertaken in climate change adaptation, as identified by reports by international organisations (e.g. UNWTO, 2007), intergovernmental organisations (e.g. IPCC 2007, 2013), as well as in academic books (e.g. Becken & Hay, 2012; Reddy & Wilkes, 2012; Schmidt-Thome & Klein, 2013; Schmidt-Thomé & Klein, 2013; Scott. et al., 2012). Moreover, several studies investigating adaptation options have been carried out by individuals, organisations, and regional communities, for example: studies about agricultural community adaptation have been done by Wittrock, Kulshreshtha, and Wheaton (2011) and Simane, Zaitchik, and Mesfin (2012). Songok, Kipkorir, and Mugalavai (2011) studied indigenous practices to sustain household food security and adapt to the extreme changing climate in Kenya; the adaptation strategies of Tanzanian Maasailand communities to avoid cattle loss during

drought were investigated by Goldman and Riosmena (2013); and finally, the tourism sector's strategies to respond to climate change have been discussed by Scott and Gossling (2012), and Becken and Hay (2012).

Every individual and stakeholders' group has different vulnerabilities and adaptation needs. According to IPCC (2013), adaptation options can be categorised into three general categories: structural/physical, social, and institutional. Detailed example of adaptation options can be seen in Table 2.4. Comprehensive assessments need to be made to identify the adaptation needs and options appropriate for governments at local, regional and national levels, for private businesses and for communities.

Table 2.4: Categories and examples of adaptation options

Category	**Example of Options**
Structural/Physical	
Engineered and built environment	Sea walls and coastal protection structures; Flood levees and culverts; Water storage and pump storage; Sewage works; Improved drainage; Beach nourishment; Flood and cyclone shelters; Building codes; Storm and water management; Transport and road infrastructure adaptation; Floating houses; adjusting power plants and electricity grids.
Technological	New crops and animal varieties; Genetic techniques; Traditional technologies and methods; Efficient irrigation; Water saving technologies, including rain water harvesting; Conservation agriculture; Food storage and preservation facilities; Hazard mapping and monitoring technology; Early warning systems; Building insulation, Mechanical and passive cooling; Renewable energy technologies; Second generation bio fuels.
Ecosystem-based	Ecological restoration, including wetland and floodplain conservation and restoration; Increasing biological diversity; Forestation and reforestation; Conservation and replanting mangrove forest; Bushfire reduction and prescribed fire; Green infrastructure (e.g. shade trees, green roofs); Controlling overfishing; Fisheries co-management; Ex situ conservation and seed banks; Community–based natural resource management (CBNRM).
Social	
Services	Social safety nets and social protection (SP); Food banks and distribution of food surplus; Municipal services including water and sanitation; Vaccination programs; Essential public health services, including reproductive health services and Enhanced emergency medical services; International trade.

Category	Examples of Options
Social	
Educational	Awareness raising and integrating into education; Gender equity in education; Sharing local and traditional knowledge including integrating into adaptation planning; Participatory action research and social learning; Community survey; Knowledge-sharing and learning platforms; International conferences and research networks; Communication through media.
Informational	Hazards and vulnerability mapping; Early warning and response systems including health early warning systems; Systematic monitoring and remote sensing; Climate services, including improved forecast; Downscaling climate scenarios; Longitudinal data sets; Integrating indigenous climate observations; Community-based adaptation plans, including community-driven slum upgrading and participatory scenario development.
Behavioural	Accommodation; Household preparation and evacuation planning; Retreat; Migration, which has its own implication for human health and human security; Soil and water conservation; Storm drain clearance; Livelihood diversification; Changing livestock and aquaculture practices; Crop-switching; Changing crop practices, patterns and planting dates; Reliance on social networks.
Institutional	
Economic	Financial incentives including taxes and subsidies; Insurance, including index-based weather insurance security; Catastrophe bonds, Revolving funds, Payments for ecosystem services; Water tariffs, Saving groups; Microfinance; Disaster contingency funds, Cash transfers.
Laws and regulation	Land zoning laws; Building standards, Easements; Water regulation and agreements; Laws to support disaster risk reduction; Laws to encourage insurance purchasing; Defining property right and land tenure security; Protected areas; Marine protected areas; Fishing quotas, Patent pools and technology transfer.
Government Policies and Programs	National and regional adaptation plans, including mainstreaming climate change; Sub-national and local adaptation plans; Urban upgrading programs; Municipal water management programs, Disaster planning and preparedness; City-level plans, which may include: Integrated water resources management; Landscape and watershed management; Integrated coastal zone management; Adaptive management, Ecosystem-based management (EBM); Sustainable forest management (SFM); Fisheries management; and Community-based adaptation (CBA).

Source: IPCC (2013).

Table 2.4 is derived from AR5 of Working Group II (WGII) Chapter 14 on page 47. Despite the lists of adaptation options provided in this table, the implementation is still limited. Bierbaum et al. (2013), in their review about climate adaptation in the USA, argue that "although substantial adaptation planning is occurring in various sectors, levels of governments, and the private sectors, few measures have been implemented and even fewer have been evaluated" (p. 361). They also argue that the most significant challenges are lack of funding, policy and institutional barriers, and difficulty in understanding the anticipated climate change threats. In similar vein, an empirical study by Tompkins, Adger, Boyd, Nicholson-Cole, Weatherhead, and Arnell (2010), which reviewed 300 example of adaptation practices across the UK, found out that most adaptation investment was supported by government (dominated by the water supply and flood defence sectors) and little evidence is available that these adaptations were applied at local level.

Likewise, Ford, Berrang-Ford, and Paterson (2011) reported that limited climate change adaptation initiatives are implemented in developed countries. Moreover, this study found that majority of the reviewed research was conducted in the transportation, infrastructure and utilities sectors in the Arctic and coastal areas. Thus, it neglected the populations beyond these destinations. A review of business and management literature by Linnenluecke, Griffiths, and Winn (2013) suggests that most firms and industries are more concerned about the changes in business conditions (e.g. emergence of new competitors, new markets, and new political and legal conditions) rather than the changing of the natural environment. As this thesis focuses on the tourism sector, the specific literature review regarding the tourism industry's adaptation will be discussed in the following section.

2.4.3 Adaptation in Tourism

Focusing on the tourism sector, Scott et al. (2008, pp. 18) warn that "all tourism businesses and destinations will need to adapt to minimize risks and capitalize on new opportunities in a sustainable way". Several studies have revealed the tourism industry adaptation strategies in the literature (Abegg, Agrawala, Crick, & de Montfalcon, 2007; Becken & Hay, 2012; Buzinde, Manuel-Navarrete, Kerstetter, & Redclift, 2010; Lipman, DeLacy, Vorster, Hawkins, & Jiang, 2012; Scott et al., 2008; Scott, Freitas, &

Matzarakis, 2009; Scott, Hall, & Gossling, 2012). Moreover, Becken and Hay (2012) have listed several adaptation strategies for the tourism industry. In dealing with drought, the tourism industry needs to start rain water collection and water conservation. In coping with the changes in future demand, the tourism industry can start diversifying markets and designing weather-proof tourist activities. In minimising the risks of sea-level rise and beach erosion, the tourism industry might need to build seawalls and/or set back building structures from the shoreline. In increasing climate change awareness, the tourism industry needs to educate its staff and guests about climate change hazards and how to deal with them. Buzinde et al. (2010) reported that many hotels in Playacar, Mexico have had to use sandbags to cope with coastal erosion. Furthermore, Abegg et al. (2007) discussed ski operators' adaptations to climate change. Their efforts were divided into four practices, which were: developing landscape, moving to higher altitude, glacier skiing and artificial snow-making.

Scott, DeFreitas and Matzarakis (2009) divided climate change adaptations into five types. These are: (1) technical adaptation – involves new technology and innovation in order to cope with climate change and vulnerability; (2) business management adaptation – includes operational techniques such as product diversification, marketing strategy and insurance; (3) behavioural adaptation – involves tourist behavioural adaptation (e.g. adjust clothes, time for holiday or changing destination choices) and employee behavioural adaptation (e.g. change dress code to protect employees from extreme weather, reduce outdoor activities during extreme hot days, use sun screen for employee health and safety); (4) policy adaptation – includes the changes in government plans and strategies; and (5) research and education – involves strengthening the understanding of climate change impacts and adaptation options, and educating community and increasing public awareness. Table 2.5 presents these adaptation types, along with examples of actions for tourists, tourism operators, tourism industry organisations and government.

Table 2.5: Adaptation options for the Tourism and Recreation sector

TYPES OF ADAPTATION	TOURISTS	TOURISM-RECREATION OPERATOR	TOURISM INDUSTRY ORGANISATION	GOVERNMENT	FINANCIAL SECTOR
TECHNICAL	Use wet suits for diving or windsurfing Use hand and foot warmers for snowmobiles Use rain gear for golf and hiking	For winter tourism operators: Snow making system; slope development and operational practices; cloud seeding For water shortages adaptation: reservoirs; desalination; water recycling system; construction of new dams; increasing storage tank capacity; water conservation education	Pilot-Test Structural Adaptations Develop websites with practical information on adaptation measures	Support technical adaptation providing for tourism operators Provide additional funding for cooperative adaptation plan	Provide information to customers Develop building design standards for insurance
BEHAVIORAL	Change the timing of visitation Change destination Modify activities	Carbon offset programs Monitoring water and energy use	Carbon offset programs Water conservation initiatives	Extreme event recovery marketing	Good practice in-house
POLICY		Adopt proactive approach in addressing climate change threats Comply with regulations	Lobby government to increase political support on climate change mitigation Develop a cooperative adaptation plan		Consideration of climate change in financing and credit risk assessments

TYPES OF ADAPTATION	TOURISTS	TOURISM-RECREATION OPERATOR	TOURISM INDUSTRY ORGANIZATION	GOVERNMENT	FINANCIAL SECTOR
BUSINESS MANAGEMENT		Developing tourism attractions that are not climate sensitive, such as Spa, indoor performances and shopping. Promoted development of the MICE market (meetings, incentives, conventions and exhibitions) among business travellers. Low season closures. Redirect clients away from impacted destination.	Snow condition report through media Use of short term seasonal forecast to plan marketing activities Training program on climate change adaptation Encourage environmental management	Support climate adaptation strategies (e.g. coastal management plans and set back requirements, building design standards, emergency management, water quality standards, and wildfire management)	Adjust insurance premium Restrict lending to high risk business operations
RESEARCH AND EDUCATION		Physical risk analysis for properties. Water and energy conservation education for employees and guests.	Public education campaign (e.g. campaign "keep winter cool")	Support climate change adaptation research and capacity building Increase public awareness to use sunscreen to protect from skin cancers	Extreme event risk exposure Educate/inform potential and existing customers

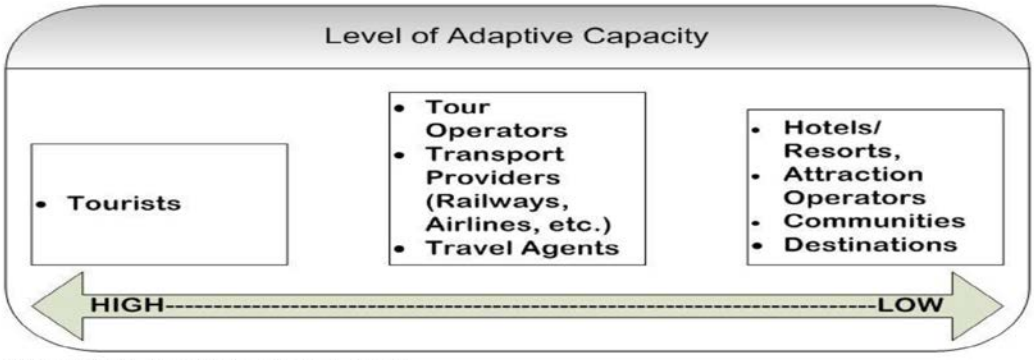
Adapted from: Scott (2009) and Scott, Hall, and Gossling (2012)

Kajan and Saarinen (2013), from reviewing the current literature, found out that some adaptation options are unrealistic. For example, making artificial snow is costly, thus diversification is needed. However, it is challenging to do product diversification because summer activities such as water rafting, hiking and biking, have been provided by other destinations. Likewise, insurance and product diversification require more finance than current financial ability. These are making the adaptation options provided by scientists challenging.

Adaptation options to climate change vary greatly depending on the climatic, environmental, social, and political conditions in the target region and sector (Füssel, 2007). After discussing the adaptation options, this section now moves on to discuss the adaptive capacity of the tourism stakeholders.

Adaptive capacity of tourism stakeholders varies considerably. Figure 2.2 illustrates that tourists have the highest adaptive capacity. Tourists can easily change their holiday destinations to other ones in case there is an extreme event. Communities, attractions operators and hotel businesses have the least adaptive capacity, as they cannot relocate themselves immediately to avoid unfavourable environmental changes. Therefore, the ability for destinations to be proactive and make well-informed decisions is needed in the development and implementation of appropriate adaptation strategies (Jopp, DeLacy, & Mair, 2010).

Figure 2.2: The relative adaptive capacity of tourism stakeholders



Adapted from Jones and Scott (2006) in Scott et al. (2012).

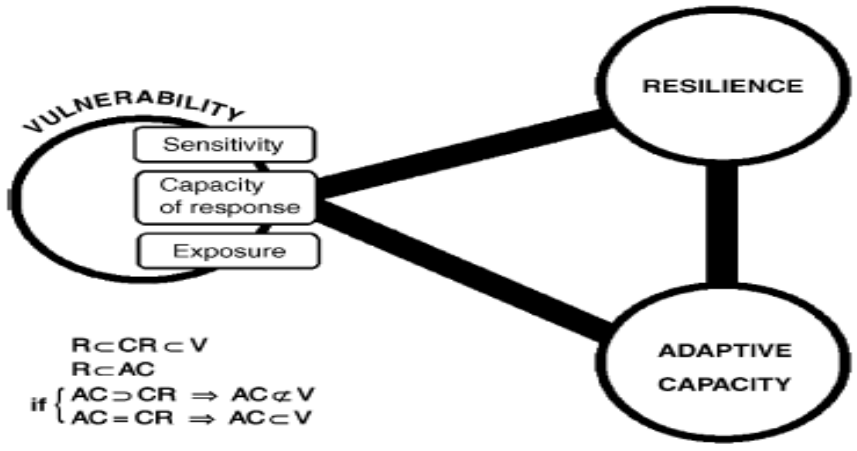
Furthermore, considering that the communities within the tourism destination have the least adaptive capacity, the actions to tackle the consequences of climate change should be taken at local level (Lindseth, 2004). In similar vein, Saavedra and Budd (2009, pp.250) argue, "in order to be successful in dealing with climate change it is necessary to consider that mitigation and adaptation strategies should be focused on increasing the capacity of communities to adapt and live with change and surprises". Thus, the specific issues around community adaptive capacity are discussed in the following section.

2.5 Vulnerability, Resilience and Community Adaptive Capacity

2.5.1 Defining the Concept

Vulnerability, resilience and adaptive capacity are basic concepts that are interconnected with each other. The definitions of these three basic concepts vary, therefore Gallopin (2006) uses a systematic analysis of linkages between vulnerability, resilience and adaptive capacity within social-ecological systems (SES) so that these can be applied across disciplines.

Figure 2.3: A diagrammatic summary of the conceptual relations among vulnerability, resilience, and adaptive capacity

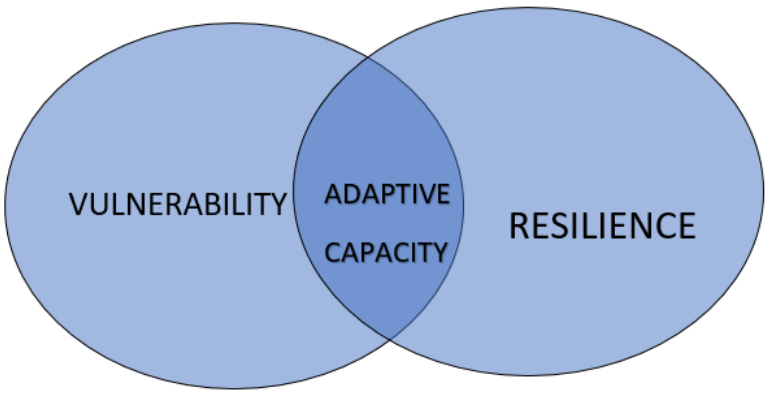


Source: Gallopín (2006, p. 301). Used with permission.

The signs in the Figure 2.3 represent relationships between sets: ⊂ means‘‘subset of’’; ⊄ means ‘not a subset of’’. Meanwhile, R, V, AC, and CR stand for resilience, vulnerability, adaptive capacity, and capacity of response, respectively. According to Gallopin (2006), Resilience is closely related to vulnerability and capacity of response or adaptive capacity. However, the conceptual links between adaptive capacity as a component of social and ecological system and capacity of response as a subset of vulnerability are not clear. If adaptive capacity is considered as improvement to the systems, then it is clear that adaptive capacity is more general than capacity of response. Gallopin (2006) shows in the Figure 2.3 that capacity of response has been distinguished from adaptive capacity using the criteria of short- or long-term adjustments, or of their timing, but in this case both terms have been viewed as belonging to vulnerability.

Differing from Gallopín (2006), Engle (2011) argues that vulnerability and resilience are two different concepts which are linked with each other and turn into adaptive capacity (as illustrated by Figure 2.4).

Figure 2.4: Vulnerability and resilience frameworks as linked through the concept of adaptive capacity



Source: Engle (2011). Used with permission.

The IPCC defines vulnerability as:

> the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity (McCarthy, Canziani, Leary, Dokken, & White, 2001).

The most recent IPCC report changed its approach to the definition of vulnerability. In a summary for policy makers of the latest IPCC report, vulnerability is defined as "the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt" (IPCC, 2013, p.5).

Vulnerability is most often theorised as being constituted by components that include: exposure to perturbations or external stresses, sensitivity to perturbation, and the capacity to adapt (Adger, Arnell, & Tompkins, 2005). Exposure is defined as "the nature and degree to which a system is exposed to significant climatic variation" (IPCC, 2007, p. 987). Sensitivity is "the degree to which a system is affected by, either adversely or beneficially, by climate variability or change" (IPCC, 2007, p. 881). Vulnerability is often discussed in relation to bio-physical impacts, such as sea-level rise, bush fires or coastal erosion.

The next concept is resilience, which refers to the ability of groups or communities to cope with external stresses and disturbances because of social, political, and environmental change (Pelling & Uitto, 2001). However, the ability to cope with the challenges varies considerably among communities, regions, destinations, and countries. The impacts of many previous extreme climatic events, such as tsunami, bushfire and flood, often exceed the capacity of community to cope. Therefore, Saavedra and Budd (2009, pp.250) argue that "in order to be successful in dealing with climate change, it is necessary that adaptation strategies should be focused on increasing the capacity of communities to adapt and live with change and surprises".

Adaptive capacity is defined as "the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take

advantage of opportunities, or to cope with the consequences" (IPCC, 2007, p. 869). Adaptive capacity, according to Smith and Wandel (2006, pp. 287), is "the conditions that a system can deal with, accommodate, adapt to, and recover from". Thus, community adaptive capacity to climate change is the community's ability to adapt and recover from the impact of climate change.

The capacity to adapt to climate change varies from country to country, region to region and community to community (Smit & Pilifosova, 2003). Jacobs and Leith (2010) suggest that four questions need to be addressed in assessing adaptive capacity, they are:

1) What are the likely and current impacts?
2) Who needs to adapt?
3) What are the obstacles to adapting?
4) What are the facilitators for adapting?

Smith and Pilifosova (2003) suggest that enhancing a community' ability to cope with climate change risks requires pertinent study about local vulnerabilities, involvement of local stakeholders and adaptation initiatives that are well-suited to the current decision processes. As suggested by Lindseth (2004), reducing the impacts of global climate change should be done at the local level because the consequences of climatic events are mostly felt at the local level. Therefore, building community adaptive capacity to become resilient and deal with climate change is important. According to Posey (2009), community adaptive capacity has two different meanings: (1) the adaptive capacity of individuals living in the community, and (2) the capacity of the leader in leading collective action on behalf of the group. The next section discusses the factors that determine community adaptive capacity to climate change.

2.5.2 Determinants and Strategies for Building Community Adaptive Capacity

Adaptive capacity may vary depending on the different scales and breadth of determinants. The determinants of adaptive capacity exist and function differently in different contexts and scales. Numerous studies have attempted to explain the

determinants of adaptive capacity from different scales. Table 2.6 describes the previous literature that discusses the determinants of adaptive capacity.

Table 2.6: The determinants of adaptive capacity at various scales

Scales	**Determinants of adaptive capacity**	**Research locations/ contexts**	**Sources**
Local/communities	Kinship network, socio-economic and political system, access to financial, technology and information resources, infrastructure	Global	Smith and Wandel (2006)
Local/communities	Economic power, information and knowledge about climate change risks	Maldives	Sovacool (2012)
Municipality	Socio-economic characteristic (financial capacity)	USA	Posey (2009)
Regional	Governance mechanisms	Brazil/water system	Engle and Lemos (2010)
Regional	Financial capital to develop snow making system, capacity to expand water supply, capacities to do product diversification.	Ski destination	Scott and McBoyle (2007)
Scales	**Determinants of adaptive capacity**	**Research locations/ contexts**	**Sources**
Regional	Policy and planning frameworks, property ownership, local taxation structures, insurability and insurance cost, financial capability	Coastal destination	Manoj, Punam, and Tarja (2009)
National	Governance, civil and political rights, literacy	Global	Brooks, Neil Adger, and Mick Kelly (2005)
National	Human capital, information and technology, material resources and infrastructure, organisation and social capital, political capital, wealth and financial capital, institutions and entitlements	Latin America	Eakin and Lemos (2006)

Scales	Determinants of adaptive capacity	Research locations/ contexts	Sources
International	(1) The range of availability of technology options; (2) The availability of resources and their distribution across the population; (3) The structure of critical institutions, the derivative allocation of decision-making authority, and the decision criteria; (4) The stock of human capital including education and personal security; (5) The stock of social capital including the definition of property rights; (6) The system's access to risk spreading processes; (7) The ability of decision-makers to manage information; (8) The public's perceived attribution of the source of stress and the significance of exposure to its local manifestations.	Global	(McCarthy et al., 2001)

In Table 2.6, financial capital and government are the key determinants across the scales. As Posey (2009) found in his research, financial capacity of the municipalities affects the capacity of municipal leaders in taking collective action to respond to environmental changes. Meanwhile government has an important role in providing the policies, laws and supports to modify the access to technology, information and infrastructure as well as supporting financial capital to enhance adaptive capacity (Jacobs & Leith, 2010).

Turning now to the strategies for build community adaptive capacity, Engle (2011) suggests two approaches. The first approach draws from the vulnerability assessment (such as lost property, number of death and injured during extreme events, damages to the ecosystem). The second approach draws from the resilience framework which focuses on evaluating the capability of the systems to cope with the challenges or extreme events.

The Third Assessment Report (TAR) of the IPCC recommends two types of strategies: macro and micro (McCarthy, et.al. 2001). The macro strategy involves enhancing macro-scale adaptive capacity, such as: improving education and training, increasing wealth, and improving health care and income distribution to improve a country's ability to cope with climate change and other stresses. The micro strategy involves enhancing micro-scale adaptive capacity, such as: planning for sea level rise and designing water conservation to deal with drought in the future, thus modifying the management of those sectors of society and the economy most sensitive to climate change.

More practical strategies have been applied by local government in Washington, USA, in King County (Saavedra & Budd, 2009). This local government focused on building public awareness and enhancing sharing knowledge through releasing guidebooks preparing for climate change and distributing the Green Tools CD-Room to assist other communities in establishing a green building program. In addition, such communication plays an important role in engaging the public to adopt a low carbon lifestyle and stimulating grass-roots action. Other research by Petheram, Zander, Campbell, High, and Stacey (2010) noted some practical strategies suggested by indigenous people in NE Arnhem Land (Australia), such as: temporary relocation in extreme events, improving communication, engagement and knowledge sharing on climate change, improved infrastructure and community health, and utilisation and promotion of traditional knowledge. Similarly, Ockwell, Whitmarsh, and O'Neill (2009) argued that opening access to information and communication can enhance adaptive capacity through effective and rational commitment to addressing climate change. In this way, the tourism industry can take part in communicating climate change information and building community adaptive capacity in their CSR initiatives. Specific discussion regarding the tourism industry's CSR initiatives can be seen in Sub-section 2.6.5.

2.5.3 Empirical Studies Examining Community Adaptive Capacity

A large and growing body of literature has investigated community adaptive capacity to climate change. In examining the empirical studies in the literature of climate change and community adaptive capacity, this review was prepared using the Scopus database. According to Hall (2011), this database is considered to have a larger coverage of

tourism journals than the ISI Web of Science. A combination of the term 'climate change' and 'community adaptive capacity' were used to search. The search was conducted in June 2014. There were 364 document results for the literature search in the Scopus website. The area of the literature was dominated by environmental science with 284 documents or 43.1% and social science with 154 documents or 23.4%, while the business and management field comprised only 1.5% or 10 documents, and economics and finance only 9 documents. Among that literature, most the studies were conducted in developed countries. The following are examples of the empirical research done in: agriculture and water management; fisheries, coastal and marine communities; and forest conservation, while the empirical studies regarding community adaptive capacity in the tourism sector are discussed separately in Sub-section 2.5.4.

For the agricultural sector, high levels of poverty, food insecurity, and instability of employment and income limit a community's adaptive capacity, as experienced by small coffee farmers in the Soconusco region of Chiapas, Mexico (Ruiz Meza, 2014) and households in Tanzanian Maasailand (Goldman & Riosmena, 2013). In tackling water scarcity and flood, several strategies have been used by different community. For example, Wittrock et al. (2011) reported that Canadian prairie rural communities have applied drought adaptation strategies, including providing a water reservoir and implementing water rationing. This makes agricultural communities able to cope with short term drought but still highly vulnerable to long term drought. In order to enhance farmers' ability to cope with drought, Chen, Wang and Huang (2014) suggest the government should support communities with early warning information, post-disaster services, technical assistance, and financial and physical supports. Governments in Zambia and Zimbabwe build the adaptive capacity of the agricultural sector by improving crop production practices (e.g. alternative crops, better weed control and soil fertility amendments) and providing farmer incentives to cope with the extreme climate (Twomlow et al., 2008).

Similarly, for fisheries communities:

> adaptive capacity of households is limited because of the lack of physical, natural, and financial capital and limited diversification of livelihoods. These factors are interrelated. Because of the lack of financial capital (i.e. income or access to credit), households cannot augment their physical capital (i.e. boats or nets) or diversify their livelihoods (Islam, Sallu, Hubacek, & Paavola, 2014, p. 291).

Research by Marfai and Hizbaron (2011) reported that due to economic conditions, coastal communities use traditional adaptation strategies to cope with tidal floods (for example, heightened housing foundations and making small dams to block the water from entering the houses), which create unhealthy and un-aesthetic environments. Thus, financial security and support from government may boost fisheries communities' adaptive capacity to deal with the impacts of the changes.

Like fisheries and farmer communities, indigenous and forest-dependent communities are also vulnerable to the impacts of climate change. Research by Valls and Sarda (2009) reported that Congo Basin forest communities are highly vulnerable to the effects of climate change because of the following factors: poverty, a high level of corruption, absence of infrastructure and low government supports. Thus, they suggested that in order to enhance the capacity to respond to climate change, inter-institutional linkages between international organisations, international NGOs, national NGOs and government are important. Case studies by Robledo, Clot, Hammill, and Riché (2012), conducted in three African countries – Zambia, Mali and Tanzania – emphasised the importance of forest ecosystems in providing food and shelters for community during the extreme events (flood or drought). Therefore, a multi-sectoral policy framework that ensures long-term productivity of forest goods and services needs to be optimised for enhancing adaptive capacity at the livelihood level.

Those empirical findings suggest that, in general, community adaptive capacity is limited by poverty, lack of infrastructure and lack of support from government. After discussing the conceptual and empirical findings related to community adaptive

capacity, this section now moves on to discuss this topic specifically in relation to the tourism field.

2.5.4 Empirical Studies Examining Community Adaptive Capacity in the Tourism Sector

While some economic sectors (e.g. agriculture, water resources and fisheries) have been actively engaged in climate change adaptation study for years, research about community adaptive capacity has received scant consideration within the tourism-recreation industry. In fact, there were only 24 research articles on the Scopus database by December 2016, discussing community adaptive capacity in the tourism sector. Table 2.7 provides the overview of the existing literature on this topic.

Table 2.7: Community Adaptive Capacity, Climate Change and Tourism literature in Scopus database

Focus of study	Case study sites/regions	Key findings	Methods	Author
Marine-based tourism	The Caribbean island of Anguilla	Fishers and marine-based tourism operators have developed their adaptation strategies following previous hurricanes. However, heavy reliance on marine resources hinders the community's adaptive capacity to the environmental changes.	Qualitative	Forster et al. (2014)
Attitudes to adaptation strategies	The Swiss Alps	A comprehensive and collaborative planning approach is vital to enable policy makers and stakeholders to maximise opportunities, minimise the adverse effects of climate change on the local economy, and develop inclusive adaptation measures that benefit the entire region to create more sustainable social, economic and environmental structures.	Qualitative	Hill, Wallner, and Furtado (2010)
Supply chain network (social network analysis or SNA)	Swiss Gotthard region	The Gotthard network has a high diversification capability due to high cohesion and close collaboration. Main weaknesses are uneven distribution of power, and a lack of integration of some supply chain sectors into the overall network.	Quantitative	Luthe, Wyss, and Schuckert (2012)
Governance and policy	The Arctic region	The existing adaptive strategies regarding climate change reside frequently in the process of decision making, planning and of the organisational culture of other changes facing the destination.	Qualitative	Matthews and Sydneysmith (2010)
Climate change policy (innovation and adjustment)	Barbados	Policy adjustments to protect the coastal areas from severe damage are essential, such as: building construction planning; water resources management; sewage treatment; coastal zone management; physical planning; and land management.	Qualitative	Mycoo (2014)

Focus of study	Case study sites/regions	Key findings	Methods	Author
Indigenous perspectives on climate change	NE Arnhem Land (Australia)	Indigenous communities have traditional adaptation strategies based on their culture and knowledge. They recommend ways to build community adaptive capacity based on their experiences.	Qualitative	Petheram et al. (2010)
Ski industry	Ski destinations	Ski industry adaptation options and characteristics of ski areas/operators with greater adaptive capacity.	Qualitative	Scott and McBoyle (2007)
Potential risk to a scenario of one-metre SLR.	Caribbean Community (CARICOM) countries	Most CARICOM resort properties would be at risk with 1m sea level rise (SLR). The adaptive capacity of individual coastal tourism properties and destinations is argued to differ substantially. Complex planning is required for coastal management and protection (e.g. environmental assessments, financing, land acquisition and construction) to avoid adverse impacts of SLR.	Quantitative	Scott, Simpson, et.al (2012)
"Integrating Climate Change Risks into Resilient Island Planning in the Maldives" Program, or ICCR	Maldives	ICCR are important programs for the Maldives in improving: (1) physical resilience for Maldives by deploying "soft" infrastructure; (2) institutional resilience by training policymakers and enhancing good governance; (3) community resilience by strengthening community assets and awareness.	Qualitative	Sovacool (2012)
The feasibility of sport fishing in the context of community-based ecotourism	Pacific	Pre-requisite principles are recommended, such as: (1) adequate local capacity to manage tourism businesses; (2) governance support needed to ensure the businesses benefit community and provide conflict resolution; (3) minimise for future conflict; (4) social, biodiversity and ecosystem service co-benefits should result from the enterprise; (5) monitoring and evaluation of these principles, social learning and power-sharing are required for all stakeholders.	Qualitative	Wood, Butler, Sheaves, and Wani (2013)

Despite the different focuses of the studies,some common conclusions can be drawn from that literature, among others:

(1) Communities and tourism business operators have applied specific adaptation strategies to cope with the environmental events (Forster, Lake, Watkinson, & Gill, 2014; IPCC, 2013; Petheram, et.al. 2010). For example, fishers and marine-based tourism operators in the Caribbean island of Anguilla have developed specific behavioural adaptations such as removal of fish pots during hurricane months, or bringing boats to shore, indicating fishers' flexibility to changing conditions (Forster, et.al., 2014). Indigenous communities use traditional adaptation practices to cope with extreme events, such as: temporary relocation; passing on traditional and ecological knowledge; empowering younger and older women; and maintaining and strengthening kin relationships (Petheram et al., 2010).

(2) The existing adaptive strategies regarding climate change reside frequently in the process of decision making, planning and of the organisational culture of other changes facing the destination (Matthews & Sydneysmith, 2010; Mycoo, 2014).

(3) Major constraints to strengthening adaptive capacity are poor communication and engagement, lack of finance, limited institutional capacity, and lack of recognition of indigenous culture and practices (Petheram et al., 2010; Scott & McBoyle, 2007; Sovacool, 2012). Addressing these constraints will enhance community adaptive capacity. As quoted from Sovacool (2012, p. 746),

> the ultimate adaptive capacity, at least for a community, is the purchasing power of people. If all goes to hell, as a last resort purchasing power can at least ensure people can leave their land and fly off. To do so they need to have that economic power, yes, but also knowledge on how to adapt.

(4) Finance, network or positive relationship, access to water, infrastructure and information are the important determinants to build community adaptive capacity (Petheram, et.al., 2010; Scott & McBoyle, 2007; Scott, Simpson, et.al., 2012; Sovacool, 2012). As identified by Scott and McBoyle (2007), ski areas with greater adaptive capacity have the following characteristics: capital to develop efficient and extensive snow making systems; capacity to expand water supply for increased snow making;

capacity to further diversify resort operations; and finance to support during poor business conditions. Furthermore, Sovacool (2012) argues that The Integrating Climate Change Risks into Resilient Island Planning (ICCR) program in the Maldives may not directly increase community income but it does empower rural planners and attempt to share information and knowledge about climate change so that a community can make an informed choice to adapt to the changes.

Wall and Marzall (2006) and Mendis, Mills, and Yantz (2003) created a set of measures to examine adaptive capacity of a community with respect to their resource levels, which include social, human, institutional, natural and economic resources. The framework for adaptive capacity to climate change can be seen in Table 2.8. This set of indicators can be useful to assess community capacity to handle stress stimulated by climate change.

Table 2.8: Framework for adaptive capacity: resources, definitions and related variables

Resource	**Definition**	**Variables**	**Indicator**
Social	People's relationships with each other through networks and the association; life in their community	Community attachment Social cohesion	Buckner scale Trends in mobility rates Number of community events
Human	Skills, education, experiences and general abilities of individuals combined with the availability of 'productive' individuals	Productive population Education infrastructure Education levels	Trends in dependency ratios School/institutional availability measure Trends in years of schooling completed
Institutional	Government-related infrastructure (fixed assets) -utilities such as: electricity, transportation, water, institutional buildings and services related to health, social support, and communications	Political actions Utilities infrastructure Emergency preparedness Health services Communication services	Elected representation Age and condition Number of programs available Services available Availability of local radio/TV

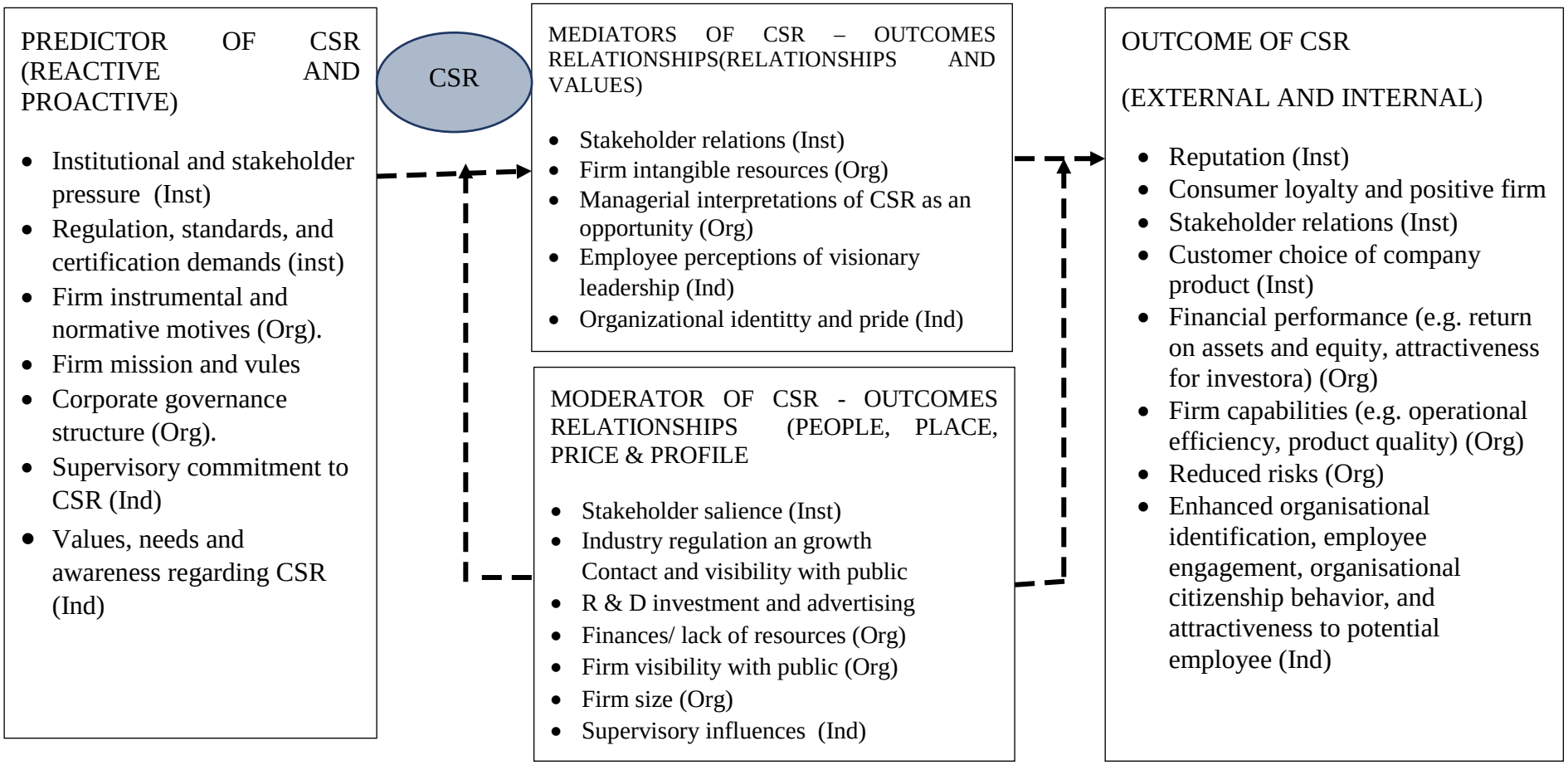
Resource	Definition	Variables	Indicator
Natural	Endowments and resources of a region belonging to the biophysical realm, including forests, air, water, arable land, soil, genetic resources and environmental services	Potable water quality Potable water quantity Surface water Soil conditions Forest reserves Fish reserves	Frequency of contamination Frequency of shortage measure Quality/quantity assessment Percentage erosion
Economic	Financial assets including built infrastructure as well as several features enabling economic development	Employments levels and opportunities Economic assets	Trends in employment rates Trends in income level Trends in home ownership rates Local business ownership rates

Sources: (Wall & Marzall, 2006, pp. 379-380) and (Mendis, Mills, & Yantz, 2003)

2.6 Corporate Social Responsibility

Corporate Social Responsibility (CSR) is not a new concept. It has been discussed for almost eight decades and was first discussed as early as the 1930s in the book *Social Responsibilities of the Businessman*by Howard R.Bowen (as cited in Carroll, 1979). Since then, CSR has been researched from different perspectives, levels and disciplines. For example, recent research by Aguinis and Glavas (2012) reviewed 690 journal articles, books and book chapters on CSR. They reviewed the CSR literature at each level of analysis (e.g. institutional, organisational, and individual) and then summarised the results into predictors, outcomes, mediators and moderators at each level. This can be illustrated briefly by Figure 2.5. Another review by Lindgreen and Swaen (2010) classifies the CSR literature into five major strands, which are: implementation, measurement, the business case, communications and stakeholder engagements. For the purpose of this thesis, the following sections will be divided into four themes: (1) definitions and dimensions of CSR; (2) driving factors in implementing CSR; (3)

benefits of CSR; and (4) empirical finding regarding CSR practices by tourism industries and others.



Note: Inst = Institutional level of analysis, Org= organisational level and Ind= individual level. Figure 2.5: Multilevel and multidisciplinary model of Corporate Social Responsibility (CSR): Predictors, outcomes, mediators and moderators. Source: Aguinis and Glavas (2012, p. 952). Used with permission.

2.6.1 Definitions and Dimensions of CSR

CSR has been defined in many ways. For example, Friedman (1970, p. 33) argues that:

> there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engage in open and free competition without deception or fraud.

Meanwhile, according to the World Business Council for Sustainable Development (WBCSD) (2000, p.8):

> Corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.

The International Institute for Sustainable Development (IISD) (2004, p.2) constructs CSR as an "organization's contribution to the balanced promotion of all three pillars of sustainable development: economic growth, social development and environmental protection". Likewise, Kang et al. (2010) see CSR as the initiative that makes firms contribute to the society's well-being beyond their own interest. Arguing in a similar vein, Williams et al. (2007) view CSR as the implicit social contract between the society and the firm for the long-term benefits in response to societal needs and want. Meanwhile, ISO 26000 defines social responsibility as the:

> *responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour [that]… contributes to sustainable development, including health and the welfare of society, takes into account the expectations of stakeholders,… is in compliance with applicable law and consistent with international norms of behaviour… [and] is integrated throughout the organization and practised in its relationships. (ISO, 2010a, Clause 2.18*)

One recent study by Dahlsrud (2008) analysed 37 definitions of CSR and found that there are many available definitions of CSR and they are consistently referring to five

dimensions, namely: stakeholder, social, economic, voluntariness and environmental. Table 2.9 demonstrates the five dimensions of CSR, how the coding scheme was applied and example phrases. Carroll (1991) listed four key dimensions of CSR. First, economic responsibilities of the firms, on which the other three are based; second are legal responsibilities; third are its ethical responsibilities to do what is right and fourth are its philanthropic responsibilities to be a good corporate citizen and improve the quality of life for the society.

Elkington (2004) conceived three dimensions of CSR (people, planet, profit) as "triple bottom lines". Further explanations regarding the CSR dimensions by Carroll and Elkington can be seen in Chapter 4.

Table 2.9: The CSR five dimensions, coding scheme and example phrases

Dimensions	The definitions are coded to the dimensions if it refers to	Example Phrases
The environmental dimension	The natural environment	'a cleaner environment' 'environmental stewardship' 'environmental concerns in business operations'
The social dimension	The relationship between business and society	'contribute to a better society' 'integrate social concerns in their business operations' 'consider the full scope of their impact on communities'
The economic dimension	Socio-economic or financial aspects, including describing CSR in terms of a business operation	'contribute to economic development' 'preserving the profitability' 'business operations'
The stakeholder dimension	Stakeholders or stakeholder groups	'interaction with their stakeholders' 'how organizations interact with their employees, suppliers, customers and communities' 'treating the stakeholder of the firm'
The voluntariness dimension	Actions not prescribed by law	'based on ethical values' 'beyond legal obligations' 'voluntary'

Source: Dahlsrud (2008, p. 4)

2.6.2 Benefits and Driving Factors of CSR

At a glance, CSR seems to be an additional cost over and above normal operating expenses for a company. However, there are many advantages that the company can gain in implementing CSR that can offset these apparent extra costs. The range of CSR strategies and their impacts on company performance have been well documented in the tourism literature (de Grosbois, 2011; Hawkins & Bohdanowicz, 2012; Henderson, 2007; Kabir, 2011; Kang, Lee, & Huh, 2010; Williams, Gill, & Ponsford, 2007).

According to Pearce II and Doh (2005), the CSR is credited with cost savings in areas such as staff recruitment and retention, image and brand building, advertising, differentiation and competition. Likewise, Rodríguez and del Mar Armas Cruz (2007) found a positive relationship between hotel companies' CSR activities and return on assets (ROA). Chandler and Werther Jr (2010) found that the implementation of CSR is frequently rationalised as a means of gaining competitive advantage. Social media is now crucial to a company's reputation – so reputation or brand is becoming ever more important.

Arguing in similar vein, research by Perera and Chaminda (2013, p. 245) reveals that "the higher the CSR commitment and the brand familiarity, the more positive the product evaluation". Consumers use product indicators (price, quality, durability) to compare one product to another and to estimate whether the product provides value for money or not (Klein & Dawar, 2004). Similarly, research by Kim, M. S., Kim, D. T., & Kim, J. I. (2014, p. 1) confirmed that a "consumer will be more likely buy products from those companies which employ a self-benefit CSR positioning". They suggest that "companies can use CSR as a strategic investment to increase their sales and profit by communicating the beneficiaries of CSR as the consumers themselves" (p. 25). Another empirical research of 1200 SMEs entrepreneurs in Germany, undertaken by Hammann, Habisch, and Pechlaner (2009, p. 37) found that "socially responsible management practices towards employees, customers and to a lesser extent society have a positive impact on the firm and its performance. As such, values can create additional value".

Turning now to the empirical evidence on driving factors of CSR initiatives, Samuel and Ioanna (2007) found that the key reasons for forty UK modern corporations providing CSR reports are: corporate reputation, stakeholder pressure, economic

performance, genuine concern and social/cultural interests. Detailed reasons from their respondents are provided in Table 2.10.

Table 2.10: The reasons for providing a CSR report

Reasons Summarised				
Corporate reputation	**Stakeholder Pressure**	**Economic Performance**	**Genuine Concern**	**Broad Social/Cultural**
To provide a more rounded picture of the company	To inform stakeholders	To meet best practice in company reporting	To ensure that employees are aligned to the company's target	To demonstrate an open management style
To meet best practice in company reporting	To provide a more rounded picture of the company	To derive CSR's positive public relations benefits	To demonstrate an open management style	To reflect the importance attached to CSR by the company
To derive CSR's positive public relations benefits	To satisfy disclosure requirements of major shareholders	To satisfy disclosure requirements of major shareholders	To reflect the importance attached to CSR by the company	To uphold its core values, to act as corporate conscience
To reflect the importance attached to CSR by the company	To align with the request of the current UK government	To ensure that employees are aligned to the company's target	To demonstrate to stakeholders that non-financial issues are also important	To continue the culture which its founder started at the inception of the company
To demonstrate to stakeholders that non-financial issues are also important	In response to questionnaires to be completed for tenders and government departments	In response to questionnaires to be completed for tenders and government departments	To act as an impetus to challenge its existing practices	To demonstrate that its senior managers are from a culture which strives to strike a balance between the need of its shareholders and that of other stakeholders

Source: Samuel and Ioanna (2007, p. 144)

However, Font et al. (2012) argue that corporate CSR reports are not necessarily reflective of their actual business practices. After investigating ten international hotel groups, they found that corporate CSR practices are mostly inward looking, focusing more on corporate performance, cost saving, and to comply with regulations, with little impact to local people at the tourist destination or to maintain sustainable supply chains.

Regardless of the debate on motivation for CSR practices and motivation for CSR report, numerous studies have attempted to explain the moral or altruistic motivations of theCSRactivities. Manoj et al. (2009) explain that Hindu philosophy has a strong influence on CSR activities in India. Their research found that all companies listed on recognised stock exchanges of India have 100 percent compliance with the mandatory requirements of CSR. However, they also found that for non-mandatory contributions, hundreds and thousands of social work endeavours undertaken by people or companies go unrecorded and unnoticed as Hindu philosophy says so. Similarly, Virakul, Koonmee, and McLean (2009) reported that CSR initiatives in Four Thai companies that received the best CSR awards from the Stock Exchange of Thailand (SET) in 2006 were based on moral or altruistic motivations. Other research by Kuada and Hinson (2012) revealed that key motives of CSR practices of local firms in Ghana are moral and ethical considerations, in contrast with foreign companies, which are mainly guided by legal obligations. In a similar vein, Hamann (2004) argues that legal accountability and corporate image constitute the drivers of the foreign mining firms' CSR initiatives in South Africa. A study of 400 small and medium accommodation enterprises (SMAEs) showed that the main motivation for their CSR practices is altruistic, although achieving competitive advantage is important (Garay & Font, 2012). Case studies from India, Thailand, Ghana and South Africa showed that spirituality and moral motivation may become the main driver of the companies in undertaking CSR activities.

A book by Bubna-Litic (2009) titled *Spirituality and Corporate Social Responsibility: Interpenetrating Worlds*, emphasises some important points in achieving business sustainability, including: (1)in order to produce world-class products and services, the manager must harness the immense spiritual energy within each individual in the organisation; (2) human nature, a philosophy of life and issues to do with meaning and purpose are behind managerial decisions and actions of each actor in the organisation; and (3) a successful economic system depends on the integrity of its actors and a

successful market system requires the ethical and responsible operation of the market. In other words, awakening the spiritual value of each individual in an organisation will help top managers in designing and implementing CSR initiatives and achieving corporate sustainability.

2.6.3 Strategies and Principles of Corporate Social Responsibility

Elkington (1999) asserted that integrating the triple bottom line is the absolute requirement for achieving sustainability in capitalism and ignoring one part of it will turn into severe catastrophe for the corporation. Elkington (1999) in his book, *Cannibals with Forks*, provides seven revolutions for corporations aiming to become leading economies in world business, including:

(1) Markets. Customers no longer only focus on the quality of the product, but also on the impact of the company's operation on the entire environment. It is argued that the company that can make some innovations to address environmental protection will gain market competitiveness;
(2) Values. Wealth creation needs values. There are some principles that a corporation must adopt in bringing business into harmony with people, for example, not employing child labour, not putting profits ahead of lives and not tolerating sexual harassment;
(3) Transparency. The stakeholders expect the company to operate transparently like goldfish in an aquarium. This pressure can be used as momentum for the company to gain public support as well as to boost the company's credibility;
(4) Life-cycle technology. The company must be aware that every one of their operations in the product life cycle will have an impact on the outcome of its product, on itself, on its economic performance and on the environment. To be successful, the company needs to minimise the life-cycle economic, social and environmental costs associated with their production;
(5) Partnership. "Stakeholders want to be treated as partners. The greater the mutual earned respect and loyalty, the greater the chance that the organization will be sustainable" (Elkington, 1999, p. 219);
(6) Time. Sustainable economies must consider time dimensions in their decision-making processes. It is vital to find out the future generations' need in a current business plan;

(7) Corporate Government. “The sustainability agenda often overlaps with the corporate governance agenda” (Elkington, 1999, p. 300). Therefore, it is crucial to integrate a triple bottom line strategy into every aspect of the business to achieve sustainability.

Focusing on the tourism industry, Hawkins and Bohdanowicz (2012, pp. 33-34) revealed ten principles of responsible hospitality:

> (1) Avoid wasteful use of resources and protect, and, where possible, improve theenvironment; (2) Prepare for the (un)expected; (3) Develop products that are responsible and can be operated responsibly; (4) Take full account of the views of people and communities; (5) Embed responsible business practices throughout the supply chain; (6) Engage employees and customers in actions that support environmental, economic and social wellbeing; (7) Contribute to the development of public policy that promotes environmental, social and economic wellbeing; (8) Define responsible business values and communicate good practice; (9) Build trust through transparency; and (10)Take responsible business to the heart of the company.

Referring to managerial experiences of top international hotels that have advanced CSR initiatives in their companies, Pojasek (2011, pp. 115-116) recommends the following guidelines in implementing CSR:

> (1) make sure the programs are carried out within the frameworks; (2) provide subordinates with a clear explanation of the rationale of the concrete projects and set attained objectives; (3) makes projects look interesting and encourage a spirit of competition; (4) provide employees with authentic support and make sure that the program is not a one off-project but a continuous effort and an integral part of corporate philosophy; (5) engage employees and guests in innovative and learning-oriented activities that raise ecological awareness and monitor their reactions; (6) create and put into place environmental (sustainability) management IT systems (such as ESCAP enviro and LightStay) that, using meaningful indicators (energy in kWh per guest–night or energy in kWh per m2 of floor area), monitor and

show in comprehensible and vivid fashion the environmental performance of particular establishments; (7) give feedback performances to all the concerned; (8) persuade suppliers and subcontractors to pay attention to environmental issues and to comply with green legislation (for instance, cooperate with those taxi car-rental firms that use hybrid, electric or bio-fuelled vehicles and with those developers that, while designing and constructing new buildings, use state-of-the-art-energy efficient technologies; (9) co-operate with external organisations and institutions that have experience with innovative projects that aim at environmental conservation in different places over the world; and (10) consult on their ideas and activities with local communities.

2.6.4 Standardising Corporate Social Responsibility

A guidance on Social Responsibility was launched by the International Organization for Standardization (ISO) in Geneva on November 2010, called ISO 26000:2010 (Thomas, 2013). The ISO 26000 provides a comprehensive guide to convert its environmental management system into an integrated sustainability management system (Pojasek, 2011). Table 2.11 gives more detail about the core subjects and issues covered by ISO 26000.

Table 2.11. The core subjects and issues of Corporate Social Responsibility

Core Subjects	Issues
Human Rights	Issue 1: Due diligence Issue 2: Human rights risk situations Issue 3: Avoidance of complicity Issue 4: Resolving grievances Issue 5: Discrimination and vulnerable groups Issue 6: Civil and political rights Issue 7: Economic, social and cultural rights Issue 8: Fundamental principles and rights at work
Labour practices	Issue 1: Employment and employment relationships Issue 2: Conditions of work and social protection Issue 3: Social dialogue Issue 4: Health and safety at work Issue 5: Human development and training in the workplace

Core Subjects	Issues
The Environment	Issue 1: Prevention of Pollution Issue 2: Sustainable resource use Issue 3: Climate change mitigation and adaptation Issue 4: Protection of the environment, biodiversity and restoration of natural habits
Fair Operating Practice	Issue 1: Anti-corruption Issue 2: Responsible political involvement Issue 3: Fair competition Issue 4: Promoting social responsibility in the value chain Issue 5: Respect the property rights
Consumer Issues	Issue 1: Fair marketing, factual and unbiased information and fair contractual practices Issue 2: Protecting consumers' health and safety Issue 3: Sustainable consumption Issue 4: Consumer service, support, and complaint and dispute resolution Issue 5: Consumer data protection and privacy Issue 6: Access to essential services Issue 7: Education and awareness
Community involvement and development	Issue 1: Community involvement Issue 2: Education and culture Issue 3: Employment creation and skills development Issue 4: Technology development and access Issue 5: Wealth and income creation Issue 6: Health Issue 7: Social investment

Source : http://www.iso.org/iso/discovering_iso_26000.pdf

Different from other ISO standards, ISO 26000 is not a management system standard and not intended to offer certification (ISO, 2010; Pojasek, 2011; Thomas, 2013). This is a voluntary standard that offers guidance to the private and public organisations in implementing CSR. Therefore, the need for ISO 26000 is not convincing enough from the perspective of general business governance (Thomas, 2013). Thomas also argues that an ISO 26000 scope is too broad, too costly and time consuming for many small and medium-sized enterprises to implement and its efficacy is difficult to access.

However, organisations can gain many benefits from implementing ISO 26000, such as: (1) competitive advantage; (2) reputation; (3) ability to attract and retain workers or

members, customers, clients or users; (4) maintenance of employees' morale, commitment and productivity; (5) favourable view of investors, owners, donors, sponsors and the financial community; and (6) positive relationship with companies, governments, the media, suppliers, peers, customers and the community in which it operates. Moreover, according to ISO, a CSR standard provides business, society and government with practical tools for three dimensions of sustainable development (economic, environmental and social) which make a positive contribution to the world (http://www.iso.org/iso/discovering_iso_26000.pdf).

Mazilu (2013) noted that the European Union encourages all tourism stakeholders to conduct a voluntary and continuous process of "responsible tourism" as specified in ISO 26000. The European Union stated that one way to measure the growth of sustainable development in the Baltic Sea Region (BSR) is by counting the number of tourism industries that have adopted ISO26000 in their organizations (NIT, 2011). "As the overall goal of CSR is to maximize an organization's contribution to sustainable development" (NIT, 2011, p. 3).

Likewise, the Korea Tourism Organization or KTO (2010) reported that they have conducted ISO 26000 self-assessment to review the sustainability management and social responsibility of their organisation. ISO 26000 self-assessment checks the 8-step social responsibility system implementation process and the 7 core subjects, and analyses the status based on 196 items with the total score being 1,000 points (ISO, 2010). The KTO stated that they achieved 902 points out of a possible 1,000 points, and were found to belong to level 4, the highest level (KTO, 2010).

Mazilu (2013, p. 263) argues that:

> tourism has the potential to contribute to environmental protection and poverty reduction by capitalizing on biodiversity assets; to increase public appreciation of the environment and to spread awareness of environmental problems bringing people into closer contact with nature and the environment.

According to UNWTO (2014), "total export earnings generated by international tourism in 2013 reached US$1.4 trillion. Receipts earned by destinations from international

visitors grew by 5% to reach US$1159 billion, while an additional US$218 billion was earned by international passenger transport". Moreover, WTTC (2014) reported that the travel and tourism sector's total contribution to GDP is US$6990 billion in 2013 and is expected to grow 4.3% in 2014. Those data confirm the argument that tourism sectors have a powerful capacity to confront the economic and environmental challenges worldwide.

2.6.5 Empirical Findings of CSR Practices in the Tourism Sector

A considerable amount of literature has been published on the application of CSR in the tourism industry (Carroll, 1991; de Grobois, 2011; Hawkins & Bohdanowicz, 2012; Henderson, 2007; Kabir, 2011; Kang, et.al., 2010; McWilliams & Siegel, 2001; Williams, et.al., 2007). Table 2.10 describes the empirical findings of CSR practices undertaken by the tourism industry worldwide. These research findings are chosen to represent the application of CSR by the tourism industry on five continents. Although the focus of their research differs, there are some common findings that can be drawn from those studies, such as:

1) Tourism industries have a strong commitment to implementing CSR in their organisations. There are five areas of CSR involvement: environment and energy saving, human resources, community involvement, fair business practices and product safety.
2) Local companies and SMEs tend to undertake CSR practices for altruistic or moral motivation while the international or chain companies are more driven by legal obligation as good citizens.
3) Firms' contributions to CSR practices highly depend on the top management decisions based on their income. 5% of profits is a common "rule of thumb" for charitable donations within the industry.
4) Although tourism industries have implemented CSR initiatives, this does not translate into participation in responsible tourism initiatives or the international CSR standardisation.
5) The studies' major limitation is that the data and analysis are taken from published information from websites from firms. Thus, the information,

objectivity and reliability remain questionable, although no firms can afford to provide false data. Font et al. (2012) provided evidence that CSR reports published on the website are not automatically reflect their CSR practices. Opinions of the communities and the government on CSR programs implemented by the tourism industry have not been much discussed.

As can be seen in Table 2.12 most of the research is conducted by using a quantitative method. Research in the field of CSR with a qualitative approach is still very limited. This is in line with Aguinis and Glavas (2012) who argue that qualitative approaches can offer a fruitful research agenda to uncover what CSR can do for communities.

Table 2.12: Research findings on CSR of tourism industry around the world

Focus of study	Case study sites/regions	Key findings	Methods	Author
CSR practices	Europe	British Airways and Qantas Airlines have well established CSR programs that support community development projects. However, little is known about the efforts of other businesses in tourism and hospitality in addressing climate change risks.	Qualitative	Beeton (2006)
CSR practices by hotel industry	Swaziland	There are six areas of CSR involvement: (1) Community involvement; (2) Human resources; (3) Fair business practices; (4) Energy saving; (5) Environmental conservation; (6) product and safety.	Descriptive Quantitative	Kabir (2011)
CSR activities, and drivers and inhibitors in achieving CSR.	Travel Industry Association of America (TIA)	Most respondents currently engage in some CSR and 24% have a person dedicated to CSR activities. The main drivers of CSR activities are enhanced reputation, and community-based issues. The main inhibitors are lack of resources and lack of understanding. The results show a predominance of environmental (rather than socio cultural) CSR projects.	Descriptive Quantitative	Sheldon and Park (2011)
Companies report commitment to CSR	The Top 150 Hotel Companies in The World in Summer 2010	There are four types of companies based on their CSR communication: (1) CSR report or CSR section in Annual Report (14%); (2) CSR-devoted website section, but no CSR report nor CSR section in Annual report (27%); (3) No report, no CSR website section but provide some CSR information on their website (28%); (4) Hotel companies with no information regarding their impacts or CSR efforts provided (31%).	Content analysis Quantitative	de Grosbois (2011)
CSR Report in security markets of China	China	Chinese companies tend to follow their own guidelines in issuing CSRRs rather than to adopt international guidelines. Social reporting practice is still at an early stage of development in China.	Content analysis Quantitative	Gao (2011)
CSR assessment regarding the social issues of the CSR	Bulgaria	The implementation of CSR (human resources related) measures in the hotels was not implemented because of: (1) Lack of clear strategic vision of the owner/senior management on how to develop—recruit, retain, train, motivate, discipline and dismiss—its personnel; and (2) Lack of enough good HR specialists.	Quantitative	Matev and Assenova (2012)

Focus of study	Case study sites/regions	Key findings	Methods	Author
Environmental reporting	The Asia Pacific airline sector	Eight airlines in the region have implemented any form of published environmental reporting, and only five of them in four countries have published stand-alone environmental reports. It appears that airlines in the more developed countries are more environmentally conscious and have invested heavily in environmental policies.	Quantitative	Barry and Wilco (2006)
The Hilton Environmental Reporting (HER) system.	Hilton International and Scandic	The Scandic and Hilton International are the leading players of CSR and activists in environmental Initiatives. They have strong environmental commitments and broadened sustainability-oriented activities.	Qualitative	Bohdano wicz (2007)
CSR reasons and impacts on corporate performance	400 SMAEs in Catalonia, Spain	Most enterprises undertaking CSR activities for altruistic reasons. CSR makes a positive contribution to Corporate Financial Performance［CFP］. However, lack of budget remains the barrier to undertaking more CSR practices.	Quantitative	Garay and Font (2012)
Level of CSR practice in hotel industry	58 hotels in Croatia in 2008	Most of the surveyed hotels did not publish CSR reports on their website. This reveals that social consciousness is still lacking in Croatia.	Quantitative	Aguinis and Glavas (2012)
Level of CSR practices	Hotel industries in Thailand after tsunami 2004	Hotel industries in Thailand acted in a responsible manner after the tsunami, by supporting communities' welfare, promoting restoration of environmental damages and working with local and international agencies for recovery.		Henderson (2007)
CSR initiatives in chain hotels	Intercont, Wyndham, Marriott Hilton, Scandic, Rezidor, and Accor	All the companies have committed to environmental sustainability. These were focused on: water and energy saving; recycling programs; buying eco-friendly products; energy tracking; green building design; and community programs.	Content analysis Qualitative	Pojasek (2011)

2.7 Chapter Summary

This chapter highlights that the CSR has powerful capacity to empower a community in tackling environmental challenges in the future. There are four main gaps that have been identified throughout this literature review. First, an obvious gap in the knowledge is that very little of the climate change research has focused on tourism and community adaptive capacity. Second, there is no literature on tourism, CSR and climate change-related literature for Bali. Third, most of the CSR literature uses quantitative methods to assess the tourism industries' CSR practices (Aguinis & Glavas, 2012). Fourth, the CSR studies' major limitation is that the data and analysis are taken from published information or websites from firms. Thus, opinions from the communities and the government related to CSR programs implemented by the tourism industry have not been much discussed.

3 METHODOLOGY

3.1 Introduction

This chapter discusses the approach and the methodology adopted to address the research aims given in Chapter 1. The overarching paradigm used for this thesis is outlined in Section 3.2, highlighting how this approach is relevant to this study. The next section discusses the methodological approach, methods, and sampling techniques used for this research. The study incorporated three research phases. The first phase involved developing a conceptual framework through reviewing the literature, the second phase involved testing the framework in a case study in Bali and finally, the third phase involved developing a generic model based upon the results of the Bali evaluation. Instrument constructions for primary methods are outlined followed by data analysis. This chapter also discusses the limitations of the research, and methods to maintain confidentiality and data storage. Finally, a summary is given to conclude this chapter.

3.2 The Research Paradigm

In conducting research, understanding the philosophy of the science is useful. Guba (as cited in Jennings, 2010, p. 34) suggests that the researcher should understand the following three basic questions to guide the design of a research project:

1) Ontological: What is the nature of the 'knowable'? Or, what is the nature of 'reality'?
2) Epistemological: What is the nature of the relationship between the knower (the enquirer) and the known (or knowable)?
3) Methodological: how should the enquirer go about finding out that knowledge?

Moreover, Jennings (2010, p. 35) distinguishes between paradigm, methodology and method:

1) paradigm is the overlying view of the way the world works;
2) the methodology is the complementary set of guidelines for conducting research within the overlying paradigmatic view of the world; and
3) methods are the specific tools of data and/or empirical material collection and analysis/interpretation/(re)construction that a researcher will use to gather information on the world and thereby subsequently build "theory" or "knowledge" about that world.

Additionally, Neuman (2011) states that a different philosophical stand point will influence the methodology and methods chosen by the researcher in finding data, and, in turn, in creating knowledge or closing the knowledge gap in the literature. Furthermore, he argues that understanding the philosophy of science helps explain how and why the approaches to social science research are different from natural science research.

This section is designed to provide a general overview of the diverse types of research paradigms available and the rationale as to why the interpretive approach was chosen as the appropriate paradigm for this research. According to Neuman (2011, p. 94), a paradigm is "a general organizing framework for theory and research that includes basic assumptions, key issues, model of quality research, and methods for seeking answers". There are three major approaches in social research: positivist, interpretive and critical (Neuman, 2012). Positivist researchers seek precise quantitative measures, test causal theories with statistics, and believe in the importance of replicating studies. Interpretive research emphasises the understanding of the participant's point of view, feelings and experiences. Differing from positivist and interpretivist approaches, the critical approach blends the theory into action and advocates social change (Neuman, 2012). Beside those three approaches, other philosophical paradigms are also discussed by Jennings (2010), such as: pragmatism, feminism, post-modernism, and participatory paradigms.

According to Veal (2006), in a positivist paradigm, researchers view the world as external and objective, whilst in an interpretive paradigm, the researcher tries to be involved in the participant's way of life to access their mind and point of view. In line with Veal, Neuman (2006) mentions that by utilising an interpretive approach,

researchers gain an in-depth understanding of the phenomenon under investigation using relatively few cases. In this thesis, the candidate aligns herself with the interpretive approach in order to uncover participants' points of view regarding CSR, climate change and building community adaptive capacity. This research focuses on understanding participants' perspectives on the topic and the reason for their actions, and linking it with the framework developed from the literature.

The following sentences are the clarification of the ontological, epistemological and methodological basis that are the foundation for this research:

1) Ontology: there is a reality that can be studied from a social perspective.
2) Epistemology: the researcher chooses to be an interpretivist because of her belief that the relationship between researcher and the research is inter-subjective, not objective.
3) Methodology: the researcher has chosen the case study method, as the topic of climate change and community adaptive capacity is more relevant in a local rather than a global context.

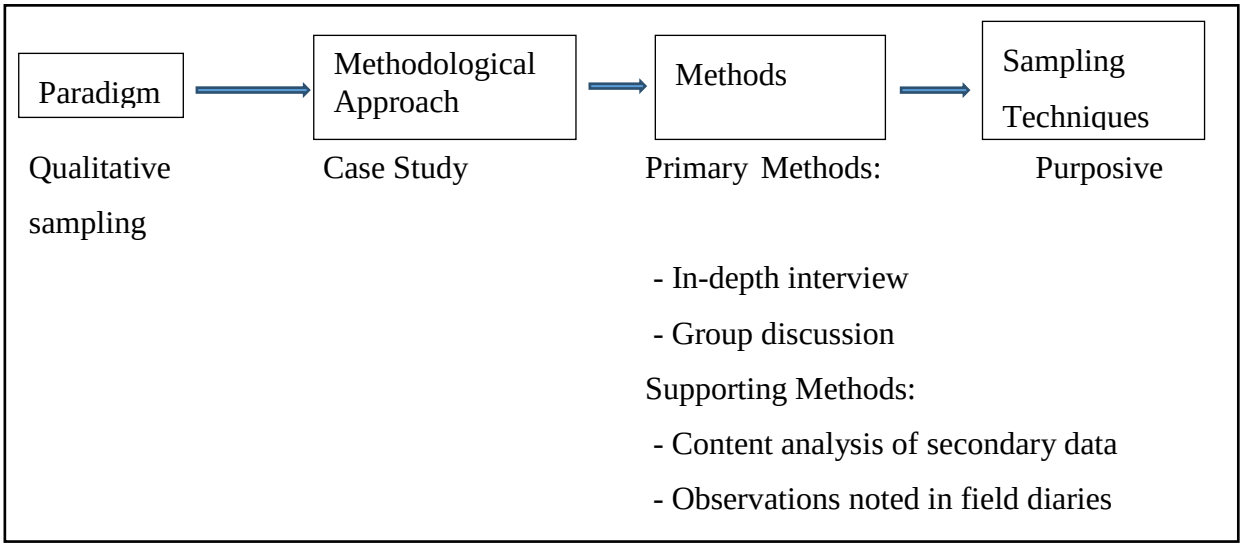
The next section will explain in detail the methodology and methods used for this research.

3.3 Research Methodology

This research adopts a qualitative research approach within the interpretivist tradition. A qualitative approach is a type of scientific research that involves gathering information from the research participants and actors to uncover meanings in and understanding of the issues being researched. For the most part the data is expressed by the actors in their own words, and this may or may not be voluminous, unstructured, nuanced, ambiguous (Dwyer, Gill, & Seetaram, 2012; Ercan Sirakaya-Turk, 2011; Guest, Namey, & Mitchell, 2013; Lawrence, 2006; Veal, 2006; Veal & Ticehurst, 2005; Williams, Gill, & Ponsford, 2007). An overview of paradigm, methodological approach, methods and sampling techniques used in this research can be seen in Figure 3.1. The following

sections justify the methodological approach and then describe the methods adopted for this study.

Figure 3.1: Paradigm, methodological approach, methods, and sampling techniques in this research



Sources: Adapted from Gary, 2004 (as cited in Klint, 2013, p. 89)

3.3.1 Qualitative Research

The use of a qualitative approach in CSR research is somewhat sparse. Reviewing CSR research, Aguinis and Glavas (2012) found that only 11% use qualitative methodologies. Therefore, this research is interested in enriching CSR literature by using a qualitative approach. Moreover, a qualitative approach was chosen because this research aims to assess the CSR practices of the tourism industry and the extent to which these align to climate change mitigation and adaptation strategies. As well, this research was designed to develop a model to assist the tourism industry in harmonising their CSR obligations with mitigation and adaptation strategies in building tourism community resilience to climate change. Qualitative research is considered an appropriate approach for this thesis to uncover peoples' understanding about climate change in the tourism context and how the tourism industry addresses the climate change problem in their CSR initiatives. As stated by Merriam (as cited in Jiang, Dominey-Howes, Harrison, & DeLacy, 2010, p.2) "qualitative researchers are interested

in understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world". The model developed through qualitative research will be useful for the global context, although the assessment of the conceptual framework will be done in the context of Bali as a single case study.

3.3.1.1 Case Study

The term case study is largely used for qualitative research which seeks to explore a context using interpretive enquiry. As stated by Yin (2006) (as cited in Jennings, 2010, p. 185), "a case study is an empirical inquiry that investigates a 'contemporary phenomenon in depth and within real-life context', especially when the boundaries between phenomenon and context are not clearly evident". Furthermore, Glesne (2011) mentions that case study refers to the intensive study of a case or study about what can be learned from the single case. Additionally, he explains that a "case" has various meanings. It can be a case about one person or many, a village or event or part of a program. Sirakaya-Turk (2011) argues that although the sample of case study is small (one unit or village or company), the story can be completed holistically from various data sources, e.g. interviews, observations, documentations, memos, emails, poster physical artefacts and video tapes. According to Hammond and Wellington (2012), case study research is not intended to present a general phenomenon. Rather, the case is used to explain the "how" and "why" of a phenomenon compared to other cases.

Stake (2000) identifies three types of case study; intrinsic, instrumental and collective. Intrinsic case study research is interested in a specific case in and of itself, without want of generalisation or theory building. Instrumental case study is useful for research to discuss a case with an aim to examine a specific issue. Collective case study involves gathering data from several cases to comprehend a specific phenomenon. This thesis can be categorised as an instrumental case study because it has gathered data from tourism businesses in Bali as a single case study to understand how the tourism industries help local communities deal with climate change.

Climate change is a contemporary and ambiguous phenomenon. It impacts communities, businesses and governments. It is complex, dynamic and protean and as such is best investigated by a case study approach in a real-life context. Further to these

key reasons, case study research allows all data collection methods to be applied (de Vaus, 2001). According to Jennings (2010), there are three common modes that can be used: interview, participant observation and documentary methods. Yin (2009) acknowledged six ways of collecting empirical data for case study research: documentation, archival records, interviews, direct observation, participant observation and physical artefacts. This thesis uses interview and group discussion as the primary data collection methods as explained in detail in Section 3.3.3. It also uses content analysis of secondary data and observation noted in research diaries as supporting data analysis methods (discussed in Section 3.3.4).

This thesis takes a case study approach because it has several strengths as identified by Hodkinson, P., and Hodkinson, H. (2001). First, case study research allows researchers to understand complex inter-relations. Secondly, case study research is grounded in "lived reality". Thirdly, case study allows the exploration of the unusual or unexpected. Fourthly, case study explains the causal relationship of the process and finally, case study enriches conceptual development in the research. Moreover, case studies have several strengths compared to other types of study. They can: provide depth or detail story about a case; deliver complete information regarding the context, process, what causes the phenomenon and linking causes and outcomes; and foster new research questions (Denzin & Lincoln, 2011).

However, it is important to acknowledge the limitations of the case study as well. These are: the complexity of data gathered is difficult to represent simply; data cannot use as numerical representation; case study is not generalisable in the conventional sense; and there can be doubt about the objectivity of the researchers (Hodkinson, P., & Hodkinson, H., 2001). Jensen and Rodgers (2001) argue that the case study approach may be lacking rigour, is prone to bias, and lacks generalisability. However, conventional wisdom that assumes case study research is not generalisable is misleading because "case studies often contain a substantial element of narrative. Good narratives typically approach the complexities and contradictions of real life which cannot be summarized or formulated into specific scientific formula" (Flyvbjerg, 2006, p. 237).

3.3.2 Primary Methods

3.3.2.1 In-depth Interview

The main idea behind an interview is to uncover peoples' perspectives and experiences regarding a specific context. The interview is an exchange of ideas or perspectives between researcher and respondent regarding the topic being researched (Jennings, 2010). According to Hesse-Bieber and Leavy (2011, p. 94), the in-depth interview "uses individuals as a point of departure for the research process, assumes that individuals have unique and important knowledge about the social world that is ascertainable, which can be shared through verbal communication".

The in-depth interview technique was employed in this research because: (1) it enables the researcher to collect rich empirical data and dense explanations of the topic being studied (Geertz, 1973, as cited in Jennings, 2010); (2) the iterative nature of interviewing can ensure its validity and accuracy (Dwyer, Gill, & Seetaram, 2012); and (3) face to face interviews allow researchers to observe surroundings, ask longer questions and achieve a high respond rate compared to the survey method (Neuman, 2012).

However, as with any research methods, the in-depth interview also has its limitations, e.g. it needs a large investment from both researcher and interviewee as one interview can take up to ninety minutes. Moreover, the distance of one location to others as well as adjustment to respondent schedule may generate additional transport and communication costs (Jennings, 2010; Neuman, 2012). These challenges were addressed to some extent by combining with other research methods such as focus groups, content analysis and observation to achieve the research objectives whilst controlling costs.

3.3.2.2 Group Discussion

Focus group research is a qualitative technique by which researchers gather with approximately six to twelve people to discuss the issue. These discussions mostly last about 90 minutes and participants are free to express their opinions facilitated by a trained moderator (Neuman, 2012). Moreover, Glesne (2011) explains that group

discussion means facilitating a group of people (six to ten people) on a discussion on a research topic over a period of one to two hours in one session.

The group discussion approach was applied in this study for the following reasons: Firstly, focus groups can produce more powerful knowledge and insights. According to Denzin and Lincoln (2011, p. 559) “more than observations and individual interviews, focus groups afford researchers access to social-interactional dynamics that produce memories, positions, ideologies, practices and desires among specific group of people”. Secondly, focus groups allow researchers to see the complex ways by which respondents position themselves in relation to each other as they answer the research questions in more focused ways (Denzin & Lincoln, 2011). Thirdly, focus groups save time and energy. As stated by Glesne (2011), focus groups allow researchers to access the perspective of several people at the same time and in the same place. However, despite this enthusiasm, Neuman (2012) argues that focus groups produce fewer ideas than individual interviews.

3.3.3 Supporting Methods

3.3.3.1 Content Analysis of Secondary Data

Content analysis can be defined as “a research method that uses a set of procedures to make valid inferences from text” (Weber, 1990, as cited in Dwyer, Gill, & Seetaram, 2012, p. 443). The content refers to words, symbols, ideas, pictures or anything that can be used as a visual and audio communication medium for human interaction (Neuman, 2012). Additionally, secondary data may include academic journals, books, conference papers, government publications, newspaper articles, reports, theses, statistics, and websites (Gray, 2009).

3.3.3.2 Observations Noted in Field Diaries

Research involving observation allows for exploring the world in many ways (Patton, 2002). Observation allows researchers to explore and explain the setting of the research context and note real situations that cannot be expressed verbally or in written form. Berg (2007) suggests that the observations are noted in written field diaries that, when possible, are completed immediately after any activities undertaken during the field trip. The use of observational analysis in research allows researchers to explore the world in

many ways as well as provide an opportunity to describe to the reader the setting of the phenomenon being studied (Patton, 2002).

A summary of methods applied in this research can be seen in Table 3.1 while a further discussion of how the primary methods are applied in this thesis is provided in Section 3.5 on instrument construction.

Table 3.1: Summary of methods applied in this research

Method	**Purpose**	**Participants and Recruitment Sources**
In-depth interview	Utilised in order to: (1) uncover participants' perspectives based on their expertise and experience; (2) capture broad opinions, experiences, and points of view that cannot be explored by conducting a survey or questionnaire or other methods (Guest et al., 2013).	Participants: 14 participants as representative of three stakeholder groups: (1) tourism managers in Bali; (2) NGOs; and (3) government. Recruitment: Participants were selected through purposive sampling techniques.
Focus Group Discussion (FGD)	Applied to: (1) develop an understanding of diverse opinions and perceptions regarding the current hazards and future risks of climate change; (2) allow knowledge sharing between community, community leaders, NGOs, and government representatives, regarding the topic discussed (Dwyer et al., 2012).	Participants: 14 participants in the first FGD in the North of Bali and 9 participants in the second FGD in Denpasar-Bali. Recruitment: Participants were selected through purposive sampling techniques.
Content Analysis of Secondary Data	Applied in order to: (1) provide supplemental data to contextualise the case study destination; (2) help in designing interview questions; and (3) identify possible respondents for primary data collection (Neuman, 2011).	Sources: Research report, government policies and regulations, academic literature, and newspaper articles.
Observation noted in Field Diaries	Utilised in order to: (1) obtain first-hand information; (2) examine interaction and behaviours in real-world settings; (3) enable wide ranges of empirical data as researcher in the study setting for extended period; and (4) gain awareness of how respondents construct their point of views (Jennings, 2010).	Sources: Observation and documentation during data collection activities in Bali. Recruitment: Immediately after any activities taken during the field trips. This includes date, specific location and experiences or personal responses.

Adapted from Calgaro (as cited in Klint, 2013, p. 105)

3.4 Sampling Techniques

This research used purposive sampling techniques to identify the key informants for the research. Patton (2002) explains that purposive sampling is the way to choose study participants based on their involvement in the study and to select those from whom the researcher can learn most about the issue or the central inquiry. The generalisability of much published research on the sample size issue for qualitative research is problematic. Adger, Brooks, Bentham, Agnew, and Eriksen (2004), for example, argue that the sample size for phenomenological study is between five to 25 respondents and for grounded theory is 20 up to 30. In purposive sampling, respondents are not selected as a representative of a larger population but more because of their capacity to give rich information regarding the topic being researched (Sirakaya-Turk, 2011). Most of the experts in this field agree that a purposive sample size should be determined inductively, therefore sampling should continue until theoretical saturation is reached. Saturation was firstly formally described by Glaser and Strauss in 1967, who defined saturation as the point at which little or no new information is being raised from new, additional respondents (Ezzy, 2013).

Prior to data collection, Victoria University's Ethic Committee granted human research ethics approval to conduct in-depth interviews and focus groups in Bali, Indonesia. The government of Bali, several tourism industries and individual respondents provided support for this project (see Appendix 1 to see a letter of support). Table 3.2 shows the number of respondents that participated in this research. To ensure confidentiality, a further breakdown of the sample is not provided.

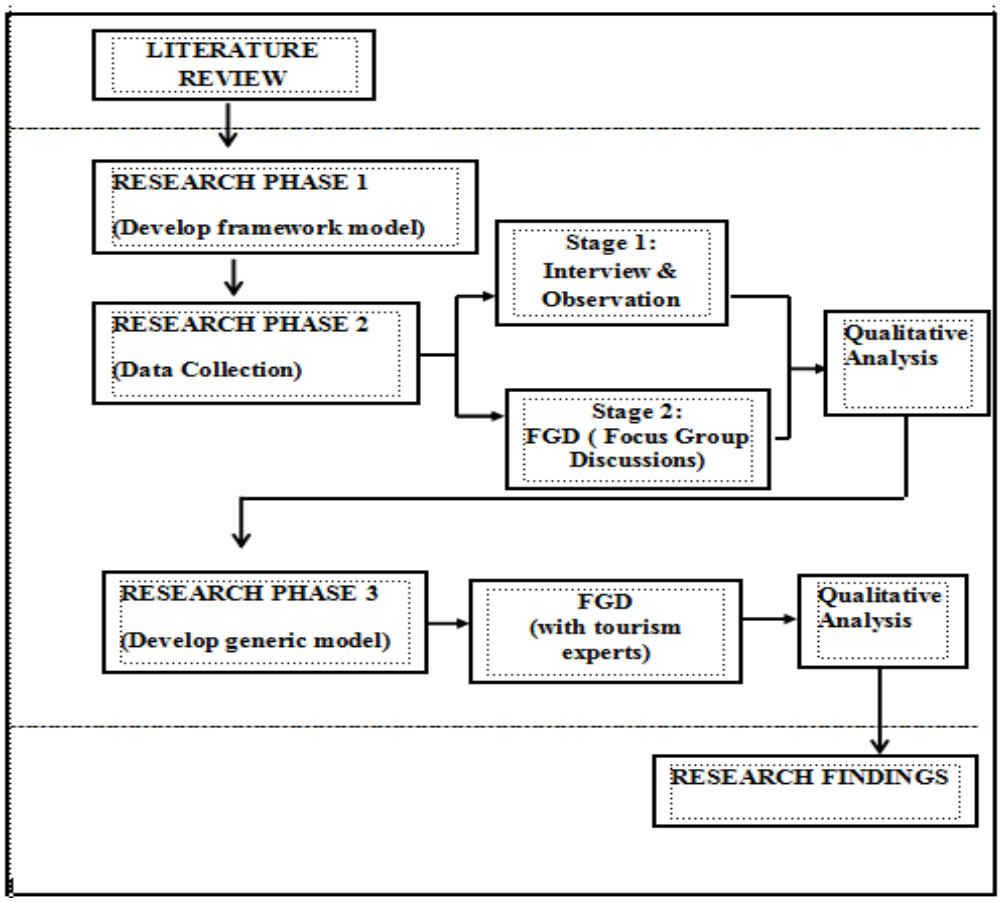
Table 3.2: The number of sample participants in this research

Sample groups	Number of respondents			Code		
	Interview	FGD 1	FGD 2	Interviewee (INTW)	FGD 1	FGD 2
Government Representatives	3	-	-	7, 8, 9	-	-
Tourism Industries	8	7	3	1, 2, 3, 4, 6, 10, 11, 13	15, 18, 19, 20, 21, 26, 27.	29, 35, 36
Community Leader	-	5	-	-	16, 17 23, 24, 28	-
Non-Governmental Organisation	3	2	4	5, 12, 14	22, 25	31, 32, 33, 34
Academic	-	-	2	-	-	30, 37
Total	14	14	9	37		

3.5 Process of Data Collection

Data was gathered from multiple sources at various time points during the 2013-2016 academic years. This study involved three phases. The first phase encompassed developing a conceptual framework based on a literature review; the second phase involved conducting interviews, observations and focus group discussions guided by the conceptual framework; and then the third phase involved developing a framework based on the data analysis. The illustration of the research phase utilised in this research can be seen in Figure 3.2

Figure 3.2: Research phases



The first phase involved developing a conceptual framework based on the literature review. This phase was conducted at Victoria University, Footscray campus from December 2012 to July 2014. Literature on climate change, CSR, and community adaptive capacity were reviewed, especially in the tourism context. Intensive discussion was conducted with supervisors in developing the framework. Once the conceptual framework was developed, the research instruments for this research were also constructed. Then, after the research instruments were settled, the researcher applied for human research ethics approval to Victoria University's Ethics Committee, which was granted prior to the empirical data collection which was conducted in August 2013.

The second phase of this research was field data collection in Bali, Indonesia during August to October 2013. The in-depth interviews with tourism businesses in the second phase were conducted to address the second research objective. The participants

included community leaders, tourism businesses (the private sector), government, members of community groups, and NGOs. Tourism industries chosen for this study range from: non-star hotels to five star hotels, transport firms, snorkelling and diving companies. The location of these firms spread from the south, to the east and middle of Bali to gain a comprehensive understanding of all of Bali's stakeholders and their perspectives. Furthermore, community groups and NGOs were selected based on their involvement in tourism and environment activities.

To access the respondents, co-operation was required from the hotel and restaurant association in Bali as well as other tourism industry associations. Therefore, networking was an important role at this point. Some tourism managers were approached through professional online networks, such as LinkedIn and the Bali Executive Group. Some were built through Facebook, for example networking with tourism community groups in the north of Bali.

Semi-structured interview questions and focus group guidelines were developed based on an intensive literature review to create the research instrument. On-site interviews were conducted and mostly followed respondents' schedules for maintaining convenient discussions. Assistance from academics with expertise in this field was sought to review the instruments. To ensure the reliability of the instruments, a pilot study was employed. Feedback from the pilot study was used to revise the instruments for the second step of data collection. Detail about instrument construction is provided in Section 3.6.

Furthermore, focus group discussions (FGD) were conducted for this research. The first one was held in the north of Bali involving tourism industries and communities to address research objective number two. Pemuteran village was chosen as the first FGD destination. As suggested by Dwyer et al. (2012), a focus group discussion involves sharing of knowledge, which becomes the foundation of community empowerment and increasing the community's level of awareness of tourism issues. Coordination with Bali tourism offices was important for obtaining formal recommendation letters to conduct focus group discussions in their territory. The second focus group discussion involved tourism experts from tourism industry associations, NGOs, and universities in Bali (Udayana University and Ganesha University of Education). The interviews and

the first FGD results were key inputs for drafting the next focus group discussion. The second FGD was held in the southern regionof Bali as the majority of the respondents live in this area.

3.6 Instrument Construction for Primary Methods

3.6.1 Semi-Structured Interviews

For the first field visit, in-depth interviews were conducted to gather information from respondents to answer the second research objective. The in-depth interview was conducted because there is limited information in the secondary data regarding the climate change policies/actions that have been introduced by the government and CSR initiatives that are currently implemented by the tourism industry in Bali to address the climate change risks. A number of interviews were conducted during August to September 2013 in Bali, Indonesia and were on average 60 minutes in length. Most interviews were conducted in the respondents' offices, such as in government offices or in managers' offices. Date and time of each interview followed the respondents' schedules to allow the respondents to provide their answers in a comfortable situation. A voice recorder was used to record the conversation with permission from respondents. Table 3.4 provides an example of interview questions. Slightly different questions were asked based on the respondent's role and position, e.g. questions for government were more about policy while questions for tourism managers were more about CSR initiatives.

Table. 3.4: Examples of interview questions

Respondent groups	**Questions**
Government	1. What impacts of climate change are already being felt in Bali? 2. What are the climate change risks that might be experienced by Bali as a tourism destination? 3. How does the government integrate the issue of climate change in the grand design of Bali's development? 4. What are the government plans and policies in dealing with the threat of climate change? 5. What strategy does Bali have as a tourism destination to tackle climate change risks? 6. Would you please mention the inhibitor and facilitator factors in facing climate change problems? 7. In your opinion, what are the roles of corporate social responsibility in helping the government deal with climate change?
Tourism Managers	1. In your opinion, what is going on in Bali related to climate change risks? 2. Would you please tell me, what CSR initiatives are currently employed in your organisation? 3. Do you see these initiatives as CSR only or as a response to climate change? 4. If any, what are the facilitators and inhibitors in relation to applying CSR strategies within your organisation? Within the community? 5. As you know, actions associated with building adaptive capacity may include communicating climate change information, building awareness of potential impacts, maintaining well-being, protecting property or land, maintaining economic growth or exploiting new opportunities. Do you think that Corporate Social Responsibility can improve the community's ability to deal with climate change? 6. Do you think that your company has any plan to enhance the firm's Corporate Social Responsibility towards building the community's adaptive capacity to climate change? 7. Does the company have a CSR report? What are the benefits of a CSR report for your company? 8. What do you think about this "the more a company has CSR reports the more a community can be helped to cope with climate change"? 9. What risk strategies do your company implement in terms of the climate change forces? (in addressing natural disaster, major economic downturn and health problems?) 10. How can the company help the destination authority to address climate change threat?

3.6.2 Focus Group Discussion

As mentioned in Section 3.5, two FGD were conducted in this research. Both FGD had a different audience and different objectives. The first FGD objective was to gather data that can complement the interview results which were dominated by tourism managers. By involving community leaders and NGO in the discussion, this thesis can present broader perspective from various tourism stakeholders. The results of the first FGD provide balance information between data presented by tourism managers during interviews and information from community leaders at the grass root level.

The second FGD objective was to find out the challenges faced by various stakeholders in building community adaptive capacity to climate change and thereby, formulate strategy to tackle the challenges. FGD guidelines can be seen in Appendix 6.

3.7 Data Analysis

Data obtained from in-depth interviews and focus group discussions was analysed by a qualitative method. The data gathered firstly needed to be transcribed and translated from a non- English language (Bahasa Indonesia) into English. The thematic approach was used to analyse the data. In thematic analysis, once data is collected, it will be coded to search for similar themes and patterns and then to explore how the categorisations are presented by codes from case to case, from setting to setting (Füssel, 2007).

Füssel (2007) divided the data analysis steps into three activities: firstly, conducting early data analysis which includes memo writing, analytic files, and creating a monthly report; secondly, entering the code mines; and finally, presenting the data. Similarly, Veal (2006) mentioned that the main activity of qualitative analysis is reading of notes, documents and transcripts, listening to the interviews and FGD records, transcribing the data, and coding, sorting and organising data. In similar vein, Crowther and Lancaster (2012) state that analysing qualitative data involves three steps: (1) data reduction, which means the researcher organising data into clear patterns; (2) data display, which is analysing qualitative data in a way that reader can understand and evaluate; (3)

conclusion drawing and verification. This step involves comparing data against the initial theories, and then verifying through more detailed examination.

In this research, I used Nvivo to help in analysing the data. As suggested by Veal and Ticehurst (2005), Nvivo is the most widely used program, which can aid in shaping and understanding data, and has the capacity to help form and test theoretical assumptions about the data. Nvivo is a tool to help the researcher to manage, explore and find pattern in the data but it cannot replace the analytical expertise of researchers (NVIVO10). The reason to use computer software to do data analysis is to organise the data collected for this research in a more structured way. Moreover, NVIVO helps to find similar patterns in the data so that the researcher can answer the questions of "why" and "how" relating to the sources of data through data query.

According to Edhlund (2007), there are some key concepts in NVIVO software: (1) Sources. The material of the research is called sources, including documents, PDF files, videos, audios, pictures, memos, and framework matrices; (2) Coding. This process helps in organise the data by topic, case or theme; (3) Nodes. This is similar to the folder in a computer program, which is useful to place material in one place to make it easier to pull together similar patterns and ideas; (4) Source classification. This lets the researcher classify the data based on their source; (5) Node classifications. This helps in recording data about people or place or case, for example, demographic data of the respondents.

The first step to analyse the data was listening to the voice recorder, transcribing the data and then saving it into word document. As the interviews were conducted in a non-English language (Bahasa Indonesia), the researcher translated and transcribed the interview data into an English version. Similarly, the memos from the observations were translated into English so that it was easier to do the further steps. Once data had been transcribed, the next step was developing codes for the data. According to Hennink, Hutter, and Bailey (2011, p. 230), "a code is an issue, topic, idea, concept, or process that is evident in the data. Codes are essentially discussed by participants and are developed by reading the data". Moreover, codes are distinguished into two types: deductive codes and inductive codes (Hennink et al., 2011). Deductive codes originate from the researcher and can be developed from an interview guide derived from the

literature review. Inductive codes come directly from reading the data which reflects participants' views.

This research coded the data deductively. Based on the literature review, an extensive list of codes was developed as a starting point for data analysis. For example, there are five types of CSR dimensions and practices identified in the literature (de Grosbois, 2011; Lozano & Huisingh, 2011; Sheldon & Park, 2011): (1) environmental; (2) human resources; (3) society and community well-being; (4) product and safety; and (5) fair business practices. Thus, these fives dimensions and practices served as codes for this research. In climate change topics, there are some codes that can be identified based on the literature review. For example, five types of mitigation action, as identified by Scott et al. (2012) are: (1) reducing energy use; (2) using renewable energy; (3) sequestering carbon; (4) reducing carbon footprint; and (5) environmental policy. Also, five types of adaptation options that are known to be relevant for the tourism industry, as mentioned by Scott et al. (2012), are used as codes: (1) technical; (2) managerial; (3) policy; (4) behavioural; and (5) research and education. Once codes had been developed, they were kept in a code book as the central reference to make the data coding consistent. Coding data is a process that involves reading data carefully and organising it into appropriate codes (Hennink et al., 2011). Moreover, they argue that new codes can be added to a codebook if new codes are identified during the coding process.

3.8 Data Storage and Confidentiality

It is the responsibility of the researcher to maintain confidentiality of data and store it in a safe and secure place. According to Gillham (2005), there are several guidelines in conducting interviews for research: designing informed consent forms, storing and analysing data, respecting safety and well-being of the respondents, and protecting the identity of information. I followed these guidelines to make sure the data of the respondents are kept confidential and secure. This has been done by separating the answers and the identities of the participants. The participants' data will never be given to clients or other people (Glessne, 1999). Moreover, research data and primary materials will be stored in safe and secure storage. The computer which is used to store the data has been locked so that only the researcher can get access to it. Furthermore,

data have been backed up in Dropbox and Skydrive so that it will be safe in case something happens with the computer (e.g. stolen or attacked by viruses). Data will be held securely for 5 years at Victoria University (Victoria University, 2012).

3.9 Limitations

Data collection was undertaken overseas with limited time and cost to spend in the field. International flights and local transport costs from one location to others are costly. This influenced the methods of research undertaken for this research. I believe that combining in-depth interviews and focus groups can minimise the cost without reducing the quality of data gathered.

Furthermore, I found some challenges in managing time to conduct in-depth interviews with tourism industry managers in Bali. For example, (1) some of respondents frequently changed their interview schedule because most of them were involved as a host in APEC 2013 and Miss World 2013; (2) some interviews were delayed up to 70 minutes as they still had something urgent to do before the interview; (3) distance between one interview location and others was, on average, 60 minutes not including traffic jams, which normally occur in Bali. I scheduled two interviews in one day but due to traffic challenges in Denpasar, Bali, the schedule could not run as planned; (4) some respondents cancelled their appointment at the last minute. This wasted my time in travelling to their location and in time taken to find another respondent to replace their position.

Despite the challenges found during data collection, I could manage the problems and solve them to gather the data needed for this study. This could be done with support from my family members who provided me free accommodation in Denpasar during data collection in south of Bali as well as in North Bali. As I am originally from Bali and experienced in conducting research in Bali, I am familiar with the situation, location and the cultural issues that may occur during the research. Therefore, I prepared the plan to flexibly follow the respondent schedule until data saturation was achieved.

3.10 Chapter Summary

This study was grounded in the interpretive research paradigm. A qualitative method was considered as the most appropriate approach to achieve research objectives of this study. Data for this research was collected from primary methods including in-depth interviews and two focus group discussions, and secondary methods consisting of content analysis of secondary data and observations made in field diaries. The results of the in-depth interviews and the first focus group became the materials for Chapters 5 to 7. The analysis of the previous chapter combined with results of the second focus group became the materials for Chapter 8. And finally, these are followed by Chapter 9 to conclude this thesis.

4 DEVELOPING A CONCEPTUAL FRAMEWORK

4.1 Introduction

This chapter aims to develop a conceptual framework that allows a better understanding of how CSR practices can enhance tourism community adaptive capacity. There are some underlying rationales for why it is important to link climate change, CSR and community adaptive capacity, inter alia: (1) mitigation, adaptation and CSR have common grounds; (2) building tourism community adaptive capacity to climate change is an urgent challenge; and (3) the existing literature has yet to provide frameworks that can help tourism managers use their CSR to build community adaptive capacity to climate change. To achieve the research aim, this chapter is organised into the following outline. After the introduction, a review of literature highlights the common ground between climate change mitigation, adaptation and CSR. Next, the importance of CSR in building community adaptive capacity to climate change is presented. Following this, an analysis of previous frameworks in climate change, CSR and community adaptive capacity is discussed to propose a conceptual framework. Finally, this chapter draws overall conclusions and recommendations.

4.2 Mitigation, Adaptation and CSR: Common Ground

This section basically argues that mitigation, adaptation and CSR have common ground. When the key elements of climate change mitigation and adaptation plus CSR are mapped in the one matrix, as per Table 4.1 below, it can be readily seen that CSR dimensions are closely linked to climate change mitigation and adaptation elements.

Table 4.1: CSR, mitigation and adaptation

CSR dimensions and practices	ISO 26000	MITIGATION	ADAPTATION
Environmental ➢ Reduce GHG emissions ➢ Reduce energy consumption ➢ Use renewable energy sources ➢ Reduce water consumption ➢ Reduce, reuse, recycle solid waste ➢ Reduce air pollution ➢ Contribute to biodiversity conservation **Human Resources** ➢ Provide safe and healthy work environments ➢ Provide fair careers, wages and benefits ➢ Provide opportunities for learning and development ➢ Embrace diversity and accessibility ➢ Hire local residents	**The Environment** ➢ Prevention of pollution ➢ Sustainable resource use ➢ Climate change mitigation and adaptation ➢ Protection of the environment, biodiversity and restoration of natural habitats **Human Rights** ➢ Human rights risk situations ➢ Economic, social and cultural rights **Labour Practices** ➢ Conditions of work and social protection ➢ Health and Safety at Work	**Environmental Policy** ➢ Implement water-saving and reuse measures ➢ Purchase green label products ➢ Become involved in climate change policies and plans ➢ Become involved in climate change networks ➢ Locate new establishments in climate-risk areas **Reducing Energy Use** ➢ Implement control systems for heating ➢ Use energy-efficient appliances **Use Renewable Energy** ➢ Use solar energy ➢ Use wind energy	**Technical** ➢ Snowmaking ➢ Shore-protection structures ➢ Rainwater-collection ➢ Cyclone-proof building design **Managerial** ➢ Water conservation plan ➢ Low-season closures ➢ Product and market diversification ➢ Redirect clients away from impacted destinations **Policy** ➢ Hurricane interruption guarantees ➢ Comply with or exceed regulations (e.g. building codes)

CSR dimensions and practices	ISO 26000	MITIGATION	ADAPTATION
Fair Business Practices ➢ Do business with green companies ➢ Be fair, honest and ethical ➢ Bring social responsibility into the supply chain **Product and Safety** ➢ Responsible and healthy product choices ➢ Safe environment for consumer **Society and community well-being** ➢ Support local community, grassroots, economically ➢ Raise public awareness of environmental initiatives ➢ Promote community value and cultural heritage ➢ Support youth/volunteer	**Fair Operating Practices** ➢ Fair competition ➢ Promote social responsibility in the value chain **Consumer Issues** ➢ Protecting consumers' health and safety ➢ Education and awareness **Community Involvement and Development** ➢ Community involvement ➢ Employment creation ➢ Wealth and income creation ➢ Health and social investment **Organisational Governance** Provide a decision-making system to put social responsibility into practice	**Sequestering Carbon** ➢ Volunteer for local conservation projects ➢ Provide carbon offset projects for guests **Reducing Carbon Footprint** ➢ Provide locally produced, seasonal food ➢ Reduce, reuse and recycle waste ➢ Encourage staff use of public transport ➢ Hire local people	**Research** ➢ Physical risk analysis for property **Education** ➢ Water and energy conservation education for employees and guests **Behavioural** ➢ Real-time webcams of snow conditions ➢ GHG emission offset programs
Adapted from (de Grosbois, 2012; Lozano & Huisingh, 2011; Sheldon & Park, 2011)	Source: ISO (2010)	Source: Scott., Hall, and Gossling (2012)	

The link between the three is readily apparent. Climate change mitigation strategy is closely linked to environmental responsibility, whereas adaptation is more closely related to economic and social responsibility. For example, designing an emergency plan is closely aligned to applying CSR to provide safety for consumers and employees. Moreover, the policy to provide "hurricane interruption guarantees" is comparable to the application of delivering fair business practices for clients/consumers.

Bubna-Litic (2007) argues that although CSR and environmental law are two different scientific fields, focusing on their intersection rather than on the gap between them will improve the implementation of CSR in addressing environmental problems including global warming. Arguing in a similar vein, Kabir (2011) says that it is important to have strong legislation which positions environmental conservation and energy saving as part of those CSR initiatives. In some countries, such as Australia, Norway, the United Kingdom, and South Africa, environmental laws have become the major drivers for implementing CSR (Bubna-Litic, 2007). The role of the tourism industry to embrace these approaches to build community adaptive capacity will be discussed in the next section.

4.3 CSR and Community Adaptive Capacity to Climate Change

As described in Section 2.3, climate change will severely impact the livelihood of the communities in developing countries and on small islands, especially those who highly depend on the tourism sector. Tourism is recognised as one of the leading economic sectors in many developing countries (Cruz, 2007 in Parry, Canziani, Palutikof, van der Linden, and Hanson (2007). Furthermore, as Cruz comments, whilst the industry is highly vulnerable to climate change, only a few research studies have reviewed and assessed its vulnerability. The assessment of vulnerability and adaptive capacity is more likely dependent on the local context. Therefore, Simpson, Gössling, Scott, Hall, and Gladin (2008) suggest that developing countries and small island states should assess their vulnerability as well as their adaptive capacity to climate change so that appropriate action can be prepared to minimise the risk.

Reviewing literature regarding community adaptive capacity, empirical evidence from tourism and other sectors reveals similar findings (see Sections 2.5.3). Community adaptive capacity is limited by poverty, poor communication and knowledge, low levels of institutional capacity and lack of support from government or tourism authorities. Considering the barriers to building community adaptive capacity, this section argues that tourism industries can be part of the solution by communicating climate change information through their CSR initiatives. Tourism industries can take a leadership role in communicating climate change impacts to the community; engaging the public in adopting a low carbon lifestyle and supporting grassroots action. The following sections will analyse the existing framework in climate change, CSR and community adaptive capacity literature to propose a new conceptual framework.

4.3.1 Analysis of Existing ClimateChange Frameworks in the Tourism Sector

Numerous studies have attempted to explain the existing frameworks in the tourism and climate change field. For example, Prideaux, McKercher, and McNamara (2013) proposed a four-stage problem definition and response framework for climate change mitigation at both national and international levels. Ajani, Keith, Blakers, Mackey, and King (2013) presented a national carbon accounting framework that will help policy makers handle mitigation strategies and challenging demands in natural ecosystems and agricultural land.

Jiang, Dominey-Howes, Harrison, and DeLacy (2010) have classified the existing adaptation frameworks into four approaches, inter alia:

1) Vulnerability. This approach focuses on assessment of the vulnerability of the system.
2) Adaptation framework. This approach focuses on designing adaptation strategies for the tourism sector.
3) Risk and disaster management. This approach focuses on understanding the risks and impacts of climate change and then designing disaster management for the industry or destination.

4) Resilience. This approach focuses on assessing the resilience of the community or destination in relation to climate change risks.

Later, Jopp, DeLacy, and Mair (2010) developed a conceptual framework for regional destination adaptation. This framework provides a practical tool for policy makers and tourism managers in making decisions regarding climate change as well as exploring the role of the consumers in influencing the adaptation options at the destination level.

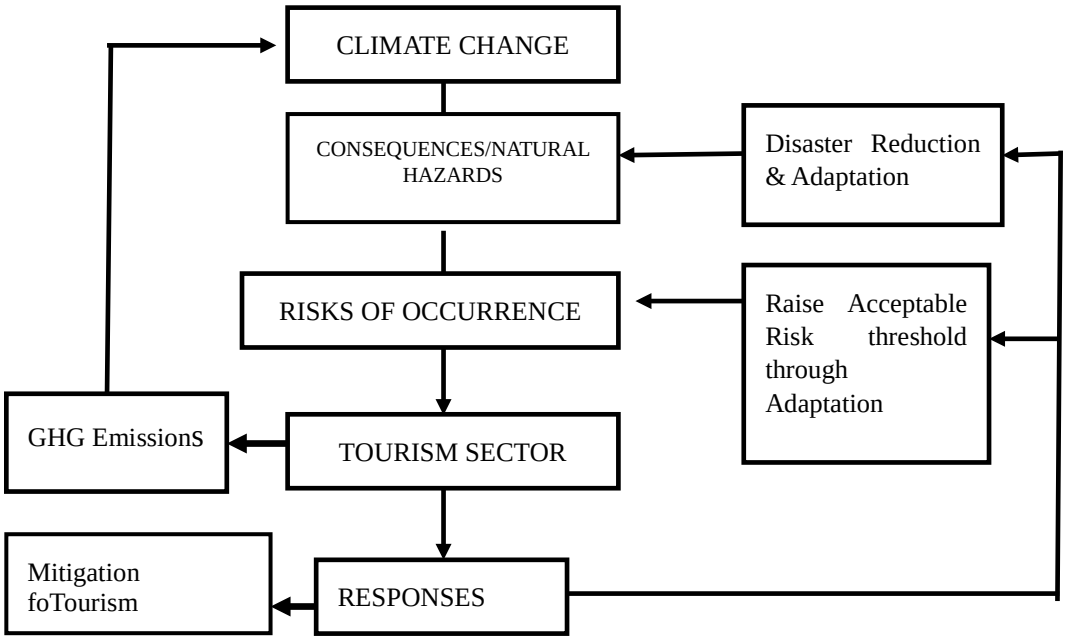
So far, little attention has been paid to the community dimension in the adaptation literature. After reviewing empirical studies and conceptual frameworks in climate change adaptation literature, Kajan and Saarinen (2013, p. 26) argue that climate change research in tourism requires a shift of focus "from market-led and business driven research to more holistic and community-centred adaptation research".

Among the existing frameworks explained earlier, I decided to adapt a framework developed by Becken and Hay (2007). There are several assertions to support the reason to choose this framework, inter alia:

1) This framework describes the complex relationship between the tourism industry and climate change (see Figure 4.1).
2) Although not mentioned explicitly in the framework, it is apparent that this framework is suitable for tourism businesses as well as for regional tourism destination authorities. Responses to climate change risks can be made by tourism businesses individually as well as collectively under the coordination of regional tourism destination authorities.
3) CSR can be viewed as a 'response' and therefore replace the position of 'response' in the framework. As explained earlier, CSR and climate change mitigation and adaptation strategies have a common ground, therefore the word 'response' is interchangeable with CSR.

However, this framework only illustrates the relationship between the tourism sector and climate change. It does not explain how the tourism industry shows their responsibility to the host community to be prepared for climate change risks.

Figure 4.1: The relationship between tourism and Climate Change and possible responses to mitigate and adapt to changes in the climate



Source: Becken and Hay (2007, p. 8). Used with permission.

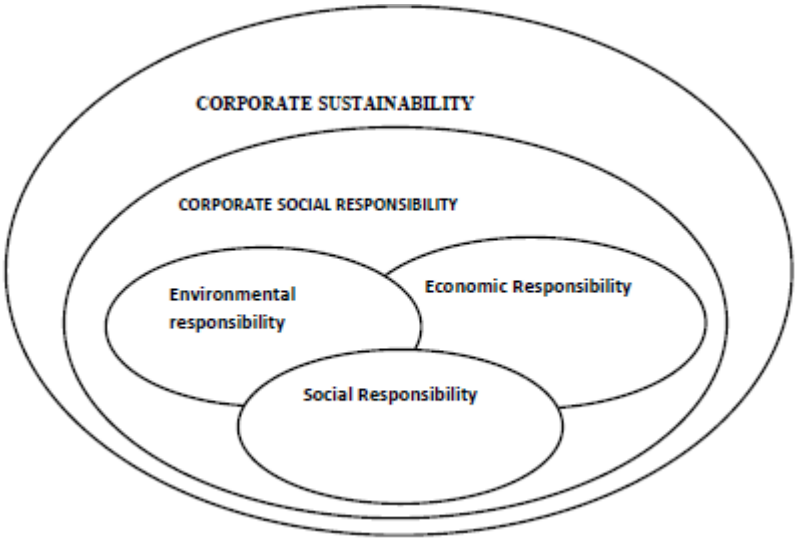
4.3.2 Analysis of Existing CSR Frameworks

A large and growing body of literature has investigated CSR frameworks (Carroll, 1979; Carroll, 1991; Cragg, Schwartz, & Weitzner, 2009; Manal El & Annie, 2012; Valentine, 2010). For example, Carroll (1979) developed a conceptual model called "a three-dimensional conceptual model of corporate performances" that is useful for managers in conceptualising social issues and planning social performance. Twelve years later, Carroll (1991) constructed a model called "the pyramid of corporate social responsibility". This model explains that CSR consists of four layered components: at the bottom of the pyramid is economic responsibility, above it is legal responsibility, next is ethical responsibility and at the top is philanthropic responsibility.

Some studies have discussed that CSR is the foundation of corporate sustainability (CS). According to Panapanaan, Linnanen, Karvonen, and Phan (2003) pursuit of sustainable development is one of the major drivers in implementing CSR. Similarly,

Marrewijck in Cragg, Schwartz, & Weitzner, (2009, pp.252) explained that “three aspects of sustainability (economic, environmental, and social) can be translated into a CSR approach that companies have to be concerned with”. He also explained that CSR has a close relationship with CS and they can be illustrated as the two sides of the same coin, with CSR a more specific interpretation of the social dimension of the organisation in achieving corporate sustainability. Likewise, Kaptein and Wempe (2011) suggested that the firm should balance the triple bottom line (profit, people, planet) in achieving corporate sustainability. The concept of “people, planet, profit", was conceived by Elkington in 1995 to concisely explain the importance of triple bottom lines in achieving business sustainability (Elkington, 2004). Elkington (1999) argued that integrating the triple bottom line is the absolute requirement for achieving sustainability of capitalism, and ignoring only one part of it will result in severe catastrophe for a corporation. An illustration of the relationship between CS and CSR can be seen in Figure 4.2.

Figure 4.2: General model of CS/CR and its dimensions



Source: Linnanen & Panapanaan, in (Cragg et al., 2009, p. 252)

Some researchers have discussed CSR initiatives in addressing climate change (Bubna-Litic, 2007; Cowper-Smith & de Grosbois, 2010; Dodds & Kuehnel, 2010). Most of this literature is concerned with environmental responsibility. Little research has been

undertaken to address the other dimensions of CSR, namely, social and economic responsibility. This argument is supported by Cowper-Smith and de Grosbois (2010, p. 72), who clearly mention that the "majority of the analysed reports heavily focus on the environmental dimension of CSR and provided less detail regarding the social and economic dimensions". Therefore, it is crucial to further investigate how the local community would tackle climate change risks and how tourism businesses can build adaptive capacity of their host community through their CSR initiatives. Against this backdrop, this chapter aims to link the mitigation and adaptation strategies of climate change with the full range of environmental, economic, and social responsibility, of the tourism organisations and how these can, in turn, build community adaptive capacity.

4.3.3 Analysis of Existing Community Adaptive Capacity Frameworks

According to Ismail (2009), CSR has many roles in community development, including: technology and knowledge transfer, poverty alleviation in the communities, cost sharing for environmental protection and human rights advocacy. For many business leaders, it is difficult to know when CSR starts and ends in relation to creating economic opportunities, reducing poverty, increasing access to education and health care and developing infrastructure for the local community (Ismail, 2009).

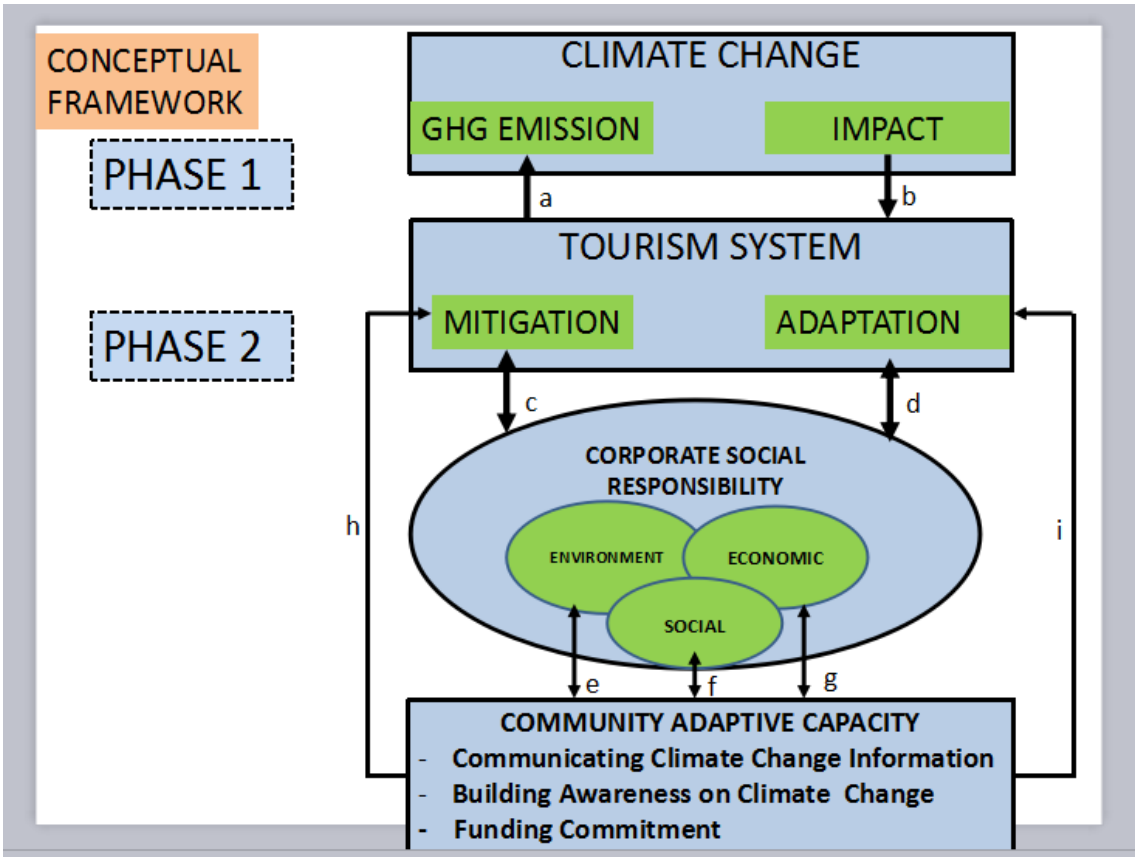
As mentioned earlier, tourism businesses may already be involved in building community adaptive capacity as part of their CSR initiatives. Adger, Arnell, and Tompkins (2005, p. 79) mentioned that "actions associated with building adaptive capacity may include communicating climate change information, building awareness of potential impacts, maintaining well-being, protecting property or land, maintaining economic growth or exploiting new opportunities".

4.4 Proposed Conceptual Framework

The proposed model for linking climate change, tourism and CSR to build community adaptive capacity is presented in Figure 4.3. This model represents an integrated approach to the three established models discussed so far in this paper, including:

climate change and its relationship with the tourism industry by Becken and Hay (2007), CSR by Linnanen & Panapanaan, in Cragg et al. (2009) and community adaptive capacity by Adger et al. (2005). Conceptually, the model aligns common elements and seeks to forge links between what may appear to have been disparate elements of the three models. The aim is to provide a holistic presentation of the steps involved in harmonising CSR initiatives with climate change mitigation and adaptation strategies whilst building community adaptive capacity.

Figure 4.3: Conceptual framework



After reviewing the literature, two phases became apparent in designing the framework. The first is to understand the relationship between climate change and the tourism industry. This stage involves assessing the vulnerability and resilience of the destination. It is critical to identify the impact of climate change on the destination, on

the tourism businesses and on the community. The second phase is addressing the climate change problem through CSR initiatives both for business advantage and for building community adaptive capacity.

The following sections explain in detail how the components adopted from the previous frameworks are fundamentally linked to each other to provide a holistic approach to the integration of tourism CSR and climate change strategies.

4.4.1 Phase One: Understanding the Relationship between Climate Change and the Tourism Industry

The story starts from the first group of connections: arrow ‘a’ and ‘b’, showing the dual relationship of tourism with climate change. Arrow ‘a’ illustrates that the tourism systems emit GHG emissions, which contribute to the environmental changes. At the same time, arrow ‘b’ illustrates climate change is threatening the tourism industry. This phase is adapted from a framework presented by Becken and Hay (2007) which uses a risk management approach to respond to climate change threats.

The next step is developing a response to address climate change problems through mitigation and adaptation strategies. Arrows ‘c’ and ‘d’ illustrate the tourism industry’s response to climate change. The word ‘response’ in Becken and Hay (2007) is now replaced by CSR, given that this chapter argues that mitigation and adaptation are closely aligned with CSR initiatives and thus CSR can also be seen as part of the tourism businesses’ response to climate change.

4.4.2 Phase Two: Responding to the Climate Change Problem through CSR Initiatives

This part of the framework describes the second group connection (arrows ‘c’ and ‘d’). This part presents that within the remit of corporate social responsibility, the tourism industry can: (1) address climate change mitigation through their environmental initiatives; (2) develop climate change adaptation strategies through their economic responsibility initiatives; and (3) build community resilience (adaptive capacity) to climate change through social responsibility initiatives.

Following this, the third group of connections: ‘e’, ‘f’, ‘g’, showing CSR initiatives, contributes to building community adaptive capacity through environmental (arrow ‘e’), economic (arrow ‘f’), and social responsibility (arrow ‘g’) initiatives. Arrow ‘e’ illustrates that tourism firms, in discharging their environmental responsibility, can enhance community resilience through communicating and building awareness regarding climate change. Arrow ‘g’ demonstrates that tourism businesses can enhance community adaptive capacity as part of their economic responsibility. It can be seen clearly from arrow ‘f’ that communicating climate change information and building awareness can increase community resilience in dealing with climate change.

The fourth group of connections, ‘h’ and ‘i’, show the feedback loop of resilient community more capable of responding to climate change. CSR initiatives to build community adaptive capacity will help the community to take part in climate change mitigation (arrow ‘h’) and adaptation (arrow ‘i’) strategies and programs.

This framework seeks to demonstrate that by addressing climate change via CSR practices, tourism managers will benefit their stakeholders, including their owners, and especially the local community. This argument is supported by Moratis and Cochius (2011). They argue that whilst not the only part, creating a profit is an important part of corporate responsibility. This leads to recognising the mutual relationship between the organisation and host community. By reducing energy use, water consumption, and solid and liquid waste, the company can generate savings, which in turn bring benefits to the shareholders and employees as well as the broader community and the environment. In other words, mitigating climate change not only helps the environment, but also helps companies to be economically responsible to their shareholders.

As a part of their responsibility to tourists, businesses should provide climate information, year-round tourist activities, and appropriate emergency plans. Moreover, a business should also consider a suite of adaptation strategies, including building rainwater collectors, constructing sea walls and securing adequate property insurance. Each action will enhance the business’ ability to cope with climate change impacts as well as showing economic responsibility to its stakeholders.

4.5 Chapter Summary

Through gap analysis on current CSR and climate change framework, two phases of assessment were provided: (1) understanding the relationship between climate change and tourism system; (2) responding to climate change through CSR initiatives. Each phase has several key components. Phase one has two components. The first component of phase one is understanding the contribution of tourism system to climate change. The second component of phase one is understanding the impact of climate change on tourism. Phase two has three main components, including: (1) understanding how tourism businesses can implement mitigation strategy as part of their environmental responsibility; (2) understanding how tourism businesses can implement adaptation strategy as part of company's economic responsibility; (3) understanding how CSR of tourism businesses can build community adaptive capacity to climate change.

The conceptual framework is intended fill knowledge gap in the available literature on integrating climate change and CSR, which were previously discussed as separate entities. Although the model is theoretical, it is intended to persuade tourism managers to accept that the benefits of addressing climate change threats can outweigh the costs. As concern about climate change grows, the tourism industry needs to act as a good corporate citizen.

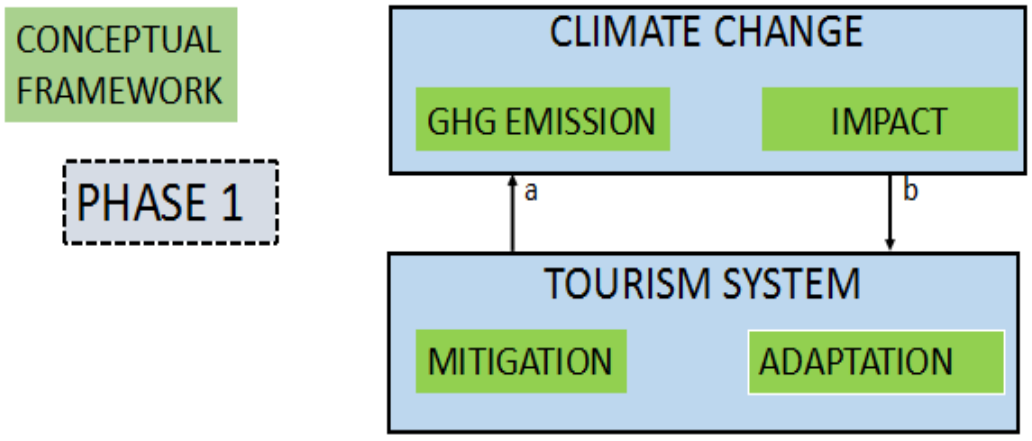
This chapter achieve research objective one by developing a framework that allows a better understanding of how CSR practices can enhance community adaptive capacity to climate change. This chapter argues in a vein that is similar to Aguinis and Glavas (2012, p. 960) who state that "using CSR as a conduit to test management theories in the context of society, CSR research may help us leave the world a better place than we found it".

5 RELATIONSHIP BETWEEN CLIMATE CHANGE AND BALI TOURISM

5.1 Introduction

This chapter aims to address phase one, which is understanding the relationship between the tourism system and climate change as expressed in Figure 5.1. To achieve the aim, this chapter is divided into five main sections. Following the introduction, the second section identifies the components of the tourism system, and then assesses how the system contributes to climate change and how it can be impacted by climate change. The third section assesses the observed climatic changes and future risks of climate change based on Bali's tourism stakeholders' experiences. Then, the fourth section examines how communities and the government have responded to the risks triggered by climate change. Finally, a chapter summary is presented to conclude these research findings.

Figure 5.1: Phase one: Understanding the relationship between the tourism system and climate change



As discussed in Chapter 3, secondary and primary data are used to obtain a comprehensive understanding of the dual relationship between the tourism system and

climate change. Section 5.2 of this chapter (5) mainly uses secondary data and previous research. Section 5.3 mainly uses primary data based on in-depth interviews with tourism stakeholders in Bali. Fourteen respondents from government representatives, tourism managers and NGO leaders were interviewed from August to October 2013. Different sets of questions were asked based on the respondents' occupational backgrounds. Examples of those questions can be seen in Chapter 3 (see Table 3.3). In brief, respondents' opinions and experiences regarding climate change were requested, for example: (1) What impacts of climate change are already being felt in Bali? (2) What are the climate change risks that might be experienced by Bali as a tourism destination? In Section 5.3 the results of these interviews will be compared with the secondary research findings in Section 5.2. Qualitative interviews with tourism stakeholders were complemented with a FGD to provide access to social-interactional dynamics between participants in relation to climate change. Section 5.4 uses a combination of secondary and primary data due to the scattered character of available information.

5.2 The Relationship Between Bali's Tourism System and Climate Change

The tourism industry is a well-known leading industry sector in Bali. According to The Bali Tourism Satellite Account 2007, tourism contributes 46% of Bali's Gross Domestic Product［GDP］(BPS & DCT, 2009). The importance of the tourism sector to communities makes this island vulnerable to the impact of climate change. At the same time, the tourism system also contributes to changes in the climate.

This research uses Leiper's framework to identify the components of Bali's tourism system. According to Leiper (2004, p. 51), every tourism system consists of five basic elements:

1) *Tourists* – Human element: the essential human element;
2) *Traveller-generating regions (TGRs)* – geographical element: places where a tourist 's trip begins and normally ends;

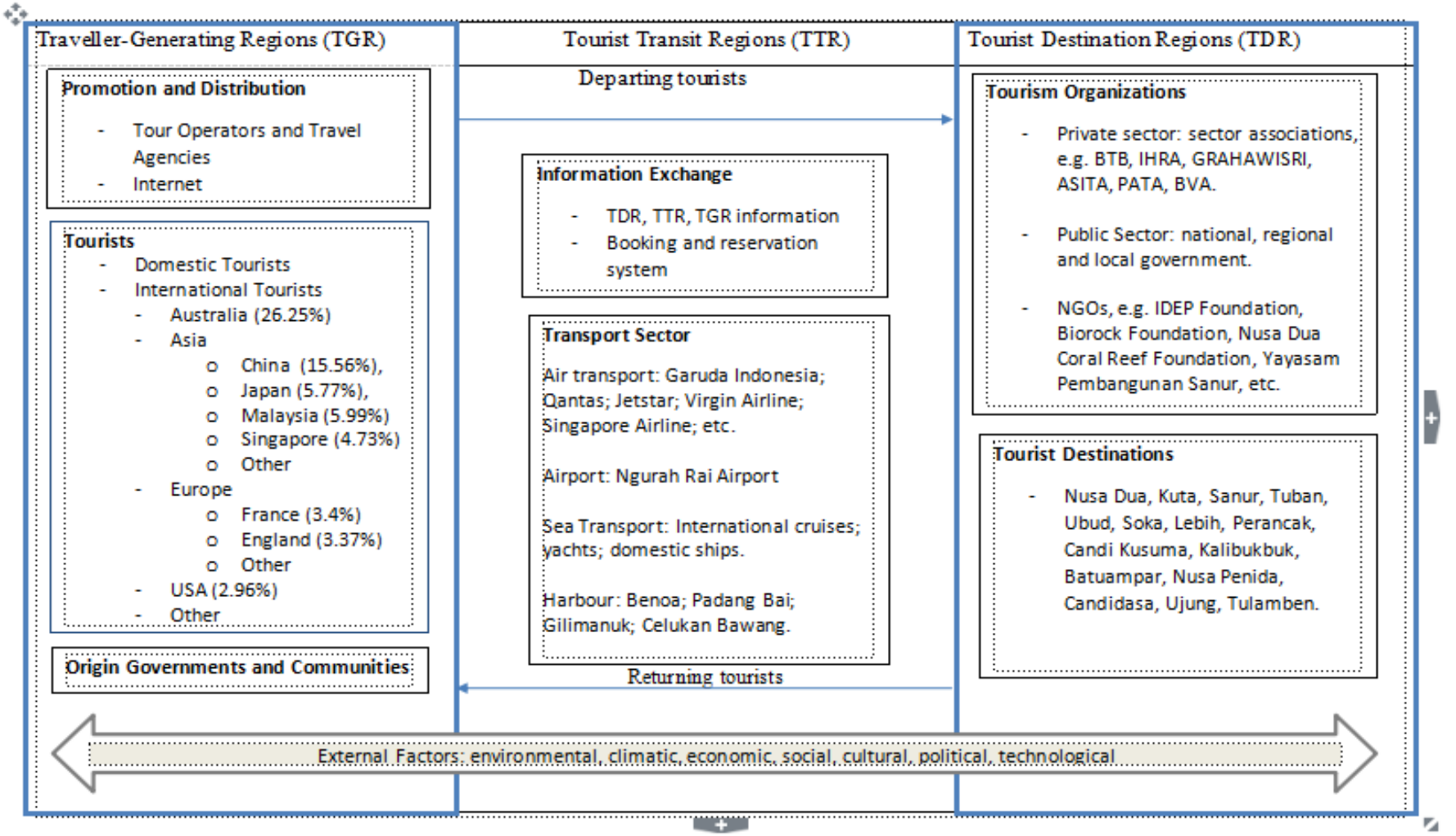
3) *Transit routes* – geographical element: places where a tourist's main travelling activity occurs;

4) *Tourist destination regions (TDRs)* – geographical element: places where a tourist 's main visiting activity occurs;

5) *Tourism industries* – organisational element: collection of managed organisations in the businesses of tourism, working together to some degree in marketing tourism and providing services, goods and facilities.

Figure 5.2 provides an overview of the contextualised tourism system of Bali. The following sub-sections will explain in detail each of the five aforementioned components.

Figure 5.2: The main elements of Bali's tourism system



5.2.1 The Tourists

Bali attracted more than 3.7 million international tourists and around 6.3 million domestic tourists in 2014 (Statistics of Bali province, 2014). This figure rose significantly from 7 million tourists in 2010 up to 10 million tourists in 2014. Detailed figures of tourist arrivals in Bali, the employment numbers resulted from the tourism industry and the GDP produced by this sector can be seen in Table 5.1. Increasing numbers of tourist arrivals in Bali will put more pressure on this island to manage its GHG emissions (Law, de Lacy, & Wiranatha, 2013). Moreover, Bali's intensive tourism-driven development has led to a range of social, cultural and environmental problems, including waste problems, traffic congestion and loss of cultural uniqueness (Picard, 1996; Pitana, 2010; Wardana, 2015).

Furthermore, the growing tourist arrivals will increase water demand and energy usage and thus will make Bali more vulnerable to climate change risk. DeLacy et.al (2011) have reported that overall water consumption for hotels in Bali is as high as 22.7%. This is quite alarming as Coles (2012) claimed that Bali has been suffering water inequality. Toyota and Fujikura (2012) argued that the dominance of the tourism industry, the private sector selling water bottles and regional water delivery services are responsible for the water conflicts and crop failures in dry season in the south of Bali.

5.2.2 Tourist Generating Regions (TGRs)

As can be seen in Figure 5.2, the largest international Tourist Generating Region (TGR) for Bali was Oceania, including Australia, which accounted for 26.25 percent of all international visitors in 2012 (Statistic of Bali Province, 2014). Asia was the second source of international tourists to Bali, of which the main source countries included China (15.56%), Japan (5.77%), Malaysia (5.99%) and Singapore (4.73%). Other significant international TGRs for Bali in 2014 were France (3.4%) and England (3.37%) (Statistic of Bali Province, 2014). Inevitably, the tourism sector contributes to changes in the climate as international flights emit large amounts of GHG emissions to the atmosphere. According to Law et al. (2013), air transport to Bali produced the highest GHG emissions from tourism activity (2,590.71 KtCO2 for international and 1,033.23 KtCO2 domestic), followed by land transport (1,012.10 KtCO2) and water transport (29.52 KtCO2). Meanwhile, Bali's dependence on international tourist arrivals

makes this island vulnerable to the impacts of climate change. As mentioned in Chapter 2, climate change impacts have the potential to disrupt the advantages of the tourist destination directly and indirectly (Scott, Gössling, & Hall, 2012). For example, international tourists may tend to choose closer destinations to the home country because of extreme or unpredictable weather in any chosen holiday destination.

5.2.3 Tourist Destination Regions (TDRs)

Bali provincial regulation no. 3, 2005 on spatial planning of the Bali Province set up fifteen tourist destinations and six district tourist attractions (Bali Provincial Government, 2005). As shown in Figure 5.3, most of the tourist destinations in Bali are in the coastal areas. This means that most of them are very likely to be impacted by climate change. As discussed in Chapter 2, tourist destinations in the coastal areas might be deteriorated by the impact of climate change. Consequently, coastal infrastructure and coral reefs will likely be deteriorated through the rise of sea levels, increased storm frequency and intensity, coastal erosion and coral bleaching (Wilkinson, 1996; Stern, 2007; UNWTO, 2008; Hijioka, Lin, Pereira, Corlett, Cui, Insarov, Lasco, Lindgren, & Surjan, 2014). This chapter elaborates the empirical data in the context of Bali based on in-depth interviews and FGD with leading tourism stakeholders in this tourist destination. Previous and current experience, as well as respondents' perceptions about the risks of climate change on Bali as a tourist destination will be discussed in detail in Sub-section 5.3.

Table 5.1: Tourist arrivals in Bali from 2010 to 2020

Visitor Forecast Bali	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Africa	12,973	14,428	17,595	19,759	22,189	24,917	27,981	31,421	33,892	37,543	39,776
Americas	113,094	131,570	139,269	148,773	158,926	169,771	181,357	192,773	202,876	209,943	219,740
Asia Pacific	1,746,386	1,846,321	2,170,561	2,429,650	2,619,674	2,844,309	3,027,706	3,253,077	3,363,092	3,521,044	3,722,032
Europe	613,774	591,344	582,275	586,200	595,032	612,633	637,440	671,105	711,943	752,711	804,010
Middle East	6600	6092	6300	6532	6988	7234	7467	7732	7980	8255	8469
Other countries	231	249	255	264	276	285	293	302	311	321	332
TOTAL	**2,493,058**	**2,590,004**	**2,916,255**	**3,191,178**	**3,403,085**	**3,659,149**	**3,882,244**	**4,156,370**	**4,320,094**	**4,529,817**	**4,794,359**
Domestic	**4,646,343**	**5,250,771**	**5,745,966**	**6,287,935**	**6,880,858**	**7,245,912**	**7,731,095**	**8,247,302**	**8,629,299**	**9,076,320**	**9,532,488**
Bali GDP and employment forecast	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Tourism GDP Bali (billion rupiah)	26,981	28,425	30.808	33,169	35,373	37,498	39,749	42,384	44,323	46,566	49,211
Tourism employment Bali (000)	1120	1178	1277	1375	1466	1555	1648	1758	1838	1930	2040

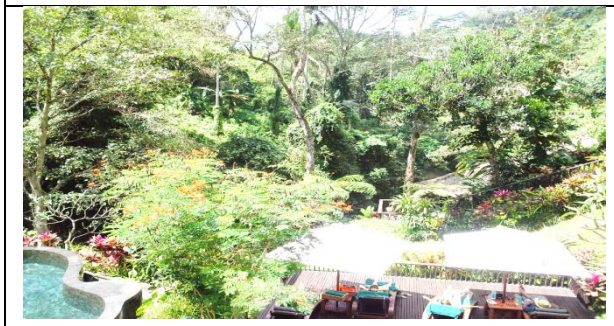
Adapted from Turner (2011), Hoque (2011), Law and Hoque (2011) and De lacy et al. (2014), Law, A. et al. (2015).

Photos 5.1: The tourist destinations in Bali, key attractions and activities.

Nusa Dua: Beaches, MICE, golf, art centre, shopping, spa

Sanur: The Mayeur museum, beaches, water sport, kite festival, Sanur festival

Kuta: beaches, surfing, shopping, swimming



UBUD: monkey forests, arts museums and galleries, rice field

Batu Ampar: Beaches, spiritual trips, diving, snorkling, wildlife trekking to West Bali National Park

Lovina: Dolphin tour, fishing, beaches

Photos: researcher's collections

5.2.4 Transit Route Region (TTR)

Tourists travel to and from Bali by flight or by sea. Ngurah Rai Airport, which is in Tuban, South Bali, is the entrance gate to the island for tourists who travel by flight. Ngurah Rai Airport serves 14 million passengers per year and Hariyanto (2013) estimates it is working at over capacity. The government has accelerated the preparation to build a new airport in the north of Bali to expand its capacity to receive more tourists.

Figure 5.3: Map of Bali

Source: http://www.balitourismboard.org/bali_maps.html

For tourists who travel by sea, there are four sea ports in Bali including: Gilimanuk, Padang Bai, Celukan Bawang and Benoa. The locations of these ports are highlighted in circles as shown in Figure 5.3. Gilimanuk is in the west of Bali, and is available for travellers from Java to Bali or vice versa. Padang Bai is situated in the East of Bali, usually for passengers travelling between Bali and Lombok Island. Celukan Bawang is a sea port in the north of Bali which is mostly for freight transport and a small number of cruise ships. Benoa is a sea port in the south of Bali, serving passengers from national or international ships. International cruise ships and yachts can anchor both in

Padang Bai and Benoa. In 2013, 41 cruise ships anchored in Benoa sea ports and this is expected to increase up to 58 cruise ships in 2014 (www.antaranews, 2014).

When travelling to tourism destinations around Bali, tourists can choose several transport modes based on budget and time available, such as bus, car, motorcycle or public transport. Traffic congestion in the South of Bali has reached severe levels due to overpopulation and intensive tourism development (Manuaba, 1995 in (Jaya, 2002) &De Lacy, T. et al. (2014). The Bali Human Ecology Study Group (Bali-HESG) recognised that traffic congestions can create environmental, health and safety problems in Bali (Site, 2000). As reported by Bali Tour (2013), the government has opened two new roads to overcome two traffic problems in the south of Bali, which are:

1) The Highway from Sanur to Ngurah Rai Airport and to Nusa Dua. This new highway has 12.7 km length, 10 km of which is located over the sea. This bridge-highway has become the longest in Indonesia and the first highway to provide a special route for motorbikes (Bali tour, 2013). Figure 5.4 presents the new highway in Bali.
2) Underpass road in Simpang Dewa Ruci. This new road divides the traffic into two routes, one from the south (from Ngurah Rai Airport to Sunset Road) and one from the north (from Sunset Road to Ngurah Rai Airport).

Figure 5.4: Bali's new highway

Source: (www.Balilive, 2013).

The transport system in Bali produces a high share of GHG emissions compared to the accommodation sector (Law et al., 2013). Depending heavily on non-substitutable air transport for international tourist arrivals makes this small island not only vulnerable to climate change risks but also vulnerable to mitigation policies such as carbon pricing which may affect the aviation cost structure (Vorster & Volchecnk, 2014). Emissions reductions from land transports are also a big challenge for Bali due to limited public transport options resulting in a high dependence on private vehicles.

5.2.5 Tourism Industries and Organisations

Based on Presidential Decree Number 7 in 2015, the Ministry of Tourism and Creative Economy has been changed into the Ministry of Tourism (http://www.dephut.go.id, 2015). Mr. Arief Yahya has been chosen as a Minister of Tourism under President Jokowi's working cabinet from October 2014. The Tourism Ministry oversees 25 sector associations to represent the businesses at a national level (see Table 5.2). These sector associations play an important role in developing sustainable tourism as well as improving Indonesia's tourism image at an international level. Each association has a specific role in helping the government achieve Indonesia's SDGs (Sustainable Development Goals) through the tourism sector. For example, the Bali Tourism Board (BTB) plays an important role in developing sustainable tourism in Bali and enhancing tourists' travel experience as well as conserving environment and cultural assets. Key roles and responsibilities of each association can be seen in Table 5.2.

In addition to those mentioned above, the following tourism associations also heavily contribute to supporting tourism development in Bali: Society of Indonesian Professional Convention Organizers (SIPCO), Bali Chapter; Indonesian Tourist Attraction Organization (PUTRI), Bali Chapter; and the Bali Tourism Transportation Association (PAWIBA). Beyond the tourism industry, many NGOs also exist in Bali, for example, the IDEP Foundation, the Nusa Dua Reef Foundation, the Sanur Development Foundation, the Biorock Foundation, etc. Each of these organisations undertakes significant roles in reducing communities' vulnerability to climate change.

Table 5.2: Tourism associations in Bali

Association name	Association name (translation)	Key roles and responsibility	Website
Perhimpunan Hotel dan Restoran Indonesia (PHRI), wilayah Bali	Indonesian Hotel and Restaurant Association (IHRA), Bali Chapter	Developing the potential of IHRA members; providing guidance, consultation, protection and promotion; conducting research and planning.	http://www.phriBali.or.id/
Asosiasi Perusahaan Perjalanan Wisata Indonesia, wilayah Bali	Associations of the Indonesian Tours and Travel Agencies (ASITA), Bali Chapter	Improving Indonesia's tourism image by providing satisfaction, security protection and guarantee to the service users without compromising the interest of fellow members.	http://www.asitaBali.org/
Bali Tourism Board (BTB)		Developing sustainable tourism by facilitating and enhancing tourists' travel experience in Bali.	http://www.Balitourismboard.org/
Gabungan Pengusaha Wisata Bahari Indonesia (GRAHAWISRI), Bali	The Indonesian Marine Tourism Association, Bali Chapter	Developing marine tourism in Indonesia and providing advice to the government to expand this industry for the future investment opportunity.	https://www.facebook.com/gahawisri.Bali
Pacific Asia Travel Association (PATA), Bali and Nusa Tenggara Chapter		Developing partnerships with private and public sector members to enhance sustainable and responsible travel and tourism businesses in Asia Pacific.	http://www.pata.org/chapters/1537
Bali Villa Association (BVA)		Providing a forum for sharing knowledge, marketing and promotion as well as for discussion in ensuring the high quality of villas in Bali.	http://www.Balivilla-association.org/

Adapted from official website, as mentioned in the Table.

5.3 Observed Changes and Future Climate Change Threats to Bali: Tourism Stakeholders' Perspectives

This section aims to contribute to our knowledge of how tourism-dependent communities experience and how climate change affects their main source of livelihood – tourism. This section begins with the secondary projection of the observed climate change in the literature. This is followed by discussion on the empirical findings, based on the result of in-depth interviews with 14 leading tourism stakeholders, including representatives of government, industry and NGOs. These empirical findings are enriched by the results of the FGD which involved representatives of community, industry and community leaders.

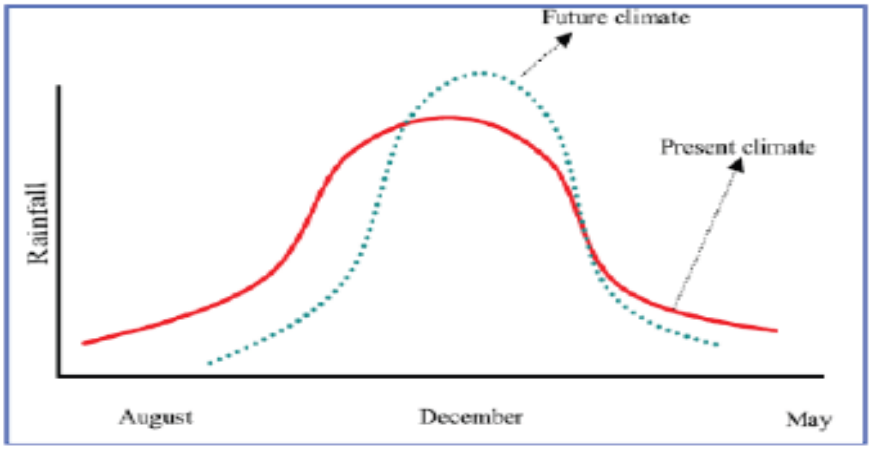
Chapter 2 gives a background to this section. In this section, the discussion focuses particularly on the context of Bali as a small-island with tourism-dependent communities. Sub-section 2.2 in Chapter 2 explained that new evidence of observed extreme weather and climate events globally has been provided by the IPCC's Fifth Assessment Report (AR5). Although the IPCC's Fourth Assessment Report (AR4) and AR5 provide a similar projection of future climate events, the degree of certainty in the prediction has increased substantially (IPCC, 2013). In brief, the IPCC (2013, p.6) has elaborated seven global-scale assessments of recent observed changes: (1) warmer and/or fewer cold days and nights over most land areas; (2) warmer and/or more frequent hot days and nights over most land areas; (3) warm spells/heat waves. Frequency and /or duration increases over most land areas; (4) heavy precipitation events. Increase in the frequency, intensity, and/or amount of heavy precipitation; (5) increases in intensity and/or duration of drought; (6) increases in intense tropical cyclone activity; (7) increased incidence and/or magnitude of extreme high sea levels.

The evidence of how climate change will severely impact small islands which highly depend on the tourism industry has been elaborated by various authors (Jiang, DeLacy, & Noakes, 2009; Klint et al., 2012; Moreno & Amelung, 2009; Parry et al., 2007; Scott et al., 2008). According to projections in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, "current and future climate-related drivers of risk for small islands during the 21st century include sea-level rise, tropical and extra-

tropical cyclones, increasing air and sea surface temperatures, and changing rainfall patterns" (IPCC WGII AR5, 2013, p. 2). This may lead to their failure in achieving the Millennium Development Goal (MDG) standards (Jiang, DeLacy, & Noakes, 2009).

Turning to the national level, a country report by the United Nation Development Program [UNDP] (2013) has provided information about the current and future climate risks in Indonesia and the ongoing risk management strategies to tackle the problem. This report mentioned three main observed climate change trends in Indonesia, which are: (1) increases in temperature; (2) average sea level rise for the period 1993-2008 is 0.6cm per year; and (3) significant increases of rainfall in December-January and significant decreases in June - August in most regions. Moreover, this report provides the projection of climate trends in Indonesia, as follows: (1) the temperature in Indonesia is expected to increase from 0.021°C up to 0.034°C per year; (2) a shorter rainy season but with heavy rainfall will occur in South Sumatra Java and Bali, and this will increase the flood risks. The longer dry season increases drought risk. Figure 5.4 indicates the likely rainfall pattern in Java and Bali; and (3) sea level is predicted to rise to 29 cm by 2030, also with the sinking of almost 2000 small islands as cited from Sakya (2009).

Figure 5.5: Likely rainfall pattern in Java and Bali



Source: MoE, 2007

In Bali, some symptoms of climate change have been occurring, such as rising sea temperature, sea level rise, increasing storm frequency and health epidemics (WWF,

2007). These are predicted to become worse in the future. So far, this chapter has focused on the impact of climate change based on secondary data. In the next section, I will present some of the findings of my empirical research on climate change based on in-depth interview results and FGD. The interviews revealed many common views, perceptions and perspectives regarding climate change. Weather changes and rising sea levels are two current phenomena of climate change that are most keenly felt by the respondents, followed by awareness about the increasing temperature. This is reflected in the respondents' experiences on the impact of climate change outlined in Table 5.3.

Table 5.3: Respondents' climate change experiences

Experienced Phenomena	Impact on the community and the tourism sector	Examples of respondents' experiences
Changes in weather pattern	Short rainy season with heavy fall causing flood risks	Flood disturbing tourism activities in the tourist destination
Sea level rise	Beach abrasion, high tidal wave, water intrusion	Sea water enters the hotel garden Beach abrasion destroys hotel infrastructure
Increasing temperature	Increasing temperature in land surface combined with longer dry seasons trigger drought and bush fires	Very hot temperature outside the hotel area Bush fire close to hotel area Much coral bleaching due to increased temperature in the ocean
Storms	Frequent storms	Some tourists' activities cancelled because of storm

The following sub-section presents a detailed discussion of the observed changes and their impacts on Bali tourism as mentioned by the interview and group discussion respondents.

5.3.1 Weather Changes

The vast majority of respondents reported that weather pattern changes have negatively impacted their livelihood and tourism activities [4,5,8,9,10,11,12,15,16,17,18,19,23,24,25,26,27,28]. The occurrence of severe weather pattern changes and the impact of these were evident in the following statements:

> *the climate has been changing. I think fishermen, farmers and tourism businesses know that this is happening. A few years ago, rains came more frequently even almost never stopping during the year, while in 2013, there was drought almost through all the seasons*[12].

This is supported by another respondent who mentioned that "now the weather is unpredictable. In dry seasons, there is more rain. Sometime guests have to wait a few days till the rain stop" [4]. Another manager reported: "in Jimbaran, we strongly feel the extreme weather changes. There are no more two seasons as it used to be. The weather is no longer easy to predict" [13].

The irregularity of rainfall which led to the flood was considered unusual with serious implications for the communities [16,17,19,21,23,24,25]. The following quote is from a FGD respondent during the discussion regarding the impact of climate change on their livelihood.

> *According to my father, it was so easy to predict the season in the past so they could predict when to plant corn. In the rainy season, farmers started planting crops and harvested in the dry season. Now, it has changed. Heavy rains in a dry season and we get flooded. It's strange as our village was never flooded before. Our village used to be very dry and arid. I am not sure if this is because of climate change or because people in the mountain cut more trees* [23].

A government respondent mentioned that heavy rain has caused the occurrence of landslides in Bali. He stated:

> *Bali has experienced several landslides due to heavy rain but I don't have detailed information about the impact of it. No assessment has been made regarding the cost and the loss caused by this natural disaster. You can go to the disaster management agency for more information* [8]

Badan Penanggulan Bencana Daerah (BPPD) or the Regional Disaster Management Agency said there are 140 disaster-prone points in the north of Bali, 66 locations prone to landslides and 48 locations prone to flood (Balipost, 2014). Moreover, BPPD in the north of Bali said that within the last four years, the prominent natural disasters in the north of Bali have been landslides, floods, and tidal waves (Balipost, 2014).

The changes of weather pattern also have the opposite effect. A longer dry season will lead to further problems, such as drought resulting in water shortage, crop failure, and then a food supply problem. Tourism stakeholders are aware that water shortage due to long dry seasons and/or changes of precipitation might cause water disputes in the future [1,2,3,4,6,10,11,12,13]: "*I think water shortage is the future threat. Water becomes more expensive and the quality is decreasing*" [1]. In fact, many rivers in Bali had no water in almost all seasons in 2013, as illustrated in photo 5.2. Most of the respondents from tourism businesses admitted that they use groundwater wells because the water distributed by the government enterprise is not sufficient for their operations [1,2,3,4,6,10,11,12,13,15,18,19,26,27,28.] The use of ground water wells has become a significant cause of water crisis in Bali because the wells are not registered and the water not metered, so no one has any idea how much water is being taken from underground supplies in Bali (Cole, 2012). Photo 5.2 is an example of river conditions in the north of Bali during rainy season in Bali in 2013. As reported earlier, in 2013 there was drought almost all the year in Bali. The photo was taken during the first phase of data collection for this research, between September-October 2013.

Photo 5.2: An example of a river condition during the hot season in Bali in 2013.

Source: Author, 2013

One tourism magazine reported that the government has recognised the water crisis as a threat to this island. The government has several plans and action to tackle this problem, as reported by the media as follows:

> The government has acknowledged that the island will face a water crisis by 2015. This would be disastrous for tourism, agriculture and the economy. Water purification and sewage network projects are planned, while Bali's Environment Agency has threatened to revoke operating licences of hotels and restaurants that fail to properly dispose of their waste and sewage (Noble, n.d.).

In fact, water crises are no longer just a threat but a reality. At present, the Java-Bali regions have already faced a deficit in their water balance (ICCSR, 2009). The water crises have been happening in some of the tourist destinations in Bali as reported by some local newspapers and online media. In certain areas, communities cannot get clean water for their household supplies. Thus, they must queue for clean water from the government, as illustrated by photos below.

Photos 5.3: The impact of a prolonged dry season in Bali in 2015.

Dry reservoir in Karangasem regency.
Photo credit: Nusabali (2015a)

Hectares of agricultural land in Denpasar have been affected by drought due to a prolonged dry season. Photo credit: Fanani (Tribun Bali, 2015)

Communities were queue for clean water during the dry season
Photo credit: Eka Mita Suputra (Tribun Bali, 2015)

Communities in Bangli regency must queue for a clean water supply due to drought
Photo credit: NusaBali (2015b)

Another problem caused by the changes of rainfall patterns is crop failure. One respondent reported his experience as follow:

> *I have been living in this village for 25 years. I notice that the weather pattern has changed. This is bad for the farmers as they can't predict the weather now. It makes more difficult for them to determine the planting season. Many farmers are experiencing economic crisis because of crop failure* [10].

The experiences reported by the respondents fit the description of UNDP (2013, p. 37) which states that "El Niño and La Niña associated droughts and floods are a serious climate risk to Indonesian agriculture and other economic sectors". This will probably induce serious food security problems in the future. The crop failure due to climate change will likely impact the tourism industry, especially those who operate restaurants

and café businesses. Shortage of food supply may lead to increases in food prices, which will threaten the sustainability of café and restaurant businesses. The local people are disadvantaged in competing with businesses to fulfil their food needs. This would then add more pressure on poor local people as they only have limited capacity to pay the high price of their food needs.

However, some public-sector respondents noted that although there had been changes in the weather pattern, there had been no major damages to the agricultural sector and that tourism had not been greatly affected. As the following quote indicated: "*The current impact of climate change in Bali is not too significant. The weather patterns have changed frequently. This has negatively impacted the agriculture sector. Crop failure has occurred several times. However, food security remains stable*"[8].

A response from a hotel manager in a mountain area clearly stated that he feels immune from future water and food crises:

> *we don't have specific plans to address water and food security threats as we feel secure now. We have abundant water sources now. For food security, if Bali cannot produce enough food than we can import from other island or country*[4].

However, his statement reveals that the financial power of the tourism sector will place the local people in vulnerable economic conditions because the poor will have no capacity to pay the higher food prices.

Many managers recognised the need to take pro-environmental actions to tackle climate change threats in the future [1,2,3,4,6,9,10,11,12,13,19,22]. One tourism manager said: "*our management is eager to tackle the water crisis in the future by using water desalination technology, but the cost is very high. However, our manager needs to calculate the cost and benefit of the proposed idea*"[3]. Moreover, he argued that the government has the responsibility to take real action in tackling this problem.

5.3.2 Sea Level Rise (SLR)

Spatial simulation research undertaken by Bachtiarand Novico (2012) found that sea level rise projections of IPCC scenarios referenced with historical data of Bali (gauge

data and altimetry) indicate similar trends: using SRESa1b scenario, the sea level rise (SRL) will increase around 10.5cm to 24 cm in 2030 compared to the SLR in 2000; in 2080 it will reach up to 28 cm to 55cm; in 2100 it could rise around 40cm to 80 cm. Consequently, Buleleng district will be heavily impacted by climate change as the data shows it has the widest areas of highest high hazard level (HHHL) while Denpasar has the lowest risks because it has higher natural topography compared to other districts (Bachtiar & Novico, 2012).

Climate change was also seen as responsible for sea level rise and erosion of the beaches all around the Bali Island [1,2,3,8,11,12,15,26,27,28]. Local people start to feel the rises of sea level as reported by one respondent who said:

> *I have been living in this village for 25 years. I can feel that the sea level rises significantly. This has been affecting many hotels and restaurants in coastal areas including my property. Last year, sea water entered my garden. Luckily, it was only a temporary sea tide. In south of Bali, this happens more frequently [10].*

This phenomenon fits with the earlier report by WWF (2007) which mentioned that sea level rise caused coast and beach erosion, inundation of floodplains, salt intrusion in fresh water aquifers and destruction of a coastal ecosystem. In the FGD, the topic of sea level rises was discussed for quite a long time. All participants agreed that the sea level rises have made them quite worried. This is demonstrated in two quotes from FGD as seen below:

> *We are living in the eastern part of north Bali. We experience the worst abrasion. Sometimes the wave rises to 2 metres and destroys the coastal areas. Some hotel and restaurant owners worry about this as they are impacted by abrasion and high waves. Therefore, we also trying to plant coral reefs to conserve the ecosystem and hopefully it can protect us from the waves [15].*

> *Early this year, the sea water rose to the hotel garden. It forced us to move the hotel tables and chairs to the safer place. We were so terrified and anxious. I hope it never happens again [19].*

As mentioned in Chapter 2, the rising of sea levels will increase coastal flooding, raise the costs of coastal protection, lead to loss of wetlands and coastal erosion, and increase saltwater intrusion into surface and groundwater (Stern, 2007). Research about the impact of sea level rise on the coastal area in Serangan by Astuti (2002) concluded that 1 metre of sea level rise will severely destroy infrastructure and disrupt tourism, social and cultural activities in Sanur and Serangan Island. Photo 5.4 is one example of the hotel facilities in the Sanur area in Bali. In the same location, not far from this restaurant, the government has built cribs to protect the tourism infrastructure from erosion and sea level rise (see Photo 5.5). As most of the hotel and restaurant businesses in Bali are located in coastal areas, some of them have already been impacted by the rise in the sea water.

Photo 5.4: Tourism Facilities on the beach.	Photo 5.5: Cribs to protect tourism facilities from erosion.
	

Source: Author, 2014.

SLR will affect the competitiveness and the sustainability of the coastal destination, including: declining property value; reducing potential tourism revenues; increasing insurance costs; as well as declining local and national potential income (Pielke, 1998). Although most tourism property owners have insurance and some adaptation initiatives to tackle climate change threats for their property, the impact of SLR seem unavoidable. As one tourism manager said:

> *We have a tsunami evacuation maps and early warning detectors. But we are not ready for the threat of rising sea levels. If the sea level rises to 29 cm in 2030 as predicted, most of the hotels and restaurants in the coastal area will sink* [3].

Lack of preparedness to face the sea level rise may become a problem for tourism destinations in the future. This concern was supported by a private sector respondent in the following comment:

> *The risks of climate change are a global issue. What can we do as a small island? I believe that the businesses and tourists will adapt by themselves. In terms of sea level rise, the impact is not too significant. We already have some programs to protect tourism properties from erosion in several coastal areas, such as: Sanur, Lebih and Padang Galak. However, if the sea level rises to 1 metre, it will be very dangerous and we have not thought about it yet* [8].

5.3.3 Increasing Air and Sea Temperatures

The result of spatial simulation by Bachtiar and Novico (2012) indicates that the temperature increases in Bali (north of Bali temperature rises of 0.0159-0.029◦C pa and south of Bali temperature rises of 0.0169-0.0338◦C pa) tend to reach the similar temperature projection of IPCC SRESa1b (0.0272◦C). Increasing temperature has been felt by the community in Bali. Some FGD participants reported that the temperature in their village is hotter than previous years. One of the FGD participants said that he can feel that the temperature is increasing. He argues: *"I can feel that the temperature is increasing lately. In the hotel areas, we did not feel the heat because we planted a lot of trees while outside hotel areas the heats are burning"* [19].

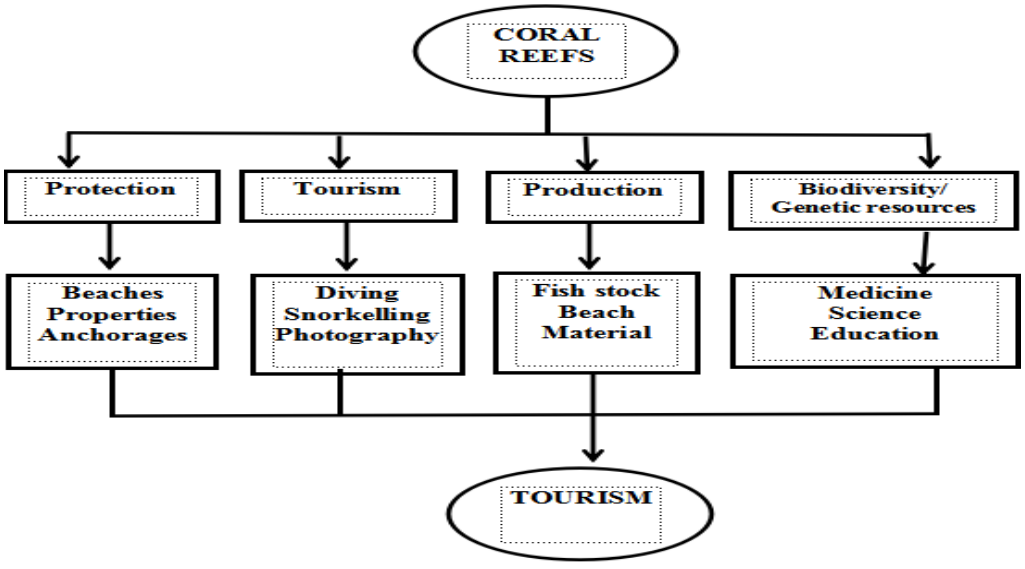
Another FGD participant noted that increasing temperature is not only felt in the surface of the village but also in the ocean. She said:

> *I believe that the climate change is happening now. We are impacted by the increasing temperature in the village and in the ocean. The rising sea temperature kills the coral reef. In 1998, reefs turned to piles of rubble and*

> *barrels for fishes. In order to tackle this problem, we started the coral reef conservation project at that time* [22].

The increasing temperature in the ocean and increasing CO2 concentration are expected to impact the reef system (Mizina, Smith, Gossen, Spiecker, & Witkowski, 1999; M. Parry et al., 2001; Becken & Hay, 2007). The changes are likely to put the community in the coastal area at severe risk because the coral reef is a very important resource for a small island. Reef systems have the functions of dissipating wave energy that can reduce foreshore erosion, producing a basis for marine food webs, and providing economic benefit for the community through recreational activities like diving and snorkelling (Moreno & Amelung, 2009; M. L. Parry, Canziani, Palutikof, van der Linden, & Hanson, 2007; Perch-Nielsen, 2010; Yadav, 2011). Figure 5.6 presents the socioeconomic links between coral reefs and tourism.

Figure 5.6: Tourism dependencies on coral reefs



Source: Becken and Hay, 2013, p. 239.

Respondents understand the importance of the reef systems for the well-being of the coastal community [3,10,12,13,14]. For example, one community representative mentioned, "*my income has improved since we conserve coral reefs. We catch more fish than before. We also earn more money from tourism activities in this village*"[24]. Some of

them reported several interventions have been implemented to respond to the increasing temperature in the ocean [3,12,14,19,20,21,22,23,24]. A respondent from the Hotel and Restaurant Association in the north of Bali reported, "*we have discussed with government to create zone for specific activities in coastal area. In the future, we will have fishing zone, coral reefs conservation zone and tourism activities zone*"[26]. Detailed responses from government and communities will be elaborated in Sub-section 5.4 while responses from the businesses will be discussed in Chapter 6.

Furthermore, the temperature rise combined with the changes in rainfall pattern has impacted the community's livelihood. It likely causes drought and bushfire. The following quote is from a FGD respondent during the discussion regarding the impact of climate change on their livelihood. "*I have been living here for 6 years. We experience burning/bush fires during hot season and floods during rainy season. This can be a combination between global warming and deforestation in the mountain*" [21].

Photo 5.6: Locations are prone to bushfires during long periods of dry season.

Source: Author, 2014.

5.3.4 Tropical and Extra-Tropical Cyclones

Cyclones have ruined people's property and destroyed the crops and farms in Bali. However, only two respondents have noticed this phenomenon as one of the climate change impacts [1,8]. A government representative said: "*Bali has experienced cyclones but I don't have detailed information about it. You may go to The Bureau of Meteorology, Climatology and Geophysical [BMKG] for region three in Denpasar"* [8].

However, there is no such data regarding cyclones or other kinds of disasters shown in the official website of BMKG Bali. Content analysis from various sources in the internet are taken to complete the data to find out the frequency of cyclones and impacts of it to the communities and businesses in Bali (see Table 5.4)

Table 5.4: The impact of storms in Bali from 2012 to 2014

Date occurred	Most affected area	Damage caused by cyclone	Source
14-18 March, 2012	All regencies	• In Bangli regency, cyclones destroyed the villagers' farms and houses. • In Badung, fallen trees covered roads, damaged some houses, and electric cables. Costing up to 500 million rupiahs. • In Tabanan, landslides caused several houses to be covered in dirt. • In Buleleng, waves as high as three to four metres crossed onto the mainland and crashed into fishermens' houses. • In Denpasar, the storms damaged some houses and cars; one died and many people were injured.	(BeritaBali, 2012) (Balipost, 2012) (Beritasatu, 2012)

Date occurred	Most affected area	Damage caused by cyclone	Source
26-28 February, 2013	South of Bali, e.g. Kuta, Seminyak, Denpasar	• Waves of sea water in the southern and northern Bali rose, reaching a height of 5 metres. • Tours and travels were cancelled. Several restaurants near the beach also felt the impact of this. • Storm interrupted sea travel activities in Port Padangbai, Karangasem. Some schedules were cancelled.	(Efrata, 2013)
19 March, 2014	Denpasar	• Some billboards collapsed and waves rose to 3 metres. No data about the cost and loss caused by this storm.	(Aquina& Bobby, 2014)
14 July, 2014	Gilimanuk	• Very strong winds accompanied by high waves in the Strait of Bali, caused activities in Port Gilimanuk to stop for three hours.	(Jsp, 2014)
13 August, 2014	Karangasem	• High waves and strong winds made the beach activities dangerous and fisherman stopped fishing.	(Iskandar, 2014)

Beside the frequency of storms, intensity of storms is also increasing. One interviewed respondent said: "*I can feel the wind is stronger than before. It is too dangerous to go the sea for fishing*" [12]. Photo 5.7 illustrates how storms and high waves disrupt tourism activities in one of the tourist destinations in Bali.

Photo 5.7: Storm and high waves stop tourism activities in Kuta beach.

Source: (Efrata, 2013)

However, not all respondents felt the brunt of climate change. One hotel manager in southern Bali says:

> *The weather is unpredictable recently. In dry seasons, there is more rain and sometimes guests must wait a few days till the rain stops. Guests do not complain as they understand that climate change is happening globally. The other impacts of climate change have not burdened us. Firstly, our place is far from the city and 70% of hotel land is a green area. It is not too hot here compared to city or beach areas. Secondly, as we live far from the beach, sea level rise does not make us worry* [4].

Overall, tourism managers seem aware of climate change as a threat to tourism activities. However, community awareness of the threat of climate change does not seem to be so well developed. Some communities consider floods, landslides and erosion are only a natural disaster, not the impact of climate change. For example, one source said:

> *At the community level, they are experiencing significant changes in weather patterns, for example rainy days in hot seasons or very hot days in rainy*

> *seasons, strong winds, etc. However, they still think it's just regular changes and not considered as a threat for their future* [2].

This concern was supported by one of the NGO leaders in the following comment:

> *Most of society does not realise the risks of climate change. People have realised that the sea water has gone up and they felt it through coastal erosion in some areas in Bali. However, it is still considered as a natural thing and not considered as a significant threat. If we start the conversation about climate change or food security, the poor community may say, "How can we think of the future? We still struggle for food to eat tomorrow. Let's the next generation think about food security by themselves"* [5].

The result of this investigation shows that the tourism stakeholders in Bali have experienced the "strange" changes in the climate. The weather changes and sea level rise are two symptoms that are more prominently felt by tourism stakeholders. The irregularity of rainfall and long periods of drought, which lead to water shortages, were of concern to the tourism stakeholders. The increasing demand for clean water for household necessities and for the tourism activities could create conflict in the future (Coles, 2012; Toyota & Fujikura, 2012). These conditions have serious implications both for tourism and local communities.

However, this study also found a lack of unpreparedness of tourism stakeholders in facing climate change risks, such as: water crisis, disruption of food security, sea level rise and health problems. Ultimately, this may indicate the need for more pro-environmental legislation and government leadership in facing climate change risks. Therefore, the next section examines the current government policy in responding to climate change, followed by the evaluation of what has been done by the community at the grass root levels.

5.4 Government and Communities' Responses to Climate Change

This section is an additional section beyond the conceptual framework outlined previously in this thesis. It was important to add this section for several reasons. First, because a comprehensive and thorough discussion on climate change context can only

be conducted by identifying and mapping out the policies that are already existing in Indonesia. This section was also added to facilitate the flow of further discussion on efforts to build community adaptive capacity to climate change at the local level. By mapping out the current policies at the national and regional level as well as assessing the current initiatives at the grass root level, we can identify the missing link occurring in the implementation phase.

This sub-section discusses three main themes. Firstly, it discusses the government policies at the national and regional level, based on the secondary data (see Sub-sections 5.4.1-5.4.3). Then, it elaborates the initiatives in responding to climate change at the grassroots level based on in-depth interviews and FGD (see Sub-section 5.4.4). Finally, the missing links between those two are discussed in Sub-section 5.5.

5.4.1 Climate Change Policies in Indonesia

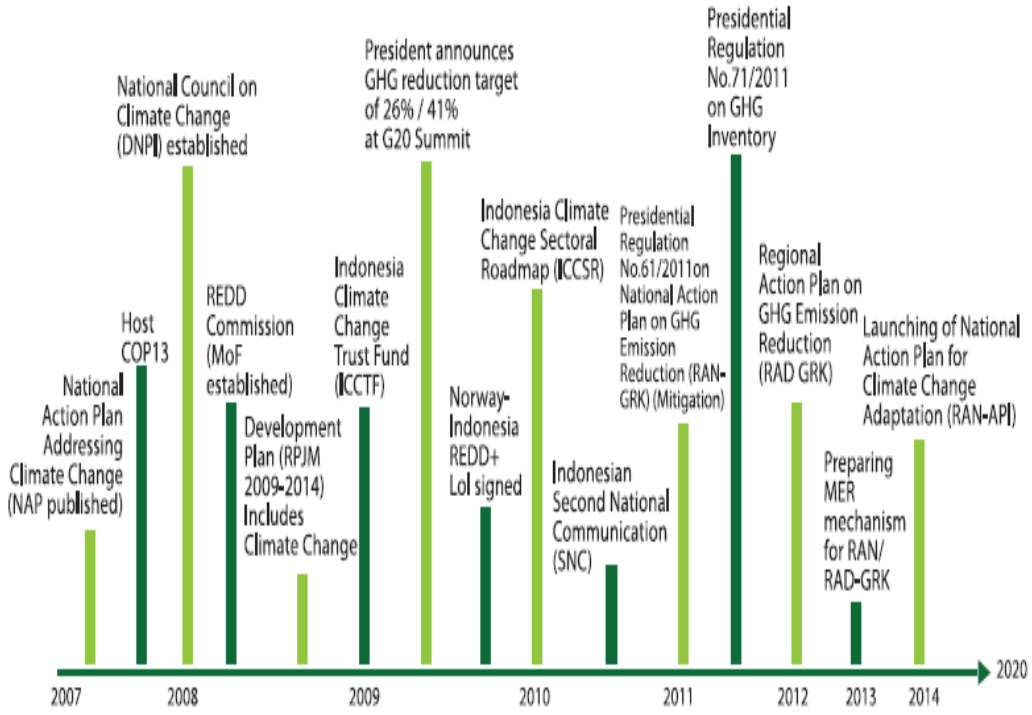
The government of Republic Indonesia has a strong commitment to reducing GHG emissions to contribute to overcoming global warming. In the G20 meeting in Pittsburgh, USA, President Susilo Bambang Yudhoyono in his speech on the 25 September 2009 claimed that Indonesia could reduce emissions by 26% from the "business as usual" (BAU) scenario by 2020 (ICCSR, 2009). He also argued that with international support, Indonesia can reduce emissions by up to 40% by 2020 (ICCSR, 2009). To achieve the target, climate change has become a national program that is integrated into the 2010-2014 National Medium-term Development Plan document (BAPPENAS, 2014). Sub-section 5.4.2 elaborates a range of government policies that have been published to achieve the national target.

5.4.2 Policies Pertinent to Climate Change at the National Level

A range of relevant policies to climate change were identified through secondary data collection. Figure 5.7 presents the development of national institutions and policies on climate change in Indonesia to achieve the targeted GHG emissions reduction. Of all the identified and accessible policies, 12 national policies were identified as being pertinent to climate change, namely:

1) Presidential Decree Number 61, 2011 on the National Action Plan for Reducing Emissions of Greenhouse Gases [RAN-GRK]
2) The Indonesia Climate Change Sectoral Roadmap [ICCSR]
3) Presidential Decree Number 71, 2011 on the implementation of the national Greenhouse Gas Inventory
4) Presidential Instruction No. 10, 2011 on New Permit Delays and Improving Governance Primary Forest and Peat Land
5) The Ministry of Forestry Regulation No. 68, 2008 on the implementation of demonstration activities for Reducing Carbon Emissions from Deforestation and Forest Degradation [REDD]
6) The Ministry of Forestry Regulation No. 30, 2009 on the procedure for the Reduction of Emissions from Deforestation and Forest Degradation [REDD]
7) Forestry Ministry Regulation No. 2009 (p.36) on licensing for utilisation of absorption and/or carbon storage in forests and protected forest production
8) Presidential Decree Number 19, 2010 on the establishment of a task force preparing institutional REDD +
9) Presidential Instruction Number 10, 2011 concerning the delay in granting new licences and improving governance of natural forest and peat land
10) Presidential Decree Number 25, 2011 on institutional REDD + Task Force
11) Forestry Ministry Regulation No. P.20/Menhut-II/2012 on the implementation of forest carbon
12) Presidential Decree Number 5, 2013 concerning amendments to the President's decision Number 25 of 2011 on the institutional preparation task force Reducing Emissions from Deforestation and Forest Degradation [REDD +]

Figure 5.7: Development of National policies on Climate Change



Source: BAPPENAS, 2014.

Policies can be divided into 'explicit' and 'implicit' (Hall & Higham, 2005). Out of 12 policies identified, none of those policies explicitly mention the tourism sector. However, implicitly, some of those policies are relevant to the tourism sector. Table 5.5 presents the relationship between the existing policies and climate change mitigation and adaptation strategies for the tourism sector. Each of these will be discussed in detail below.

Table 5.5: National policies pertinent to climate change mitigation and adaptation for the tourism sector

Policy	Mitigation	Types of Adaptation (Scott et al., 2008)*				
		1	2	3	4	5
The Indonesia Climate Change Sectoral Roadmap [ICCSR], (2009)	√	√				√
The National Action Plan of Greenhouse Gas Emissions Reduction (RAN-GRK), (2013)	√					
Nationally Appropriate Mitigation Actions [NAMA] for Indonesia (2013)	√					
Indonesia National Action Plan on Climate Change Adaptation [RAN-API] (2013)					√	√
Green Growth 2050 Roadmap for Bali Sustainable Tourism Development (Ministry of Tourism and Creative Economy of Republic Indonesia, 2012)	√	√	√			

* 1= Technical; 2= Business management; 3=Behavioural; 4=Policy; and 5=Research and education. Table 5.5 is adapted from (Klint, 2013)

The Indonesia Climate Change Sectoral Roadmap [ICCSR] (2009) provides a long-term development plan in several sectors (e.g. water, marine and fisheries, agriculture, health, industry and transport) in addressing climate change challenges. The data presented in this document is relevant for tourism stakeholders in Bali in tackling the future risks of climate change. Certain development plans are relevant for tourism businesses although the tourism sector is not discussed specifically. For example, developmental planning to produce more renewable energy will benefit the tourism industry; planning for water management will be relevant for the tourism sector, especially for Bali.

The National Action Plan of Greenhouse Gas Emissions Reduction [henceforth, RAN-GRK] document provides a policy framework for government (national and regional level) industries, and other key stakeholders in implementing actions to reduce GHG emissions during the period of 2010-2020 according to the Long-Term Development Plan [henceforth, RPJP 2005-2025] and the Mid-Term Development Plan [RPJM] (BAPPENAS, 2011). 19 out of 50 mitigation actions in RAN-GRK are listed under the

land based sector, which are intended to produce up to 672 Mt CO2 emission reduction or 87.6% of the total target. In addition, RAN-GRK also lists several actions, such as: research, improving the database for forest inventory, and producing new regulations, to support the implementation of this policy (BAPPENAS, 2013). RAN-GRK becomes the starting point for development and implementation of Nationally Appropriate Mitigation Actions [NAMA] for Indonesia.

NAMA is a set of programs and activities to reduce the GHG emissions in Indonesia, particularly in forestry and peat land, agriculture, energy, industry and transportation, as well as waste sectors. This is a voluntary initiative of developing countries to reduce their emissions within the sustainable development context. The Government of Indonesia is currently preparing NAMAs in various sectors. According to BAPPENAS (2013), several NAMA proposals are currently being developed. Among others are:

1) Integrated Energy NAMAs. This is a set of projects to reduce GHG emissions of the energy sector, which address both the production side (maximise renewable energy utilisation) and the consumption side (efficient energy use in the transport, industrial and commercial sectors) of the sector. This project includes: The Renewable Energy NAMA (RENAMA); Small-scale RENAMA; Smart Street Lighting Initiative (Energy Efficiency NAMA);
2) Waste NAMA. This is a Project which was established to unlock the largely unused GHG reduction potential in the solid waste sector;
3) Land-based NAMA. This project focuses on forest governance, strengthening spatial planning institutions, and improving sustainable forest management through regulations;
4) Cement Industry NAMA. This policy is established to encourage cement industries in the implementation of mitigation actions;
5) NAMA for Transport sector. This projects includes: The Sustainable Urban Transport Program Indonesia (SUTRI NAMA), Jabodetabek Transport NAMA, and Air Transport NAMA.

In terms of adaptation to climate change, the Ministry of National Development Planning [henceforth, BAPPENAS] has produced the Indonesia National Action Plan on Climate Change Adaptation [RAN-API] which provides guidance for sectors, local government and other stakeholders in implementing adaptation activities (BAPPENAS, 2013). The RAN-API is a national action plan document on adaptation to the impacts of climate change. There are five resilience strategies, which are deliberated in the RAN-API synthesis report (2013), including: (1) economic security (e.g. food and energy); (2) living system resilience (e.g. health, housing and infrastructure); (3) ecosystem resilience; (4) resilience of special regions (e.g. coastal areas and small islands); and (5) support systems.

Moreover, a policy document has been released by the Ministry of Tourism and Creative Economy to develop sustainable tourism in Bali. This document is entitled "Green Growth 2050 Roadmap for Bali Sustainable Tourism Development" (Ministry of Tourism and Creative Economy of Republic Indonesia, 2012). The roadmap is focused on achieving five objectives, including: (1) improved livelihood; (2) growing visitor economy; (3) better environment; (4) reduced carbon; and (5) an authentic Bali. A summary of the Green Growth 2050 Roadmap for Bali Tourism can be seen in appendix 10 as synopsised from DeLacy (2014, pp. 218-219) and Law, De Lacy, Lipman, and Jiang (2015, p. 8).

Development of effective climate change policies needs vast coordination across the key stakeholders in implementation (Klint, 2013). However, the policy gap analysis which was completed by Rustiadi and Damai (2013) found that for the Indonesian government there are several constraints in implementing the policies and programs for tackling climate change in the country, including: increasing number of population; urbanisation; the change in society life style; land conversion; conflict of interest; low coordination between institutions; and lack of funding. Consequently, the implementation of the national policies and programs requires the involvement of the regional government as well as the private sector. The next paragraphs review the current policies and programs at the regional level.

5.4.3 Policies Pertinent to Climate Change at the Regional Level

At the regional level, the Governor of Bali has issued regulation number 49 of 2012 on the Regional Action Plan of Greenhouse Gas Emissions Reduction [henceforth RAD-GRK]. This document discusses several important aspects, including: (1) the problem of greenhouse gas emissions; (2) the proposed mitigation actions and estimated emissions reduction; and (3) the institutional framework and implementation schedule (Governor Bali Regulation, 2013). The tourism sector was excluded from the discussion because only six sectors (agriculture, forestry, industry, energy, transport, waste management) were discussed in this document. As can be seen in Table 5.6, the reduction of emissions from the tourism sector has not been considered.

Table 5.6: Matrix of Climate Change mitigation policies and programs of Bali

Policies and Programs	Indicators of emission reductions (tonnes CO2)				
	2015	2016	2017	2018	2019
Mitigation programs for Forestry, Wetland and Agriculture sector					
1. Stabilisation of cropping and rotation patterns' varieties with the use of low-emission varieties, increasing the use of labelling technology, and the consolidation of integrated pest management systems	249.854	274.840	302.324	332.556	365.812
2. Changes in land use of water in farming, among others, to encourage the use of SRI system that will reduce the production of methane from the process of flooding in paddy fields.	249.854	274.840	302.324	332.556	365.812
3. Reducing the use of N fertiliser by 10%	249.854	274.840	302.324	332.556	365.812
4. Increasing the use of organic fertiliser	249.854	274.840	302.324	332.556	365.812
5. Increased forest and land rehabilitation which are prioritised on protected areas, vacant land, bush and forest	743.143	817.458	899.203	989.124	1.088.036
6. Rehabilitation of forests in order to improve the environment and habitat in national parks	743.143	817.458	899.203	989.124	1.088.036
7. Rehabilitation of mangrove forests in coastal areas or delta	743.143	817.458	899.203	989.124	1.088.036
Mitigation programs for energy sector					
1. Reduce energy use	128.690	141.560	155.715	171.287	188.416
2. Use renewable energy	33.857	37.243	40.967	45.064	49.570
3. Road maintenance	205.730	226.303	248.934	273.827	301.210
4. Management of transportation (goods and services transport)	205.730	226.303	248.934	273.827	301.210
5. Fuel efficiency	205.730	226.303	248.934	273.827	301.210
Mitigation programs for waste management					
1. Reducing waste	44.275	48.703	53.573	58.930	64.823
2. Landfill rehabilitation	81.360	89.496	98.446	108.291	119.120
3. Shifting from household septic tanks to a communal septic tank	94.047	103.451	113.796	125.176	137.694

Sources: RAD-GRK (2013); Rustiadi & Damai (2013)

According to public sector representatives, Bali has addressed climate change risks in developing the planning for 2013-2018 although the word "climate change" is not mentioned specifically in the plan [6,8,9]. Mitigation and adaptation strategies to tackle climate change have been integrated in the Bali development program, as is evident in the following statements from government representatives.

> *We have short, medium and long term strategies. The simplest way to see the government strategy is to see the Bali Mandara II (commitment of Bali governor 2013-2018). However, climate change is a complex issue and the impacts cannot be addressed by one department. I believe that in developing a program, the team will consider global issues including climate change. For example, in the health department, there is no specific program just to answer health problems caused by climate change but we do have a program to subsidise the health costs for poor people. The program is called JKBM (jaminan kesehatan Bali Mandara or health insurance from Bali Mandara). Moreover, there is a program to build a water reservoir. This program can be part of a destination adaptation strategy but we did not mention it specifically to answer climate change problems. There is no specific strategy mentioned just for the tourism sector but overall the plan will support the tourism development, for example, plan the second airport in Bali, build a monorail, a free bus for tourists (sarbagita shuttle bus)* [8.]

> *I believe that government has considered climate change in the plan. Some of the plan is intended to address the climate change problem. One good example for this question is the health program for poor people. This program provides free medical treatment for poor people in Bali. For the tourism sector, the Green Growth 2050 roadmap is the way the government will tackle the climate change problem* [9].

As stated by these respondents (see above quotes), the Bali governor's commitment for 2013-2018 has indicated that the government is committed to address climate change risks (see Appendix 3). This set of commitments has been integrated into the Regulation of Bali Province Number 9 in 2009 about the Medium-Term Development Plan or Rencana Pembangunan Jangka Menengah Daerah [RPJMD] 2013-2018. In

brief, mitigation strategies are addressed by the following actions: (1) the program called “Bali as green province”; (2) building new roads to reduce traffic jams (reduce carbon emissions), e.g. underpass Ngurah Rai and bypass road to Nusa Dua; (3) providing free public transport for the community in the Denpasar area, called “Sarbagita transport” to motivate the community to use public transport; and (4) a plan to build the monorail. Furthermore, the government’s adaptation strategies to tackle climate change risks are: (1) providing health insurance for the whole Balinese community; (2) building a water reservoir; (3) providing natural disaster quick response; (4) providing benefits for disaster victims; (5) maintaining community welfare; (6) opening job opportunities to local people; and (7) creating a clean water project using the Petanu River.

5.4.4 Responses to Climate Change at the Grassroots Level

At grassroots level, some tourism businesses have taken a leadership role in addressing climate change risks through their CSR initiatives. Detailed discussion about how the tourism industry undertakes mitigation and adaptation strategies as part of their CSR initiatives are outlined in Chapter 6. Following this, discussion about how the tourism businesses can build community adaptive capacity to climate change, will be the focus of Chapter 7.

Likewise, using in-depth interviews with some leaders of NGOs, this research found that NGOs have played a significant role in building community adaptive capacity to climate change. NGOs have programs for increasing awareness of climate change and disaster risk reduction at grassroots level. Below are four detailed examples of NGOs’ initiatives that are focusing on tackling climate change risks as well as building community adaptive capacity to climate change.

a. Foundation A

Foundation A runs several environment programs, supported by the tourism industry in Sanur through CSR funding, including:

1) Reforestation - conducted at least once a year. Foundation A provides funding until the trees grow. The planting of Intaran or Neem trees is prioritised because

of their oxygen production ability, economic value as a material for traditional boat making, and health-giving properties in the treatment of diabetes, asthma and rheumatics. To conserve biodiversity in Bali, the Foundation also plants native trees that are in danger of extinction.

2) Mangrove conservation - local people remove rubbish from the mangrove forest, especially plastic. This Foundation also pays local people to plant mangroves and maintain them until fully grown. This is known as “grow up target not plant and go”.

3) Coral reef conservation - many tourism businesses and other big companies, especially diving companies whose business sustainability depends on the coral reef ecosystem, fund the protection of these reefs through their CSR programs.

4) Clean and green programs - building community awareness to protect the environment and keep Sanur clean and green encourages tourist visits and keeps the community healthy. The Foundation also educates the younger generation to keep Bali clean and green through several programs, such as: reduce, reuse and recycle; plant a tree; and clean the school and beach initiatives.

5) Education - the younger generation are educated to be self-reliant and internationally-minded while maintaining Balinese values.

6) Promotion - Foundation A runs the Sanur Festival annually to promote the village to the international community. This event is sponsored by tourism industries and involves the whole Sanur community. In 2014, around 60,000 tourists came to visit the Sanur Festival, which was very successful in bringing economic benefits to the community.

7) Security and stability - With CSR funding, Foundation A pays local people for “*pecalang*” or cultural security. This protects Sanur from both human and natural threats. Foundation A collaborates with government in providing emergency plans to protect the whole community and tourists from tsunamis, including tsunami alarms and community awareness programs (see photo 6.3). The tsunami awareness group builds community awareness to tsunami threats and educates the community about what to do if a tsunami comes. As Interviewee 12 stated, “*We are in the process of negotiating to build a tower to*

accommodate 2000 people in case tsunami attacks Sanur. It will be 15 metres from sea level"[12].

b. Foundation B

Foundation B has eight important programs, including:

1) Agro-forestry (e.g. planting trees, organic seed saving, and environmental education and training). Working with local environmental groups and schools, this foundation planted trees in the highlands and mangrove trees along the erosion-prone coastline. To date, over 7,000 trees have been planted. Additionally, this foundation is working with the local community to build a seed garden in Jembrana regency. Seeds produced will include mahogany and jackfruit trees and other productive plants like cacao, which are planted to prevent soil erosion. By producing their own seeds, the Yehembang community will maintain biodiversity and become self-reliant. In Buleleng regency, this foundation expanded its productive tree-planting program to Gesing, a mountainous area located in central Bali. Gesing village, through rainwater catchment systems, is a main supplier of water in south Bali, including Ubud, Kuta, Nusa Dua and all the major tourists' areas of Bali. Since rainwater is naturally caught in the soil, it is important that local farmers use organic farming methods, not chemicals and pesticides. In partnership with farmers and landowners, Foundation B trained farmers and community members in organic farming methods, to build an organic garden site, and plant at least 5,000 productive trees in 2013. In addition to planting trees, Foundation B monitors the project to ensure sustainable agroforestry practices. By planting productive trees this foundation creates economic opportunities for farmers and community members who will look after their forest.

2) Reforestation. Foundation B planted mangrove and productive trees in 9 areas in Indonesia (Surabaya, Lumajang, Probolinggo, Lampung, Palembang, Padang, Bengkulu, Lombok and Makassar).

   Indigenous plant-seeds saving partnership with farmers in Bangli regency. Foundation B has been collaborating with 11 farmers from Bangli to produce a

variety of local organic seeds (at least 50% from Bali). Also, Foundation B assists farmers in sustainable and organic seed production by providing some training for farmers and aiding them in the packaging, marketing, and distribution process of the seeds. Foundation B has provided these farmers with affordable loans to purchase equipment needed for seed saving. After seeds are harvested, Foundation B buys the seeds from the farmers, providing a secure income to ensure funds for future crops, and distributes the seeds to the public through a network of outlets.

3) BERAG - Bedah Rumah Aman Gempa or "Earthquake Resistant House Building" for poor communities in Bali. The project aims to build safer and healthier houses for disadvantaged families living in rural areas in Bali that are at high risk of earthquake, and at the same time, away from tourist sight. On top of that, the project is also intended to increase capacity building for the local communities through training on safe house building and sustainable agriculture. In 2013, Foundation B built 45 houses in Buleleng regency and Karangasem regency. Several families with very low income will acquire agriculture skills and develop an organic garden beside their newly built earthquake resistant house. The eco–poly-roofs are made from recycled tetra packs. This type of roof is very light and good for vulnerable areas.

4) Disaster Risk Reduction and Mitigation (DDRM program). DDRM is a program that trains the local community to be ready for a natural disaster. Foundation B choose Pupuan village because this area is vulnerable to landslides. While in Ceningan Island, this foundation trained students, teachers, and community members in how to make a risk map, create an evacuation plan, and how to perform emergency first aid. Nusa Ceningan Island is prone to natural disasters, such as tsunamis and earthquakes.

5) Renewable energy program in Bangli regency or Biogas training program.

In 2010, Foundation B conducted a project called BIRU (biogas installations for communities in Indonesia) to Bali, in collaboration with HIVOS, who first implemented the project in Java. IDEP Foundation has certified over 40 farmers

in biogas production, one in each village, and installed reactors in their homes. In each household, a biogas reactor can produce energy in the form of gas, for cooking up to 6 hours a day or electricity. Biogas reactors are environmentally friendly and sustainable sources of energy. Each reactor only takes the waste of 3 cows or 5 pigs to run. Slurry, the leftover product of the reactors, is also an excellent organic fertiliser.

6) Disaster ready movie and book education. The movie and book is created by Foundation B to educate the community to prevent and to cope with natural disaster.

7) Disaster preparedness for hotels and restaurants. Disaster readiness for employees including: evacuation plan, standard operational procedure during disaster (SOP), equipment for disaster management, e.g. alarm, evacuation map, fire extinguisher. As Foundation B representatives reported, "*we train hotel and restaurant employees how to evacuate guests and save their own lives*" [5].

c. Foundation C and Foundation D

These two foundations have similar programs in different destinations. Foundation C runs a coral reef restoration program with support from tourism industries in the north of Bali. Foundation D has built underwater gardens as part of coral reef restoration programs in the Nusa Dua area. This is also with funding supported by the tourism industry in the area. Beside the coral conservation program, they have also built the tourists' and communities' awareness to save the environment. They also educate students about the important role of coral reefs to the sea ecosystem and to human-beings.

5.5 The Missing Link

From the above explanation, the government, industry, and NGOs have had programs to address climate change. Each party has its own strategies and program to tackle climate change risks. The missing link is communication and collaboration that involves all

stakeholders in Bali. For example, the fact that the government has accommodated the issue of climate change in the planning and development of Bali (e.g. free health services to the poor; Sarbagita buses; construction of underpass Ngurah Rai; and new toll road to Nusa Dua) was not communicated to the public and other tourism stakeholders.

As a result, the majority of respondents pointed out the lack of government initiatives, plans and strategies to tackle climate change risks [3,5,6,13,14]. Moreover, many economic activities and government policies still clash with the environmental conservation agenda [3,5,13,14]. Some of the respondents even blamed the government for the current over-exploitation of resources in Bali, suspecting that some government officials have acted illegally for personal profit [1,2,3,6,13, 23,24]. Furthermore, some respondents argued that the government has no grand design to communicate the danger of climate change to businesses and society. These perceptions are evident in the following comments:

> *Destination authorities do not have a grand plan to tackle climate change risks, how can I help? I do what I can do and I intend to help if they ask me to help [6].*

> *As we explained earlier, we always have the commitment to help the destination to tackle climate change threats. The problem is the government does not have a grand design to save Bali from climate change. One easy example, the government does reclamation in one place while dredging land in the area. I argue that the government should stop selling Bali to investors and start developing a strategy to address climate change and build sustainable tourism [3].*

> *The government should ban the existence of cheap cars because it will increase the number of cars and carbon emissions will increase. In addition, the government should educate the public not to be too consumptive, so that they keep the carbon footprint at low level[13].*

As Brillantes Jr and Fernandez (2011) stated, good governance will happen if it is supported by four factors, namely: structures, leadership, values, and engagement. However, it seems the Indonesian government only focuses on changing the structures

(e.g. introducing new laws or policies) while the implementation of the policies is not yet reported nor evaluated. Leadership, value and engagement are often neglected by governments in climate change governance.

The engagement between government, business, civil society and the poor themselves, is vital in supporting poor communities effectively (Brillantes Jr & Fernandez, 2011). Through in-depth interviews and FGD, this research found that cooperation and collaboration between government and other stakeholders in addressing climate change risks is limited. As one respondent stated:

> *Government does not have any clue to support and sustain our program. They are more often assuming NGOs are a stumbling block or counter parties that must be removed. They may forget, nearly 60% of their work as bureaucrats is resolved at the grassroots level with our program* [5].

Furthermore, the government leadership style also needs to be improved [5,13,14,23,24.] Respondents from NGOs also criticised the government approach to communicating with the communities by providing incentives to the audience. This has turned into a "money for projects" attitude. He believes "money for projects" is a systemic poison from the government that makes it difficult for NGOs to invite communities to participate in the training programs without providing money for transport. As one NGO leader said: *Preparedness natural disaster training is for the benefit of society, but sometimes they ask for transport allowance after the training because they are accustomed to being pampered by the government."* [5]

Other inhibitors that were highlighted by some NGO leaders are a lack of support in the implementation of the program both from the government as well as from donors [5,14,23.] The assumption that Bali is a wealthy area results in many donor agencies and sponsors refusing to do community capacity building activities in Bali. This is also a challenging situation for NGOs and community groups considering that there are still 182,000 Balinese who live in poverty (BPS, 2014). Most of the respondents noted that they are looking for government leadership in tackling climate change risks for the tourism sector, as reported by a community leader in the group discussion: "*we need support from government*" [16]. Another respondent from tourism businesses argues that the

government has to take a leadership role because managers do not have a power to influence others: "*we were not able to advise people to do something to prevent their property being eroded by abrasion and sea level rise. Things like that should be a government program*" [13].

Finally, this research found that no research or document reported the implementation phase of the existing government policies: "no measured results of the government to see how far the achievements that have been obtained so far" (Natural Resources Development Center, 2013). NAMA Indonesia admits that the key challenge in mitigation actions is in measuring, reporting and verifying the changes of the emissions resulting from those actions because there is no international agreement in the UNFCCC concerning the exact methodology, scope, approach, as well as rules and modalities relating to NAMAs (Thamrin, 2011).

5.6 Chapter Summary

From all the above discussions, it can be concluded that:

1) Bali contributes a significant amount of GHG emissions to the atmosphere. Increasing number of tourist arrivals, dependency on international arrivals and limited public transport options will put more pressure on Bali to reduce its GHG emissions;
2) Most of the respondents reported that they observed the changes of the climate and its impact on the tourism industry and on the communities. The weather pattern changes trigger floods during rainy seasons and drought during dry seasons. Increasing coastal erosion, flooding during high waves, and salt water intrusion into surface and groundwater caused by sea level rise has negatively impacted the tourism businesses and communities in coastal destinations. The increasing storm frequency and intensity has disrupted tourism business activities and destroyed communities' crops and houses;
3) The Government of Republic Indonesia has produced several policies and regulations both at national and regional levels to address climate change. However, no studies have reported the implementation impact of the climate

change policy to the communities nor to the GHG emissions reduction target and many interviewees reported implementation as a major failing;

4) Some NGOs and community groups interviewed in this research reported that they have some initiatives to build community adaptive capacity to climate change. Some of them are supported by the tourism industry through the company's CSR budget. Most of the respondents reported a lack of support from the government in providing funding or facilitating their initiatives.

6 CORPORATE SOCIAL RESPONSIBILITY INITIATIVES IN ADDRESSING CLIMATE CHANGE

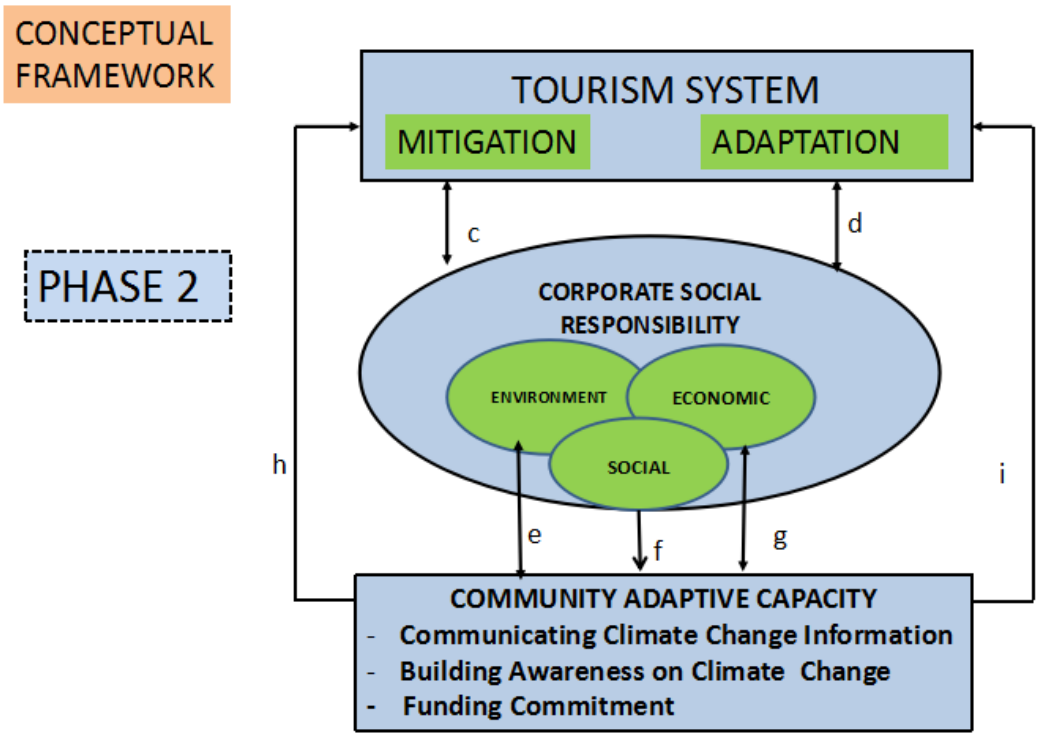
Companies should be expected to adapt their
business application to maintain the firm's sustainability
profile and conserving the environment at the same time.
(Hawkins, 2006)

6.1 Introduction

This chapter addresses phase two of the conceptual framework which is assessing how the CSR of the tourism industry undertakes climate change mitigation and adaptation strategies. This chapter specifically discusses arrow 'c' and 'd' of the framework as illustrated in Figure 6.1. In order to achieve the aim, this chapter is divided into four main sections. The first section is the introduction; the second section presents empirical data of CSR initiatives within Bali's tourism businesses that address climate change mitigation strategies; the third section discusses tourism businesses' economic responsibility initiatives as climate change adaptation strategies; and finally, the fourth section draws together overall conclusions, recommendations and suggestions for future research.

This study has found that many tourism businesses in Bali have a strong commitment to implementing CSR activities relating to climate change mitigation and adaptation strategies. However, the findings should not be interpreted as representative of the sector but rather as illustrative of the various initiatives currently implemented. The next sections will elaborate with more detailed information on how tourism businesses in Bali implement climate change mitigation and adaptation strategies internally, through their CSR initiatives.

Figure 6.1: Phase two of the Conceptual Framework



6.2 Tourism Businesses' Environmental Responsibility Initiatives to Mitigate Climate Change.

The interviews with managers or owners of tourism businesses in Bali reveal that most of the respondents had implemented mitigation strategies in their organisation as part of the companies' CSR initiatives. Five broad themes emerged from the analysis, including: (1) environmental policy; (2) reducing energy use; (3) using renewable energy; (4) sequestering carbon; and (5) reducing carbon footprint. Table 6.1 provides an overview of the key analysis themes and findings of each respondent. The following section presents a detailed discussion of these five themes mentioned by the interviewees.

Table 6.1: Mitigation practices through respondents' CSR initiatives

Recommended Climate Change Mitigation Actions	INTW 1	INTW 2	INTW 3	INTW 4	INTW 6	INTW 10	INTW 11	INTW 12	INTW 13
Environmental Policy									
- Implementing water-saving and reuse measures	√	√	√	√	√	√	√	√	√
- Selecting environmentally friendly suppliers	√	√	√	√	√	X	√	X	√
- Ratio land to building: 20-35% building & 65-80% green area	√	√	√	√	√	√	√	√	√
- Reducing, reusing, recycling waste	√	√	√	√	√	√	√	√	√
Reducing Energy Use									
- Energy saving: use of LED lamps	√	√	√	√	√	√	√	√	√
- Key card control systems in every room	X	√	√	√	√	X	√	X	√
- Environmental tag for guests	√	√	√	√	√	√	√	√	√
- Using energy-efficient appliances	√	√	√	√	√	√	√	√	√

Recommended Climate Change Mitigation Actions	INTW 1	INTW 2	INTW 3	INTW 4	INTW 6	INTW 10	INTW 11	INTW 12	INTW 13
Using Renewable Energy									
Using solar energy	X	X	X	X	X	X	X	X	X
- Using wind energy	X	X	X	X	X	X	X	X	X
Sequestering Carbon									
- Supporting local conservation projects	√	√	√	√	√	√	√	√	√
- Conserving biodiversity	√	√	√	√	√	√	√	√	√
- Providing carbon offset projects for guests	X	X	X	√	X	X	X	X	X
- Reforestation	√	√	√	√	√	√	√	√	√
Reducing Carbon Footprint									
- Employing local people	√	√	√	√	√	√	√	√	√
- Using local suppliers to reduce carbon footprint	√	√	√	√	√	√	√	√	√

Source: Author, 2014. Notes: X means the respondent's organisation does not have the identified initiative; the tick (√) means that they do. INTW means Interviewee. Climate Change Mitigation response activities are adapted from Scott, Hall, and Gossling (2012) and Simpson, Gössling, Scott, Hall, and Gladin (2008).

6.2.1 Environmental Policy

The overall response to this theme was very positive. When the participants were asked about environmental policy in their businesses, the majority commented that they have implemented some measures, including: (1) water saving and reuse actions; (2) selecting environmental friendly suppliers/partners; (3) maintaining building and land ratio (30-35% for green area and 65-70% for building); and (4) reducing, reusing and recycling waste. For their achievements, some respondents have received awards locally, nationally and internationally. The following provides a discussion of the results for each of these themes.

Most the hotels from the interviews said that they have water saving measures and sewage treatment systems in their properties [1,3,4,6,10,12,13]. One of the property managers in Nusa Dua area explained that a big sewage treatment system is used by nine five-star hotels to recycle water into grey water for hotel gardens or golf courses. He believes that all hotels in this area will use water wisely due to cost considerations. This argument is stated in the following quotes:

> *No single drop is wasted because the water has three times economic value. First, clean water is bought by the hotels from local water companies. Second, the hotels must pay to send the liquid waste to the sewage treatment area. Third, the hotels then must pay to buy recycled water to water the garden. Therefore, I believe that every hotel will save water to reduce their operational cost [3].*

> *This resort has sewage treatment facilities to recycle water used in the hotel. In 2012 the technology was upgraded to improve water quality and reduce pollution. This was done by introducing an additional clarifier extension, sand filter and carbon filter [4].*

Some respondents explained that they have committed to selecting only environmental friendly suppliers [1,2,3,4,6,11,12]. A private sector respondent highlighted that her company has chosen a business partner which can supply drinking water with recyclable glass bottles only, for reducing plastics use in the hotel.

Most of the respondents utilise 60% of land for green areas and 40% for building, in line with government expectations [1,2,3,4,6,10,11,12,13]. Some respondents went beyond the government requirement, providing 80% for green areas and only 20% for hotel facilities [4,10]. One hotel manager in Seminyak area revealed that several environmental responsibility initiatives have been implemented by the hotel as part of their CSR [1]. She further stated that this hotel uses only 30% out of 15-hectare land for hotel facilities and 70% for a beautiful tropical garden. Another property manager in Nusa Dua area explained that his company manages approximately 350 hectares of land that was previously barren and unproductive but is now an attractive tourism area, achieving international recognition as one of the six best tourist destinations in the world [3]. He further explained:

> *This company has a vision to be a "world class company in developing and managing tourists' resorts with an environmentally friendly and social cultural approach". The company is committed to keeping a low ratio of building to land by keeping 65% of its land for green areas and open space. These areas are planted with indigenous trees to protect the island's biodiversity, and during construction, management consciously avoided cutting down existing indigenous tress such as Bekul fruit (Zizyphus Mauritiana L. or Zizyphus jujube) and Badung trees (Garcinia Dulcis)*[3].

Open areas in hotels are usually used as a green area for planting various types of plants that are useful for several purposes, among others:

- As shade:
  The surrounding big trees become the sunshade of the hotel building or villas. The garden is helping a lot to produce oxygen and reduce heat in the buildings underneath.
- As a beautiful hotel garden to showcase the beauty of the flora in Bali:
  Some of the respondents also explained that their guests love the beautiful sights of nature and the landscape. The colour of diverse flora and the beauty of frangipani trees as well as its fragrance make the guests feel relaxed and joyful.

- As an organic herbs and spices garden for hotel supply

  Some of the respondents have organic gardens to produce herbs and spices that are commonly used in their restaurant. For example: lemongrass, turmeric, lemon, ginger and onion, which are all used in Indonesian and Balinese cuisine. Basil, coriander, mint, rocket, parsley, are essential for western and international menus. Freshly picked herbs and spices are sent to the kitchen to ensure guests enjoy a fresh taste at their dining table

- As a traditional air purifier

  Some hotels plant to purify the air from the smell of sewage treatment.

- As a place to plant the trees necessary for Balinese religious ceremonies

  Coconut trees can be seen easily in almost all the hotels and villas in Bali. The hotel managers let the coconut trees grow big in the area because every part of the coconut tree is important for people in Bali. Young coconut leaves, young coconuts and coconut fruits are important materials for Hindu religious ceremonies.

Photo 6.1: Coconut trees in hotel area.	Photo 6.2: Plants to purify the smell from sewage treatment.
	

Some hotels have won local, national and international awards for their sustained environmental policy on their properties [4,10]. One resort manager in Ubud highlighted that his company has a Green Globe certificate. Another property manager in Nusa Dua

explained that their company has an EarthCheck certificate [1]. A manager of a five-star hotel in Nusa Dua area stated that his company is part of a well-known international energy efficiency project. Many respondents reported that they had won the *Tri Hita Karana Award*[1,3,4,10,11,12,13]. This is a local award which not only measures a hotel's environmental initiatives but also encourages engagement with the local communities as well as the hotel's efforts toward showing respect for the Hindu Balinese spiritual relationship with God.

Reduce, reuse, recycle have also been implemented in many hotels. The comments below illustrate how the hotel management undertakes to reduce, reuse, and recycle waste in their properties:

> *Employees are trained to reduce waste and separate the waste into organic and non-organic. Organic waste is processed into compost for hotel purposes, while the non-organic waste is sent to the registered waste management company in this area. The hotel is required to pay based on amount of waste produce. So, the hotel management trains the employees to reduce, reuse and recycle for environmental purposes as well as for cost saving purposes*[1].

> *We use the waste management of local companies around the hotel. We send our garbage to them, we pay based on the total amount of garbage that we send. They always process the rubbish into recycled product and compost. They often send back the compost for our garden purposes*[11].

One interesting finding is the fact that the Bali Hotel Association has demonstrated a proactive attitude and a leadership role in addressing climate change. Simpson et al. (2008) have explained the mitigation options for the transport sector, accommodation

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[*] Green Globe certification is the global certification for sustainable tourism. Membership is reserved for companies and organisations who are committed to making positive contributions to people and planet (www.greenglobe.com, 2016).

Earth check certification is the world leading scientific certification for travel and tourism to help businesses, communities and governments deliver safe, clean and prosperous destinations for traveller to visit, work and play (http://earthcheck.org/about/, 2016).

and restaurant businesses, tour operators, consumers and destinations. However, the role of the tourism industries association is missed in the discussion.

A representative of Hotel Association in Bali highlighted their green initiatives to reduce plastic waste in Bali. This association calls on their members to calculate their plastic product and find strategies to reduce its waste. As explained in the following quote:

> *Since 2011, we asked our members (116 hotels) to calculate how much plastic waste they generate monthly. We have strong willingness to reduce plastic waste in Bali. During that period, every month we managed to reduce up to 15,000 tons of plastic waste. Hotels change plastic bottle into glass bottle. Although, it costs more but less harm to the environment. We also introduce green products, such as: bamboo straw and bio-degradable plastic, to the hotel members so that they can reduce their plastic waste. This effort continues until today (2013)* [2].

6.2.2 Reducing Energy Use

As can be seen in Table 6.2, most respondents from tourism businesses reported that their companies make substantial contributions to emission reduction by reducing the energy use in their property [1,2,3,4,6,10,11,12,13]. One hotel manager reported: "w*e replaced 90% old bulbs with LED lamps, all the rooms have been using smart cards and we replaced an old refrigerator with environmentally friendly refrigerant*" [11]. Some hotel managers explained in more detail their actions in reducing energy use in the properties, as demonstrated in the following quotes:

> *This resort takes the following actions to reduce its energy consumption: (1) using rooves thatched by local workers from locally grown long grass. Thatched rooves are environmentally friendly, protecting the building from the sun's heat during the dry season and keeping the inside warm during the rainy season; (2) using natural ventilation and light with the availability of large glass windows in every room and villa; (3) using curtains and blinds in the rooms and villas that are designed to block out the sun's heat; (4) switching bulbs to LED and energy saving varieties; (5) using timers for*

> *outdoor lighting including parking areas; (5) reducing night lighting when there is less traffic (without impacting on safety); (6) setting the air-conditioning temperature to 23° upon check-in to save energy without compromising comfort; and (7) equipping all rooms and villas with energy saving key card slots* [4].

> *Several actions for energy saving also have been undertaken, such as: (1) use LED for light bulbs; (2) use 'solar panel' for making hot water in guest rooms; (3) use light sensors for the public area; (4) use light dimmers in guest rooms so that lights can be set off depending on the purposes to reduce energy use; and (4) place an environmentally friendly tag in every guest room to remind the guests to put/hang back towels if still clean, so that the towels or/and linens are not changed every day* [1].

These results seem to be consistent with previous research conducted by Hoffman and Glancy (2006) and Okereke (2007) which found that basic technological and behavioural changes are the most prominent activities in carbon management because they often lead to reduction in energy consumption. Okereke (2007) reported that nearly 100% out of 100 companies' websites in UK present the connection between a specific carbon management program and the amount of money saved.

6.2.3 Use of Renewable Energy

The results of this study indicate that the tourism businesses in Bali have not used renewable energy for their business operation. As can be seen in Table 6.1 no respondents use solar panel or wind power for energy sources. One hotel owner explained that he has plans to use bamboo trash as a new renewable energy, as stated in the following quote:

> *I have a new proposal to collaborate with my friends from the USA to make the energy power from bamboo trash. Hopefully, this project can reduce the waste, open new employment opportunities and provide cheap energy to the community. But I cannot talk more about it, because it is still a plan not real action yet* [6].

Investment and maintenance costs become an obstacle in installing renewable energy at the hotel. One interviewee highlighted the need for government support in providing such service:

> *Some solar panel companies have already presented their products to our investor. However, solar panels require a lot of land. If we install solar on the roof, solar will dazzle and trigger eyesore. Whereas, if installed in the ground, land price is very expensive in Nusa Dua. Perhaps the government should establish an integrated energy system and do not just focus on selling Bali* [3].

6.2.4 Sequestering Carbon

The overall responses to this theme were very positive. This research found that all respondents play a significant role in sequestering carbon in Bali. A variety of actions on sequestering carbon were undertaken. One hotel manager reported: "*we undertake environmental programs such as tree and mangrove planting. For example, mangrove planting in Suwung, in West Bali, planting endangered trees in the several Hindu temples in Bali"* [1]. Another respondent went on to explain about his company's contribution to support the coral reef conservation project in Nusa Dua area, as stated in the following quote:

> *To protect marine ecosystems, our company has established a new foundation for coral reef conservation in Nusa Dua area. We support this foundation with the funding to transplant coral reefs and build an underwater garden with Balinese artefacts, such as a Kecak dance statue and a Wisnu goddess statue, and many others. We also establish an "adopt the coral project" which encourage hotel guests to support our coral reef project* [3].

Another hotel manager explained his company's support to conserve biodiversity in Bali as well as to build awareness of local people to protect the environment. A detailed explanation regarding supporting a biodiversity project can be seen in the following quote:

> *This hotel runs a project that combines its efforts in biodiversity conservation with the reforestation of Bali Island. This includes the reforestation of one hectare of land in Nusa Penida Island, organised by the Friends of National Park Foundation (FNPF). In addition, the hotel has a unique program called "every guest plants a tree". This program is distinct from the reforestation program, which is usually funded by the company's own budget. "Every guest plants a tree" provides guests with the opportunity to preserve their memories in Bali. Guests are asked to donate some money for the maintenance of this tree and, in return, they can put their name in front of the tree. This program is well-received by guests, especially honeymooners* [4].

The same person further explained his company's contribution to support environmental events to build community awareness to climate change. As stated in the following quote:

> *This hotel educates employees and their local community to be more aware of environmental issues, including climate change. This hotel actively supports several programs at the community level which are managed collectively by the Ubud Hotel and Restaurant Association, such as: (1) Car Free Day, which educates community members about reducing their carbon footprint; (2) Earth Day Initiatives, which encourage communities to undertake reforestation by planting trees; and (3) Clean Up Coastal, which promotes a clean environment free from plastics* [4].

One respondent (an owner of transport and tour operator businesses) argues that he has done more than what is expected by scientists and government to protect the environment. He bought 10 hectares of land and planted 25,000 trees as his social responsibility to protect local people from climate change risks. He said:

> *We planted 25,000 trees on 10 hectares of land as my social responsibility to participate in tackling climate change. Let's say one acre can absorb GHG emission issued by one jumbo jet or 225 cars or 500 bulbs with hundred-watt. Then, you can just multiply my contribution to absorb carbon emission*

> *and to humanity in this world. The trees that I have planted can reserve water and land, so that there will be enough water in the future and soil will be better quality from the composting so that there will be enough food in the future* [6].

Generally, carbon offset programs are not familiar among the tourism businesses. It is apparent from Table 6.1 that the carbon offset program is not adopted by most of the respondents.

6.2.5 Reducing Carbon Footprint

The employment and supply strategies also contribute to minimise the industry's carbon foot print. Most of the respondents reported that they employ local people and local suppliers [1,2,3,4,6,10,12,13], with comments such as: "we *employ 190 people, 99% of our staff are local. All of our suppliers are also local*" [4], "*Out of 600 staff, 75% are local people and approximately 80% of our suppliers are local*" [11]. One hotel owner explained in more detail how the design of his businesses contributed to reduce the city traffic congestion as well as supporting local culture at the same time. As stated in the following argument:

> *I am not sure if this is part of CSR. My first consideration to build hotels in the village is to reduce poverty. I build hotels in the three areas that the communities need employment (unproductive and poor area). The hotel developments help provides new infrastructure in the village, for example better roads, electricity and water access. With better infrastructure, the local people can earn a stable income from tourism businesses. Therefore, local people don't have to go to the city to earn money. I paid the Bali Hotel Institute to train local people to be hotel staff, e.g. waiter, housekeeping, cook, etc. I believe that this is CSR because local people stay in the village earning better incomes, they can live with their families, observe their cultural activities. This will reduce carbon emissions by commuters. Can you calculate how much carbon that can be saved by employing local people and building hotel in rural areas?* [6].

It is apparent from the findings that most respondents understand the importance of employing local people both for economic reasons as well as keeping the carbon footprint at minimum level. However, this research did not explore in more detail other actions taken by the tourism industry in Bali in minimising carbon footprint on their properties.

Besides mitigation actions explained above, all tourism businesses in Bali also obey the rules that have become cultural heritage in Bali. Bali's New Year or *Nyepi* or Silent Day is one of the sacred ceremonies that are closely related to the climate change topic. Therefore, Box 6.1 is added to explain in brief about what *Nyepi* is and how it contributes to GHG emission reduction in the atmosphere [1]. Box 6.1 was deliberately added to give an idea that adherence to religious beliefs and traditions make Bali not only one of the most unique destinations in the world, but also a destination that understands the importance of providing the opportunity to our planet to breathe without pollution, even if only for a day.

Theexplanation about Bali's silent day in Box 6.1 is purely the researcher's perspective and based on her local knowledge as a Balinese. Silent day in Bali is cultural tradition and adhering to the local tradition is part of the licence to trade in business operation in Bali. Referring to the literature review in Chapter 2, we argue in a similar vein with Muniapan and Satpathy (2013) that religion and spirituality play an important role in the development of business practices, especially in initiating and implementing CSR. According to legitimation theory, a company becomes involved in CSR practice as a part of the social contract to the local community. The story in Box 6.1 shows that religion and spirituality have become the foundation of the social contract that exists in the community.

Box 6.1.
Balinese New Year "Silent Day":
Balinese people under its ancient philosophy reduce GHG emission to the atmosphere

Balinese people have a unique way to celebrate New Year based on the Caka calendar. Whilst people from other parts of the world celebrate New Year with lots of fireworks, drinking parties and entertainment which use excessive lighting and huge amounts of energy, Balinese are the opposite. Balinese stay in silence for one day to celebrate the Caka calendar New Year. *Nyepi* or Silent day ritual is performed with the following conditions:

- Amati geni: no fire, no light and no electricity
- Amati karya: no working
- Amati lelungaan: no travelling
- Amati lelanguan: no entertainment

On *Nyepi* day, every street is quiet, people in Bali stay at home for self-introspection. Everyone living in Bali must respect these rules without exception. Airport, manufacturing and other businesses are closed. Every guest stays inside the hotel with minimum energy use. No lighting at night. No traffic is allowed. Only pecalang or "Balinese security" can check the situation and ambulances for emergencies.

Several newspaper articles reported the Bali silence day can reduce the CO_2 emission to the atmosphere. Erviani (2012) noted that "There are no motorcycles or cars roaming the streets during Nyepi and that alone reduced CO2 emissions by 30,000 tons". Silent Day adopted ancient philosophy as a Bali local wisdom to give the earth time to refresh from human activities. In 2007, The Bali Collaboration for Climate Change proposed the 'World Silence Day' as a worldwide action to preserve the environment during the United Nations' Climate Change Conference (http://www.creativeacts.org/taxonomy/term/1/0). However, the campaign failed to reach the 10 million signatures required to propose World Silent Day to the Secretary of the United Nations Framework Convention on Climate Change (UNFCCC) as a global movement (Suriani, 2011). Balinese people as well as tourism businesses in Bali still respect this ancient wisdom. Hopefully *Nyepi* rituals or Silent day can be preserved endlessly to make people live in harmony with nature.

(This part was written on 17 March 2015,

6.3 Tourism Businesses' Economic Responsibility Initiatives as Climate Change Adaptation Strategies

As discussed in Chapter 2, adaptation strategies are designed to reduce the cost of climate change (McCarthy et al., 2001; Parry, Canziani, Palutikof, van der Linden, & Hanson, 2007; Scott, Freitas, & Matzarakis, 2009) by diversifying business reliance on the current climate. This means that adaptation strategies and the company's economic responsibilities are aligned to the same goal: to make the company profitable and sustainable whilst also contributing to the adaptive capacity and well-being of their host communities.

The interviews with managers or owners of tourism industries in Bali revealed that most of the respondents had implemented adaptation strategies in their organisation as part of the companies' CSR initiatives (see Table 6.2). Four broad themes emerged from the analysis, including: (1) technical adaptation; (2) business management adaptation; (3) behavioural adaptation; and (4) policy adaptation. Table 6.2 provides an overview of the key themes and findings from each respondent. The following sections present a detailed discussion of these four themes mentioned by the respondents during in-depth interviews regarding adaptation strategies in their organisations.

Table 6.2: Adaptation strategies as part of respondents' economic responsibility

CSR initiatives	INT W 1	INT W 2	INT W 3	INT W 4	INT W 6	INT W 10	INT W 11	INT W 12	INT W 13
Technical Adaptation									
Provision of disaster warnings	√	√	√	√	√	√	√	√	√
Have water reservoir	√	X	√	X	X	X	X	X	X
Sea walls/cribs	X	X	X	X	X	X	X	√	X
Beach nourishment	√	X	X	X	X	X	X	X	√
Biopore holes	√	√	√	√	√	√	√	√	√
Coral conservation project	X	X	√	X	X	√	√	√	X
Business Management Adaptation									
Provide emergency plans	√	√	√	√	√	√	√	√	√
Have business insurance	√	√	√	√	√	√	√	√	√
Product diversification	√	√	√	√	√	√	√	√	√
Have health insurance for employees and employees' families	√	√	√	√	√	√	√	√	√
Behavioural adaptation									
Reducing outdoor activities during extreme hot days	√	√	√	√	√	√	√	√	√
Wearing clothes suited to the weather	√	√	√	√	√	√	√	√	√
Policy adaptation									
Comply with regulations	√	√	√	√	√	√	√	√	√
Physical risk analysis for properties	X	X	√	X	X	X	X	X	X

Source: Author, 2014

Notes: X means the respondent's organisation does not have the identified initiative; the tick (√) means that they do. INTW means Interviewee.

During in-depth interviews, some managers allowed the researcher to observe different types of adaptation strategies adopted in their properties. Some photos were taken by the researcher during the observations. The photos presented in this section provide some examples of climate change adaptation strategies implemented in Bali.

6.3.1 Technical Adaptation

Technical adaptation actions were identified in data collected from in-depth interviews. A range of technical adaptation actions were discovered in the analysis, including: the provision of disaster warnings, water reservoirs, sea walls/cribs, beach nourishment, and Biopore projects. This section will discuss a brief overview of the technical adaptation actions of the tourism industry in Bali.

(1) The provision of disaster warnings

The provision of disaster warnings exists in tourism businesses in Bali, especially in relation to tsunami and earthquake. All respondents in this research mentioned that they provide disaster warnings for the safety requirement in the building and hotel areas [1,2,3,4,6,10,11,12,13]. One hotel manager explained: "*We have emergency plans for tsunami, flood and earthquake" [1]. "We have natural disaster emergency plans(fire and earthquake)*" [4]. Other hotel managers also confirmed that they have emergency plans for the property, as stated in the following quotes:

> *As I explained earlier this hotel has emergency plans for fire, earthquake, and tsunami. The entire employees have been trained by management to deal with natural disaster and health problems [11].*

> *We have risk management for the tsunami. We've got a tsunami certification and we use an emergency fire plan and use technology to perform risk of emergency action. We have tsunami sirens and speakers in each room for natural disasters alarms [13].*

Photo 6.3: Tsunami emergency plan in Sanur. Source: Author, 2014

A group of tourism businesses in Sanur area pay local people for "*pecalang*" or cultural security to protect Sanur from both human and natural threats. Tourism businesses in Sanur area collaborate with the government in providing emergency plans to protect the whole community and tourists from tsunamis, including providing tsunami alarms and community awareness programs (see photo 6.3). The tsunami awareness group builds community awareness of tsunami threats and educates the community about what to do if a tsunami comes. As one community leader stated: "*We are in the process of negotiating to build a tower to accommodate 2000 people in case tsunami attacks Sanur. It will be 15 metres from sea level*"[12].

It is apparent from the interview results that disaster management plans in the hotels/resorts in Bali are more focused on fire, earthquake and tsunami. None of the respondents mentioned readiness to tackle water crises or other kind of stressors. As mentioned earlier in Chapter 5, one resort manager clearly stated that many tourism businesses in Bali are not aware of sea level rise nor ready to tackle the risks of increasing sea levels in the future.

(2) Water reservoir

The data shows that most of the respondents do not have water tanks or water reservoirs. As one hotel manager stated: "w*e do not have a water tank, but we had Biopore and pond to save rain water*" [1]. Another resort manager mentioned that: "w*e*

have water reservoir in golf area but we don't have specific plan to protect this company from water crisis/water shortage" [3]. This may become the big challenge for the tourism businesses considering water demand in the future. Table 6.3 presents projection of water supply and demand documented by ICCSR (2013).

Table 6.3: Indonesia's projection of water supply and demand

No	Area	Supply *(S)*	Demand *(D)*	Balance 2009 *(S – D)*	Balance 2015s *(S – D)*	Balance 2030s *(S – D)*
1.	*Sumatra*	111,077.65	37,805.55	73,272.10	48,420.07	-67,101.34
2.	*Java-Bali*	31,636.50	100,917.77	-69,281.27	-118,374.36	-454,000.33
3.	*Kalimantan*	140,005.55	11,982.78	128,022.77	118,423.17	88,821.14
4.	*Sulawesi*	34,787.55	21,493.34	13,294.21	13,490.80	-21,021.99
5.	*Nusa Tenggara*	7,759.70	2,054.04	5,705.66	-17,488.89	-67,848.68
6.	*Moluccas*	15,457.10	540.23	14,916.87	12,648.91	9,225.75
7.	*Papua*	350,589.65	385.58	350,204.07	325,937.74	315,647.73

Source: ICCSR (2013: 13).

The yellow highlights in Table 6.3 show the areas that are categorised as extremely high risk for water crises in the future. As can be seen in the Table 6.3, Bali has been experiencing water crises since 2009 and the water supply is predicted to continue in a negative position. Sufficient support from government is needed to encourage tourism businesses to have water tanks and other technology to ensure the businesses have enough water supply during dry seasons.

Simpson et al. (2008, p. 46), suggest six adaptation options for a destination with growing water supply shortage, including: (1) water conservation programs at resorts; (2) fee structure for water use; (3) close golf courses and curtail other high water uses during dry season; (4) limit new tourism destinations; (5) mandatory onsite water collection and storage systems; and (6) construct a desalination plant. Adaptation option numbers (1) and (2) have been implemented by the tourism industry in Bali. However, other adaptation options still need government involvement in implementing the actions

due to some constraints, such as technology price and instalment cost. As one tourism industry association representative concurred in the following statement:

> *In 2012, we added a water-saving program. We realise Bali already faces a water crisis. We've invited desalination companies to present their product in front of our association member. However, the price is too far from the price of tap water. As an association, we only introduce this company to the hotel members and the government. The prospect of using desalination is still in the discussion stage at top management level* [2].

(3) Sea walls/cribs

Beach erosion is one significant problem in Bali. Many tourism destinations have been damaged by erosion, such as: Sanur beach, Padang Galak beach, Candidasa beach, etc. In Sanur, a sea wall was built with government funding. As mentioned in Chapter 5, this project happened due to strong lobbying from the community leader, local business association and NGO. This sea wall protects hotels, restaurants and local small businesses in Sanur beach from the sea water during high tidal waves.

Photo 6.4: Cribs in Sanur to protect tourism facilities from erosion.
Source: Author, 2014

(4) Beach nourishment

Two of nine interviewed tourism businesses reported that they use beach nourishment to prevent beach erosion surround their property [1,13]. One hotel manager in Seminyak argued that beach nourishment is chosen because they want to protect the beach view, as stated in the following quote: "*We have a special plant that we planted to prevent abrasion. We do things by the natural order not to spoil the view*" [1]. Another hotel manager in Jimbaran area reported similar action, as stated in the following comment: "*We use the plant adaptation with the rising of sea water and abrasion. We tried to prevent sand eroded by continuing to plant trees on the beach*" [13]. Photo 6.5 presents one example of beach nourishment in Seminyak beach which successfully protects sand from beach erosion.

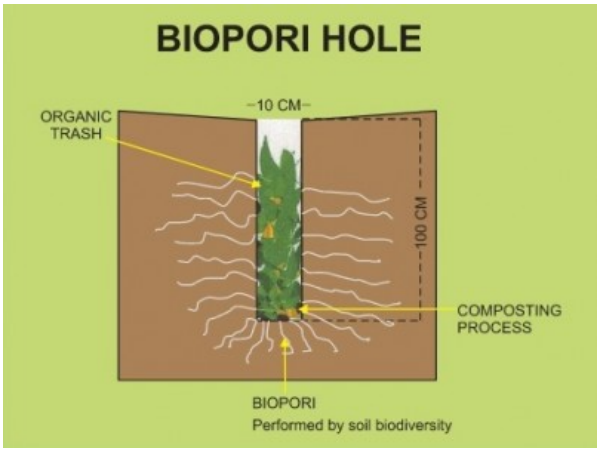
Photo 6.5: Beach nourishment in Seminyak. Source: Author, 2014

(5) Biopore holes

All of interviewees mentioned that they have Biopore holes in their properties [1,2,3,4,6,10,11,12,13]. Biopore holes are narrow holes dug about a metre deep (see photo 6.6). In a flash flood situation, water quickly drains into the Biopore hole. Moreover, it helps organic waste decompose through the tunnels or pores which then can be used as

organic fertiliser or compost. Biopore holes bring lot of advantages such as: increased soil ability to absorb water; producing compost useful for soil enrichment; and, to overcome health problems caused by stagnant water during rainy season such as malaria and Dengue fever (http://greenerlifes.com/4607/an-introduction-of-biopori-hole-to-prevent-flood/, 2016).

Photo 6.6: Biopore hole.



Source: (http://www.legacyintl.org/a-legacy-of-change/ , 2016)

(6) Coral reef conservation project

As can be seen in Table 6.2, the majority of the interviewed tourism businesses support a coral reef conservation project as part of their responsibility to the environment [3,10,11,12,18,19]. At the same time, the coral reef conservation project is also a project to adapt the tourism businesses to climate change risk. Some diving companies provide even more funding through their CSR program to protect reef conservation project because their business sustainability depends on the coral reef ecosystem [20,21, 22].

Coral reefs are significant productive ecosystems that produce a variety of essential goods and services for human life, including tourism opportunities (Brander, Van Beukering, & Cesar, 2007). According to Moberg and Folke (1999), coral reef ecosystems serve as physical buffers for oceanic currents and waves, as well as providing a suitable environment for seagrass beds and mangroves. Therefore, conserving coral reef ecosystems will help tourism businesses in coastal areas to protect

their business infrastructure and building. As reported by one respondent in the following quote:

> *Formerly, cyclones attacked this village very often. However, the cyclone no longer attacks us since we plant lots of tree in the village and coral reefs in the ocean. Firstly, coral reefs that we planted grow and naturally reduce the waves. Secondly, I believe that God bless us because I do the conservation project as my worship to God. Recently, the nature of ocean in this village is more calm compare to other beaches. During the full moon, the waves at other beaches are very high while the waves in this village are tranquil. We are very grateful to this conditions* [10].

Photo 6.7 is the author's photo when she was diving in Pemuteran village, in the northern part of Bali. The author witnessed extraordinary beautiful Goddess corals that are grown using Biorock technology, and are surrounded by various beautiful species and colourful fish. With Biorock technology, corals are much more resistant to global warming, with 16-50 times higher survival following heat shock (Prana & Gureau, 2012). Moreover, they argue that growing coral reefs with Biorock technology can help in rehabilitating eroded beaches and protect small islands which are threatened by global sea level rise. Chapter 7 will elaborate in more detail on how coral reef conservation supported by CSR of tourism businesses helps sustain the livelihood of the local communities.

Photo 6.7: Coral reef conservation project in the north of Bali.

Source: Author, 2014

6.3.2 Business Management Adaptation

Business management adaptation actions were identified in data collected from in-depth interviews. A variety of business management adaptation actions were discovered in the analysis, including: (1) provide emergency plans; (2) have business insurance; (3) product diversification; and (4) have health insurance for employees and employees' families. This section will explore the business management adaptation action of the tourism industry in Bali.

(1) **Provide emergency plans**

The vast majority of the respondents have emergency plans for their property [1,2,3,4,6,10,11,12,13]. As one respondent mentioned, *"I am not the expert of this. But I can say that this company has emergency plans for tsunami, flood and earthquake"* [3]. However, some of them mentioned that they only provide emergency plans inside the hotel because there is no emergency plan in the area, as stated in the following quote:

> *We have an emergency plan for earthquake but we do not have an emergency plan for tsunami because it is like earthquake. However, it is only for inside hotel. Sanur and Nusa Dua already have an emergency plan while we do not have one in Seminyak. So…in case of emergency, we do not know where to go outside the hotel. Our green team are in the process of designing one emergency plan for Seminyak. However, it needs collaboration with government and community leaders* [1].

It is apparent that not all tourist destinations have emergency plans. Respondents in a group discussion also mentioned their willingness to design emergency plans for their villages, as one respondent revealed, they have a: "*terraced village hall which can be used as a shelter during the tsunami. It has big road and space. We just need to design a map on how to reach this area*"[17]. An updated emergency plan for all destinations in Bali is crucial to enhance the likelihood of survival facing stresses stimulated by climate change.

(2) **Have business insurance and capital reserve**

The data shows that having capital reserves and business insurance enhances adaptive capacity of tourism businesses. The vast majority of the respondents had business insurance to cover economic downturn in the businesses [1,2,3,4,6,10,11,12,13]. As one hotel manager reported: "*For economic crisis, we have a finance department who I believe have a plan to address economic downturns. All the hotels have both property insurance and business insurance*" [3]. Another respondent, as a business owner reported: "*I have business insurance coverage, all risks*" [10].

Moreover, a business owner noted the importance of having capital reserves in facing economic crises,

> *I insure all our assets. I have a capital reserve to face the business downturn. As a business owner, I am responsible to make sure my employees and their family have stable income for living. I have 500 employees and cover up to 4 family members for each employee. Therefore, I must make sure that 2000 people have enough food and drink during the economic crises. In the first Bali bomb, I spent $12 billion to pay salaries of my employees. While other hotels fired their employees, I keep my employees and give them the same salary. It is better that I am not eating rather than I neglected my employees. Luckily, God returned my capital quickly. However, after two years, another bomb was exploded in Bali. I hope there are no more crises in Bali. I am tired and getting older now* [12].

(3) **Use product diversification**

The data indicates that all tourism businesses use product diversification to anticipate bad weather, as one private sector respondent stated: "*we do have spa, Balinese entertainment and other indoor activities in case the weather is not good for the guest to do outdoor activities*" [1]. Another resort manager went further and stated that*:* "*guests are provided with year-round activities, including alternatives to outdoor activities when the weather is unsuitable. This includes Balinese entertainment, spa and massage treatments, kids' zones, gyms, and bars and restaurants with free acoustic*

entertainment" [12]. It is apparent that most tourism managers are already aware that climate change will increase the intensity of cyclones and changing precipitation patterns which can impact their guest satisfaction. Therefore, they provide indoor activities with various types of activities to entertain their guests during bad weather.

(4) **Have health insurance for employees and employees' families**

The data demonstrates that all respondents provide health insurance for their employees and families. As one respondent stated: **"***We provide private health insurance for 1500 employees and families*" [12]. Another manager emphasised that all employees have health insurance, saying: "*In addressing health problems, I can argue that all the employees (10,000 people) have medical care, every hotel has a hotel clinic for guests and employees and in this area, there is BIMC (Bali International Medical Centre) for addressing health problems"* [3]. Anther hotel manager explained that they cover 100% of employee health insurance as well as their families. In total, they cover health insurance for 2800 people [13].

6.3.3 Behavioural Adaptation

Table 6.2 clearly shows that all respondents have implemented behavioural adaptation strategies, both by reducing outdoor activities during extreme weather and wearing clothes suited to weather. Those kinds of options are easy to implement and tourists are encouraged to adjust their clothes during extreme weather. One respondent raised a specific behavioural adaptation action which is quite unique and not mentioned in any literature,

> *We introduce the concept of Tri Hita Karana to guests. Some examples are educating the guests about how to act harmoniously with nature, with human beings and with God. We are also very active in bringing in employees in an action called "Green Engage". This is a movement that encourages employees and guests to minimise waste production, energy saving, reduction of water use and the planting of trees.* [13].

6.3.3.1 Policy Adaptation

Policy adaptation actions were identified in data collected from in-depth interviews. Only two policy adaptation actions were identified: comply with regulations, and physical analysis for properties. All of the respondents stated that they follow the government policy and regulations in addressing climate change risks [1,2,3,4,6,10,11,12,13]. However, adaptation programs in the Medium-term Development Plan (RPJM) 2010-2014 were still focused on strengthening the capacity of data, information, climate modelling and risk assessment (The Indonesian Climate Change Sectoral Roadmap [ICCSR] (2009). Therefore, Planning and Policy, Regulation and Institutional Development is currently under development. Only one respondent mentioned that his company has physical risk analysis for properties [3]. As Bali, has not yet experienced a major natural disaster, no data was available to provide depth into the knowledge of emergency management.

6.4 Chapter Summary

The findings presented in this chapter align with those of Mazilu (2013, p. 263) who argued that:

> tourism has the potential to contribute to environmental protection and poverty reduction by capitalizing on biodiversity assets; to increase public appreciation of the environment and to spread awareness of environmental problems bringing people into closer contact with nature and the environment.

This chapter shows that some in the tourism industry have provided respectable examples on how the tourism industry addresses climate change. Section 6.2 demonstrates that tourism businesses have implemented some mitigation strategies as part of their environmental responsibilities. 6.3 highlights that tourism businesses, in implementing their economic responsibilities, are also able to adapt their practices to address the risks associated with climate change. This makes the company profitable and sustainable whilst also contributing to the adaptive capacity and well-being of its host community. Lack of climate change policy, lack of economic incentives and the cost of adaptation options are the challenges in implementing climate change mitigation

and adaptation strategies in Bali. Therefore, further research is needed to find out the best ways to integrate CSR and climate change mitigation and adaptation strategies in Bali.

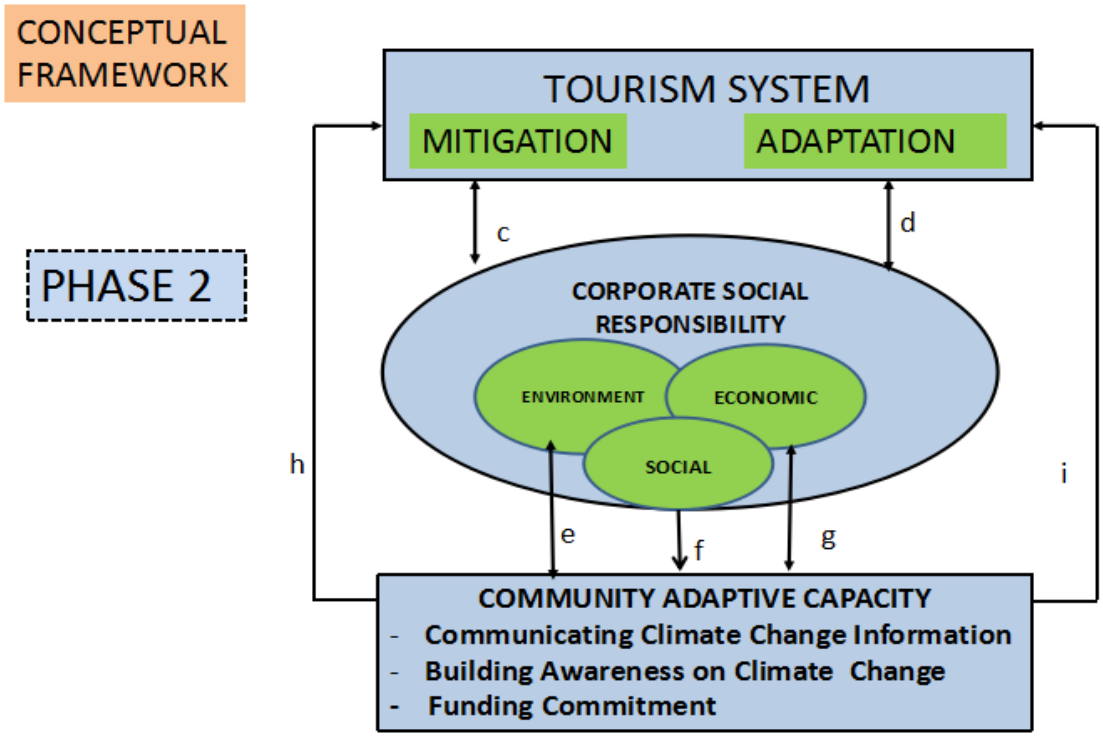
7 ASSESSING CSR PRACTICES OF TOURISM INDUSTRIES IN BALI FOR BUILDING COMMUNITY ADAPTIVE CAPACITY TO CLIMATE CHANGE

"Stakeholders want to be treated as a partner.
The greater the mutual, earned respect and loyalty,
the greater the chance that the organization will be sustainable"
(Elkington, 1999, p. 219).

7.1 Introduction

This chapter addresses phase two of the developed conceptual framework that assesses how the CSR of the tourism industry builds community adaptive capacity to climate change. This chapter specifically discusses lines e, f, g, h and i of the framework as illustrated in Figure 6.1. This research found that integrating CSR and climate change mitigation and adaptation strategies is beneficial for companies as well as for building community adaptive capacity to climate change.

Figure 6.1: Phase two of the Conceptual Framework



In order to achieve this aim, this chapter is divided into six main sections. The first section is an introduction and the second section presents tourism businesses' social responsibility initiatives in the tourism industry in Bali for enhancing community adaptive capacity to climate change. The third section provides a discussion of the research results regarding how the CSR initiatives can enhance community adaptive capacity to climate change. The fourth section discusses the motives and facilitating and inhibiting factors of undertaking the current CSR practices. The fifth section elaborates the potential power of CSR in building community adaptive capacity to climate change. Finally, the last section presents summary of this chapter.

7.2 Tourism Businesses' Social Responsibility Initiatives for Enhancing Community Adaptive Capacity to Climate Change

By undertaking social responsibility initiatives, tourism businesses could enhance community adaptive capacity to climate change. This will benefit their stakeholders, including their owners and especially the local community. This notion is supported by Moratis and Cochius (2011) who argue that while creating a profit is an important part of corporate responsibility, the company needs to balance their economic with their social responsibility. This recognises the mutual relationship between the organisations' social responsibility to its host community and its profitability. Three organisational examples are provided to explain how the social responsibilities of tourism businesses can enhance community adaptive capacity to climate change.

Company X: a boutique hotel in Northern Bali: Interviewee 10

This is a success story of a small village in northern Bali that transformed from an environmentally damaged region into a famous diving area. An interview was conducted with the owner of the first tourism businesses that had operated in this village. Interviewee 10 came to the village in 1989 to discuss his plans with the community leader. Planning to build some villas, he chose the location based on his intuition and spiritual sensibilities, a central part of which was a dream that he should do something for the community.

In his dream, he was asked to protect "the underwater asset" which he interpreted as the coral reef, the source of life for fish and fisherman. His approach to discussing his plans with the community was unique. He explained his dream during a community meeting in the village temple, assuring people that he came with good intentions to improve conditions. At that time, the village was underdeveloped (no infrastructure, no water, no electricity) and environmentally damaged. In developing his vision, Interviewee 10 implemented the following actions: (1) creating a living landscape by planting trees, designing beautiful gardens and surroundings; and (2) stopping all destructive fishing methods to allow for the rebirth of the coral.

In short, he increased awareness and participation, and developed initiatives for the local people to protect the environment. By touching people's hearts with a cultural and spiritual approach he opened their minds, building a community spirit of togetherness for the benefit of the environment. Once the community had developed common goals, the next step was an educational field trip to a tourism destination. Interviewee 10 escorted several community leaders to Nusa Dua to introduce them to the idea of developing sustainable tourism. Thus, he built his hotel with strong support from the community. Land clearance ran smoothly and the environmental appearance of the village became more appealing. The hotel employs local people, and uses local products and suppliers. He uses his profit to establish a foundation to protect the coral reef's ecosystem in the village.

Interviewee 10 explained that his spirituality guides him to earn profit ethically (through fair trade and fair treatment of employees) and to return profits to the environment and the community. The coral conservation has been successful in creating prosperity for the community by allowing more fish to populate in the coral area, thus attracting more tourists for diving activities. Several awards have been achieved for this project, including:

- SKAL International Sustainable Tourism Award for the best underwater eco-tourism project in the world.
- The Kansas Award for the best community-based coastal management project in Indonesia.

- The Kalpataru Award, Indonesia's most prestigious environmental award.
- The United Nations Development Program (UNDP) Equator Prize in 2012.
- UNWTO Award for Innovation in Non-Governmental Organizations 2016

What this interviewee has achieved for the community and the environment goes far beyond CSR. He has involved the whole community in coral reef conservation, which is managed by local people in the village, and returns around ten percent of his business profit into that conservation project. This percentage is high compared to the two percent CSR contribution mandated by the Indonesian government.

Company Y: Management of Several Hotels in Nusa Dua (Interviewee 3)

Interviewee 3 explained that his company has implemented several CSR initiatives to improve community welfare and income levels. For example**,** it provides low interest loans for small enterprises, grants and entrepreneurship workshops. In 2014, this company spent more than two billion rupiah[2] or approximately two hundred thousand AUD dollars for an entrepreneurship program. This encouraged local people to open their own businesses through supporting grants, loans and connections with international networks so that they could expand their business.

To protect Balinese culture, Interviewee 3 said that this company supports an annual Nusa Dua Festival. This brings many benefits for stakeholders. First, local artists and students are paid to perform in the festival for a week. This encourages Balinese artists, dancers and performers to protect the culture. Secondly, the hotels and restaurants in this area benefit from the guests that flock to see the festival. They earn good profits and, consequently, are eager to support the festival and other programs that help make their businesses sustainable. Finally, tourists have the pleasure of sharing in the unique Balinese culture at no cost. This enhances their holiday experience, creating positive memories. The happier tourists become, the more they will visit, encouraging the growth of businesses to accommodate their needs, employing local people in hotels and restaurants and more Balinese artists and performers.

[2] Rupiah is the basic monetary unit for Indonesia. The rupiah's value is equal to 100 cents AUD.

This company also donates funding to the government for the renovation of poor housing and basic settlement equipment. Once the house is built, owners are encouraged to grow small kitchen gardens of chillies, lemon grass, ginger, bananas, turmeric, spinach, coconuts and other foods to help sustain them. This way, Company Y teaches the poor not only to plant trees for environment purposes, but also to help them achieve food self-sufficiency.

Organisation Z: Hotel and Restaurant Association in Bali (Interviewee 2)

Organisation Z is a professional association of general managers (GMs) and/or owners of hotels, resorts and villas in Bali. In 2013, this association consisted of 116 members, who together hired almost 30,000 employees in Bali. One of the managers explained that every hotel has some level of CSR depending on the business size and budget. Types of CSR initiatives vary across environmental and social activities. Some members also initiate CSR collectively, in a more coordinated manner. Organisation Z coordinated CSR member initiatives include:

- Environment – the association runs environmental programs to encourage tourism businesses in Bali to support the Bali Clean and Green Program. It also organises monthly green team meetings to discuss how hotels and restaurants can implement mitigation strategies. It collects data from its member hotels and restaurants about water and electricity usage and creates networks of environmental friendly suppliers, such as solar panel companies or re-cycle bag suppliers.
- Education – the association manages CSR funding for scholarships to support disadvantaged students in completing their senior high school and university studies. It also provides leadership and entrepreneurship workshops for the scholarship awardees to help them to pursue suitable careers or open businesses in the future.
- Safety and security – in relation to climate change, several interventions have been undertaken, such as disaster risk reduction (e.g. tsunami ready hotels certification); the Tanjung Benoa tsunami shelter and evacuation initiatives;

comprehensive security audits; and cooperation with partners to tackle HIV AIDS, rabies and other health issues.

- Sport and cultural activities – the association organises sporting events and supports cultural activities in Bali, encouraging people to maintain their health and well-being.

To get a broader perspective from different types of stakeholders, a FGD was conducted in the north of Bali. The FGD data helped further enrich the data gathered from the in-depth interviews. The findings from these discussions (as presented below) also affirm that tourism businesses have the power to build community adaptive capacity to stem climate change:

- Some hotels sponsor a foundation to conserve coral reefs in the village. This foundation is successful in protecting coral reefs from coral bleaching resulting from climate change.
- One diving company provides manpower, oxygen cylinders and other equipment to rid the coral reef of destructive species.
- Another dive company sponsors a project to remove plastic rubbish from the beach.
- The *pecalang laut* or ocean guard (community group) was sponsored by various tourism businesses to educate the community not to remove sand from the beach to build their houses.
- The Biorock project, funded by tourism operators, involves building a boat powered by a solar panel that captures energy to be turned into electricity. This represents an action designed to address issues relating to climate change, but also acts as a tool to educate the community about the use of solar panels as an alternative source of energy.

The FGD provided an insight into community perspectives about the benefits of CSR initiatives. All FGD participants explained that the economic and environmental conditions of the villages in which they operate have improved. They agreed that CSR

initiatives implemented by tourism businesses had enhanced community adaptive capacity to climate change by: (a) providing a stable income to villagers as employees or suppliers; (b) providing new business opportunities for villagers who open art shops, cafes, restaurants and snorkelling rentals; (c) protecting coral reefs from coral bleaching; and (d) educating employees, tourists and the community to be aware of and respect the delicate environment.

7.3 How CSR Builds Community Adaptive Capacity to Climate Change

According to the IPCC (2007, p. 869), adaptive capacity is "the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences". The determinants and strategies for building community adaptive capacity to climate change have been discussed in Chapter 2 (see Section 2.5.2). In Table 6.2, adaptive capacity varies depending on different scales and breadths of determinants. Addressing these key determinants can be an entry point to building community adaptive capacity.

Moreover, numerous studies have attempted to suggest some strategies for building community adaptive capacity to climate change. For example, McCarthy et al. (2001) recommend two types of strategy: macro and micro-scale. Macro-scale strategies for building community adaptive capacity involve improving education, increasing wealth, improving health care and improving income distribution. Micro-scale strategies for building community adaptive capacity to climate change involve planning for sea level rises or designing water conservation approaches in order to deal with drought in the future. Ockwell, Whitmarsh and O'Neill (2009) contend that providing access to information and communication can enhance adaptive capacity through effective and rational commitment to tackling climate change. Petheram et al. (2010) suggested some practical strategies, such as improving communication, engagement and knowledge sharing on climate change, improving infrastructure and community health and the promotion of traditional knowledge. Based on these recommended strategies, Table 7.1

was created in order to explain how the CSR of the tourism industry can help build community adaptive capacity to climate change.

The empirical findings presented in Chapter 6 and in Section 7.2 suggest that tourism industries can enhance community adaptive capacity to climate change directly and indirectly through certain CSR initiatives. Seven broad themes emerged from the analysis (see Table 7.1), including: (1) providing economic power; (2) providing access to financial support; (3) providing education and training; (4) providing information and knowledge regarding climate change risks; (5) improving healthcare; (6) providing emergency planning; and (7) utilisation and promotion of traditional knowledge. Table 7.1 provides an overview of the key themes and findings from each respondent.

Table 7.1: CSR initiatives that build community adaptive capacity to climate change

Strategies for building community adaptive capacity to climate change	**INTW 1**	**INTW 2**	**INTW 3**	**INTW 4**	**INTW 6**	**INTW 10**	**INTW 11**	**INTW 12**	**INTW 13**
1) Providing economic power									
- Income for employees, suppliers and local retailers	√	√	√	√	√	√	√	√	√
- Additional income for local communities (e.g. farmers and cattleman) from waste management	√	√	√	√	√	√	√	√	√
- Coral conservation projects	X	X	√	X	X	√	X	√	X
- Reforestation projects	√	√	√	√	√	√	√	√	√
2) Providing access to financial support									
- Soft loans for entrepreneurs	X	X	√	X	X	X	X	X	X
- Financial support for the poor	√	√	√	√	√	√	√	√	√
3) Providing education and training									
- Scholarships for disadvantaged students	√	√	√	√	√	√	√	√	√
- Training in specific skills (e.g. hospitality skills)	√	√	√	√	√	√	√	√	√
- Entrepreneurship training	X	√	√	X	X	X	X	√	X

Strategies for building community adaptive capacity to climate change	INTW 1	INTW 2	INTW 3	INTW 4	INTW 6	INTW 10	INTW 11	INTW 12	INTW 13
4) Providing information and knowledge regarding climate change risks									
- Build awareness of climate change	√	√	√	√	√	√	√	√	√
5) Improving healthcare									
- Private health insurance for employees and families	√	√	√	√	√	√	√	√	√
- Occasional free health services for the poor	√	√	√	√	√	√	√	√	√
6) Providing emergency planning									
- Tsunami emergency planning	√	√	√	√	√	√	√	√	√
- Disaster warning technology	X	X	√	X	X	X	X	√	√
7) Utilisation and promotion of traditional knowledge									
- Promoting *Tri Hita Karana* philosophy to guests	X	X	X	X	X	√	√	X	√
- Supporting and promoting Silent day	√	√	√	√	√	√	√	√	√

Source: Author, 2016. Notes: cross marks (X) mean the respondent's organisation does not have the identified initiative; tick marks (√) mean that they do. INTW means interviewee. Strategies for building community adaptive capacity to climate change adapted from McCarthy et al. (2001), Ockwell et al. (2009) and Petheram et al. (2010).

The following sections present a detailed discussion of these themes mentioned by the respondents during in-depth interviews regarding CSR initiatives in their organisations.

7.3.1 Providing Economic Power

Capacity to adapt with climate change is enhanced when individuals have increasing economic power (Wall & Marzall, 2006). This section explicates the role of CSR in providing economic power to the host community in a tourist destination. Various CSR activities (e.g. environmental, economic and social responsibility) contribute directly and indirectly to providing local people with economic power. The following are some environmental responsibility initiatives of the tourism sector that provide economic power to local people:

- Support for coral reef conservation, which not only protects the environment, but also provides benefits to local communities, fishermen and tourists. As one FGD respondent reported:

  We have been conserving coral since 1998 and now we can feel the positive result of it. I remember when I was teenager; this village was so dry and poor. It was difficult to make a living. Now, we have better economic conditions. Villagers can send their children to the universities and have more stable income from the tourism businesses. Fishermen get a better life because they have more fish to catch and get additional income from tourism activities. Fisherman rent their boats to the divers who want to go to diving spots in the sea [23].

- Reduce, reuse and recycle waste programs provide income for community groups that run waste management and recycling businesses. For example, food waste is taken from hotels and restaurants and used for farming businesses. Organic waste from hotels is also used to make compost by some community groups for additional income.

- Reforestation programs bring many benefits to the community. These include improving soil quality and reducing the risk of drought or floods, increasing community income through money given by the tourism industry for

maintaining trees and fruit production from programs that assist with the community's food security.

Last year, we supported the community in the east of Bali to plant hundreds of trees in their area. We gave them tress to grow and we paid local communities to protect the trees so that they could grow properly. Once the trees produce fruits, local community can harvest them for their economic benefits [3].

These findings support the framework (see line 'e') in Figure 6.1. Similarly, the economic responsibility of the tourism businesses also contributes to providing economic power to the communities. The following list supports the framework in Figure 6.1 (see line 'g'):

- Employ local people and buy from local suppliers in order to provide direct economic benefits for communities, as well as reducing the carbon footprint.
- CSR initiatives sponsoring an event called Nusa Dua Festival or Sanur Festival have succeeded in improving income distribution within the community and its surrounding areas, as reported by one resort manager in the following quote:

To protect the Balinese culture, we have an annual Nusa Dua festival in our area. We spend almost 2 million dollars on this festival. This festival brings lot of benefits for our stakeholders. First, we pay the local artists, people and students to perform in the festival for a week. This can make the Balinese artists, dancers and performers have willingness to protect the culture because from it they can obtain good salary or payment. Secondly, the hotels and restaurants in our area benefit from the guests that flock to this area to see the festival. That way, they earn good profit, and in return, they are eager to support the festival and our other programs to make their businesses sustainable. Last but not least, of course the tourists are happy to see the unique culture of Bali during their holiday for free. This will enhance their holiday experiences and make good memories. The more tourists feel happy, the more business is running and then the more local people are

> *employed by hotels and restaurants, and the more Balinese artists and performers are paid. It is like a circle* [3].

The above quote provides evidence that CSR initiatives of the tourism industry can increase economic resources of the host community. Secure income provides economic power for the local community to invest in preventive and adaptive strategies to face the unexpected climate and weather disturbances (Wall & Marzall, 2006).

7.3.2 Providing Access to Financial Support

All respondents reported that they provide local people with to access to financial support through various types of grants or charities [1,2,3,4,6,10,11,12,13]. One respondent reported that his company provides soft loans for local people to open businesses, as mentioned in the following quote:

> *We provide soft loans for small enterprises, grants and entrepreneurship workshops. We spend more than 2 billion rupiah or 200,000 dollars for entrepreneurship program. We encourage local people to open businesses and support them with grants and loans and connect them with international networks so that they can expand their business. The most important thing is that we want to develop the economics of local people through the entrepreneurship program*[3].

He went on to explain other CSR initiatives that provide financial support to the poor:

> *We have a good coordination with the Bali regional government to help the communities pass their economic hardship. For example, when the price of rice in Bali rose so high that the poor could not afford it, we supported the government to provide cheap rice for the poor. This was a program under a government program. As another example, we also support funding to renovate the houses of the poor. The social welfare department has some data on which areas will be supported and who will be helped. We will come to renovate the house and give money and basic equipment for settlement. One the house is built; we suggest that they grow a small garden in their house yard to fulfil their own kitchen needs, for example: plant some chillies,*

> *lemon grass, ginger, banana, turmeric, spinach, coconut, etc. That way, we teach them to plant trees for environmental purposes as well as help them maintain their own food security strategies.*

Another hotel manager mentioned that "*we help children who are abandoned by their family. We provide shelters, land for gardening and provide water tanks for pig farms and for watering their plantations so that they have a stable income*" [13]. One respondent from the Hotel and Restaurant Association explained that hotels provide access for disabled people to work and earn stable incomes, as explained in the following quote:

> *We support grassroots initiatives to support people with disabilities. We employ people with disabilities in hotels, depending on their capacities. Besides that, we have a program 'One Hotel Support One Orphanage'. We give food, school supplies and money to orphanages in remote areas*[2].

7.3.3 Providing Education and Training

All the interviewees mentioned that they support local communities with opportunities to have free education and training in specific skills [1,2,3,4,6,10,11,12,13], as reported by some respondents in the following quotes:

> *When I built a hotel in Candidasa, the first important thing I did was I employed local people. At that time, they did not have hospitality skills. I educated them with my own money. I hired an expert from the Bali Hotel Institute to train them for 6 months, so that local people could work in different departments (e.g. food and services, housekeeping, front office, accounting, etc.). It was my first corporate social responsibility initiative. Then, we educated local women about spas. Thus, we did not have to hire spa therapists from outside the village. I hired a spa expert to teach them skills in spa management. Moreover, to demonstrate our pro-environment initiatives, we do not use products from outside or famous brands in the world. We rather create spa products from local produce and local geniuses that we have* [6].

> *From the scholarship division, every year, awardees attend a special gathering at the IDEP Foundation. In this event, IDEP builds student awareness of saving the environment by reducing, reusing and recycling waste, about permaculture and the importance of planting trees. IDEP suggests every scholar's house should have its own garden* [2].

These findings support the framework (see line 'f') in Figure 6.1, which is using corporate social responsibility to build community adaptive capacity to climate change.

7.3.4 Providing Information and Knowledge Regarding Climate Change Risks

Most respondents mentioned that they provide information and knowledge regarding climate change. One respondent stated that:

> *We support grassroots organisations to build community awareness of the environment. We educate the community to save the environment by inviting the government, NGO and community as green team initiatives. In Nusa Dua, we come to the school to educate students to save the environment. Some hotels provide green shopping bags to reduce plastic bag use. Hopefully, by educating 30,000 hotel employees in 116 members to save the environment, they will educate their own families. This can bring huge impacts in the future. However, we understand that this action takes time. Hopefully, the hotel employee can be an environmental awareness ambassador within their communities* [2].

Another respondent reported a similar initiative in their organisation, as mentioned in the following quote:

> *We are very active in encouraging our employees to get involved in the 'Green Engage' movement. This is an initiative that encourages employees to reduce waste, save energy, reduce the use of water and plant trees. Of course, we cannot change the whole world. We can only change the behaviour or our staff and guests. For example, by minimising printing*

> *emails or documents, we can save paper, save energy and, at the macro-level; we can reduce the number of tress cut by the paper industry* [13].

These findings support the framework (see line 'h') in Figure 6.1which is building community awareness to mitigate climate change.

7.3.5 Improving Healthcare

Providing healthcare for employees and their families will help the community to cope with climate change problems in the future. This reduces the government's burden of providing healthcare for the whole community. Most of the respondents highlighted that their contribution to private insurance for the tourism business employees was above the standard provided by the government, which is available for all employees and their families. One interviewee commented:

> *We provide health insurance for our employees. Totally, we cover 1500 employees and their families. We give them premium health insurance. This insurance is above government standard insurance* [12].

Health insurance coverage from tourism companies for employees and their families as well as health insurance for the poor funded by government can help improve a community's capacity to adapt to extreme climate events in the future (see line 'i' in Figure 6.1).

7.3.6 Providing Emergency Planning

All interview respondents reported that they have emergency plans inside the hotel property [1,2,3,4,6,10,11,12,13]. However, only the Sanur and Nusa Dua areas have emergency plans for the whole community outside of the hotel buildings. In Sanur, policy adaptation by tourism businesses, resulting from lobbying, participating and supporting government plans and strategies, has had positive outcomes. Sea walls or cribs have been built by funding from the national government. The cribs protect numerous tourism businesses, as well as local people and their properties, from rising sea levels or tidal waves. In addition, emergency plans protect the whole tourism community by minimising the number of deaths caused by natural disasters. Mitigation against rising

sea levels or other natural disasters can be categorised as a strategy to enhance micro-scale adaptive capacity, as defined by McCarthy et al. (2001).

7.3.7 Utilisation and Promotion of Traditional Knowledge

As explained in Chapter 6 (see Section 6.3.3), some tourism businesses have promoted *Tri Hita Karana* philosophy to their guests [11,13,10]. *Tri Hita Karana* is derived from Balinese spiritualism and beliefs, centred on the idea that prosperity will be achieved if harmony between human beings and the natural environment, the relationships among human beings and the relationship between mankind and God are maintained. The term *Tri Hita Karana* is linked to Hindu belief and acts as a moral code of conduct that is integral to daily life. One resort manager explained:

> *We introduce Tri Hita Karana philosophy to guests. The paintings on the ceiling in our hotel lobby area illustrate how the Balinese manage harmonious relationships with the environment, with human beings and with God* [11].

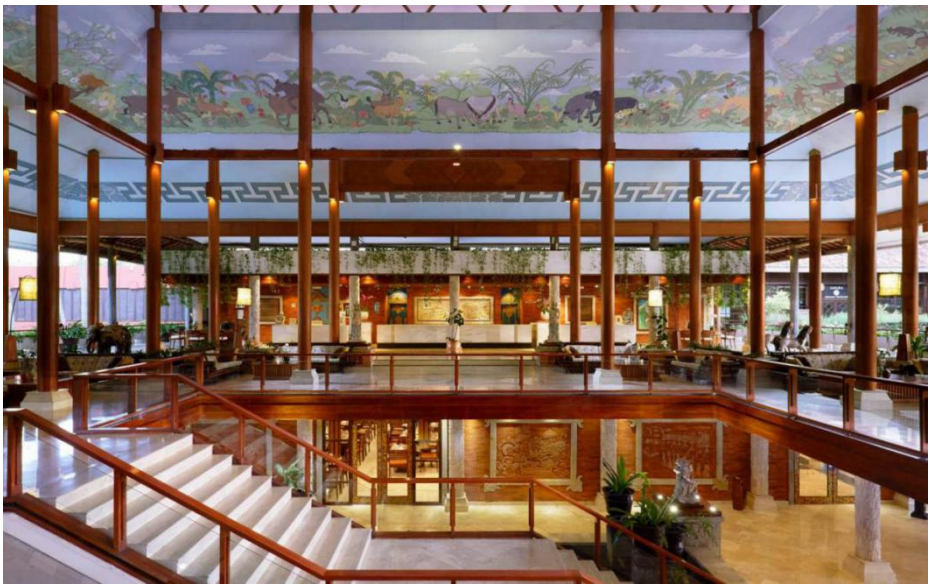


Photo 7.1: Lobby of a hotel with *Tri Hita Karana* paintings on its ceiling.

Photo credit: Melia Bali (n.d).

Furthermore, FGD results provided an insight into community perspectives regarding the benefits of CSR initiatives. All FGD participants explained that the economic and environmental conditions of the villages in which they operated had improved. They agreed that CSR initiatives implemented by tourism businesses had enhanced community adaptive capacity to climate change by: (a) providing a stable income to villagers as employees or suppliers; (b) providing new business opportunities for villagers who open art shops, cafes, restaurants and snorkelling rentals, as well as green job opportunities; (c) protecting coral reefs from coral bleaching; and (d) educating employees, tourists and the community to be aware of and respect the delicate environment.

In summary, these results show that the tourism sector has the capacity to empower local to confront the threats of climate change. These findings align with those of Mazilu (2013, p. 263), who argued that:

> tourism has the potential to contribute to environmental protection and poverty reduction by capitalizing on biodiversity assets; to increase public appreciation of the environment and to spread awareness of environmental problems bringing people into closer contact with nature and the environment.

7.4 Motives and Facilitating and Inhibiting Factors in Undertaking the Current CSR Practices

What motivates tourism operators to implement such adaptation strategies through CSR? Samuel and Ioanna (2007) found that the key reasons motivating 40 UK modern corporations providing CSR reports were: corporate reputation, stakeholder pressure, economic performance, genuine concern and social/cultural interests. Motivation to provide CSR reports and to implement CSR may be similar but they are different. As stated in Chapter 2, a corporate CSR report is not necessarily reflective of their actual business practices (Font et al., 2012).

This thesis intended to assess CSR implementation of the tourism businesses. As stated in Chapter 6, not all interviewed companies/managers have a CSR report published on their companies' website. Beside the interview results, researcher visit the location of the CSR initiatives and took some photos for evidence. Empirical evidence gathered through the interviews with tourism businesses in Bali revealed that spiritual faith appears to be an essential reason underlying tourism businesses in Bali engaging in CSR. This research finding is similar with research finding on CSR practices in India by Arevalo & Aravind (2011). They also found that CSR practices in India are primarily driven by caring values rather than a profit-driven value, even though gaining profit is also an important part of the company.

The story from the small village in northern Bali (see Section 7.2) clearly shows that spiritual belief guided the conservation project, thereby addressing climate change problems in a manner beyond government expectations. This spiritual belief aligns with the business concept, as stated by Elkington (1999, p. 219): "Stakeholders want to be treated as partners. The greater the mutual earned respect and loyalty, the greater the chance that the organization will be sustainable."

The Global Reporting Initiative (GRI) is a NGO that is organised to develop a common metric for reporting social and environmental issues. Today, this set of questions from the GRI is widely used by businesses (KPMG, 2011). "The end goal of the GRI is to make sustainability reporting as routine and credible as financial reporting in terms of comparability, rigour and verifiability" (Ananda Das Gupta, in Crowther & Capaldi, 2008, p. 107). However, most respondents do not use social and environmental reporting in their websites, as their motivation is driven by the wisdom of corporate leadership. This is in line with Frederick's argument that some businesses undertake CSR initiatives not because they will yield greater profits (although they may), but rather because it is the right thing to do (Frederick, 2006).

A spiritual 'call' and the *Tri Hita Karana* philosophy (which literally means "three causes of well-being") inspire business owners in Bali to support the community and preserve nature. Most of the interviewees in this research revealed that they are driven by spiritual faith, as two participants commented:

> *I am not concerned about legal obligation before implementing CSR. I do my best for my people (family and employees) and nature. You may know that 'what we planted is what we reap'. That is my motivation in life and businesses. Not too much talking, like a politician. I do not need any publicity. I am doing good to the universe and the universe will return to me* [6].

> *We do CSR not because of legal obligations, but more because of our belief. If we do good, nature will return to us. Similarly, if we treat the community and employees with respect, then we as hotel management will benefit from their support. The hotel cannot operate well without community support* [4].

We now turn to the empirical evidence regarding the facilitators of CSR in the tourism industry in terms of building community adaptive capacity to climate change. Most respondents also said that they had budgets for CSR activities, as well as strong support from top management inside their organisations, support from employees and their communities and additional funding from guests. Good coordination and communication between organisations and communities also contribute to the success of CSR initiatives. Furthermore, strong kinship networks represent social capital, supporting communities in tackling climate change problems.

However, some constraining factors were also identified. Many economic activities and government policies still clash with the environmental conservation agenda. Most respondents highlighted the lack of government initiatives, plans and strategies to tackle climate change risks. Some respondents argued that the government has no grand design to communicate the danger of climate change to businesses and society. Most of the tourism managers even blamed the government for the current over-exploitation of resources in Bali, suspecting that some government officials have acted illegally for personal profit. These perceptions are evident in the following comments:

> *Destination authorities do not have a grand plan to tackle climate change risks, so how can I help? I do what I can do and I intend to help if they ask me to help* [6].

> *As we explained earlier, we always have commitment to helping the destination to tackle climate change threats. The problem is the government does not have a grand design to save Bali from climate change. One easy example: the government does reclamation in one place while dredging land in another area. I argue that the government should stop selling Bali to investors and start developing strategies to address climate change and build sustainable tourism* [3].

Secondary data from government reports support those arguments: Indonesia RAN-API (2013) stated that to date there is no climate change adaptation funding policy specifically developed to support the implementation of adaptation action plans in Indonesia. The Government of Republic of Indonesia is currently in the process of providing extensive national and sectoral policies to tackle climate change after the Paris Agreement 2016. However, to date no such report is available on this process.

Despite the existing constraining factors, the empirical findings suggest that most of the respondents agreed that CSR initiatives can build community adaptive capacity to climate change. Nonetheless, that CSR capacity is restricted by company budget limitations, as one respondent commented:

> *I agree that hotels' CSR can build community adaptive capacity, but it is limited by the CSR budget of each company. For example, we donated two trucks and cash for community groups who work in the Suwung area to recycle hotels' waste. However, we cannot support all the foundations who come to ask for funding. But in my opinion, a small initiative of the hotels plus other small initiatives of other hotels will have a big impact in the future* [1].

The interviewed manager from Organisation A believed that they have played a critical role in building community adaptive capacity. However, the impact of such interventions remains limited, as he explained:

> *We hope that encouraging General Managers to educate their employees to be aware of climate change problems will have a positive impact on broader*

> *communities. About 30,000 employees under our members' organisations will bring a good influence at least to their own families. However, that number is very small compared to the total population of Bali. Therefore, these initiatives cannot change the whole population's behaviour. Responsibility should not be pushed for the hotel industry only. Coordination with the government and other tourism industries is important* [2].

The above quotation raises new questions: how can the tourism industry expand their CSR to broader communities? How can the CSR initiatives that have successfully built community adaptive capacity to climate change at the local level be expanded to a regional or national level? In the context of the Republic of Indonesia, the government has the power to oblige business owners to implement CSR. There are several CSR legal instruments, such as:

- Law No. 17/2000 (Republic of Indonesia) on the Third Amendment of law No. 7/1983 on Income Tax
- Law No. 23/1997 (Republic of Indonesia) on Environment Management
- Law No. 19/2003 (Republic of Indonesia) on State-Owned Company
- Law 25/2007 on Capital Investment
- Law 40/2007 (Republic of Indonesia) on the Corporation

Through Law No. 23/1997 on Environment Management, the government has the authority to instruct business owners to conduct an environmental audit. Moreover, Law No. 25 of 2007, Article 15b states that "every investor is obliged to implement corporate social responsibility". Also, mentioned in Article 16d is that each investor has the responsibility of preserving the environment. Moreover, in Law No. 40/2007 on the Corporation, Chapter 5 of Article 74 states that companies running businesses in the field and/or related to natural resources are required to implement social and environmental responsibility plans.

The institutionalisation of CSR in Indonesia played a significant role in strengthening its position as a legal obligation of corporations (Waagstein, 2010). Firstly, it promotes

a degree of awareness among other corporations to look beyond motives of profit maximisation. Secondly, the society at the grassroots level has the power to give attention to the monitoring of corporate behaviours and CSR mechanisms. However, the application of the regulation remains low. As discussed in Chapter 8 that low level of law enforcement has become one of the biggest challenges in regulating CSR practices in general.

The findings presented in Chapter 6 and Chapter 7 reveal the role of CSR in building community capacity to climate change. However, CSR initiatives that focused more on publicity rather than the sustainability of the project do exist as reported by some NGO leaders:

> *Recently, many companies support fun bike events to promote clean energy to society. Many businesses support reforestation projects just for the sake of media publication. In fact, much more can be done with the same budget. How can we help farmers in a sustainable program? How can farmers market their produce? Reforestation projects will be sustainable if local society benefits from the project*[5].

Another limitation mentioned by one government representative is reported in the following quotation:

> *The current problem is the businesses implementing CSR initiatives without reporting their program to the government. We almost never know what they do, how much they give and to whom. It will good for us to know this so that the funding does not overlap in certain communities in Bali* [9].

Therefore, guidance and evaluation on CSR practices are vital to ensuring that the community receives sustainable benefits from a project. This can be done in many ways. For example, one of the respondents from the government argued that CSR initiatives can be used as a parameter or criterion for assessing tourism businesses' performances to receive the '*Tri Hita Karana* Award', as can be seen in the following quotation:

> *The Tri Hita Karana Award can be used as an effective way to encourage tourism businesses to implement CSR and publish it on their website. If CSR becomes one of the key criteria to achieving this award, then the businesses will report their CSR voluntarily* [9].

7.5 Potential Power of CSR to Build Community Adaptive Capacity to Climate Change

Referring to the literature in Chapter 2 (see Section 2.5), according to Posey (2009), community adaptive capacity has two different meanings. The first one is the adaptive capacity of an individual living in the community and the second one is the capacity of the leader in terms of leading collective action on behalf of the group. From the interviews and FGD, we can see that the CSR of the tourism industry has the potential to build the community adaptive capacity, both for individuals and as a part of a group. Secondly, CSR of the tourism industry also has the power to enhance the capacity of the leader in terms of leading collective action on behalf of the group. Some CSR initiatives were undertaken collectively in partnership with the community leader in an area (e.g. reforestation or coral conservation projects). Table 7.2 provides lessons learned from interviews regarding what has been done and what has not been done.

Table 7.2 Lesson learned from case study

CSR potential power	Have been done	Have not been done
Build adaptive capacity of individuals living in the community	- Provide green job opportunities - Provide social security and staff benefits - Provide additional income - Build community awareness of climate change	- Training or workshops about green job/green business opportunities - Providing information on where to find support in the event of a crisis (disasters or climatic hazards) - Providing sunscreen to protect the employees and guests - Warning against the potential hazards
Build capacity of a leader in terms of leading collective	- Provide capital/financial support	- Limited access or networking for leaders in a location that is far from tourism areas, limiting

action on behalf of the group	- Support with network opportunities - Support with labour (employees as volunteers)	funding. The tourism organisations tend to support the communities that are close to their area of operation - Workshops for community groups or leaders in order to create a proposal of a project to be funded/supported by tourism industries are important

7.5.1 Build the Adaptive Capacity of Individuals Living in the Community

A company can build the adaptive capacity of an individual by: (1) providing access to social security and staff benefits; (2) providing additional income; (3) providing green job opportunities; and (4) building community awareness of climate change. The findings of this research (see Section 7.3.1) are in line with Noakes (2014) that the tourism sector can be a beneficiary and contributor of new green jobs in Indonesia. Referring back to the literature, green jobs can be defined as:

> direct employment to reduce the environmental impact of those sectors, which include jobs that help to reduce consumption of energy and raw materials, de-carbonize the economy, protect and restore ecosystems and biodiversity and minimize the production of waste and pollution (Jarvis, Ram, Verma, & International Labour, 2011, p. 10).

Jarvis et al. (2011) and Noakes (2014) gave some examples of green jobs in the tourism sector:

1) Delivering improvements in energy and resource efficiency, particularly in the development of new hotels and resorts and the refurbishment of such facilities, as well as for land-based, marine and air transportation services
2) Renewable energy (including biofuels and renewable technologies) in all scales of the industries
3) Waste management and recycling of raw materials by all participants in the tourism supply chain

4) Establishing new eco-industries related to pollution control within tourism supply (air, water, waste and noise)

5) Activities relating to adaptation to the impacts of climate change on the tourism sector

However, this research has identified some actions that have not been done and the importance of them being done to build adaptive capacity of individuals living in the community, such as:

1) Trainings or workshops regarding green job/green business opportunities are essential. From interviews and FGD, it can be seen that waste management centres are mainly located close to tourism destinations, while rubbish produced by domestic waste or household rubbish remains neglected. As one government representative mentioned: "*government only has one truck for one district to transport both organic and non-organic rubbish to the dumping area*" [8]. This statement holds some hidden green business opportunities, such as waste management for the whole community in Bali, recycling businesses and permaculture businesses. The more waste management services that open in partnership with government, the cleaner the villages in Bali will be from rubbish. This can reduce flood risks as well. Similarly, interview results reveal that Biopore holes installations are common for hotel and restaurant businesses because managers understand the importance of this action with regards to their property. However, not many local communities install Biopore holes in their homes/properties. Biopore holes help absorb water quickly during the rainy season, thus reducing the risk of floods. This is also a green job opportunity. Another green job or business opportunity is collecting used cooking oil from restaurants, hotels, cafés and households. Used cooking oil can be recycled into bio-diesel or used as a renewable energy. This kind of initiative both protects the environment and creates job opportunities for local people. However, the existence of these kinds of green jobs/business opportunities has not received much attention from local people and government. Therefore, training or workshops focusing on green jobs/green business opportunities are important

both to providing green job opportunities to local people and building adaptive capacity to individual living.

2) Providing warning for potential hazards and where to find support during disasters or climatic hazards. The provision of disaster warning and highlighting the kinds of support available during climatic events will help protect the whole community and tourists from severe injury or loss.

3) Building community awareness to use sunscreen during the hot season. In western countries, sunscreen is available for everyone. However, this is not the case in Bali. Building community awareness of using sunscreen during the hot season will help enhance behavioural adaptation for each individual living in the community.

7.5.2 Build the Capacity of a Leader in Terms of Leading Collective Action on Behalf of the Group

As discussed in Chapter 6 and this chapter (see Section 7.2), CSR of the tourism industry plays an important role in building the capacity of a leader in terms of leading collective action on behalf of the group to tackle climate change. CSR of the tourism industry can support community leaders with funding, networking and labour to undertake any action for tackling climate change; for example, mangrove planting or coral reef conservation projects.

However, most interviewees stated that they tend to provide support for the community close to their business area. Thus, only limited access is available for community leaders who are distant from tourism destinations. This disadvantages communities that live far from tourism destinations. In addition, through the FGD, information regarding what has not been done and needs to be done was uncovered. FGD participants planned to increase their communities' capacities to tackle the negative impacts of climate change by building drainage, making emergency plans for the whole community, constructing water reservoirs and planting more trees. However, they acknowledged that they need government funding, as well as donations from tourism businesses, to make this happen. Therefore, workshops for community groups or leaders to create a proposal for a project to be supported by the tourism industry are important. Most FGD

participants from tourism businesses expressed support for the plans, as evident in the following statement:

> *If the villagers have one voice to produce a good proposal to take real action, the tourism businesses will support them* [19].

The first FGD in the north of Bali revealed that villagers and tourism businesses agree that they need one organisation to manage tourism development in villages to protect the community from the risks of climate change, as well as other threats. This organisation could manage the industry's CSR money to support environmental, social and cultural activities. However, the FGD participants believed that such an organisation would need to operate with transparency to gain sustained support from all tourism stakeholders. The tourism industry could use this finding to create a workshop or design training regarding organisational skills for community leaders so that they can manage CSR funding in a professional way.

7.6 Chapter Summary

This chapter provides empirical findings on how CSR of the tourism industry builds community adaptive capacity to climate change, both for individual and a community in taking collective action. CSR can enhance an individual's living capacity to tackle climate change by providing: (1) economic power; (2) access to financial support; (3) education and training; (4) information and knowledge regarding climate change risks; (5) healthcare; (6) emergency planning; and (7) the utilisation and promotion of traditional knowledge.

Moreover, CSR of the tourism industry also has the potential to build the capacity of a leader in terms of leading collective action on behalf of a group to tackle climate change by providing: (1) funding support; (2) access to networks; and (3) labour or employees as volunteers. Despite the debate between legal or voluntary systems of CSR, the findings of this research show that the spiritual wisdom of the leader of a company or corporation has more prominence. Most of the respondents did not see CSR as part of income generation. Most of the respondents do not have CSR certification or

international environmental certification. How are these findings related to the framework proposed in this thesis? What are the limitations and strengths of the proposed framework? These questions will be answered in Chapter 8.

8 DISCUSSION

"CSR is a challenge but also a promise" (Williams, 2014, p. 23).

8.1 Introduction

Is this CSR or climate change mitigation and adaptation strategies? This is one among other questions that this research asked the respondents to answer. The overall responses to this question were very positive. All the interviewed respondents said they implement their CSR strategies and address climate change at the same time. This argument is supported by two quotes from a business owner:

> *I believe that we address both. Some are purely for CSR for example blood donor and charity. Some address climate change, for example, reforestation* [11].

> *I think that I address climate change through some CSR initiatives. Plant 25,000 trees is the best example to address climate change problems* [6].

This chapter presents the evaluation of the research findings presented in previous chapters. In addition, this chapter aims to answer research question 2d which is to identify challenges in building community adaptive capacity to climate change through CSR and find out strategies to address these challenges.

In achieving this aim, this discussion chapter is organised into five sections. The first section is the introduction. The second section discusses climate change mitigation and adaptation strategies of the tourism industry in Bali. The third section elaborates the challenges in building community adaptive capacity to climate change through CSR initiatives. The fourth section discusses strategies for harnessing CSR initiatives for greater positive impact at destination level. Finally, it presents research reflection based on the empirical findings presented in previous chapters.

8.2 Discussion on Mitigation and Adaptation Strategies to Tackle Climate Change

8.2.1 Discussion on Mitigation Strategies to Tackle Climate Change

Overall, the results indicate that CSR initiatives of tourism industries presented in Chapter 6 have addressed climate change mitigation strategies. Simpson et al. (2008, pp. 86-87) argue that ideally, accommodation companies should: (1) establish an environmental management system (EMS); (2) reduce energy use; (3) use renewable energy only; (4) reduce the use of materials; (5) recycle wastes; (6) rethink food in restaurants; (7) ensure sustainable constructions- new buildings should be constructed with recycled materials, use renewable energy, and use high level of insulation to keep room cool or warm; and (8) communicate green action. Section 6.2 has explained in detail how the environmental responsibility of the tourism businesses in Bali addresses climate change mitigation strategies internally. However, Table 6.1 clearly shows that none of the respondents have EMS or use renewable energy.

Referringto the literature review in Chapter 2, Section 2.4.1 has explained typologies of emission reduction actions in the companies. Product versus process oriented, internal versus external, direct versus indirect, radical versus incremental, and innovation versus compensation have been adopted by industry to reduce GHG emission in their businesses (Hoffman & Glancy, 2006; Kolk & Pinkse, 2004, 2005). Research by Okereke (2007, pp. 478-479) provides 10 specific activities by companies to tackle the change of the climate. These include: (1) Basic (non-fundamental) technological change. This step involves the instalment of new or replacement of existing office equipment and machinery with the bid to curtail in-house GHG emissions or increase energy efficiency; (2) Basic (non-fundamental) behavioural change. This step involves non-fundamental change in behaviour of employees designed to reduce a company's GHG emissions; (3) Finding new use(s) or market(s) for existing products; (4) Developing new products to satisfy emerging markets or developing low-carbon products; (5) Investment in low-carbon portfolios; (6) Acquisition of assets that balance a companies' carbon portfolio; (7) Fundamental technological shift and innovations; (8) Participation in internal or external emission trading and offsetting schemes; (9) Clean

Development Mechanisms (CDM) and Joint Implementation (JI); and (10) Educating the public.

This research finding corroborates the argument of Hoffman & Glancy (2006), who argue that companies often choose action numbers "1" and "2" because they are easy to implement and lead to reduction of energy consumption and operational cost. Some companies provide significant contribution to reduce GHG emissions by sequestering carbon (e.g. supporting local conservation projects, conserving biodiversity and reforestation. Research by Strasdas (2010) demonstrated that carbon management provides several co-benefits to the company, such as: cost savings, process optimisation, enhanced quality, improved public image and catering to climate-conscious demand segments. Therefore, it is apparent that implementing mitigation strategies and achieving economic benefits do not necessarily contradict each other.

Another noticeable finding that emerges from the analysis is that tourism businesses in Bali have given a significant contribution to educate the public about climate change. Some of these actions were funded by one single company and some were organised collectively through Hotel and Restaurant Association coordination. Therefore, this research argues in similar vein with Mumo Kivuito (2006) (in Hawkins & Bohdanowicz 2012) that the contributions of the private sector through CSR play an important role in helping the government develop sustainable development. Moreover, this combination of findings provides some support for the conceptual framework proposed in this research that CSR initiatives of the tourism industry address climate change mitigation strategies (see line 'c' in Figure 6.1).

However, this research also found some important issues that need to be addressed in designing future strategies in tackling climate change in Bali, including:

1) There is no data on GHG emissions inventory for the tourism industry in Bali. Section 6.2 demonstrates that tourism businesses have been implementing some mitigation strategies as part of their environmental responsibilities. However, respondents had no detailed data on how much GHG emissions are produced by the company or whether GHG emissions reduction has been achieved. As one government representative noted, "government have a good commitment to

reducing GHG emissions. Last year, we calculated the GHG emission from agriculture, forestry, and wastes sector. However, we only count the government's data because data from industry is difficult to obtain"[8]. This statement is supported by one hotel manager who clearly said: "we do not have detailed data on GHG emission produced by the hotel or employees" [11]. Thus, building tourism managers' capacity to measures GHG emissions emitted from their properties can be one vital agenda in reducing tourism contribution to climate change;

2) Yet, there is no data or report that calculates how much mitigation progress has been achieved. A previous report by Law, de Lacy, and Wiranatha (2013) has produced an estimate of greenhouse gas (GHG) emissions of the tourism sector in Bali. However, this research also highlights the lack of utilisable data and the estimation was relying on expert assumptions. Therefore, these research findings support Law, De Lacy, Lipman, and Jiang's (2016) suggestion regarding the need for Bali to produce and continuously monitor a detailed GHG emissions inventory for tourism.

8.2.2 Discussion on Adaptation Strategies

A list of adaptation measures has been presented by Klint (2013, pp. 73-74) who adapts a list of strategies identified by Scott et al. (2009). Scott et al. (2009) and Klint (2013) divided climate change adaptation strategies into five types: (1) technical adaptation, which involves new technology and innovation in order to cope with climate change and vulnerability; (2) business management adaptation, which includes operational techniques such as product diversification, marketing strategy and insurance; (3) behavioural adaptation, which involves both tourists (e.g. wearing clothes suited to the weather, choosing a different time of year for their holiday or changing their tourism activities choices in order to avoid extreme weather conditions) and employees (e.g. changing the dress code to protect employees from extreme weather, reducing outdoor activities during extreme hot days, using sunscreen for employee health and safety); (4) policy adaptation, which includes changes in government plans and strategies; and (5) research and education, which involves strengthening the understanding of climate

change impacts and adaptation options through community education and raising public awareness.

The results of this study indicate some adaptation strategies have been implemented by the tourism industry in Bali. The following adaptation strategies are adopted in Bali's tourism businesses, including: (1) technical adaptation actions, including: the provision of disaster warnings, having a water reservoir, sea walls, beach nourishment, Biopore projects, coral conservation projects; (2) business management adaptation through product diversification (e.g. spas, Balinese entertainment, music, children's areas, gyms); and insurance (business, property and medical); (3) behavioural adaptation by encouraging tourist adaptation (e.g. adjust time or activities for their vacation) and employee adaptation (e.g. change dress code and reduce outdoor activities); and (4) policy adaptation by lobbying for and supporting government plans and strategies to provide protection to those affected by climate change or potentially exposed to the risks of climate change.

Together these results provide important insight that adaptation strategies that have been done in business tourism in Bali (see Table 6.2) are mostly driven by business reasons rather than to address climate change. This finding is similar to previous research by Chan and Wong (2006), where the involvement of the hotel on environmental initiatives seemed to be for economic reasons and to fulfil regulatory compliance. This is quite reasonable, even the CSR guru, Friedman (1970, p. 33), argues that "there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game".

Although mostly driven by economic reasons, initiatives that have been carried out by tourism businesses in Bali had provided a lot of benefit to the company itself, the environment and society. For the businesses, the current adaptation strategies help the company to survive in the competitive market as well as protect the businesses from the climate change risks. For the society, the firm's ability to survive in the fluctuating market and climatic disturbances plays an important role in increasing community adaptive capacity to climate change. Adaptable tourism businesses will make secure income for the communities, so that they will have more power to protect their family from the consequences of climatic events. As stated in Chapter 2 (see Section 2.5.2),

financial power is one of the most important determinants in enhancing community adaptive capacity to climate change. Water and energy conservation programs not only reduce the company's operational cost but also reduce the GHG emissions to the atmosphere.

In the case of adaptation strategies to address water shortages, this research found some important findings. Firstly, the water crisis is no longer a threat but a reality. Therefore, urgent actions are needed to make sure that both the communities and the tourists have access to clean water for their daily activities. Secondly, this research found some facts about what has been done and what has not been done in regards to water shortage. Simpson et al. (2008) suggest a destination with a growing water supply shortage should undertake the following adaptation options: (1) provide water conservation programs at resorts; (2) use fee structure for water use; (3) close golf courses and curtail other high water uses during dry season; (4) limit new tourism development; (5) mandatory onsite water collection and storage systems; and (6) construct desalination plants. In fact, the vast majority of respondents mentioned that they have a water conservation program [1,2,3,4,6,10,11,12,13] and some respondents have a pay fee structure for water use [3,4,12]. However, none of the participants have water collection systems and water desalination. Therefore, tourism stakeholders in Bali should sit together and make some regulations to implement the adaptation options suggested by Simpson et al. (2008).

8.2.3 Challenges Encountered by the Tourism Industry in Implementing Mitigation and Adaptation Strategies in Bali

The findings of this research clearly show that some of the tourism industries have given a respectable example in incorporating their environmental and economic responsibility into the climate change mitigation and adaptation strategies. However, there are some challenges identified during the interviews, among others:

1) Lack of government climate change policy for the tourism industry. There is no clear direction on what to do and how to build a holistic strategy to protect tourism businesses from climate change risks. According to Indonesia RAN-API (2013), to date there is no climate change adaptation funding policy specifically

developed to support the implementation of adaptation action plans in Indonesia. However, the funding for climate change adaptation is part of the funding for overall development that is based on the annual development plan at the central, province and district/city levels;

2) Lack of government incentives. Government regulation and incentives are needed to encourage the tourism industry to implement environmental practices in their businesses. This argument is in a similar vein with Gössling (2011) who argues that government regulations and incentives are important facilitators to encouraging environmental practices by tourism companies. The Government of Republic of Indonesia is currently in the process of providing extensive national and sectoral policies and instruments to give incentives for mitigation actions, which include: regulations and standards, taxes and charges, tradable permits, voluntary agreements, informational instruments, subsidies and incentives, research and development and trade and development assistance (Thamrin, 2011). Table 8.1 provides examples of mitigation policies and measures currently discussed in Indonesia.

Table 8.1: Mitigation policies and measures currently discussed in Indonesia

Sector/Government level	**Type**	**Status**
Industry	Tax break for green technology	Operational
Industry	Public private partnership: cooperative agreement between private sector industries and the government	Under development
Local Governments	Special allocation fund for climate change	Operational
Energy	Favourable pricing policy for small scale renewable energy from independent power producer	Operational

Source: Thamrin (2011, p.6).

3) Technology price and instalment cost. Some technologies available in the market are quite costly. Some respondents highlighted in the findings that the cost of the technology available is one of the barriers in implementing advanced mitigation and adaptation strategies. For example, the price of desalination technology and solar panels for renewable energy is still considered as an additional operational cost for the company rather than the investment cost.

8.3 Challenges in Building Community Capacity to Climate Change through CSR of Tourism Industry

This section is mainly based on the result of the second FGD which was held in Denpasar-Bali on the third of June 2016. The second FGD was conducted to complete the data that have been taken previously through in-depth interviews and the first FGD in northern Bali. This approach was taken in order to gain a comprehensive understanding of perspectives across Bali's tourism stakeholders. Nine respondents participated in the second FGD, including two respondents from an academic background, three respondents from tourism businesses and four respondents from NGOs.

The second FGD results reveal a different perspective from various tourism stakeholders in Bali on their efforts to build adaptive capacity of society through CSR of the tourism industry. Respondents in the second FGD argue that efforts to use CSR of the tourism industry to build adaptive capacity of communities to climate change at the destination level face critical challenges, such as:

1) Not all tourism business owners or managers are willing to implement CSR

Six out of nine respondents in the FGD agree that not all tourism businesses in Bali have implemented CSR [31,32,33,34,35,36]. As this thesis uses a qualitative research approach, there is no data on what percentage of tourism businesses have implemented their CSR initiatives and how many have not done CSR. Moreover, not all aspects of hotels and restaurants were being investigated. For example, one thing missing from the discussion in the previous chapter is the use of used cooking oil produced by hotels and restaurants.

Chapter 6 has explained that waste produced by hotels and resorts is collected by waste management organisations. However, the researcher did not ask interviewees further questions, such as how much used cooking oil is produced per month and how it was disposed of. “Traditionally part of this oil has been used for soap manufacture, and to a lesser extent for glaziers’ putty and animal feed, but most of it is disposed of directly into the sewers” (Neto et al., cited in de Pontes Souza, Mendonça et al. 2012). In an explanatory study, de Pontes Souza (2012) estimated 129,600 litres of used cooking oil is generated by 70 hotels and 120 restaurants in the district of Copacabana, Rio de Janeiro in one year and most of this oil is disposed of directly into the drainage or sewage system. This is dangerous for the environment. Alternatively, used cooking oil can be recycled into biodiesel. According to de Pontes Souza (2012) this brings economic benefit for the community by providing more employment as well as reducing the environmental impacts caused by the disposal of used cooking oil in the sewage system. To date, there has been little research on how hotels and restaurants should dispose of the oil in a responsible manner so as not to damage the environment or interfere with public health.

Apparently, the tourism industry in Bali is not aware of the impact of used cooking oil to the environment and to the community. The second group discussion revealed that used cooking oil is mostly collected by illegal vendors for irresponsible practices that harm the community’s health and the environment. One respondent reported that he met so many challenges in getting tourism businesses involved and to support his organisation by donating used cooking oil to be recycled into bio-diesel. As he stated:

> *Bali attracted 4 million international tourists and 6 million local tourists in 2015. With that number, we predict that hotels and restaurants can produce up to 120 tons of used cooking oil monthly. Initially, we were assisted by PHRI and ASITA members who agreed at a meeting for us to take the oil for free. It was a pleasure for use to start this business. However, used cooking oil is a big business and it’s been hard for us to compete with illegally used cooking oil vendors. For more than 3 years we have approached hotels and restaurants to give us their used cooking oil. While owners agree to the collection of used cooking oil, the management do not. When both the owner and management agreed to the oil collection, the kitchen said no. When*

> *these three levels said yes, the hotel association said no. The hotel association wanted money in exchange for the used cooking oil. We said no to the exchange of monies. We wanted to change the behaviour of companies. It is the heart of CSR to dispose of used cooking oil properly, so it is not doing any harm to the environment and the community. In fact, used cooking oil vendors are selling to some illegal vendors. Why have we said their vendors are illegal? Because I can guarantee that my organisation is the only one that has a license to recycle used cooking oil in Bali. Recently, we only collected 10% of the total used cooking oil produced by hotels and restaurants in Bali* [34].

Another NGO leader said that he and his team had met difficulty in asking for CSR funding of the tourism industry to support his organisation. He went on to say:

> *I know in some hotel organisations, management pay farmers to catch fireflies and then release them in the hotel. With our project, we do not need to perform such fake initiatives. With our organic rice field project, fireflies will come automatically so that hotels do not have to pay an extra cost. We have explained this to the hotel but it seems that we are from a different world. They just do not understand us* [31].

Some respondents argue that many tourism businesses have not implemented CSR as mandated by government. For example, there is a government regulation to mandate hotels to provide a minimum 60% of their land for green areas. However, some hotels and restaurants apparently do not follow this regulation. As the following quote indicates: "*Not all hotels use 60%-80% of their land for a green area. As far as I know, all are cement*" [32]. Ideally, green open spaces should be sighted as an essential component in environmental planning, not as a residue of the building, but rather as conserved zones to conserve the balance of nature and ecosystem (Jaya, 2002). Moreover, the conservation of the green open spaces should be viewed as a vital element for the continuance of cultural and religious traditions of the Balinese. However, in fact, "*some hotels in my area do not even have parking areas. They only build a hotel with lots of rooms on a small amount of land*" [35]. This may relate to lack of law enforcement in Indonesia which will be discussed further in the next list.

2) Lack of enforcement of legislation and regulations

Chapter 7 has discussed several legislations and regulations related to CSR in Indonesia. The mandatory nature of CSR in Indonesia is legitimate. Therefore, the implementation of this legislation should be encouraged. However, in practice, there is no technical guidance for local government to enforce the tourism industry to implement CSR. Moreover, there is no punishment for companies that are not implementing CSR. Koestoer (2007) argues that corruption, poor law enforcement, and overlap among different regulations have been common problems to all sectors, particularly business. Therefore, uncertainties regarding substance of the law, extra administrative charges, and complicated bureaucracy are common. Moreover, there is also a problem related to the lack of operational standards for corporations in supporting the local community.

The data gathered in the second FGD indicates similar findings to Koestoer (2007). As described by a private sector respondent,

> *Law enforcement in our country is very low. Whatever law we put in place. The law enforcement is very weak. For example, there is a rule about the green area in the hotel, 60% of the land should be provided by hotel or restaurant for the green area. In theory, yes, but not in practice. Lots of other hotels only think about making short term profit. Some hotels do not have parking area. No control over the rule* [35].

Another respondent from a NGO went further and stated that:

> *The law enforcement in this country is zero. Used cooking oil is a waste and it should be given for free. We directly touch to the heart of the responsibility of the hotel and tourism companies. However, in fact, we only receive 10% from the current used cooking oil produced by hotels and restaurants in Bali* [34].

Considering CSR as of a mandatory nature, Waagstein (2011, p. 464) argues that "a law imposing sanctions in the absence of CSR compliance must be precise and unambiguous, clearly stating the aim, beneficiaries, and duty holder, as well as how to implement the measures in an effective, transparent, cost-efficient, and speedy manner". However, so far, there is no such organisation that controls or monitors the

implementation of CSR of the tourism industry. As one respondent from a NGO reported:

> *We have the project in UBUD and some hotels around us. I think the challenges are that the owners of the hotel do not feel that they have an obligation to help the local community. I think because there is no people that monitor CSR implementation. There is no kind of punishment for tourism businesses that do not implement CSR* [31].

As Andrews (2016) argues, even with mandatory CSR, the corporations may not do much in terms of real CSR activities that transcend mere window dressing because of weak regulation. Without enforcement, the higher norms of CSR and business ethics might remain underdeveloped (Dentchev, 2015).

3) Lack of government leadership

All data gathered from in-depth interviews, and FGD show evident lack of government leadership, especially at local and regional levels. Section 5.4.3 has discussed that government leadership remains low and most respondents expect the public sector to lead the attempt to tackle climate change risks. Data from the second FGD reflected similar findings. A leader of a NGO pointed out,

> *Lots of problem in Bali, no infrastructure, no waste management. In America, used cooking oil given is for free because they do not want to pay to dispose of it properly. Jakarta does not care. They just want all the dollar to go to Jakarta but do not care about Bali. European does not come here anymore because the place stinks. No waste management and Bali is now greedier than New Yorker. Quality tourism is going down. The quantity is up. Who is coming? Backpackers!! And now, 50% of Balinese do not have enough water. I live in the village and I don't have water twice a week. The government in Bali keep saying, water crises... water crises... is there anything change? Indonesia and Bali just do not get it* [32].

She went further to say:

> *In my experience, I don't see government responsibility. I don't see government leadership. I only see a dysfunctional government who only play with their gadget during working time. They even do not know what is CSR* [32].

It is apparent that respondents expect that government should take a leading role by encouraging and influencing other organisations to implement CSR (Albareda et al. 2009, p. 127). Moreover, governments should take a leadership role by recommending stricter ethical standards (Valentine et al., 2006).

4) Low awareness regarding climate change and CSR

There is a big discrepancy between the government target to reduce GHG emission in Indonesia and the reality at the local level. Waagstein (2011) argues that lack of knowledge represents the primary hindrance to the reception and implementation of explicit CSR in Indonesia. This research found that government and community at the local level still do not realise the impact of climate change, as stated by one respondent from an academic background: "*I am afraid that the government awareness to the climate change impact and CSR is very low*" [30]. Another respondent from a NGO noted that the tourism industry in Bali has low awareness on the impact of their business operation to the environment and to the local community,

> *We calculated hotels and restaurants in Bali can generate 120 tons used cooking oil per month, while we only can collect 10% of it. So, where does it go? The only option is to bleach the used cooking oil and mix with fresh cooking oil and then re-sell to the society. This is very dangerous for our community. Yes, the impact will not be direct but it is very dangerous for our community. Some companies said that they give it to a vendor and send it to java for a chicken feeder. Yes, the chicken can be fed with it and looks healthy but it stays in the chicken body and we eat the chicken. The terminal is our body. It will harm public health. It will not harm directly but long term it is dangerous for communities' health. Some hotels and restaurants dispose of used cooking oil to the land, mixed with solid waste. It is dangerous for*

> *Bali land. It is harmful for our nature. One litre of used cooking oil will destroy another 500-litres underground water. We all know the structure of our land, very easy absorb anything. It is dangerous for our environment. The tourism industry is not aware about this* [34].

Therefore, transferring knowledge and building awareness about climate change is important to encourage government and community to actively mitigate climate change. As suggested by Sovacool (2012) that attempt to share information and knowledge about climate change is important, so that a community can make an informed choice to face the changes.

8.4 Strategy to Build Community Adaptive Capacity to Climate Change Through Corporate Social Responsibility of Tourism Industry

The problems being faced in building community adaptive capacity to climate change are extremely complex. Therefore, Fox, Ward and Howard (2002) suggest government should play four key roles to support CSR practices. Similarly, Brooks et al. (2007) suggested three roles for the public sector: (1) government as adaptor; government have responsibility to reduce climate change risks; (2) government as catalyst and facilitator: government have responsibility to support research and information dissemination on climate change; and (3) government as an intervener or rule setter; government have responsibility to provide regulation to reduce climate change risks. This section uses Brooks et al. (2007) and Fox, Ward and Howard's (2002) suggestion on public sector roles in the context of Bali as tourist destination. The public-sector roles can be seen in Table 8.2.

Table 8.2: Public sector roles

Public Sector Roles			
Mandating	Command and control legislation	Regulators and inspectorates	Legal and fiscal penalties and rewards
Facilitating	Enabling legislation	Creating incentives	Capacity building
	Funding support	Raising awareness	Stimulating markets
Partnering	Combining resources	Stakeholder engagement	Dialogue
Endorsing	Political support		Publicity and praise

Source: Fox, Ward and Howard (2002)

Furthermore, there are five suggestions that came up from the second FGD in Denpasar to overcome the challenges in coordinating CSR at the destination level. Firstly, the government should play a mandating role in creating a system to control and monitor the implementation of CSR by tourism businesses. So far, "there is no clear direction from the central or local governments as to how to implement and monitor such a fund, or how this implementation and monitoring mechanism would function" (Waagstein, 2011). Respondents expect government to increase their controlling role over the tourism industry to implement CSR. As stated in the following quote:

> *In my opinion, it is important to create a monitoring body for the implementation of CSR in Bali. Although its name is CSR, there must be a control system that can check whether businesses have already implement CSR or not. There should be a body that forced the businessman to implement CSR for the sustainability of the environment and for the community* [29].

Secondly, the law enforcement of CSR implementation is vital. Glachant et al. (2002) suggest that law enforcement can be done through reporting requirements, permits and performance limitations. A leader of NGO in the FGD suggested a similar idea to Glachant et al. (2002), as can be seen in the following comment:

> *The government regulations should be comprehensive and interlinked with each other. A simple example, when I talked about used cooking oil, actually government have a regulation to control the hotel and restaurant businesses, for example, UKL, UPL, SPPL licenses. The government can empower NGOs like us to check if the hotel and restaurant have been implementing the rules or not. We can give the government a report every month who already disposed of used cooking oil properly and who is not* [34].

As mentioned in the above quote, there are three recommendations that are usually used as a basis for obtaining environmental permits: (1) UKL, an abbreviation for Upaya Kelola Lingkungan, which means the Environmental Management Effort (hereinafter called UKL); (2) UPL, an abbreviation for Upaya Pengawasan Lingkungan which means Environmental Monitoring Effort (hereinafter called UPL); (2) SPPL, an abbreviation for Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan Hidup or Statement of Capability Management and Environmental Monitoring (hereinafter called SPPL). So, those who fail to fulfil UKL, UPL and SPPL requirements should not get licenses for business(http://environment-indonesia.com/portfolio/pengurusan-dokumen-lingkungan-amdal-ukl-upl/)

Moreover, law enforcement can be done not only through legislation but also various instruments, such as taxes, subsidies and charges (Nyquist, 2003). Another respondent highlighted the need to give incentives to businesses, "*The government should provide incentives to entrepreneurs who are already implementing CSR well, for example by tax reductions or how to provide economic benefits to the company*"[34].

Thirdly, government should play an endorsement role in supporting the implementation of CSR. An endorsement role allows the government to publicly name and shame bad companies and reward good companies for their CSR initiatives (Idemudia, 2010). The respondent from FGD also emphasised the importance of awards and incentives to the businesses who have implemented CSR. As a private sector respondent advised:

> *I agree..... businesses should receive benefits from CSR. For example, when ASITA cooperate with the local government in planting trees along the provincial road, we get labelled by a local government like this "This project supported by ASITA". Tomorrow we are going to plant another one*

> *thousand trees along the provincial road in Bali. We also provided CSR funding for the coral reef conservation project, we were awarded in the form of media publications* [35].

The fourth suggestion is to build awareness on climate change and CSR. The understanding of CSR as a concept in Indonesia is still poor and inconsistent according to Waagstein (2011). Therefore, he suggests a continuous effort to educate and train business leaders, employees, and other stakeholders, including government and NGOs, to make larger commitments to achieving the goal of mandatory CSR regulation in Indonesia. This research found the need to build awareness about the impact of climate change on tourism and CSR, as one respondent from an academic background stated in the following quote:

> *How can we influence government? Otherwise, this is just a discussion, because, in the implementation, government support is really important. Maybe, we can do it on the next agenda, build government awareness about climate change and CSR. It should be reversed, because the government should be the one who should make the rules and socialise the way of CSR implemented at the local level* [37].

The fifth suggestion is to create a pathway to building partnership and collaboration: to develop a system that encourages collaboration between government and private businesses in tackling climate change. One tourism business owner suggests a detailed idea on how to incorporate the CSR and climate change mitigation and adaptation strategies in Bali, as follow:

> *If only all entrepreneurs in Bali had an eagerness to help. For example, if he has the plan to build a five-star hotel, then he should promise to God and himself for any number of rooms that he built, he will plant trees on wastelands and employ poor people. So, in the long-term, it's a wasteland not anymore, a wasteland and poor people have a stable income. Let say, there are 7000 rooms in Bali, then Bali should be able to plant 70 million trees, which must be accountable to himself and God. This could be designed as government regulations, at the time of application for permission to build.*

> *The Government can prepare the land where to plant the trees. After five years, these trees can improve air quality, water resources, maintain soil fertility and provide jobs to local communities. Not to mention, this tree will have a high value, so that the community also gets economic prosperity. Each tree can be a valuable resource for woodcraft and the cut trees must be replaced with ten new trees. This is just one idea, there are many that could be developed further from the CSR*[6].

The quote presented above shows that government involvement in implementing this idea is crucial. Sarmila et al. (2013) argue that government plays two important roles in CSR projects, as the supporting agency and as leader in the community. Therefore, this thesis argues in similar vein with Sarmila et al. (2013) that practical implementation of CSR needs to be shared with equal effort through collaboration with the government agency to ensure the practicality and the success of the program.

With a partnership approach, CSR is a relational system that links government, company and society initiatives in responding to environmental and social problems through partnership (Albareda et al. 2008). One respondent from a tourism association emphasised the need to invite relevant stakeholders in building awareness of the tourism industry, as she stated in the following quote: "*In my opinion, government, legislative, ASITA, PHRI, and NGOs should talk and discuss the topic on how to build awareness of the tourism industry in Bali to do real CSR instead of green wash*"[36]. Another respondent from civil society asked the tourism association to collaborate in making real action, as the following quote indicates: "*Let's make a blueprint on how NGOs collaborate with tourism associations to build awareness of the tourism industry in Bali to do real CSR instead of only as a cosmetic. We can work together to answer our need together instead of blaming each other*"[34].

Finally, there is a need to develop a coherent system for visitor contribution to support the green project. Some tourism businesses have encouraged their guests to participate in supporting their green projects. However, one private business owner reported a problem raised in the implementation, as can be seen in the following quote:

> *We can charge carbon offset funds from guests. But I prefer that the village have the same regulations so that all the hotels in the village do the same. One day, I said this in a meeting but one said it is illegal to take money from the tourists. Thus, I stopped this practice. This is bullshit! I believe that the guests have willingness to help and to protect the environment if there is transparency in management* [22].

This quote recalls the need to develop a system for visitor contribution to help fund Bali green growth actions, as recommended by DeLacy, Lipman, and Law (2014). This needs to be supported by an education system that allows tourists and communities to understand why the charge is in place and what the money is used for. In summary, the foregoing discussions have indicated the significant contribution of CSR of the tourism industry in tackling climate change as well as building community awareness to climate change.

8.5 Reflections on the Application of the Framework in Bali

Using a qualitative analysis, the conceptual framework was applied to the tourism sector, making judgments as to how each component was best applied in a tourism destination. Table 8.3 presents key phases, steps from the frameworks and whether these have successfully tested in Bali.

Table 8.3 Framework phases and components that have been successfully tested in Bali

Key phase	Steps / line	Chapter & Section	References	Tested
Phase one	Understanding tourism contribution to the atmosphere (arrow 'a')	Chapter 5 Section 5.2	Becken & Hay (2007); World Economic Forum [WEF] (2009);	√
	Understanding climate change impact on tourism industry (arrow 'b')	Chapter 5 Section 5.3	Becken & Hay (2007); IPCC (2013); Scott, Gossling & Hall (2012); UNWTO, 2007)	√
Phase two	Identifying mitigation strategies for tourism industry (line 'c')	Chapter 6 Section 6.2	Simpson et al. (2008); Okereke (2007); (Hoffman & Glancy, 2006); Kolk & Pinkse (2004, 2005).	√

	Identifying adaptation strategies for tourism industry (arrow 'd')	Chapter 6 Section 6.3	Scott et al. (2009); (Klint, 2013); Becken & Hay, (2012); Reddy & Wilkes, (2012); Schmidt-Thome & Klein, (2013); Scott., et al., (2012); Tompkins, Adger, Boyd, Nicholson-Cole, Weatherhead, & Arnell, (2010); Scott, DeFreitas & Matzarakis (2009)	√
Phase two	Exploring environmental responsibility initiatives that can build community awareness to climate change (arrow 'e')	Chapter 7	Becken & Hay (2007); IPCC (2013); Scott, Gossling & Hall (2012); UNWTO, 2007)	√
	Exploring economic responsibility that can build community adaptive capacity to climate change (arrow 'f')		Scott et al. (2009); (Klint, 2013); Becken & Hay, (2012); Scott, DeFreitas & Matzarakis (2009)	√
	Exploring social responsibility that can build community adaptive capacity to climate change (arrow 'g')		McCarthy et al. (2001), Ockwell et al. (2009) and Petheram et al. (2010).	√
	Understanding CSR power in building community adaptive capacity to climate change (arrow 'h' & 'l")	Chapter 7 Section 7.5	Posey (2009); McCarthy et al. (2001), Ockwell et al. (2009) and Petheram et al. (2010).	√

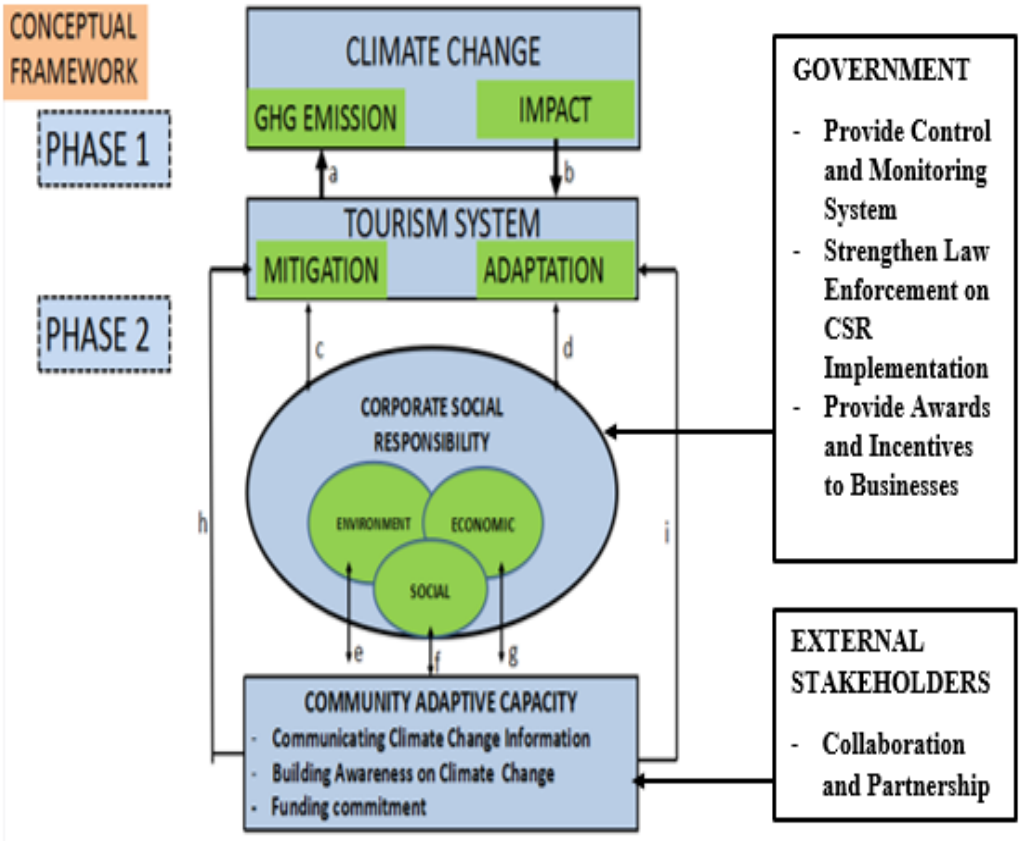
Table inspired by Klint (2013, p. 314).

On balance the framework has been useful in understanding how CSR can be used to build community adaptive capacity to climate change. However, I also identify two main weaknesses of the proposed framework which was presented in Chapter 4. Firstly, this framework pays less attention to external factors that can help the applicability of this framework in the real world at the destination level. As discussed in Section 8.3, the low level of law enforcement in Indonesia hinders efforts to encourage CSR implementation at the destination level. This framework fails to recognise the enabling environment for effective implementation of CSR inside and outside the organisation. Secondly, this framework does not highlight the need to identify the important

stakeholders that must support business CSR efforts to build the community's capacity to tackle climate change risks. The proposed framework only considers the company as the sole decision-makers in implementing CSR. Albareda et al. (2008) argue that the application of CSR requires relational governance models which allow collaboration and partnerships among corporations, government, and civil society.

Therefore, it is necessary to make modifications to the proposed conceptual framework developed for this study. Figure 8.2 contains the revised version of the conceptual framework. Although the examined concepts in the proposed framework have been developed based on the comprehensive review of the relevant literature, there are two supporting factors incorporated in the refined framework. Three supporting factors relate to government roles on CSR implementation and one supporting factor relates to external stakeholders.

Figure 8.2 Revised Framework



The key difference between the proposed and the revised framework is the inclusion of government as part of the supporting factors of CSR implementation in the tourism industry. This is based on the research findings discussed in Section 8.3 that government plays a significant role in harnessing CSR implementation at the destination level.

Government capacity to develop a control and monitoring system can ensure that businesses adhere to rules and regulation to implement CSR. For countries that have mandatory CSR regulation, it is important to provide a law imposing sanction in the absence of CSR compliance (Waagstein, 2011). Government at the national level must be precise and unambiguous in stating the aim of the CSR law, beneficiaries, and duty holder, as well as how to implement the measures in an effective, transparent, cost-efficient, and speedy manner in every level of organisation (Waagstein, 2011). The monitoring and evaluation of CSR practices are pivotal to bridge dissonance between what is expected by law designed at the national level and what are the challenges in the implementation at the local level. Furthermore, the revised framework acknowledged the important of providing awards and incentives for businesses that have acted as best practices in CSR implementation. “Government, through policies, laws, and supports for institutions, are critical to the development of livelihoods because they modify the ability to access, combine and transform capital, and influence the returns (livelihood outcomes) to the livelihood strategies” (Jacobs, B., & Leith, P., 2010. p. 53).

The involvement of external stakeholders in the implementation of CSR is important. “Addressing the multiple issues of climate change and tourism requires effective communication and collaboration between researchers, planners, policy makers, tourism operators and wider public, including host and guests” (Becken & Hay, 2007, p. 304). Therefore, I added collaboration and partnership with external stakeholders into the new framework. Collaboration and partnerships with external stakeholders such as public sector, tourism sector, NGO and civil society are vital in implementing CSR (Albareda et al., 2008).

8.6 Chapter Summary

This chapter has discussed the findings of the research which concluded the data collection and analysis. Firstly, this chapter presented what has been done by the tourism industry related to climate change, what has not and what can be done in the future to improve the existing CSR initiatives. Secondly, this chapter highlighted challenges in building community adaptive capacity to climate change, followed by providing some recommendations to harnessing CSR implementation at the destination level.

As presented in Chapter 6, some of the tourism industries in Bali have implemented mitigation and adaptation strategies for climate change. Some case studies presented in Chapter 6 gave illustration that the tourism industry can be a change agent in addressing climate change and has the potential to implement more advanced CSR initiatives. Section 8.2.1 highlights the need to have data on how many GHG emissions are produced by the tourism sector and how much GHG emissions reduction has been achieved. This data is needed for designing future strategies in tackling climate change. Chapter 5 mentioned that the tourism industry was not included in the calculation of GHG inventory of Bali (see Table 5.6). Therefore, it is argued that the tourism industry should be involved in global efforts to tackle climate change by providing continuous data on their GHG emissions and reporting their CSR initiatives to reduce GHG emissions to the atmosphere. Public sector organisations play significant roles in building tourism managers' capacity to measure GHG emissions in their organisations.

Section 8.4 provided some strategies for better CSR implementation at the destination level, including: (1) the government should play a mandating role in creating a system to control and monitor the implementation of CSR by tourism businesses; (2) improve the law enforcement of CSR implementation; (3) government should play an endorsement role in support the implementation of CSR; (4) build awareness on climate change and CSR; and (5) create a pathway to build partnership and collaboration to involve all stakeholders in tackling climate change.

Based on the evaluation of the research results, Section 8.5 revisited the proposed framework which was developed in Chapter 4. This proposed framework only focuses

on the tourism businesses as a sole decision maker in designing CSR initiatives. The empirical research findings presented in Section 8.3 and Section 8.4 clearly show that government's role is vital. Collaboration with external stakeholder is also important in implementing CSR.

9 CONCLUSION

9.1 Introduction

The tourism sector in Bali has seen massive growth in recent years. In a small island with a current population of 3.5 million, international visitation is predicted to grow up to five million tourists, and domestic visitors up to 10 million in 2020. Such rises in visitation and resultant employment put enormous pressure on Bali's fragile environment and culture. Moreover, Bali is inherently vulnerable to climate change and will experience significant challenges in years to come. These challenges highlight the importance of building community adaptive capacity to climate change. The tourism industry as a leading sector of the island is expected to act to address climate change as part of its responsibility. Consequently, the question of how CSR of the tourism industry can build community adaptive capacity to climate change will remain of substantial interest to researchers, policy makers and tourism managers alike.

This thesis was motivated by the paucity of research on the adaptive capacity to climate change in the tourism field and how CSR can contribute. In endeavouring to fill the gaps in the CSR, climate change, and adaptive capacity literature, two research objectives were set out to achieve the main aim of the research. In this concluding chapter, I revisit the objectives of this thesis as presented in Section 1.3 of Chapter 1 to ascertain whether I have fulfilled my research goals. The main aim of this research is to discover how CSR of the tourism industry can build community adaptive capacity to climate change with the case study of Bali. In achieving the research aim, two research objectives were designed followed by research questions. The first research objective was to develop a theoretical framework that allows a better understanding of how CSR practices can enhance tourism community adaptive capacity to climate change. The second research objective was to use this framework to investigate and assess current CSR practices in Bali, and based on the assessment, to inform future development. The thesis used a qualitative research method to analyse the data gathered through in-depth interviews and FGDs which involved tourism stakeholders in Bali.

This concluding chapter is organised into six sections. The first section is the introduction. The second section provides a summary of the research findings and

highlights how these have addressed the research objectives. The third section elicits the significance of the study from theoretical and practical perspectives. The fourth section proposes recommendations for policy makers and tourism industry managers. Limitations of the study are acknowledged in section five. The last section suggests directions for further research.

9.2 Summary of the Research Findings

This section is dedicated to explaining how the findings discovered in this research have addressed the aim of the study, the objectives, and the research questions. The summary is outlined in Table 9.1.

Table 9.1. Summary of key findings addressing aim of the study, research objectives, and research questions

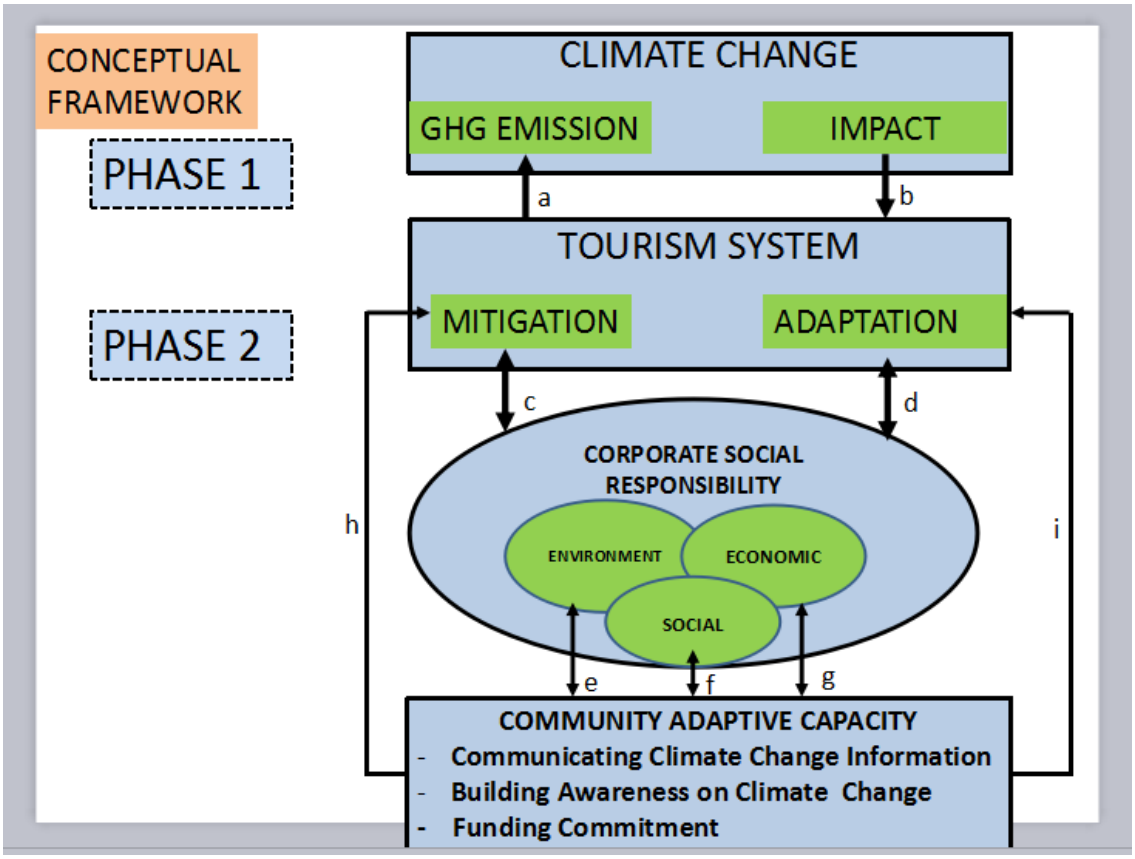
<table>
<tr><td colspan="3">RESEARCH AIM
To find out how CSR can build community adaptive capacity to climate change with the case study of Bali.</td></tr>
<tr><td>Research Objectives</td><td>Research questions</td><td>Key findings</td></tr>
<tr><td rowspan="2">RO1
Develop a theoretical framework that allows a better understanding of how CSR practices can enhance tourism community adaptive capacity to climate change.</td><td>RQ1a. How much do we already know about CSR initiatives and their links to mitigation and adaptation strategies in the tourism sector?</td><td rowspan="2">Proposed conceptual framework.

It constituted two phases. Phase one is understanding the relationship between climate change and tourism. Phase two is assessing CSR implementation to address climate change and to build community adaptive capacity.</td></tr>
<tr><td>RQ1b. What key components should a framework include that can allows us to better understand how mitigation and adaptation strategies can be integrated in CSR initiatives to build community adaptive capacity to climate change?</td></tr>
</table>

Research Objectives	Research questions	Key findings
RO2 Use this framework as a tool to guide the investigation and assessment on current CSR practices in Bali, and based on the assessment, to inform future development.	**RQ2a.** To what extent do we understand the interaction between climate change and Bali tourism system?	Local communities, tourists and businesses in Bali have already been impacted by the sea level rise, coral bleaching, storms, extreme weather, floods during rainy season and water shortage during dry seasons.
	RQ2b. Towhat extent doCSR activities address climate change mitigation and adaptation initiatives?	CSR initiatives of the tourism industry in Bali are mostly inspired by *Tri Hita Karana* philosophy which requires human to maintain harmonious relationships with God, human beings and nature.
	RQ2c. To what extent do CSR activities build community adaptive capacity to climate change?	CSR of the tourism industry has the power to build community adaptive capacity to climate change both for individuals and for community leaders to undertake collective action to tackle climate change.
	RQ2d. What are the challenges and strategies for harnessing CSR activities for greater positive impact at destination level?	Some challenges are faced in building community adaptive capacity to climate change, such as: low level of law enforcement; lack of government leadership; low awareness to implement CSR; and low awareness on impact of climate change. This thesis recommends some strategies for harnessing CSR implementation at destination level for greater positive impact for the Balinese community.

9.2.1 The Proposed Conceptual Framework

As shown in Table 9.1, to achieve the first research objective and answer the two related research questions (RQ1a and RQ1b), the conceptual framework was proposed. This framework is entitled "the CSR and climate change framework". This framework incorporates three established models in CSR and climate change literature: climate change and its relationship with the tourism industry by Becken and Hay (2007), CSR by Linnanen and Panapanaan, in Cragg et al. (2009) and community adaptive capacity by Adger et al. (2005). The initial proposed framework was presented in chapter 4 as seen in the following figure.



The proposed framework consists of two phases. The first phase is understanding the relationship between the tourism sector and climate change. This part was an explicit part of Becken's (2007) framework which uses a risk management approach to tackling climate change. The first step of phase one is understanding the fact that the tourism industry is one of many contributors to changes in the climate system (see line 'a'). The second step in phase one is understanding the impact of climate change on the tourism

industry and to the community in the tourist destination (see line 'b'). The second phase consist of two steps. The first one is highlighting the mitigation and adaptation strategies of the tourism industry as part of their responsibility to the environment and to the community. The next step in phase two is understanding the role of CSR of the tourism industry in building community adaptive capacity to climate change.

The second objective of this thesis was to use this framework to investigate and assess current CSR initiatives of tourism business in Bali. This island was chosen as a case study considering the importance of the tourism industry to the host community in this region. The assessment of this framework was presented in Chapter 5 to Chapter 7.

9.2.2 Understanding the Relationship between Climate Change and Bali Tourism

Chapter 5 assessed how the system contributes to climate change and how it can be impacted by climate change. This chapter is intended to address phase one of the proposed framework to understand the relationship between climate change and tourism in Bali. In brief, there are four research findings in this chapter, including:

1) Tourism activities in Bali inevitably emit a significant amount of GHG emissions to the atmosphere due to several reasons, such as increasing number of tourist arrivals, dependency on international arrivals and limited public transport options. Another consideration is the fact that "tourism is a very energy-intensive activity that contributes to the GHG emissions and the build-up of these gasses in the atmosphere. One result is an exacerbation of risks due to a changing climate, with detrimental impacts on tourism" (Becken & Hay, 2007, p. 7).
2) Weather changes and rising sea levels are two current phenomena of climate change that are most keenly felt by the respondents, followed by awareness about the increasing temperature. The changes of weather pattern and increasing temperature has caused a water shortage in some tourist destinations in Bali. Water crises are no longer a future risk but the current reality that is faced by

communities and tourism industry. Similarly, with sea level rise: most of the hotel and restaurant businesses in Bali have already been impacted by the sea level rise. Giant waves hit coastal areas of the southern coast in June 2016. Waves soak the entire shoreline in Sanur and in Kuta beach sea water also reached the street. As reported by several newspapers in Bali, some popular resorts and restaurants were damaged and repetitively pounded with sea water. This research confirms that climate change has impacted the tourism industry and communities in Bali in various ways.

3) Climate change policies and regulation have been produced at the national level.

   However, the implementation at regional and local level remains limited. So far, no studies have reported the impact of the climate change policy to the communities nor how government will achieve the GHG emissions reduction target;

4) Initiatives to enhance the adaptive capacity of communities to climate change (e.g. build earthquake resistant houses for the poor, train the local community to be ready for a natural disaster, make disaster ready movies and books) have been done with the support of funds from the CSR of the tourism industry. However, the expansion of these initiatives is constrained by limited funding from the government, donor agencies and sponsors donors who assume that Bali is a wealthy region and does not need such funding. In fact, the rich are the investors and the poor is the host community. Thus, the poor community is disadvantaged from this condition because they have limited social and economic power to survive environmental disturbances.

Referring to the proposed framework, this chapter illustrated the contribution of the tourism industry to climate change (see arrow ‘a’ in the framework) and the impact of climate change on the tourism industry and community (see arrow ‘b’ in the framework).

9.2.3 CSR Initiatives of Tourism Industry in Bali in Addressing Climate Change

At the national level, Indonesian government also established REDD^{+} Agency [Reducing Emissions from Deforestation and Forest Degradation] in 2013, to carry out coordination, synchronization, planning, facilitation, management, monitoring of reforestation project in Indonesia. BP REDD+ also mandates to develop national strategy for REDD. Since its formation, the BP REDD+ in Indonesia has undertaken various initiatives to achieve more cohesive REDD+ governance (such as the One Map Initiative and its involvement in the establishment of Indonesia REDD + trust fund (FREDDI). The REDD+ Agency has signed a Memorandum of Understanding (MoU) with local governments to initiate REDD+ programs at the local level (Denier, L., Korwin, S., Leggett, M., MacFarquhar, C., 2014).

In relation to the tourism sector, REDD + has no special cooperation with the tourism sector. However, in its implementation, the reforestation program supported by CSR funds of hotels and restaurants have been supported the same goal with REDD+. In some tourist destinations, reforestation project have been undertaken in partnership between tourism industries, NGO and government (Department of Forestry). For example, the cooperation of Maya ubud hotel with NGO called Friends of National Park Foundation (FNPF) in the reforestation project in Nusa Penida island in Bali.(see page 178). However, the involvement of tourism industry in the REDD+ national framework and GHG accounting is limitted both at the national level and at the regional level. In section 5.4.3, it can be seen more clearly that tourism industry has not been included in the calculation of GHG emission reduction targets at the regional level.

In brief, this research found some mitigation strategies that had been implemented by the tourism industry in Bali, including: (1) water saving and reuse actions; (2) selecting environmental friendly suppliers/partners; (3) maintaining building and land ratio (30-35% for green area) and 65-70% for building); (4) reducing, reusing and recycling waste; (5) replaced 90% old bulb with LED lamp; (6) use smart cards for energy saving; (7) replaced old refrigerator with environmentally friendly refrigerant; (8) plant tree and mangrove; (9) conserve coral reefs; (10) reduce carbon footprint. However, the findings should not be interpreted as representative of the tourism sector in Bali but

rather as illustrative of the various environmental responsibility initiatives currently implemented.

In addition to adaptation strategies, similar results revealed from the interviews that the tourism industry had implement adaptation strategies as part of their economic responsibility. The discussion in section 6.3 has indicated that most of the respondents had implemented adaptation strategies in their organisation as part of the companies' CSR initiatives (see line ‘d’ in figure 6-1). In accordance with the literature as reviewed in section 2.4.3, four broad themes emerged from the analysis, including: (1) technical adaptation; (2) business management adaptation; (3) behavioural adaptation; (4) policy adaptation. A range of technical adaptation actions was discovered in the analysis, including the provision of disaster warnings, water reservoir, sea walls/cribs, beach nourishment and Biopore projects. Business management adaptation actions were discovered in the analysis, including (1) provide emergency plans; (2) have business insurance; (3) product diversification; and (4) have health insurance for employees and employees' family. However, only two policy adaptation actions were identified: comply with regulations and physical analysis for properties. Although mostly driven by economic reasons, initiatives that have been carried out by tourism businesses in Bali had provided a lot of benefit to the company itself, the environment and society.

9.2.4 Understanding the role of CSR in Building Community Adaptive Capacity to Climate Change

Findings presented in Chapter 7 provide evidence of the crucial role of CSR in building community adaptive capacity to climate change. The environmental responsibility initiatives of the tourism industry, such as: supporting the coral reef conservation project, mangrove planting, and reforestation project, not only build community awareness to protect the environment but also provide economic benefit to local people. The result of this study corroborates with the framework proposed in this chapter, specifically line ‘e’. Furthermore, environmental initiatives combined with the economic responsibility of the tourism industry (e.g. employ local people and partner

with a local supplier), can increase the financial power of the local community in facing climate change risks. Besides that, tourism businesses' ability to adapt to any business turbulences including climate change, helps provide stable income to the tourism-dependent community. As Sovacool (2012) argues, the local community needs to have economic power as well as knowledge on how to adapt to climate change. This result confirms the role of CSR in building community adaptive capacity (see line 'g'). As depicted in section 7.2 the results of this study showed that social responsibility of the tourism industry (e.g. supporting the 'green engage movement' and 'earth hours' movement) can build community adaptive capacity through build community awareness to climate change. These study results confirm the proposed framework (see line 'f').

Moreover, in accordance with the literature as reviewed in section 2.5.2, the results of this study confirm the proposed framework (see line 'h' and line 'i'). Community with greater access to various community resources or capital (e.g. financial, natural, cultural, social and political) would be expected to have a greater capacity to tackle the actual or anticipated impact of climate change (Keys, Thomsen & Smith, 2016). The findings presented in Chapter 7 showed that CSR can enhance an individual's living capacity to tackle climate change by providing: (1) economic power; (2) access to financial support; (3) education and training; (4) information and knowledge regarding climate change risks; (5) healthcare; (6) emergency planning; and (7) the utilisation and promotion of traditional knowledge.

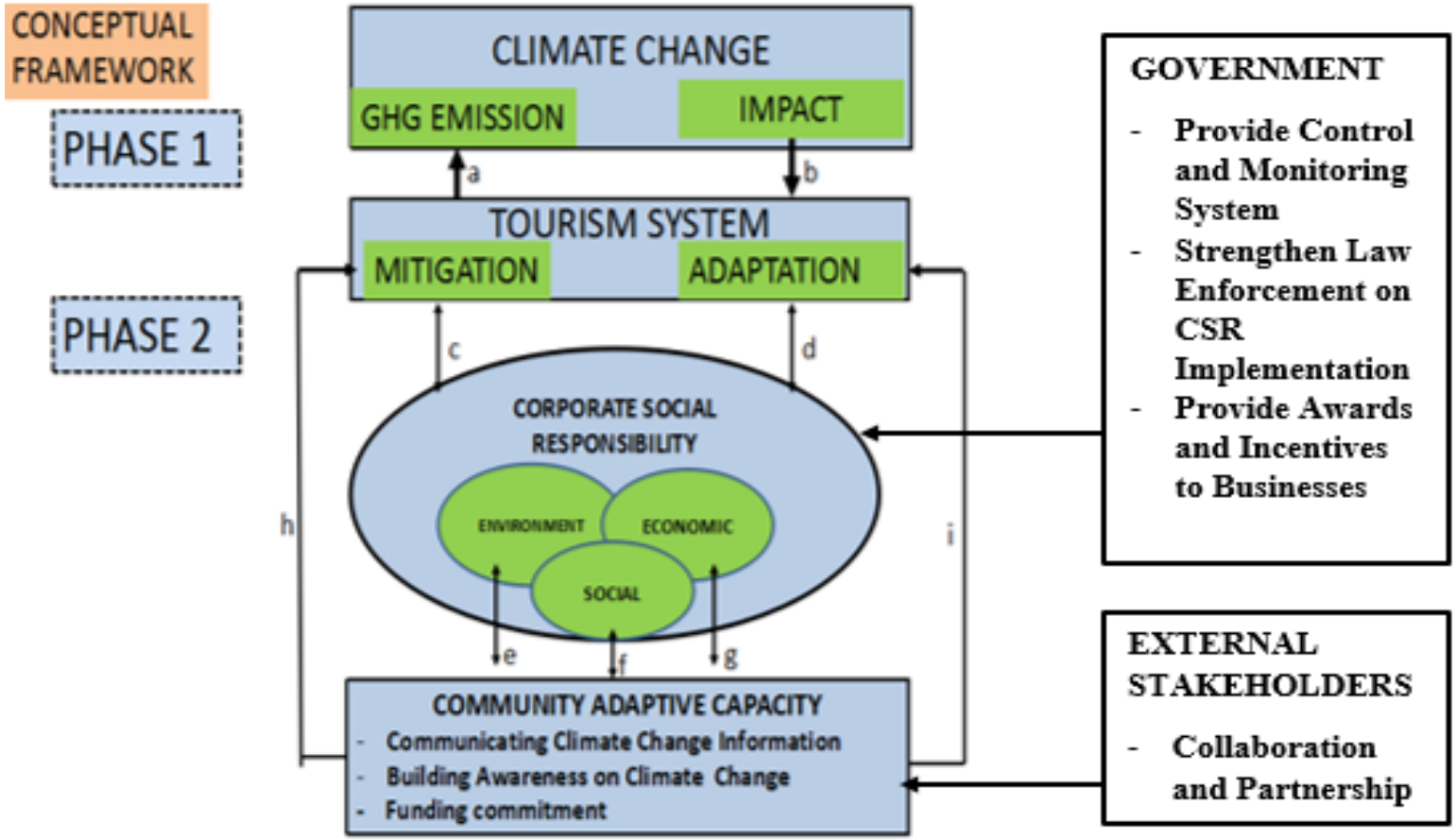
Moreover, CSR of the tourism industry also has the potential to build the capacity of a leader in terms of leading collective action on behalf of a group to tackle climate change by providing: (1) funding support; (2) access to networks; and (3) labour or employees as volunteers. CSR can help community leaders to improve collective adaptive capacity by providing greater social capital (Adger, 1999; 2003). In addition, CSR build networks which build trust and reciprocity between tourism businesses and community. With funding, networks and labour support from tourism businesses, community leader would have expected to have greater capacity to mobilise physical and social resources to respond to climate change.

9.2.5 Challenges in Building Community Adaptive Capacity to Climate Change and Strategies for Harnessing CSR Initiatives at the Destination Level

Chapter 8 discussed research findings from previous chapters as well as answering RQ2d. This chapter revealed some challenges faced by tourism stakeholders in building community adaptive capacity to climate change, including: (1) not all in the tourism industry are willing to implement CSR; (2) low level of law enforcement; (3) lack of government leadership; and (4) low awareness on climate change.

Further, as an attempt to answer RQ2c, this chapter formulated some strategies to encourage CSR implementation at destination level, including, among others: (1) government should play a mandating role in creating controlling and monitoring systems for CSR implementation; (2) increased law enforcement for better implementation of CSR; (3) government should play an endorsement role to support CSR implementation; (4) build awareness on climate change and CSR; and (5) create pathways to build partnership and collaboration to involve all stakeholders to tackle climate change.

Chapter 8 also acknowledges the weaknesses of the proposed framework that was presented in Chapter 4. Government roles and external stakeholders' involvement were not involved in the proposed framework. Empirical findings presented in Chapter 8 show clearly that the government's role is vital in harnessing CSR implementation at the destination level. Collaboration with external stakeholders is also important in implementing CSR initiatives. Therefore, the refinement of the proposed framework was presented in Chapter 8 (see Figure 8.2).


CONCEPTUAL FRAMEWORK
PHASE 1
PHASE 2
CLIMATE CHANGE
GHG EMISSION
IMPACT
a
b
TOURISM SYSTEM
MITIGATION
ADAPTATION
c
d
CORPORATE SOCIAL RESPONSIBILITY
ENVIRONMENT
ECONOMIC
SOCIAL
e
f
g
h
i
COMMUNITY ADAPTIVE CAPACITY
- Communicating Climate Change Information
- Building Awareness on Climate Change
- Funding commitment
GOVERNMENT
- Provide Control and Monitoring System
- Strengthen Law Enforcement on CSR Implementation
- Provide Awards and Incentives to Businesses
EXTERNAL STAKEHOLDERS
- Collaboration and Partnership

9.3 Significance of the Study

9.3.1 Contribution to Knowledge (Academic Contribution)

This thesis makes both a theoretical and practical contribution to knowledge. This thesis has several theoretical contributions to knowledge. Firstly, this research takes a different angle from previous research on climate change. The majority of previous research focuses on how tourism businesses adapt to climate change challenges (Kajan & Saarinen, 2013). This research focuses on how tourism businesses build community adaptive capacity to climate change. Moreover, this research takes a research direction suggested by Kajan and Sarineen (2013), that the climate change research in tourism and climate change adaptation should expand from market-led and business-driven research to community centred adaptation research.

Secondly, this research fills the knowledge gap in the literature where research on tourism and climate change from developing countries is still very limited. Geographically, research on tourism and climate change is centred on western world tourism destinations and small islands states, such as Canada, Australia, US, UK, New Zealand, Austria, and Switzerland (Becken, 2013; Kajan & Sarineen, 2013). Similarly, CSR literature is predominantly a western phenomenon (Arevalo & Aravind, 2011; Chapple & Moon, 2005). These papers support the significance of my research in contributing to the knowledge of climate change and CSR literature in a developing country, Bali.

Thirdly, the review of CSR literature in Chapter 2 found that most of the research is conducted by quantitative methods. Therefore, in terms of methodology, this research fills a gap in the literature by using a qualitative approach, which in the field of CSR research is still very limited. Aguinis and Glavas (2012) argue that qualitative approaches can be a fruitful research agenda to uncover what CSR can do for communities and to build a better world. Most of the previous research on CSR used data and analysis from companies' websites. Thus, reliability and objectivity of data presented on websites remains questionable. This research used primary data supported by documentation (photos) of the projects that have been done through CSR initiatives.

Moreover, community and NGOs were involved in this research to enrich the data and give a balanced perspective on this subject matter.

9.3.2 Statement of Significance (Practical Contribution)

This thesis also has several practical contributions. The conceptual framework of CSR and climate change presented in this thesis is intended to be of use as a practical tool for understanding how mitigation and adaptation strategies can be integrated in CSR initiatives to build community adaptive capacity to climate change. This idea is supported by Klein and Huq (2003). They argue that it is important to look at the degree to which an institution (government, private sector and NGO) enhances development of social capital to increase community adaptive capacity.

In addition, the empirical data presented in this research are relevant for policy makers in designing future policy or regulation on climate change. Chapter 5 presented the gap between government policy at the national level and the implementation at the regional and local level, both for climate change and CSR policy. The findings of this study contribute not only to the CSR and climate change literature but also to providing strategic insights and recommendations for policy makers to better CSR implementation at the destination level.

9.4 Recommendations

9.4.1 For Policy Makers

Considering CSR implementation in Indonesia is mandatory, this research suggests government should play a mandating role in creating a system to control and monitor the implementation of CSR. Moreover, law enforcement in CSR implementation should be improved to ensure greater participation of tourism businesses in tackling climate change. More political support and guidance is needed from the national government to enable local authorities to work in partnership with other stakeholders (Bulkeley & Kern, 2006).

This research also found the importance of developing economic incentives to help the tourism industry overcome the challenges in implementing mitigation and adaptation strategies (e.g. technology price and instalment cost). The economic incentives may help tourism businesses to buy more water tanks, desalination technology or renewable energy sources. Therefore, a public sector facilitating role is vital in providing enabling legislation to support CSR with economic incentives.

It is important to involve tourism managers in designing a 'grand plan' to protect tourism destinations from the risks of climate change. As presented in Chapter 6, most of the respondents have the willingness to help to tackle climate change threats and they have CSR budgets to do so. Therefore, government should take a leadership and partnering role in designing a 'grand plan' to tackle climate change and communicate this plan to encourage support from the tourism industry, others in the private sector and society.

9.4.2 For Tourism Managers

This study revealed that climate change is no longer a future risk but it is happening now. Therefore, it is crucial to understand how Bali tourism contributes to climate change and how businesses, tourists and local people can be impacted by climate change. On the basis of this understanding tourism managers should develop mitigation and adaptation strategies through CSR initiatives. Addressing climate change is vital in maintaining tourism business sustainability. In addition, building community adaptive capacity to climate change can be integrated as part of a company's effort to tackle climate change and responsibility to support local people.

9.5 Limitations

Although this study has made important contributions to the knowledge of CSR and climate literature, several limitations should be acknowledged. Two limitations acknowledged here are related to generalisability of the findings and possible sample bias.

While the study aims to develop a framework that is relevant for other destinations, data were collected and analysed in the form of a qualitative case study. This approach has

limitations in regards to the overall generalisability of the findings. Moreover, this research uses qualitative data which were collected using a purposive sampling technique. This methodological limitation may create sample bias as the findings cannot be assumed as representative of all tourism businesses in Bali. The sample is limited to a population of the tourism industry that have already implement CSR initiatives, which restricts the researcher's knowledge of CSR practices for non-participants. Thus, future research should consider using a more comprehensive sampling design that would contribute to higher reliability and validity of the data.

9.6 Future Research Direction

Aguinis and Glavas (2012, p. 960) argued that "CSR research may help us leave the world a better place than we found it." Therefore, further research is needed in order to achieve such an ambition. Several important findings from this study raise some additional questions for further exploration, such as:

1) As mentioned in Chapter 5 and Chapter 8, limited data are available on GHG emissions that are produced by the tourism industry. Therefore, research that can measure the total amount of GHG emission produced by the tourism industry will be very useful for both policy makers as well as for further research investigation.
2) As stated in Chapter 8 the public sector facilitating role is important to stimulate tourism businesses to implement CSR. The government requires research on the type of incentives necessary for encouraging the implementation of mitigation and adaptation strategies as part of CSR.
3) Research on the economic impact of climate change on Bali tourism is important. Hopefully, the outcome of this research will raise tourism industry awareness and encourage more commitment to start real action to tackle climate change.
4) As stated in Chapter 5, tourism businesses have the willingness to help to build community adaptive capacity to climate change. However, there is no grand plan

and guidance that can be used by tourism businesses in distributing CSR funding to tackle climate change risks. How can the government and tourism businesses work together to tackle the future risks of climate change? The answer to this question will be very useful for future collaboration between government and the private sector.

9.7 Concluding Statement

Having presented the future directions for research, I conclude this thesis with a few final words. Climate change is not a future threat, it is happening now. Delay in action will create a more catastrophic impact on humanity. As governments around the world have signed the Paris Agreement, there is a great expectation that real action will be taken from the national level to the local level. Tourism industry involvement in tackling climate change through CSR will greatly support government in achieving GHG emission reduction targets that have been signed in the Paris Agreement. Findings presented in this thesis explain the power of CSR in building community adaptive capacity to climate change, both for the individuals living in a community and for the community leader to lead collective actions. As a return, a company can earn respect, a good image and support from internal and external stakeholders for being a good citizen. Finally, I end this thesis with a simple message, we must act now before it is too late.

"only when the last tree has died and the last river been poisoned,

and the last fish has been caught we will realize that

we cannot eat money" (Cree Indian Proverb).

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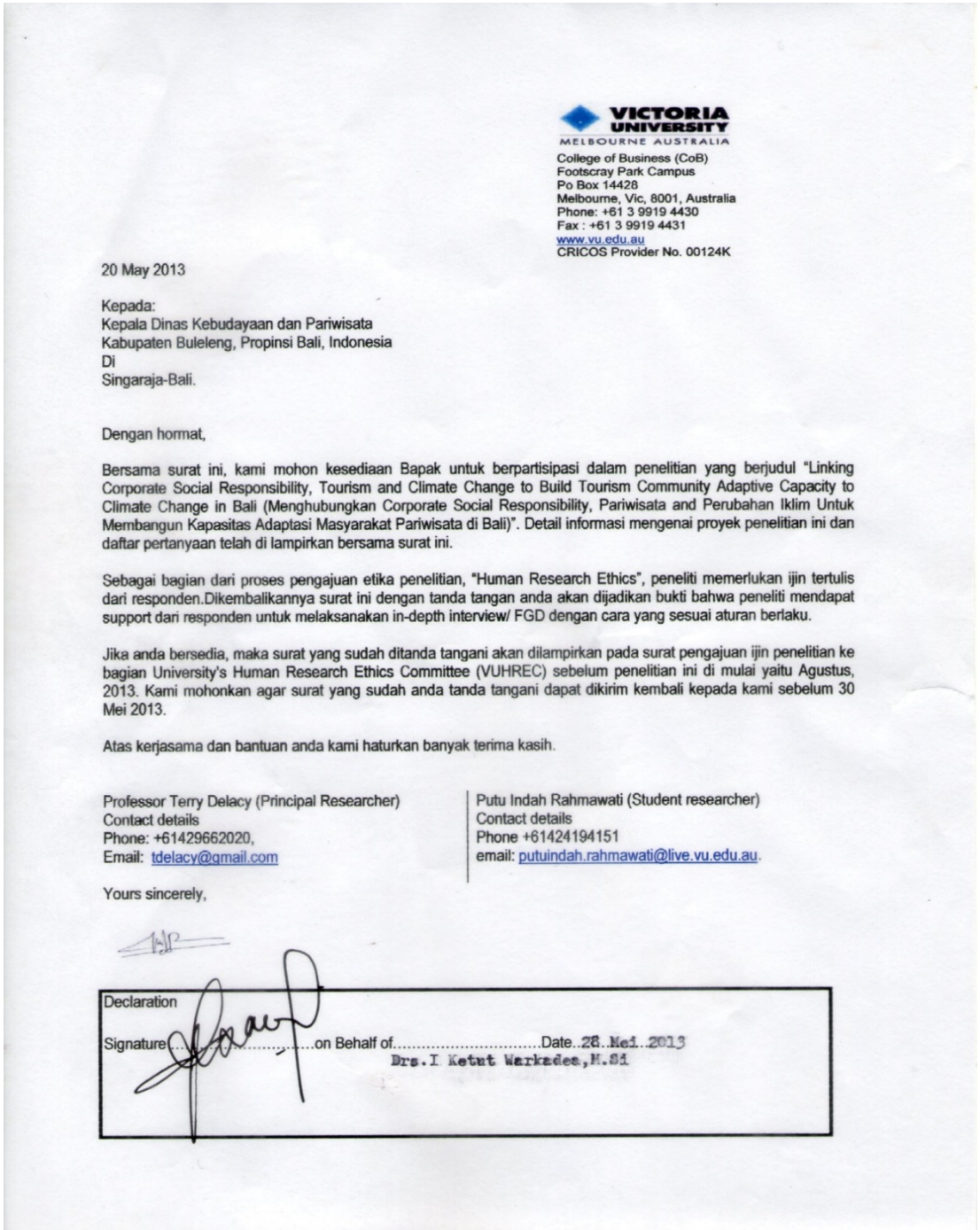
11 APPENDICES



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20 May 2013

Kepada:
Kepala Dinas Kebudayaan dan Pariwisata
Kabupaten Buleleng, Propinsi Bali, Indonesia
Di
Singaraja-Bali.

Dengan hormat,

Bersama surat ini, kami mohon kesediaan Bapak untuk berpartisipasi dalam penelitian yang berjudul "Linking Corporate Social Responsibility, Tourism and Climate Change to Build Tourism Community Adaptive Capacity to Climate Change in Bali (Menghubungkan Corporate Social Responsibility, Pariwisata and Perubahan Iklim Untuk Membangun Kapasitas Adaptasi Masyarakat Pariwisata di Bali)". Detail informasi mengenai proyek penelitian ini dan daftar pertanyaan telah di lampirkan bersama surat ini.

Sebagai bagian dari proses pengajuan etika penelitian, "Human Research Ethics", peneliti memerlukan ijin tertulis dari responden.Dikembalikannya surat ini dengan tanda tangan anda akan dijadikan bukti bahwa peneliti mendapat support dari responden untuk melaksanakan in-depth interview/ FGD dengan cara yang sesuai aturan berlaku.

Jika anda bersedia, maka surat yang sudah ditanda tangani akan dilampirkan pada surat pengajuan ijin penelitian ke bagian University's Human Research Ethics Committee (VUHREC) sebelum penelitian ini di mulai yaitu Agustus, 2013. Kami mohonkan agar surat yang sudah anda tanda tangani dapat dikirim kembali kepada kami sebelum 30 Mei 2013.

Atas kerjasama dan bantuan anda kami haturkan banyak terima kasih.

Professor Terry Delacy (Principal Researcher)
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Yours sincerely,

Declaration

Signature.....on Behalf of.....Date..28..Mei..2013
Drs.I Ketut Warkadea,M.Si

11.1 Appendix 1: Supporting Letter From Participants

11.2 Appendix 2: Information for Participants

INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH

You are invited to participate

You are invited to participate in a research project entitled "Linking Corporate Social Responsibility, Tourism and Climate Change to Build Tourism Community Adaptive Capacity to Climate Change in Bali".

This project is being conducted by a student researcher, Putu Indah Rahmawati as part of a PhD study at Victoria University under the supervision of Professor Terry Delacy from Centre for Tourism and Services Research at Victoria University.

Project explanation

Our Climate is changing. That is the scientific consensus that threatens the economic, social and environmental well- being. Climate change also significantly affects the tourism industry with coastal infrastructure being threatened by rising sea levels, storm, and deterioration of coral reef ecosystems. The threats of climate change will add to the problems of environmental degradation being experienced in Bali.

The tourism industry is expected to take part in addressing climate change in their CSR initiatives as their operations contribute to changes in the climate. There are two strategies to deal with climate change, mitigation and adaptation. Numerous studies have attempted to explain mitigation and adaptation strategies for the tourism industry. Most of the literature are business oriented. No research has been found which examined the extent to which the tourism industry addresses climate change and build community adaptive capacity.

As generally known that Corporate Social Responsibility (CSR) plays important role in answering environmental degradation issues, climate change and social and human right issues. CSR is the willingness of the company to integrate social and environmental concern to its decisions and operations beyond businesses inerest to earn more profit. CSR initiatives is a powerful branding tool that can influence consumers buying

intention. Moreover, CSR can buildpositive workplace atmosphere and enhance mutual relationship with the community.

This study aims to develop a model to assist the tourism industry in harmonising their CSR obligations with mitigation and adaptation strategies in building community resilience to climate change. The general aim of this study can be expressed more specifically as the following explicit research objectives.

1. From a review of the literature, develop a framework suitable to understanding tourism community resilience through climate change mitigation and adaptation strategies, and CSR initiatives.

2. Use this framework to investigate and assess current business and related government and community practices in Bali.

3. Based on the Bali case study develop a generic model that is suitable for communities in other tourism destination.

We are inviting you to participate in this study. This is important in improving Bali's image at international level. The international policy to reduce GHG emission from long haul travel will definitely reduce numbers of tourist visiting Bali in the future. This make Bali as the first victim of climate change. This will affect your business and reduce the community income, thus reducing community adaptive capacity to climate change. Therefore, your involvement in this research is expected to build the positive image at international level. Hopefully, some aspect of your CSR initiatives will inspire other tourism businesses to enhace their CSR initiatives for better world and better future.

The findings of this study are expected to contribute not only to the CSR and climate change literature but also to providing strategic insights and recommendations for managers and policy makers to better implement CSR strategies in promoting climate change mitigation and adaptation practices within both organizations and communities.

What will I be asked to do?

As a participant in this study, you will be invited to be interviewed by the researcher. Most of the questions are open-ended to gain more in-depth information about corporate social responsibility initiatives in your organization. The interview will take between 60 and up to 90 minutes to complete.

What will I gain from participating?

Researcher will provide the summary of the outcomes and recommendations for participants when the report complete. Participants can use the interview questions as organization self-reflection for the better implementation of CSR in the future and, of course, for company long term benefits.

How will the information I give be used?

The information will be kept confidential. Access to data retained by researcher and research supervisor only. Information will not use by third party for other purposes. The information that you give provide the in-depth view regarding CSR initiatives in tourism industry in Bali and how its address climate change and build community adaptive capacity as well as analysing how it can be implemented by other organization or community.

What are the potential risks of participating in this project?

There is no potential risk in participating in this research. Assurance will be provided of no dangerous consequences for the life of the interviewees. Interview will be conducted at a time and in a place, that is convenient for participants. The interviews will be accurately transcribed without omissions or fraudulent interpretations. Data gathered from interview will be kept confidential and all materials presented in any publications will be de-identified. Participation in this research is voluntary. Participant will be asked to sign the consent form and return it to researcher. Participant may withdraw from the project at any time.

How will this project be conducted?

This research adopts a qualitative research. This study will involve three phases. The first phase is developing conceptual framework based on literature review; the second phase is conducting interviews, observations and focus group discussions; and then the third phase is developing a generic model based on the data analysis.

The in-depth interviews with tourism businesses may include community leaders, tourism businesses (the private sector), government, community groups, NGOs. Tourism industries chosen for this study range from: non-star hotels to five star hotels, land and air transport firms, snorkelling and diving companies. The location of these firms spread from the south, east and middle of Bali in order to maintain the generalizability of the findings. Purposive random sampling will be used to identify the key informants for the purposes of the research.

There will be two Focus group discussions (FGD). The first one will be conducted in the North of Bali involving tourism industries and communities to address research objective number two. The second FGD will be done in the South of Bali. It will involve tourism experts in Bali to participate in sharing knowledge and experiences as well as to contribute in answering research objective number three. Tourism experts from tourism industry associations, governments and from three universities in Bali will be invited, such as: Bali Tourism Institute, Udayana University and Ganesha University of Education.

Data obtained from in-depth interview and focus group discussion will be analysed by qualitative method. Thematic approach will be used to analyse the data. In thematic analysis, once data is collected, it will be coded to search the similar themes and patterns and then explore how the categorizations are presented by codes from case to case, from setting to setting (Glesne, 2011).

Who is conducting the study?

This study is being conducted through College of Business, Victoria University, Melbourne, Australia. The researcher details are as follow:

Chief Investigator :

Professor Terry Delacy,

Phone: +61429662020, Email: tdelacy@gmail.com

Student investigator:

Putu Indah Rahmawati

Phone +61424194151, email: putuindah.rahmawati@live.vu.edu.au.

Any queries about your participation in this project may be directed to the Chief Investigator listed above.

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001 or phone (03) 9919 4781.

11.3 Appendix 3: Consent Form for Participants involved in this research

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH

INFORMATION TO PARTICIPANTS:
We would like to invite you to be a part of a study of "Linking Corporate Social Responsibility, Tourism and Climate Change to Build Tourism Community Adaptive Capacity to Climate Change in Bali"

Full details of the project and your involvement are provided in the accompanying sheet titled 'Information to Participants Involved in Research'

CERTIFICATION BY SUBJECT

I, ... (Please write your name)
of .....(Please write your address)
certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the study:
"Linking Corporate Social Responsibility, Tourism and Climate Change to Build Tourism Community Adaptive Capacity to Climate Change in Bali" being conducted at Victoria University by: Putu Indah Rahmawati.

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by:Putu Indah Rahmawati
and that I freely consent to participation involving the below mentioned procedures:

- In-depth Interview
- Focus Group Discussion (FGD)

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdrew from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the interview/FGD will be recorded, and the files and recordings will be kept in a safe place locked in a filing cabinet in Victoria University. Only the researcher and the principal and associate research supervisors will have access to the data I have been informed that the information I provide will be kept anonymous and confidential.

Signed:

Date:

Any queries about your participation in this project may be directed to the researcher
Putu Indah Rahmawati
Phone +61424194151, email: putuindah.rahmawati@live.vu.edu.au.
Or to Research Supervisor
Professor Terry Delacy
Phone: 0429662020, Email: tdelacy@gmail.com

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001 or phone (03) 9919 4781.

11.4 Appendix 4: Ethic Approval from Victoria University

9/26/2018 Ethics Application - Approved - Putu Indah Rahmawati

Ethics Application - Approved

Quest.Noreply@vu.edu.au

Tue 7/16/2013 3:04 PM

Inbox

To:terry.delacy@vu.edu.au <terry.delacy@vu.edu.au>;

Cc:paul.whitelaw@vu.edu.au <paul.whitelaw@vu.edu.au>; putuindahrahmawati@live.vu.edu.au <putuindah.rahmawati@live.vu.edu.au>;

Dear PROF TERRY DE LACY,

Your ethics application has been formally reviewed.

Application ID: HRE13-138
Application Title: Linking Corporate Social Responsibility, Tourism and Climate Change to Build Tourism Community Adaptive Capacity to Climate Change in Bali

The application has been accepted and deemed to meet the requirements of the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007)' by the Victoria University Human Research Ethics Committee. Approval has been granted for two (2) years from the approval date; 16/07/2013.

Continued approval of this research project by the Victoria University Human Research Ethics Committee (VUHREC) is conditional upon the provision of a report within 12 months of the above approval date or upon the completion of the project (if earlier). A report proforma may be downloaded from the Office for Research website at: http://research.vu.edu.au/hrec.php.

Please note that the Human Research Ethics Committee must be informed of the following: any changes to the approved research protocol, project timelines, any serious events or adverse and/or unforeseen events that may affect continued ethical acceptability of the project. In these unlikely events, researchers must immediately cease all data collection until the Committee has approved the changes. Researchers are also reminded of the need to notify the approving HREC of changes to personnel in research projects via a request for a minor amendment. It should also be noted that it is the Chief Investigators' responsibility to ensure the research project is conducted in line with the recommendations outlined in the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007)'.

On behalf of the Committee, I wish you all the best for the conduct of the project.

Secretary, Human Research Ethics Committee
Office for Research
Email: researchethics@vu.edu.au

This is an automated email from an unattended email address. Do not reply to this address.

11.5 Appendix 5: Invitation letter for interviewee in Bahasa Indonesia

Kepada:
Direktur Executive Yayasan IDEP
Di
Gianyar-Bali.

Dengan hormat,

Bersama surat ini, kami mohon kesediaan Bapak/staff untuk berpartisipasi dalam penelitian yang berjudul "Linking Corporate Social Responsibility, Tourism and Climate Change to BuildTourism Community Adaptive Capacity to Climate Change in Bali (Menghubungkan Corporate Social Responsibility, Pariwisata and Perubahan Iklim Untuk Membangun Kapasitas Adaptasi Masyarakat Pariwisata di Bali)".

Penelitian ini penting untuk meningkatkan citra Bali di tingkat internasional. Kebijakan international untuk mengurangi emisi GHG (gas rumah kaca) dari perjalanan wisata jarak jauh tentu saja akan mengurangi jumlah wisatawan yang datang ke Bali di masa mendatang. Hal ini menjadikan Bali sebagai korban pertama dari ancaman perubahan iklim. Ini akan berpengaruh terhadap bisnis anda dan mengurangi pendapatan masyarakat, sehingga mengurangi kapasitas adaptasi masyarakat terhadap perubahan iklim. Oleh karena itu, keterlibatan anda dalam penelitian ini diharapkan dapat membentuk citra positif tentang Bali di tingkat Internasional. Besar harapan kami agar anda turut berpartisipasi dan memberi aspirasi bagi perusahaan pariwisata di Bali untuk mengembangkan program-program CSR mereka, untuk dunia yang lebih baik dan masa depan yang lebih baik.

Detail informasi mengenai proyek penelitian ini dan daftar pertanyaan telah di lampirkan bersama surat ini. Wawancara akan dilaksanakan antara 28-30 Agustus 2013. Kami bersedia mengikuti jadwal yang anda berikan. Demikian permohonan ini, atas kerjasama dan bantuan anda, kami haturkan banyak terima kasih.

Best regards,

Professor Terry Delacy (Principal Researcher)
Contact details
Phone: +61429662020, mail: tdelacy@gmail.com

Putu Indah Rahmawati (Student researcher)
Contact details
Phone +61424194151 email: putuindah.rahmawati@live.vu.edu.au

11.6 Appendix 6: Focus Group Discussion (FGD) 1 Guidelines

FOCUS GROUP DISCUSSION (FGD 1) GUIDELINES

Location : Village hall in Pemuteran village, North of Bali.

Participants : Tourism managers, NGO Biorock, villagers, tourism awareness groups, government representatives (15 people).

Schedule : Week 1 November 2013.

Technical assistants (Ganesha University of Education) :

Moderator : Putu Indah Rahmawati (lecturer)

Note person : Putu Veyna Maharani (student)

Documentation: Fajar (audio, video and photograph)

Technical and admin : Dede Dukakis (student)

SCENARIO :

1. Introduction/warm up (5 minutes):

- introduce the moderator, and respondents
- introduce the topic
- discuss the rules during the FGD

2. Discussion:

There were three main questions discussed in the first FGD:

1) Current climate change hazards felt by the community? And how it impacts the community life? (30 minutes). In this session, participants were asked to share their experience regarding the climate change in their village and how climate change disturb their livelihood.

2) Assessing Corporate Social Responsibility of Tourism Industry in Pemuteran Village (50 minutes). In this session, participants were asked to present their CSR activities in the village. This session includes:

- Presentation of tourism industry about their CSR initiatives (5 minutes)
- Presentation from Biorock foundation on coral reefs conservation(5 minutes)
- Presentation from community group "*Pecalang Laut*" (5 minutes)

This session also discussed:

- Comparison of the community livelihood before and after CSR initiatives
- Facilitators and inhibitors to the current CSR initiatives

3. Discussing Future Plan (30 minutes)

This session started by raising the participants' awareness that climate change is unequivocal and need to be addressed promptly. Followed by discussing:

- how can it be addressed
- who can "take the lead" in addressing this
- discuss how all stakeholders can help contribute

4. Closing out the FGD (5 minutes):

- Getting and asking any final or follow-up questions
- Asking the group for final thoughts on the topic
- Thanking the participants
- Filling out any final paperwork
- Gathering all material (notes, photos, audio and video recording)
- Restoring the room to its original condition

11.7 Appendix 7: Interview questions for Public Sector

INTERVIEW QUESTIONS WITH GOVERNMENT

1) In your opinion, what are the key issues tourism developments in Bali?
2) Would you please explain the strategies for tourism development in Bali? Long term? Middle term? Short term?
3) How government integrate the issue of climate change in the Grand design of Bali's development?
4) What are the government plans and policies in dealing with the threat of climate change?
5) Would you please mention the inhibitors and facilitators factors in facing climate change problems?
6) In your opinion, what are the roles of corporate social responsibility in helping the government deal with climate change?
7) Does the government integrate the corporate social responsibility in the government planning and development in Bali?
8) Who are the key actors in integrating CSR in the Bali development program?
9) Can you explain how the corporate social responsibility of tourism industry in Bali distributed?
10) Is there any programs that can make government, companies and society work together in dealing with climate change risks?
11) In your opinion, how to stimulate the tourism industries to participate in implementing their CSR program to help the community deal with the climate change impacts in the future?

11.8 Appendix 8: Interview Questions for Tourism Managers

INTERVIEW QUESTIONS FOR TOURISM MANAGERS:

1) Would you please tell me, what CSR initiatives are currently employed in your organisation?
2) Do you see these initiatives as CSR only or as a respond to climate change?
3) If any, what are the facilitators and inhibitors to applying CSR strategies within organisation? With community?
4) As you know that actions associated with building adaptive capacity may include communicating climate change information, building awareness of potential impacts, maintaining well-being, protecting property or land, maintaining economic growth or exploiting new opportunities. Do you think that Corporate Social Responsibility can improve community's ability to deal climate change?
5) Do you think that your company have any plan to enhance firm's corporate social responsibility towards building community's adaptive capacity to climate change?
6) Does the company have a CSR report? What are the benefits of CSR report for you company?
7) What do you think about this "the more company has CSR reports the more community can be helped to coped with climate change"

11.9 Appendix 9: Interview Questions with NGOs or Community Group (in Bahasa Indonesia)

1) Mohon bapak/ibu menjelaskan program-program apa saja yang dilaksanakan di organisasi ini berkaitan dengan upaya mengatasi permasalahan perubahan iklim?
2) Bagaimanakah tingkat kesadaran masyarakat terhadap resiko perubahan iklim?
3) Menurut anda, apakah program Corporate Social Responsibility (CSR) dapat membantu membangun kapasitas adaptasi masyarakat terhadap perubahan iklim?
4) Bagaimana pendapat anda tentang hal ini "Semakin banyak perusahaan memiliki program CSR semakin banyak masyarakat yang terbantu untuk menghadapi ancaman perubahan iklim di masa mendatang"?
5) Menurut anda, bagaimana industry pariwisata di Bali dapat membantu meningkatkan kemampuan adaptasi masyarakat menghadapi ancaman perubahan iklim?
6) Adakah program CSR dari industry pariwisata di Bali yang mendukung Yayasan IDEP untuk membangun kapasitas adaptasi masyarakat terhadap perubahan iklim?
7) Mohon Bapak/ibu menjelaskan faktor-faktor pendukung Yayasan IDEP dalam menjalankan program-program kepada masyarakat di Bali?
8) Mohon Bapak/ibu menjelaskan faktor-faktor penghambat Yayasan IDEP dalam menjalankan program-program kepada masyarakat di Bali?
9) Kerjasama Pemerintah, Perusahaan dan LSM sangat penting dalam membantu masyarakat dalam menghadapi ancaman perubahan iklim. Bagaimana peran pemerintah di Bali dalam memotivasi/menjembatani keberlanjutan program-program di Yayasan IDEP?

11.10 Appendix 10:

Summary of the Green Growth 2050 Roadmap's major directions (guiding policy)

Products and Markets Cluster

a. Rationalize government programs to encourage quality, authentic product and experiences with stronger environmental performances. Specifically target high yielding market segments and provide incentives for green growth product development.
b. Creative an authentic Bali quality product mark. Specifically provide support with certification and promotion.
c. Establish 'authentic Bali' products that showcase the uniqueness of each Bali tourism destination under the 'Bali brand'.
d. Build on 'Bali my life' integrated with 'Clean Green Bali' in a consistent high quality marketing program. Specifically shift to more digital marketing.

Community and Jobs Cluster

a. Accelerate programs to create green jobs, with incentives, training and micro-financing.
b. Build a community program to strengthen the sector at a local level and increase local jobs and entrepreneurs with a focus on cultural authenticity.
c. Enhance the Bali education and training system so as to deliver continuous learning and skills improvement for the tourism sector.
d. Establish a hospitality and tourism recruitment program aimed at matching industry needs with workforce availability.
e. Support customary village practices as an effective means of conservation.
f. Include local food production linked to Agro-tourism.

Climate and Environment Cluster

a. Government to strengthen implementation of waste management; water management; and biodiversity conservation.
b. Government and private sector to seek investment to lower carbon intensity of electricity and reduce carbon emission from ground transport.
c. Tourism enterprises to measure and reduce waste production, water use and GHG emissions. Specifically use a simple, bespoke online measuring tool.
d. Build resilience of the tourism sector to shocks and stressors including to future climate change risks.
e. Establish a dialogue between National, Provincial and Regency government and the tourism industry around developing more effective integrated land use planning.

Infrastructure and Investment Cluster.

a. Create a comprehensive tourism infrastructure plan that cross relates to national and provincial plans/programs.
b. Develop an integrated approach to air, sea, road, rail, transport infrastructure and related traffic congestion – including light rail and a new airport. Specifically identify transport choke points resulting from tourism or impacting adversely on product quality.
c. Implement carbon pricing systems in line with national carbon commitments and polluting vehicles to be gradually phased out by supply/price regulation.
d. Explore effective means to establish a sustainability financing facility to underpin green growth development.
e. Rationalise current visitor fees/charges and investigate innovative international financing.

11.11 Appendix 11: Bali Plan 2013-2018

BALI Mandara Volume II (2013-2018)

Bali Mandara is a set of commitments of local governments to develop strategies Bali advanced, secure, peaceful, and prosperity.

The commitment is further stated in the Bali Provincial Regulation No.9 of 2009 on the Medium-Term Regional Development Plan of Bali Province (RPJMD) 2008-2013

1. **HEALTH**
    1. Adding 20 health centres Inpatient Unit in whole of Bali
    2. Building 2 Primary Hospitals
    3. Building International Hospital Bali Mandara
    4. Adding Hospital Beds with Class III
    5. Adding Unit *Ambulance* for All Health Centre
    6. Adding Specialist Doctors, Physicians and Paramedical Personnel
    7. Improving Quality of Service JKBM

2. EDUCATION

1. Compulsory Education 12 Years
2. Scholarship for Vocational School (SMK) and the Medical Faculty of Udayana University
3. Expanding SMA Bali Mandara with Building 2 units SMA Bali Mandara in Buleleng regency
4. Adding Scholarship Program for Faculty Bali's Literature and Agriculture
5. Providing Scholarship for teacher and Certification Standards
6. Build School (SLB) and *Boarding School*
7. Smart Card Plus Savings Book Bali Mandara for Disadvantaged Students
8. Infrastructure Repair of Schools

3. FIELD OF EMPLOYMENT AND ECONOMY

1. Empowerment of SMEs Through Technical Assistance and the Unsecured Credit Facility Facilitated Jamkrida Bali Mandara

2. Education and Training for Employment Candidate Accompanied Cruise Credit Facility
3. Empowerment and the Traditional Market Soon Build 200 Units in whole Bali Traditional Market
4. Optimizing Function and Fun Training Center (BLK) Through the Program Guidance and Training in the District/City
5. Empowerment Through Senggol Market Khas Bali Culinary Tour Package

4. **SOCIAL**
    1. Renovating 20,000 houses for poor people
    2. Grant Assistance Rp. 200 Million for Every Pakraman/village
    3. Grant Aid for Every Subak (farmer organisation)
    4. Program to develop the Village Office 100 with Help of Rp 1 billion every village and Assistance Operational Costs of Rp 20 Million Each village
    5. Providing funds for mass cremation
    6. Empowerment for teenagers
    7. Empowerment and Building Orphanages and Nursing Homes
    8. Death Benefits for Disaster Victims
    9. Cars for Operational Bali Mandara Rapid Reaction *(Quick Response)*

5. **ART OF CULTURE AND TOURISM**
    1. Maximize Function *Art Center*for Cultural Arts Center Activity
    2. *New Art Center* – Build a More Representative and Modern Center
    3. 100 Village-Based Development of Cultural Tourism
    4. Empowerment Studio Art Traditional and Modern Culture
    5. Facilitate Artists and Cultural Insurance
    6. Help IPR Certification Process
    7. Developing Cultural *(Spiritual Tourism),* Agriculture *(Agricultural Tourism),* Sports *(Sport Tourism),* and Seniors *(Retirement Tourism)*
    8. Provide Health Assistance, Special for Bali's Priests and Stakeholders
    9. Controlling Illegal Travel Agents *and* Guides
    10. *On line* for hotel and restaurant tax

6. **YOUTH AND SPORTS**
    1. Renovation of Ngurah Rai International Standard for Gelora
    2. Building Infrastructure Sports Foundation Hosts as PON XXII 2018
    3. Building Youth and Sports Venues Bali Mandara
    4. Providing facilities and the Award for Outstanding Young Athletes

7. **ENVIRONMENT AND AGRICULTURE**
    1. Adding 1,000 Simantri
    2. Building Organic Fertilizer Factory at Bali Mandara
    3. Bali Embodied as *"Green Province"*
    4. Organic Fertilizer Subsidy
    5. *Organic Trade Centre*
    6. UN subsidies for Rice
    7. Build 100 Embung (water reservoir)
    8. 50 Fishing Vessels
    9. Seaweed Sports Factory
    10. Consistent Spatial

8. **WOMEN'S EMPOWERMENT**
    1. Improving Women's Empowerment
    2. Providing Child Care (TPA)
    3. Preparing Guidance Program Special Skills and Strengthening Capital for Women
    4. Domestic Violence Prevention Program
    5. Special Gift During Delivery
    6. Women Farmers' Cooperative Organisation
    7. Life Skills Training *(Life Skill)*

9. **INFRASTRUCTURE**
    1. Clean Water/SPAM Patanu
    2. 1,000 Megawatts of electricity
    3. District roads, village and province
    4. Monorail Around Bali
    5. Airport in the North
    6. Water Reservoir Titab
    7. Water reservoir in Guyangan Nusa Penida
    8. Port Revitalization Celukan Bawang areas
    9. Ferry Nusa Penida
    10. House Expo *(Trade Centre)*
    11. Creative Industries
    12. Development of BPD and Jamkrida
    13. Empowerment of local assets
    14. Local Entrepreneur Investors

10. **DEMOCRACY AND HUMAN RIGHTS**
    1. Governor *(Open House)*
    2. Interactive TV and Radio
    3. Empowerment of NGOs and the Public
    4. Health news

5. Parties and Parliament
6. KPID empowerment and KIP

11. **SECURITY AND PUBLIC ORDER**
    1. Coordinating military - police
    2. National Unity and Empowerment of police
    3. Security Guards and Coaching Pecalang
    4. Hotel Security and Safety Standards
    5. Security Forces Modernization; TNI-Police
    6. Maintain Network

Source:http://www.mademangkupastika.com/visi-misi-made-mangku-pastika.php