Green Growth 2050 Roadmap For Bali Sustainable Tourism Development

Ministry of
Tourism and Creative Economy
of The Republic of Indonesia

PART ONE

PART TWO

Acknowledgements

This Report represents the output of a consultancy commissioned by the Indonesian Ministry of Tourism and the Creative Economy to develop “A Green Growth 2050 Roadmap for Bali Tourism”. The consultancy was undertaken by a group of Indonesian researchers coordinated by Dr Agung Wirantha and Mr Ary Suhanda and international experts, Professor Geoffrey Lipman, Professor Terry De Lacy, Mr Geoff Buckley and Ms Alexandra Law, in the last quarter of 2011.

The research used a framework model and methodology developed by Greenearth.travel and Victoria University (Australia).

The project was overseen by a Steering Committee, chaired by the Secretary General of the Ministry of Tourism and Creative Industries with representatives from national government ministries and agencies and of the Bali Governor.

A key component of the study was the work undertaken by four visioning groups of Bali stakeholders comprising representative of the Provincial and regency governments, industry and NGOs. This extensive work was co-ordinated by Dr Wirantha.

The research team undertook and commissioned several primary studies using a number of experts namely: Professor Lindsay Turner, Dr Sebastian Filep and Dr Serajul Hoque. These reports are presented in part two of the report.

Executive Summary

Bali has developed as one of world's most prominent tourism destination. Its main attractions are its nature, its unique culture and the hospitality of its people.

However, Bali is facing many important challenges. Its traditional agriculture is under pressure from the staggering demand for land from population and tourism growth. Bali is also facing serious threat from its lack of capacity to maintain water provision for agriculture, industry, tourism and residential development. Traffic congestion is currently overwhelming and GHG emissions and degradation of terrestrial and marine ecosystems are increasing. As the main economic sector in Bali, tourism (more than 40% of its GDP according to Indonesian Tourism Satellite Accounts), is under pressure to reduce its impact while still continuing to grow in a very competitive environment to deliver much needed livelihood improvements for its people.

To help address these challenges we have developed a Green Growth 2050 Roadmap to guide the continued growth and sustainable development of Bali's tourism sector.

We have used Green Growth as the strategic policy framework, because this has already become an overriding global geopolitical strategy of industrialised and developing countries as well as major international institutions. It is a transformational model for responding to today's economic, climate and poverty challenges, while preparing for the impacts of a growing population. It is based on clean energy, major technological innovation, continuous info-communication advances, social inclusion, poverty alleviation and biodiversity conservation. It will become even more relevant over time as the climate imperative strengthens - for that reason we have taken 2050 as the long term transformation point with built in capacity for regular review and adjustment.

The Roadmap helps determine how to get there, with the engagement of key local stakeholders in both visioning and execution programs. It also provides a framework for integrating global/national policy evolution with local implementation; as well as for incorporating public, private and civil society interests.

We followed a structured process to collect international, national, provincial and local information and data, comprehensively engage stakeholders, rigorously analyse these inputs against our green growth framework, leading to the development of the Green Growth 2050 Roadmap for Bali Tourism.

The Roadmap is focussed on delivering 5 objectives:

- Improved livelihoods,
- Growing visitor economy,
- Better environment,
- Reduced carbon, and,
- An Authentic Bali.

It is underpinned by Bali's core philosophy of Tri Hita Karana Sustainable Development. The Roadmap has 12 key strategies aimed at helping to deliver the objective. These are:

- Enhance product
- Quality marketing
- Build human capital
- Manage water
- Manage waste
- Conserve biodiversity
- Reduce GHG emissions
- Build resilience
- Upgrade infrastructure
- Manage transport
- Improve land-use planning, and
- Strengthen financing.

The Strategies are clustered into four areas that highlight the major directions of the roadmap.

1. Products and Markets

- Rationalise Government programs to encourage quality, authentic product and
- experiences with stronger environmental performance;
    - Target High Yielding Market Segments
    - Incentivize green growth Product Development
- Create authentic Bali quality product mark;
    - Support with certification & promotion
- Establish "authentic Bali" products that showcase the uniqueness of each Bali Tourism destinations under the "Bali Brand".
- Build on "Bali is my Life" integrated with "Bali Clean & Green" in a consistent high quality
- marketing program;
    - Shift to more digital marketing

2. Community and Jobs

- Accelerate programs to create green jobs, with incentives, training and micro-financing.
- Build community program to strengthen the sector at a local level and increase local jobs & entrepreneurs with a focus on cultural authenticity.
- Enhance the Bali Education and Training System so as to deliver continuous learning & skills improvement for the tourism sector.
- Establish a Hospitality and Tourism recruitment program aimed at matching industry needs with workforce availability.
- Support customary village practices as an effective means of conservation;
    - Include local food production linked to agri-tourism.

3. Climate and Environment

- Government to strengthen implementation of waste management; water management; & biodiversity conservation.
- Government and Private Sector to seek investment to lower carbon intensity of electricity & reduce carbon emissions from ground transport.
- Tourism enterprises to measure & reduce waste production, water use & GHG emissions; Using a simple bespoke online measurement tool.
- Build resilience of the tourism sector to shocks and stressors including to future climate change risks.
- Establish a dialogue between National, Provincial and Regency Government and the tourism industry around developing more effective, integrated land use planning.

4. Infrastructure and Investments

- Create a comprehensive tourism infrastructure plan that cross relates to national & provincial plans / programs.
- Develop an integrated approach to air, sea, road, rail, transport infrastructure and related traffic congestion – including light rail & new airport.
- Identify transport choke points resulting from tourism or impacting adversely on product quality.
- Implement carbon pricing systems in line with national carbon commitments & polluting vehicles to be gradually phased out by supply / price regulation.
- Explore effective means to establish a sustainability financing facility to underpin green growth development.
- Rationalize current visitor fees / charges & investigate innovative international financing.

We believe the Government working with industry and the Bali community can use the Green Growth 2050 Roadmap to establish a framework to manage creative change.

The seeds for that creative change already exist in:

> The Bali Green Province Roadmap with its capacity to guide environmental change.
> The National Economic Development 2011-2025 Master plan with its identification of Bali and Beyond as a core strategy for long term sustainable traffic flows for the Bali -
> Nusa Tenggara corridor and in turn as the gateway for Indonesian Tourism dispersion.
> The new National Tourism Strategy with its potential for “global” linkage between diverse national, provincial, regency and community policies.

We recommend an Implementation Taskforce from National, Provincial and Regency Governments jointly chaired by the Minister and Governor be established to implement the Roadmap strategies and to:

> Use the Green Growth 2050 Roadmap to establish a framework to manage change.
> Integrate the Green Growth Roadmap into the Bali Green Province Roadmap.

- Utilize the Green Growth Roadmap as a pivotal implementation platform for the Republic of Indonesia's "Acceleration and Expansion of Economic Development 2011 - 2025" tourism component.
- Link the Green Growth Roadmap to the strategic policies and targets of the Ministry of Tourism and Creative Industry.
- Focus on fast tracking key actions vital to addressing immediate challenges for Bali tourism.

Implementation of this Green Growth 2050 Roadmap and its associated strategies will thereby enable Bali to fulfil its role as the "... gateway of the main economic activity of tourism in Indonesia" but at the same time retain the "Tri Hita Karana" philosophy that underpins the Balinese lifestyle; a balance between the spiritual, natural and human interaction.

The Roadmap Strategy recognised that without immense change, Bali could exceed its carrying capacity for 'Tri Hita Karana' sustainability at some time between now and 2050. This is due to a combination of strong visitor growth (our forecast has 14 million visitors in 2020), rapid population growth, (our forecasts indicate an increase in tourism employment from 800,000 in 2010 to 2 million in 2020), intractable traffic congestion, severe waste/carbon management demands and potential land use constraints.

Such continuing expansion will become a major threat to the very authenticity and Tri Hita Karana culture that defines Bali's unique attraction as a destination. This will also threaten the established socio-economic benefits from tourism, so important to the livelihoods of Bali's people.

We are convinced that this Bali Green Growth 2050 Roadmap, with its Tri Hita Karana foundation and strategies evolving from community based engagement and visioning, can be a valuable addition that will help to successfully manage the process of dynamic change.

1 Introduction

The Indonesian Ministry of Tourism and Creative Economy commissioned PT. Maton Selaras Consultant and a team of international experts co-ordinated by Victoria University (in Australia) to "develop a strategy for Bali tourism to take an international leading role into the new green economy and tourism market and provide a road map for action and investment ".

Specifically the Government requested the research team to:

- Scope Bali tourism's sector and aligning and comparing it to competitors and global trends
- Undertake a vulnerability assessment of Bali tourism to climate change
- Complete a supply side sustainability and Green House Gas emissions overview of Bali tourism
- Complete a demand side analysis of Bali tourism, its comparative market performance including Brand positioning
- Provide a Quadruple (Economic/ social/environmental/climate) bottom line vision for Bali tourism emanating from the Bali community, culture and industry and aligned with the changing international economy, employment, market and tourism demand.
- Outline strategic directions for sustainability and mitigation of emissions for aviation, ground transport, accommodation and attractions, and conservation of ecosystems, management of waste, improving livelihoods and job opportunities and integration of tourism into local community and balancing it with traditional Bali culture
- Outline the elements needed to improve Bali's competiveness position taking into account the WEF tourism competitiveness report
- Outline the components needed in a strategy to develop an updated Bali tourism brand aligned to the new green economy
- Provide 2050 travel spectrum scenarios and draft a preliminary Green Growth 2050 roadmap to implement the strategy in the near, medium and long term.

This has resulted in this Green Growth 2050 Roadmap for Bali Tourism.

This report:

- Reviews Bali's tourism sector in the context of an emerging global green economy
- Outlines the methodology used
- Presents an analysis of the data collected
- Describes the Roadmap and recommended strategies
- Proposes a set of next steps towards implementation of the Roadmap

2 Objectives

The broad aim of the Indonesian Government was to develop a strategy for Bali tourism that would allow it to take an international leading role in bringing Bali (a globally important destination) into the new green economy and provide a road map of action and investment for the development of sustainable tourism in Bali.

2.1 Roadmap Objectives

In discussion with key stakeholders it was agreed that Roadmap should aim to deliver five key objectives for the people of Bali and the Indonesian Government. These five key objectives are:

Objective 1. Improved Livelihoods

Objective 2. Growing Visitor Economy

Objective 3. Better Environment

Objective 4. Reduced Carbon

Objective 5. Maintain an authentic Bali.

In developing the roadmap, it was clear that it should be underpinned by a philosophy of achieving Tri Hita Karana sustainable development.

2.2 Tri Hita Karana Sustainable Development

Tri Hita Karana is a concept initial derived from Sanskrit, and literally means three, welfare and cause. In the culture of Bali the complete sentence of Tri Hita Karana symbolizes the three aspects that bring about wellbeing and have a significant meaning in the culture of Bali. For the Balinese life is about a balanced and harmonious relationship between the:

(1) Spiritual environment (Parahyangan); the relationship between a human being with the God

(2) Social environment (Pawongan); the relationship of a human being with other human beings, and

(3) Natural environment (Palemahan); the relationship between a human being with the environment and other creatures.

Their source of happiness is based on the harmony between human being with universe, the earth, the sky, and with other creatures. The Balinese think, speak and act to achieve this harmony through their daily activities. Harmony among these three aspects of life is believed to generate the maximum benefit to human spiritual, mental and physical well being

Tri Hita Karana is a basic philosophy that is deeply engrained in Balinese culture, tradition and lifestyle. It is the belief that happiness is based on the harmony between a human being with (1) God and the universe, earth, and sky, (2) other human beings and (3) nature and other creatures. The Balinese think, speak and act to achieve this harmony through their daily activities in order to generate the maximum spiritual, mental and physical wellbeing.

3 Background

3.1 Bali Tourism Profile

Bali is one of more than 17,000 islands in the Indonesian archipelago and is located just over 2 kilometres (almost 1.5 miles) from the eastern tip of the island of Java and west of the island of Lombok. The island, home to about 4 million people, is approximately144 kilometres (90 mi.) from east to west and 80 kilometres (50 mi.) north to south.

The word "paradise" is used a lot in Bali and not without reason. The combination of friendly, hospitable people, a magnificently visual culture infused with spirituality, plus spectacular beaches with great surfing and diving have made Bali Indonesia's unrivalled number one tourist attraction.

Eighty percent of international visitors to Indonesia visit Bali and Bali alone.

Most visitors will arrive at Ngurah Rai International Airport, also known as Denpasar International Airport located in Tuban between Kuta and Jimbaran, roughly 30 mins away from Denpasar. Ngurah Rai is Indonesia's 3rd busiest international airport (after Jakarta and Surabaya) and a major hub well -connected to Australia, South-East Asia, and the rest of Indonesia.

Bali can be broadly broken down into six visitor regions, (also shown on the map above)

South Bali (Kuta, Bukit Peninsula, Canggu, Denpasar, Jimbaran, Legian, Nusa Dua, Sanur, Seminyak, Tanah Lot). The most visited part of the island by far, with Kuta Beach and chic Seminyak.

Central Bali (Ubud, Bedugul, Tabanan) the cultural heart of Bali and the central mountain range.

West Bali (Negara, Gilimanuk, Medewi Beach, Pemuteran, West Bali National Park) Ferries to Java and the West Bali National Park.

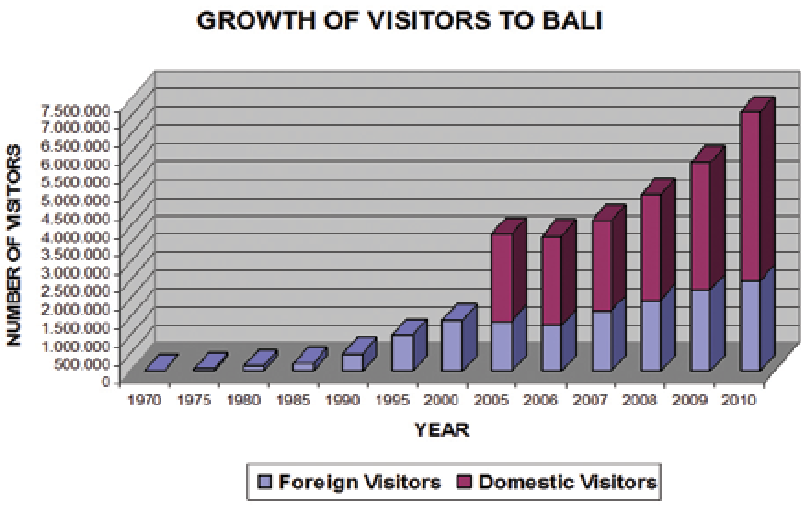
North Bali (Lovina, Singaraja) Quiet black sand beaches and the old capital city.

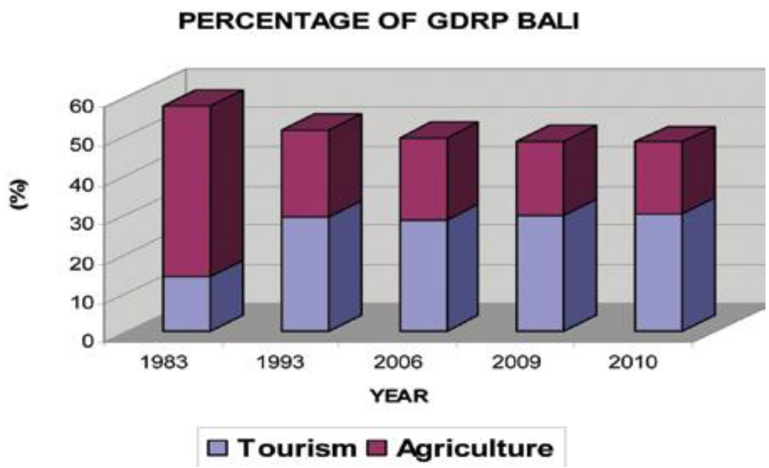
East Bali (Amed, Besakih, Candidasa, Kintamani, Klungkung, Mount Agung, Padang Bai, Tirta Gangga) Laid back coastal villages, an active volcano and the mighty Mount Agung

Southeastern Islands (Nusa Lembongan, Nusa Penida, Nusa Ceningan) Quiet offshore islands in the southeast, popular for diving activities.

3.2 Tourism to Bali

Whilst Indonesia did not fall victim to recession in 2008-2009 unlike most other countries in the world, travel and tourism still felt the negative impact of the woes affecting other countries, as inbound tourism flow slowed down notably in growth and spending of these tourists shrank considerably.





2010 was however, a brighter year, as the recovered economic situation in various countries translated into more tourists visiting Indonesia, boosting inbound tourism flow quite strongly if not reaching 2008 levels. Spending of inbound tourists has also shown growth again, indicating signs of recovery in demand.

The 2007 Bali Tourism Satellite Account indicated that 46.6% of Bali's GDP came from tourism and the sector was responsibility for the employment of 816,000 people. The following Graph indicates the growing percentage of Bali GDP driven by tourism receipts.

3.3 Green Growth and the Travel & Tourism Sector

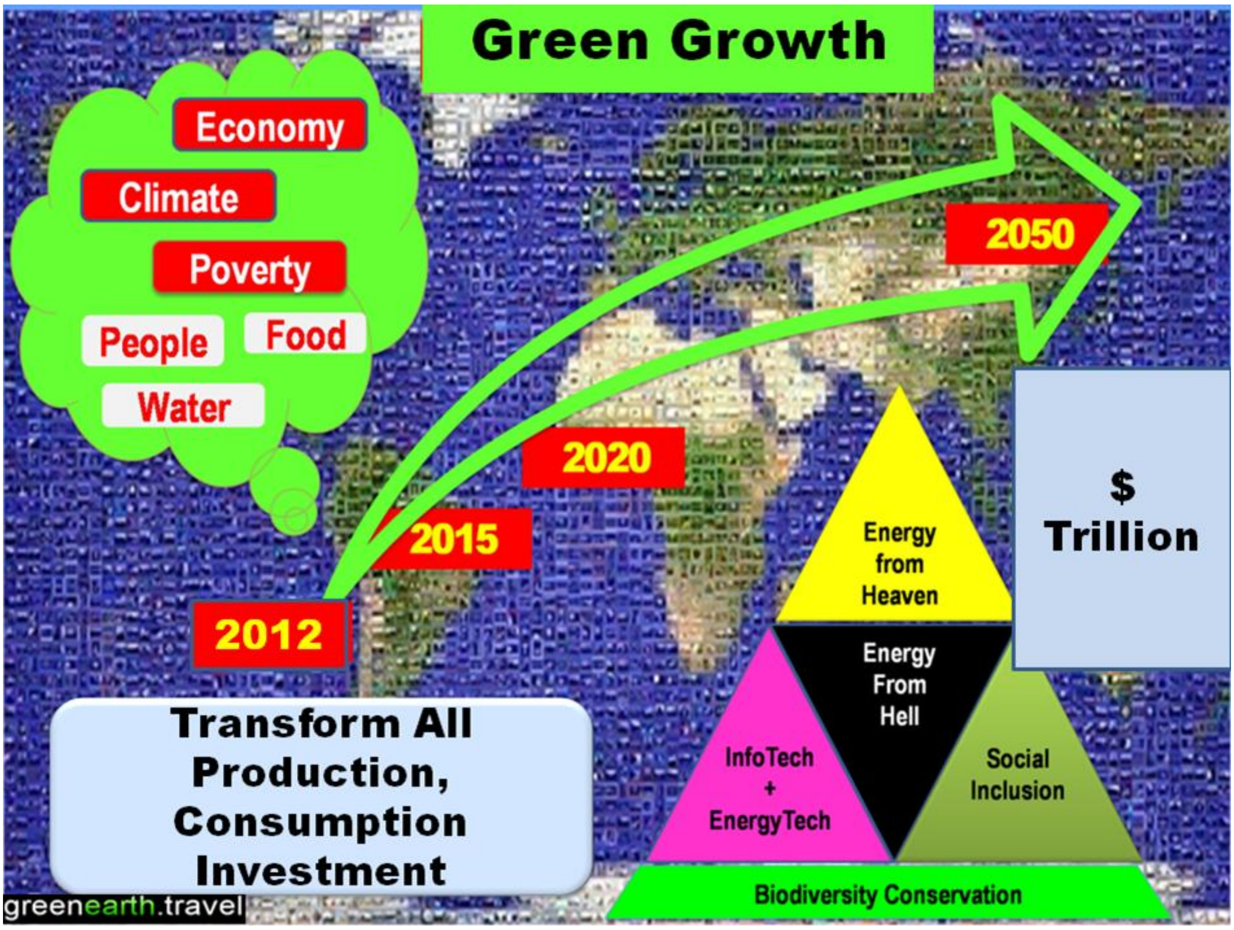
Green Growth -- A New Paradigm

Green Growth is gaining significant worldwide geopolitical momentum as a new economic paradigm. It is seen as a coherent strategy set, to respond proactively to today's extreme economic, poverty and climate crunches; as well as preparing for tomorrow's anticipated food, water and energy crises; compounded by a population jump from 7 to 9 billion over the next 4 decades.

This strategic challenge is clouded by continuous pressures of dramatically volatile economics, markets and related politics; intensified by lightly regulated, superheated, globalization of capital and accentuated by recurring patterns of extreme natural or manmade disasters. But the long term direction remains unchanged. The generally identified transformation time frame of 2050 is linked to the ultimate date the world community is targeting for stabilised global emissions to keep adverse impacts of climate change at manageable levels. There will be numerous focal points for course adjustment en-route.

According to the UN the new green economy will be low-carbon, resource- efficient and socially inclusive. Key components are reducing dependence on oil or coal and increasing reliance on clean energy – wind, solar, bio fuel, geothermal etc.: transferring technology and finance to developing and emerging countries: conserving eco-systems for life sustaining biodiversity and linking information technology with energy technology to manage change. It will result in improved human well-being and reduced inequalities over the long term, while not exposing future generations to significant environmental risks and ecological scarcities or reduction in quality of life.

The complexity, scale and scope of this half century shift in every activity on this planet is almost incomprehensible - given different starting points, socio-politico-economic realities and multi-trillion dollar cost.



Across the world, governments and industry stakeholders are now defining green growth principles, practices and enabling programs, and integrating them into national and local policy action. This includes a range of reforms to boost and sustain demand, foster job creation, contribute to rebalancing, and increase growth potential. It also includes commitments to invest in energy and resource efficiency, low carbon technologies, greener cities and sustainable mobility. At the same time, industry generally is embracing the concept in Corporate Social Responsible or transformational programs and consumer interest is gradually escalating.

The second Earth Summit in Rio in June 2012 will see a new global effort to recommit to the Green Growth Transformation and it is evident that the travel and tourism sector must seize the opportunity to reposition to contribute and to benefit from the paradigm.

Travel and Tourism's Socio-economic Balance Sheet.

On the positive side, tourism's direct and indirect economic and employment contribution is massive. From 2011 to 2021 it is forecast to grow from 9.1% of global GDP to 9.6% and from 8.8% to 9.7% of global jobs (WTTC). These impacts are particularly important for developing landlocked or small island states, where it is a major source of export and foreign investment. Virtually all poor countries have some capacity to be competitive producers in this marketplace. But the balance sheet is more than economics - it's a factor in global integration, trade and business: it underpins enjoyment of leisure, sport, culture or nature: it's fundamental for well-being and happiness.

On the negative side, Travel and tourism is an evident contributor to climate change generating some 5% of global carbon emissions with aviation accounting for some 2%.The sector also has a significant “eco” foot print in terms of water, waste, marine biodiversity, and threats to culture/ traditions. These elements will also grow through forecast sector expansion, unless radically modified by government, industry and accommodation, the response has been ad hoc. Yet, large corporations are increasingly engaging through CSR, supply chain management, certification and awards. For land transport there are alternatives: cleaner vehicles, modes and fuels: for aviation, in the absence of the large scale commercialization of sustainable low carbon jet fuel, the challenge is greater.

With the right strategies, these challenges can be met by a combination of technology, incentives, market based mechanisms and greener consumer behaviour. However, enabling frameworks for sustainability transformation in this sector are still too fragmented. The industry/government interface, tourism/transport divide, and “siloed” decision making must also be transformed to encourage creative cross sector approaches.

3.4 A 2050 Vision for Travel and Tourism and Green Growth

A green growth vision for travel and tourism should encompass sustainable destinations, sustainable mobility and sustainable lifestyles based on clean renewable energy. All stakeholders in the value chain must be engaged: on the supply side it is air, land and water transport, accommodation, tour operators and tourist attractions and on the demand side travellers themselves. It should enhance the long term competitiveness of tourism destinations and the supporting industries. It must ensure that socio-economic growth is inclusive and provides decent jobs. Ultimately, it must bring about new demand and empower communities in the context of a broader balance sheet of societal well-being, including quality of life and environmental sustainability, or what some call gross national happiness.

We have used a framework for visioning and analysis developed by Greenearth.travel (see figure 1), to develop an integrated and comprehensive framework for government, industry and multilateral institutions to explore 2050 green growth options. The scheme deals with three core questions:

1. **What** do we want to achieve when we refer to a new paradigm for green growth and travel and tourism? The response focuses on:

(i) sustainable destinations,
(ii) sustainable mobility, and
(iii) sustainable lifestyles

2. **Why** do we want to achieve it, in other words, through objective analysis, could visitors, hosts, supply side businesses, the community at large and other stakeholders assess the available options for the transformation of the sector?

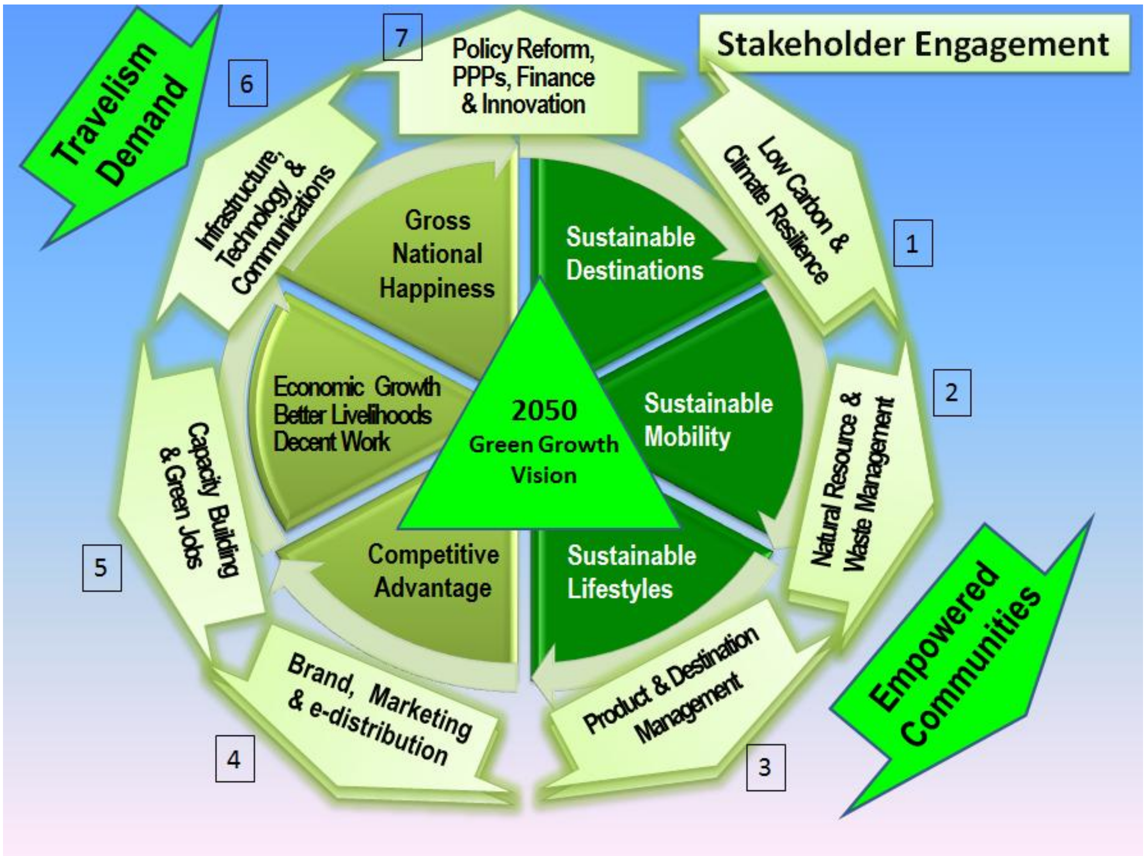
The response centres on:

(i) enhanced competitiveness (i.e. developing first mover advantages through industry leadership and new business models, reputation management, customer retention and long term brand equity),
(ii) green growth with decent jobs and
(iii) advancing happiness/societal well-being

3. **How** can we deliver on this vision? What are the pillars of our response as we move down the path from the current reality to the envisaged future? We identify seven pillars:

i. building climate resilience (adaptation) and managing the low carbon transition (mitigation);
ii. natural resource and waste management, which includes improved biodiversity conservation;
iii. product development and destination management;
iv. branding, marketing and e-distribution;
v. capacity-building & green jobs;
vi. infrastructure, technology dissemination & communications; and, finally,
vii. the means of implementation, including policy reform, public- private partnerships (PPPs), finance and innovation.

Figure 1: The Roadmap for Travel & Tourism and Green Growth



This process then leads to the creation of a Roadmap for Bali to:

- Respond effectively to a rapidly moving marketplace in very uncertain times
- Engage tourism in transformation to a low carbon, resource efficient future
- Thoroughly asses trends to improve competitiveness & the overall visitor economy
- Handle increasing visitor numbers and impacts, more sustainably
- Integrate tourism in overall community development, focusing on local livelihoods

- Engage local stakeholders and industry employees in the transformation
- Access global education and training programs for capacity building in the sector
- Consider new and traditional funding sources to help implementation.
- Routinely review progress and adjust to planned and unplanned changes

This systems approach was focused through a short intensive scoping program outlined below and designed to produce an improved assessment of the direction, pace and nature of transformational changes required to achieve a “Green Growth” outcome for Bali.

4 Methodology

The Framework to translate the green growth vision into practical actions consists of five distinct phases with an underlying requirement of commitment of local, provincial and national government, including non-government stakeholders to support this systems approach.

It is a methodology that analyses potential travel and tourism demand/impacts and through an inclusive, empowered community visioning process which provides a practical way to implement the vision of a Green Growth Economy.

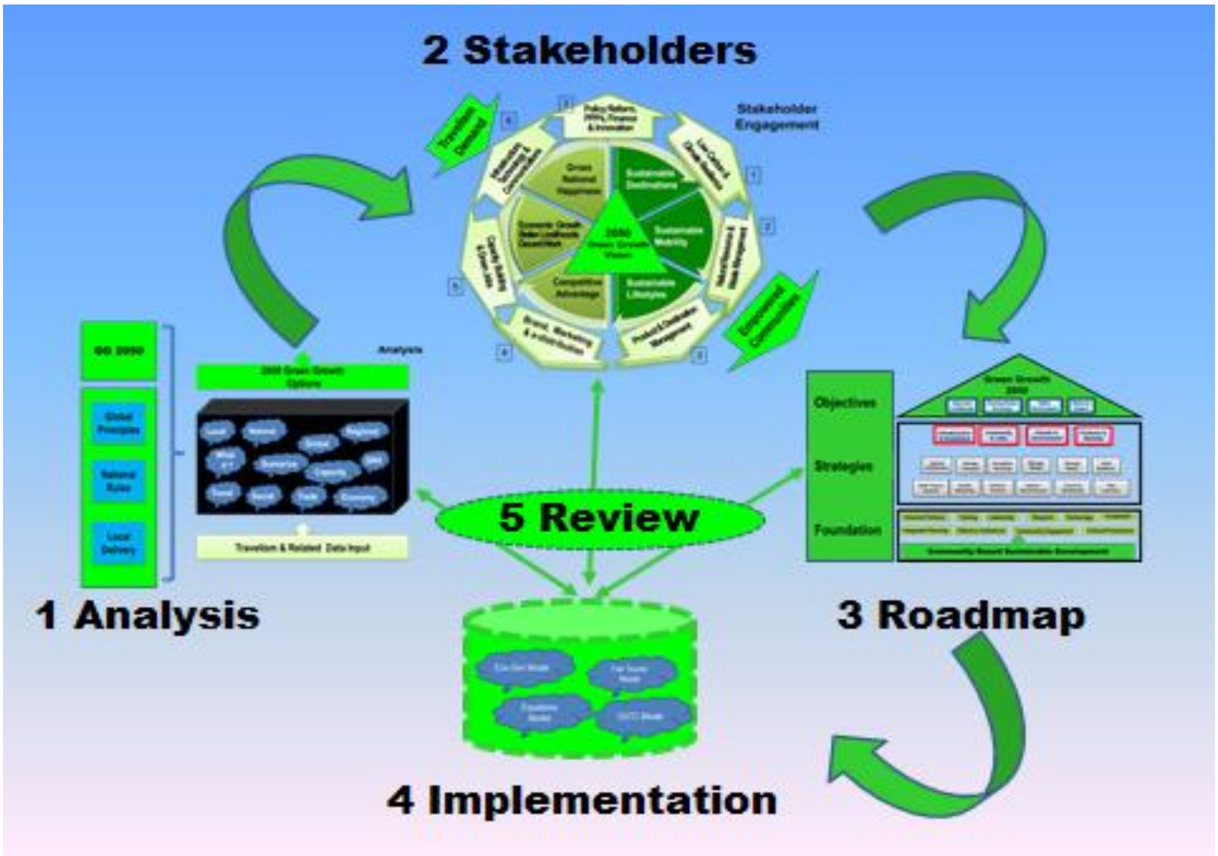
The five major stages in the methodology are:

STAGE 1: DATA GATHERING &ANALYSIS

Involved the gathering of information from secondary sources and a range of primary research.

STAGE 2: STAKEHOLDER ENGAGEMENT

In the second stage this information and data was shared with local stakeholder groups who analysed it within the proprietary green growth model, identifying key issues and opportunities



STAGE 3: DEVELOPMENT OF A GREEN GROWTH ROADMAP

This in turn formed the basis for the construction of a unique Bali Green Growth Roadmap structure

STAGE 4: IMPLEMENTATION

This stage involved testing through implementation, the information gathered.

STAGE 5: CONTINUOUS FEEDBACK

Recognising the fast changing nature of the inputs into the system the framework was constructed to provide for continuous feedback process as indicated in the diagram.

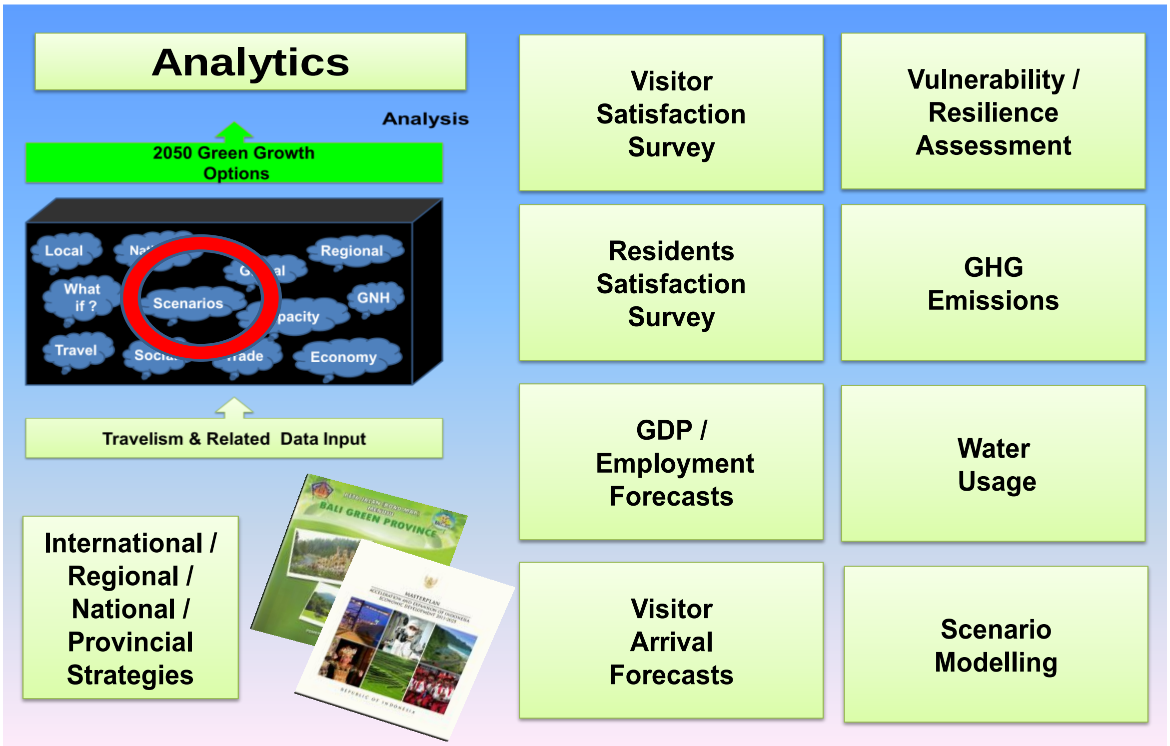
Describing the Stages in more detail:

Stage 1: Data Gathering and Analytics

It is an intensive data gathering and forecasting exercise using international and nationally published statistics - economic, trade, development and environment. Host and visitor surveys are an integral part of this. Proprietary models and advanced forecasting techniques are used to create a range of projected community, travel, industrial and service 'alternative futures'. The approach identifies key elements that are vital for addressing the risks of climate change and taking advantage of the opportunities presented by the emerging green economy. These are the reduction of GHG emissions and water use, growing market demand and the visitor economy, employment and socio-cultural trends and the enhancement of environments and ecosystems.

The model also highlights the complexity of the approach and stresses the importance of reflecting a wide range of community development visions. It applies system dynamics theory, which simulates changes independent and interdependent variables in travel and tourism systems at destination level. Key actions in undertaking this process for Bali were:

- One main area of analysis was the drawing out of findings from relevant international, regional and provincial economic development and tourism plans.



- In the absence of available data we undertook a number of field research tasks including an estimate of GHG emissions, water usage, a visitor and a resident satisfaction survey as well as a vulnerability/ resilience assessment.
- We undertook modelling research to forecast visitor arrivals as well as GDP and employment growth forecasts through to 2020.
- Using a proprietary system modelling tool we developed a range of medium and long term scenarios based on the data collected.

Data Findings

From the data several significant issues emerged:

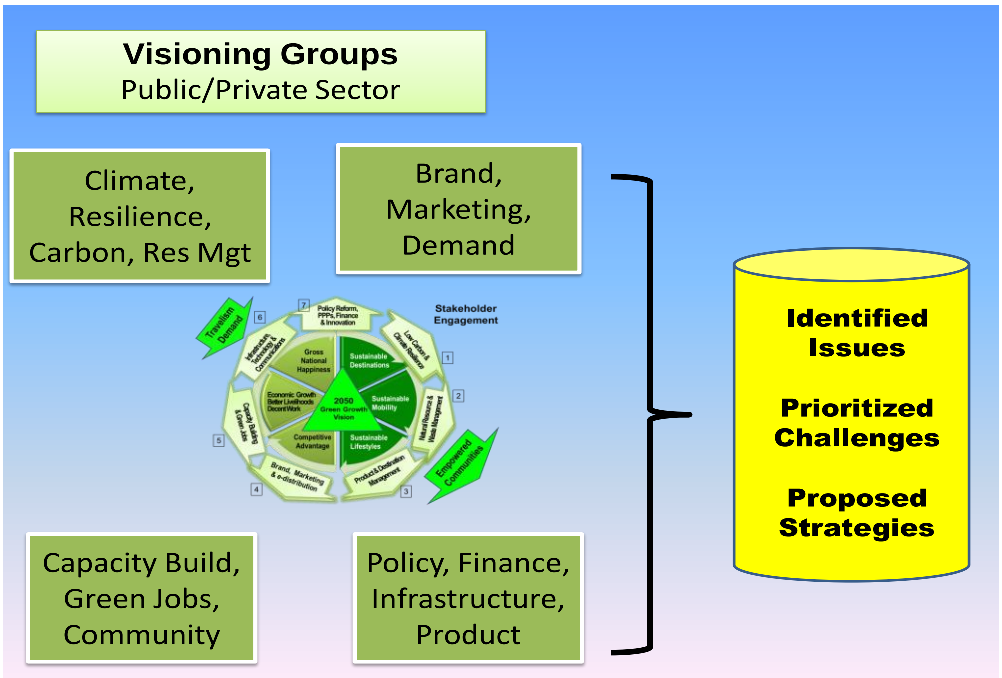
- Forecasts show **a doubling of arrivals by 2020**, based around a major increase of domestic arrivals. In addition the forecast indicated a shift in the profile of international source markets
- A dramatic increase in **employment growth from 800,000 to 2 million.**
- Estimates of **GHG emissions for the tourism** sector (one of the first studies in this field) shows a **large contribution of land transport**

From the survey research:

- Both the visitors and residents reported considerable **concern with traffic congestion and waste**
- The visitor survey indicated a **high level of satisfaction with the Bali experience,** primarily focussed on nature and culture
- **Residents were supportive of tourism,** in particular its job creation opportunities

Stage 2: Stakeholder Engagement

A key element of the process has been stakeholder engagement. This involved the establishment of four visioning groups comprising staff from Provincial and Regency Government agencies, leaders of industry organisations, business owners and NGO's. The groups met four times following the structure of the framework model to identify issues, prioritise challenges and propose strategies.



This process involves public, private and civil society representatives. The first priority is to get a genuine interest in the strategic process, from people traditionally and understandably dealing with near term realities. At the same time the sometimes overlapping and fragmented structure of governance policies can be factored into the process during this phase. We facilitate peer led discussion on the broader dimension of the right kind of sustainable destinations, lifestyles and mobility, as well as the resultant impacts on competitiveness and branding, economic growth, decent work and the increasingly relevant concept of gross national happiness. This can be well managed by engagement with a local university to build a framework for continuing research and process continuation.

This in turn creates a framework for structured analysis of a wide range of essential components of long term community well-being – including low carbon climate response; natural resource management; enhanced products and marketing; green jobs, and the framework for change management – including technology, infrastructure, finance, partnerships and innovation.

Two workshops were undertaken in this study, i.e. the first workshop at the beginning of the study (Friday, 23rd and Saturday 24th September 2011), and the second workshop at the end of the study (1st December 2011). The first workshop was followed by two FGDs, namely: the first FGDs (Thursday, 13th October and Friday 14th October 2011), and the second FGDs (Thursday, 3rd November and Friday 4th November 2011). The number of participants who were actively involved in the workshops and FGDs were 67 persons. They came from various backgrounds, namely:

1. Government officials (32 persons)

a. Provincial Government Officials: 14 persons From various government offices : Tourism (Pariwisata), Culture (Kebudayaan), Environment (Lingkungan Hidup), Forestry (Kehutanan), Planning Board (Bappeda), Trade and Industry (Industri dan Perdagangan), Public Works (Pekerjaan Umum), Agriculture (Pertanian), Transportation (Perhubungan), Energy (Pertamina), Electricity (PLN).

b. Local Government Officials: 18 persons from nine local governments (regencies): Tourism office (Pariwisata) and Planning Board (Bappeda).

2. Businesses / Industries / Professionals (28 persons)

a. Tourism Associations: 19 persons From various tourism associations: Bali Tourism Board, Kuta Executive Club, PHRI Bali, ASITA Bali, Bali Hotel Association, Bali Villa Association, KADIN Bali, PAWIBA, SIPCO Bali, PATA Bali, Bali Dwe, PUTRI Bali, Organda Bali, HPI Bali, etc.

b. NGOs: 5 persons From various NGOs: Wisnu Foundation, Conservation International Indonesia, Parasparos, Bali Organic Association, and MUDP Bali.

c. Businesses: 4 persons From several companies: PT. BTDC (tourism resort area), PT. Garuda Indonesia (airline), and Hotel Discovery Kartika Plaza.

3. University (7 persons)

From various academic backgrounds: Postgraduate School in Tourism Udayana University, Research Centre for Environment Udayana University, Research Centre for Culture and Tourism Udayana University, and STP Bali.

Based upon the first workshop, more than 20 key issues regarding tourism development in Bali were raised by the participants. The issues, namely:

1. Environmental problems (destruction, pollution, degradation)
2. Losing exotic and beautiful view
3. Energy (lack of energy supply, green and solar energy access)
4. Role (involvement) of local people
5. Traffics (traffic jam, crowded, traffic management)
6. Waste (plastic waste, waste management)
7. Water (water crisis, water supply, exploitation of groundwater)
8. Degradation of tourism objects
9. Land (limited availability, land use change)
10. Population (migration and urbanization)
11. Culture & tradition (degradation, destroy, traditional Bali changing)
12. Dealing with growth
13. Tourists (no need to get more tourists to Bali)
14. Carrying capacity & sustainability
15. Redefinition of Bali (identity)
16. Risk (Global Financial crisis, terrorism, natural disasters)
17. Tourist guides
18. Transportation infrastructures (roads, bridges, etc.)
19. Tourism destroy – beach cases
20. Global warming
21. Attitude and behaviour of Balinese

During the FGDs, the participants were divided into four visioning groups. Each visioning group discussed different topics. The topics were the seven pillars of green growth.

(1) The First visioning group discussed about Pillar 1 (Climate Resilience and Innovation), Pillar 2 (Low Carbon and Technology Shift), and Pillar 3 (Natural Resource and Waste Management).

(2) The Second visioning group discussed about Pillar 4 (Brand, Marketing and e-Distribution).

(3) The Third visioning group discussed about Pillar 5 (Capacity Building and Green Jobs).

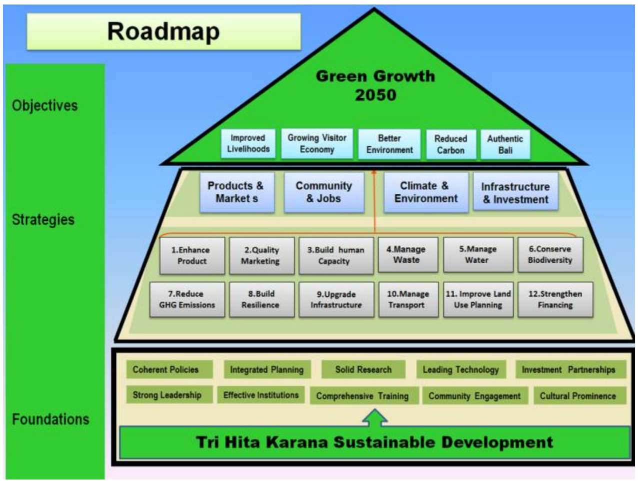
(4) The Fourth visioning group discussed about Pillar 6 (Infrastructure and Communications) and Pillar 7(Policy Reform, Public and Private Partnerships, and Finance).

The outcomes of the visioning groups were fed into the Green Growth Roadmap strategies.

Stage3: Development of the Roadmap Strategy

Based on best practice patterns and governance we created a structured bottom-up framework as outlined.

It includes core objectives such as improved livelihoods, enhanced visitor



economy, reduced carbon and better environment with measurable KPI's such as human development, visitor yield, reduced greenhouse gas emissions and the like.

The Green Growth 2050 Roadmap was based on a unique, Bali specific, foundation around the concept of Tri Hita Karana sustainable development. This has been integrated with a range of elements seen as fundamental to the success of any sound tourism strategy. These foundations for success include; coherent policies, integrated planning, solid research, leading technologies, investment partnerships, strong leadership, effective institutions, comprehensive training, community engagement, cultural prominence.

Strategies to achieve the core objectives and based of the key foundations were developed. While such strategies must now have a core of greenhouse gas reduction,

in line with national commitments, they must also consider the enhancement of environments and ecosystems generally, as well as economic and cultural imperatives within the destination. Other vital considerations include the changing and greening of market demand (i.e. green consumerism), supply chain dynamics, destination competitiveness, brand positioning and traditional as well as new funding options.

Stage 4: Implementation

As a 'Roadmap' in an 'initial stage' program, the focus here is on strategic direction, enabling mechanisms and support structures.

Typically, we identify a variety of global good practice vehicles for environmental impact measurement, capacity constraint modelling, certification management, competitiveness enhancement, consumer

Green Growth 2050 Roadmap for Bali Sustainable Tourism Development funding programs and the like. It is worth highlighting three innovative programs by “greenearth” partners – the Evolution system for scalable, environmental impact reporting/management; the Ecosim capacity constraint architectural modelling and the Fairtourist destination financing system.

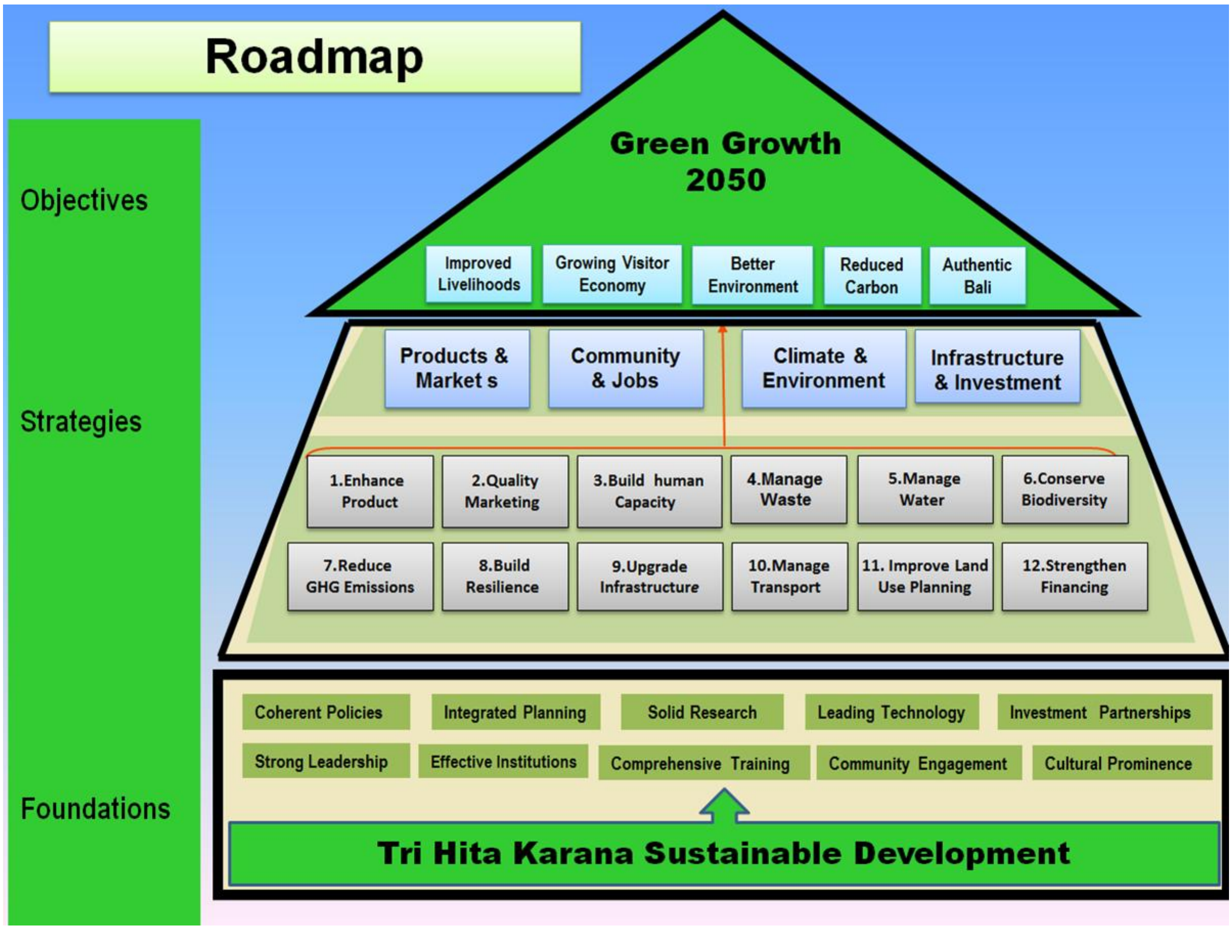
We also introduce a web based education and training system www.greengrowth2050 designed to provide a continuing education and training structure.

Stage 5: Continuous Feedback

The complexity and integrative nature of the components, as well as the fast changing global socio-economics complicate long-term policy making and consequently there is a need for a continuous evaluation process. This allows governance and stakeholders to assess the impact of various decisions against rapidly changing marketplace dynamics.

We believe that a small monitoring unit established in the relevant governance and academic framework could be used to track developments, manage support and organize essential meetings around an annual re-visioning conference. This ensures that the Green Growth vision is supported by a dynamic process that is responding to the now constant change but with a very clear goal.

5 Recommended Green Growth Roadmap for Bali



The above diagram summarises the key elements of the recommended Green Growth 2050 Roadmap for Bali – 12 areas of strategy driving to achieve the five core objectives of the Roadmap, all underpinned by functional foundations that Bali will need to have in place to successfully implement the Strategy.

The twelve strategy areas have then been clustered into four broad areas of delivery:

- Products and markets
- Community and Jobs
- Climate and Environment
- Infrastructure and Investment

The specific strategy recommendations are as follows:

5.1 Products & Markets

STRATEGY 1: ENHANCE PRODUCT		
Continue to develop and build products and experience that are authentic to Bali brand, meet the target market needs and deliver green growth		
Strategies	**Priority Actions**	**Timeframe**
1.1 Tri Hita Karana Sustainability positioning. Government programs to encourage the development of quality, authentic product and experiences as well as stronger environmental performance	(a) Develop a policy framework that promotes an holistic green growth product development program (b) Establish a Government Tourism Investment Priority (TIP) grants program that helps develop & attract investment and development in the high yielding, innovative, green growth product/experience where Bali has competitive advantage. Examples: • Cruise Sector • Adventure • Agri tourism/organic food • Luxury tours/unique (local style) accommodation • Culturally authentic retail (and manufacturing) • Eco-conference facilities • Wellness • Products/experiences • Spiritual tourism	Medium Medium
1.2 Establish a "Bali" authentic quality product mark	(a) Develop an accreditation program for quality, authentic locally made retail products (b) Establish a marketing promotional campaign that supports and positions the quality mark	Short Short
1.3 Spread tourism across Bali's key tourism precincts – each should focus on a unique Bali brand experience	(a) Expand/combine the existing "accreditation" programs, to establish an integrated "Authentic Green Bali" certification scheme (b) Establish a Bali visitor education program (e.g. top 10 tips to get the most from a visit to Bali), that is adjusted for different visitor types (e.g. domestic, international, conference visitor, etc.(self-selected))	Medium Medium
1.4 Rationalize and extend the tourism industry's accreditation program to drive a stronger environmentally and culturally sustainable approach to all tourism activity	(a) Expand/combine the existing "accreditation" programs, to establish an integrated "Authentic Green Bali" certification scheme (b) Establish a Bali visitor education program (e.g. top 10 tips to get the most from a visit to Bali), that is adjusted for different visitor types (e.g. domestic, international, conference visitor, etc. (self-selected))	Short (Refer to 5.2, 7.2) Medium

STRATEGY 2: QUALITY MARKETING		
Establish a strong, motivational brand positioning and messaging strategy for Bali to support green growth.		
Strategies	**Priority Actions**	**Timeframe**
2.1 Maintain a long term, consistent marketing program that leverages the current successful branding for Bali (i.e. "Bali is My Life") and evolves the brand to also capitalise on the "Clean & Green" Bali positioning	(a) Establish Brand toolkit for use by all key stakeholders (Bali Industry/Bali regency destination marketing, etc.) (b) Develop and implement a three year marketing strategy around the Brand messaging to key target markets, with a strong Government industry cooperative funding program, for Bali tourism (c) Establish a high quality retail/product positioning campaign promoting local, authentic (quality mark) retail products	Short Medium Short Term Medium term refer to 9.2
2.2 Shift to a greater use of digital marketing in Bali promotional activity	(a) Build competitive, industry and Government digital marketing capability E.g.: • Online promotion/Search engine optimisation • Social networks/Podcasting/Vidcasting/Blogs • Web3.0 – Geomap search, mobile/smartphone app's	Short
2.3 Focus all marketing on the major, higher yielding, demand driver markets for Bali	(a) Establish an "exit" visitor survey process that captures key information on both numbers, spend, activities, regional dispersal and satisfaction. (b) Establish a social media tracking program that monitors the extent and nature of "buzz/talkability" around the Bali brand by each of the key target markets	Short
2.4 Develop an events strategy for Bali that builds the brand and balances visitor seasonality	(a) Consolidate the existing iconic festival series, to promote internationally the Bali cultural icon experiences (e.g. spirituality, wellness, etc.) focusing outside the current primary visitor precincts (b) Establish a business events (MICE) development plan identifying key infrastructure needs (e.g. new convention facilities) primarily focused on small/medium meetings/incentives business. (c) Match and promote key festivals to major business events delegates/partners, to help extend length of stay and dispersal (d) Use the extensive, high profile MICE events to further promote the "Bali green" positioning. (e) Link the business events marketing program to the broader Bali "export promotion" activities	Medium Short Short Medium Medium

2.5 Establish a strong understanding (research based) of the primary target markets for Bali's future tourism growth	(a) Establish an "exit" visitor survey process that captures key information on both numbers, spend, activities, regional dispersal and satisfaction. (b) Establish a social media tracking program that monitors the extent and nature of "buzz/talkability" around the Bali brand by each of the key target markets	Medium Short

5.2 Community & Jobs

STRATEGY 3: BUILD HUMAN CAPACITY		
Establish an education and training system that will provide high quality local tourism/hospitality training to meet industry's green growth needs.		
Strategies	**Priority Actions**	**Timeframe**
3.1 Enhance the Bali education and training systems to deliver continuous learning and skills improvement for the tourism sector	(a) In partnership with Government, industry and key training providers strengthen the hospitality and tourism skills/training framework for Bali. (b) Evolve hospitality training, cultural awareness and customer service modules across the Bali educational and training system (c) Enhance the "local guides" training program that develops strong cultural understanding and good story telling skills.	Medium Medium Medium
3.2 Develop and undertake a community education program across Bali that promotes the benefits of tourism to the community as well as travel and tourism as a career	(a) Develop a "tourism is everybody's business" community campaign for use by businesses to sell the benefits of the industry to Government, the broader community and potential employees	Short
3.3 Establish a hospitality and tourism recruitment program aimed at matching industry needs with workforce availability	(a) Undertake a workforce needs analysis that identifies size and level of the main skill needs in the hospitality and tourism sector in Bali. (b)Establish a website for employers to advertise for skilled employees (c) Establish a business start-up support program with industry education/mentoring programs	Short Short Medium

STRATEGY 4: BUILD RESILIENCE		
Build resilience of the Tourism sector so it can better adapt to risks from shock (short term events) and stressors (long term ones)		
Strategies	**Priority Actions**	**Timeframe**
4.1 Update the Indonesian and Bali Provincial Government's risk management strategies to include a specific focus the tourism sector in Bali	(a) Strengthen response programs to reflect the positioning of Bali as the gateway to Indonesian tourism (b) Ensure specific activity modules and associated training programs for tourism businesses reflect contemporary risk management practice	Medium
4.2 Build resilience of the tourism sector to climate change, terrorism, pandemics, natural hazards, economic down terms etc. as a core component of Bali's tourism planning	(a) Continually update Bali's tourism incident response plan in line with UNWTO's risk management system (b) Develop specific visitor risk information tool perhaps integrated into a broader "Bali visitor app" (c) Focus on increasing tourism product and market diversity to buffer against market fluctuations in core origin markets	Medium Medium Long Ref UNWTO risk planning; Hawaii visitor risk z-card
4.3 Bali Provincial Government develops a comprehensive adaption to climate change risks strategy which engages and mainstreams the tourism sector	(a) Government to complete a 2050 coastal inundation map for Bali and set coastal planning development guideline accordingly (b) Other issues will include, infrastructure planning, water conservation, flood mitigation, coastal protection including mangrove rehabilitation etc.	Medium Medium Long ref 12.2.

5.3 Climate & Environment

STRATEGY 5: CONSERVE BIODIVERSITY		
Establish an education & training system that will provide high quality local tourism/hospitality training to meet industry's green growth needs.		
Strategies	**Priority Actions**	**Timeframe**
5.1 Government update its marine and terrestrial conservation plans/strategies to include tourism specific policies	(a) Support a comprehensive research program into conservation of Bali's biodiversity, including forecasting forestry activity and timber use (b) Develop policies, controls and actions to ensure: coral reef protection, mangrove rehabilitation, sewage waste treatment and outflows, boat sewage dumping regulation and treatment, forest restoration, tourist/wildlife management, stream conservation etc. (c) Support customary village law and practices as an effective means for local conservation	Medium Long Medium Ref Bali Green Province Roadmap Long
5.2 Tourism sector support forest (including mangrove) replanting and rehabilitation	(a) Evaluate carbon off-set schemes for air travel, accommodation, ground transport to invest in community-forestry and forest (including mangrove) rehabilitation (b) Investigate CSR combined with visitor donation schemes for village biodiversity/forestry enhancement	Medium Ref 10.1, 12.1 Medium
5.3 Enhance agri-tourism and marine tourism as a core component of Bali's tourism product	(a) Support local food, (especially organic) production for tourism sector e.g. technical assistance, training, loans, cooperatives (b) Produce an agri-tourism strategy; e.g. inventory, market, infrastructure needs, capacity building, financial support options, pilot projects etc.	Medium Ref 1.1 Medium

STRATEGY 6: REDUCE GHG EMISSIONS		
Measure and reduce GHG emissions from Bali Tourism sector to align with national GHG mitigation commitments and capitalise on opportunities provided by emerging Green economy		
Strategies	**Priority Actions**	**Timeframe**
6.1 Tourism sector reduces its GHG emissions	(a) Government collaborates with industry to set progressive targets for sector businesses to measure and reduce GHG emissions (e.g. by 3% per annum)	Short
	(b) Industry collaborates with Government to have available simple, bespoke, online measurement and educational tools to assist businesses to take action and report annually	Short Ref Evolution Tool
	(c) Government and industry publicize, educate and persuade business the benefits measuring and reducing GHG emission	Short
	(d) Government and industry establish a dedicated educational/communication/search unit to support tourism businesses reduce GHG emissions, including supplying information on leans energy technology (as well as water sewage and waste minimisation	Medium Ref 4.2, 5.2
	(e) Use an integrated “Authentic Green Bali” certification scheme to encourage action by individual businesses	Medium
	(f) Evaluate carbon off-set schemes for air travel, accommodation, ground transport to invest in community-forestry and forest (including mangrove) rehabilitation	Medium
6.2 Lower carbon intensity of electricity generation for supply to the tourism sector and improve carbon efficiency of ground transport system	(a) National Government seek international “climate change mitigation development assistance” investment to support development of ‘lower carbon’ electricity generation	Medium/Long Ref 12.1
	(b) Government introduce policy incentives (e.g. subsidy/tax rebates etc.) to support small scale clean energy uptake for hospitality electricity generation	Medium
	(c) Government introduce policy incentives to encourage private road transport to shift towards low emission vehicles	Long
	(d) Improve low carbon public transport including rail construction and increase percentage of travellers using it	Long

5.4 Infrastructure & Investment

STRATEGY 7: MANAGE WASTE		
Government and tourism sector work in partnership to reduce Bali's waste pollution and enhance the quality of tourist experience		
Strategies	**Priority Actions**	**Timeframe**
7.1 Government strengthens its implementation of a comprehensive waste management plan for Bali recognising the pivotal tourism sector needs	(a) Develop adequate landfills and effective associated collection system	Medium Long
	(b) Continue to improve waste recycling collection and treatment systems	Medium Long
	(c) Support waste recycling as a resource for local businesses (e.g. building materials, handicrafts, organic fertilizer)	Medium
	(d) Progressively improve sewage and the liquid waste treatment system in Denpasar and extend to other locations	Medium Long
	(e) Support with associated communication and education program	Medium Long Ref Bali Green Province Roadmap
7.2 The tourism sector to measure and reduce its own waste production and support community waste management initiatives	(a) Businesses measure waste production, increase recycling and produce less waste that is sent to landfill	Short Medium
	(b) Industry collaborates with Government to have available simple, bespoke, online measurement and educational tools for relevant sectors (e.g. accommodation and restaurants) to assist individual enterprises take action	Short
	(c) Introduce an annual clean up Bali day involving Government, community organizations, volunteers and tourists (at a strategic time, e.g. during the beach "waste season")	Medium
	(d) Industry initiates and supports small community based waste recycling programs in their local region based around traditional and customary village approaches	Medium Long Ref Evolution tool 5.2 and 6.2

STRATEGY 8: MANAGE WATER		
Manage and conserve Bali's water resources to ensure sufficient supply for the local communities while catering for tourism and its forecast		
Strategies	**Priority Actions**	**Timeframe**
8.1 Government implement a comprehensive water conservation plan for Bali	(a) Undertake research to update and document all of Bali's fresh water resources including its potential use and resultant conservation impact	Medium Long
	(b) Investigate are-modelled water pricing system to encourage water conservation	Medium
	(c) Invest in more surface water reservoirs	Long
	(d) Support water recycling initiatives	Medium
	(e) Introduce incentives for rainwater collection	Medium Long
	(f) Control deep well exploitation by the tourism sector	Medium Long
8.2 Tourism sector implement a comprehensive water conservation strategy	(a) Tourism businesses measure and progressively reduce their water usage per guest activity	Short
	(b) Industry collaborates with Government to have available simple, bespoke, online measurement and educational tools to assist businesses and report on water usage	Medium
	(c) Government and industry establish a dedicated educational/communication/research unit to support tourism businesses minimize water usage (as well as reduce GHG emissions and waste)	Short
	(d) Use an integrated "Authentic Green Bali" certification scheme to encourage action by individual businesses	Short/Medium Ref 4.2, 6.2, 9

STRATEGY 9: UPGRADE INFRASTRUCTURE		
Create a Tourism Infrastructure Framework as a core component of a Bali Green Growth Tourism Plan		
Strategies	**Priority Actions**	**Timeframe**
9.1 Government should create within the BGGTP a comprehensive tourism infrastructure plan that cross relates to overall infrastructure plans/programs	(a) Establish basic framework and incorporate annual assessment, correlated to regional and national tourism growth and development scenarios.	Short
	(b) Develop an integrated approach to air, sea, road, rail, transport infrastructure and related traffic congestion	Short
9.2 Private Sector should input constructively, coherently and systematically	(c) Identify transport choke points resulting from tourism or impacting adversely on tourism product quality – village, highways, airports, ports.	Short
	(d) Particularly consider airport infrastructure expansion – with an immediate focus on existing terminal and access facilities, while accelerating plans for new airport	Medium
9.3 The national and international banking community as well as global/regional and national financing frameworks should be included in BGGT planning	(e) Include integrated light rail network – at least around the island to take pressure off road transport & reduce carbon footprint	Short
	(f) Include in plan tourism waste, water, low\carbon energy, communications infrastructure needs.	Medium
	(g) Link to financing plans with an emphasis on new PPP's, a tourism contribution program & carbon adaption funding	Long

STRATEGY 10: MANAGE TRANSPORT		
As a top priority incorporate strategies and programmes to control tourisms adverse impacts on transport flows, congestion and pollution. These should contain measures to manage the flow of tourism transport and correlate with low carbon strategies.		
Strategies	**Priority Actions**	**Timeframe**
10.1 Ensure that the BGGTP is integrated with broader national and provincial transport plans and is closely aligned with infrastructure, finance and low carbon goals **10.2 Industry to better manage its congestion contribution**	(a) Government to include new programs for traffic management to minimize congestion and speed flows to improve visitor experience. (b) Integrated transport planning should be intensified, with new rail port and airport a priority focus, as well as reducing the impact of tourist coach and car transport (c) There is an immediate need for stronger traffic regulations, more active enforcement and increased driver education, to improve safety and amenity for visitors. This is particularly the case for motorcycles and scooters where licensing conditions should be strengthened (d) Carbon pricing systems should be implemented in line with national carbon commitments & polluting vehicles to be progressively phased out by supply/price regulation (e) Public transport systems should be upgraded and expanded, with main tourist circuits a high priority and incentive pricing schemes introduced	Short Short Short/Medium Medium/Long Medium

<table>
<tr><td colspan="3">STRATEGY 11: STRENGTHEN FINANCING</td></tr>
<tr><td colspan="3">Ensure coherent financing for tourism development programs and facilitate PPP initiatives to support managed green growth tourism</td></tr>
<tr><th>Strategies</th><th>Priority Actions</th><th>Timeframe</th></tr>
<tr><td rowspan="2">11.1 Government financing and fiscal frameworks should coherently take account of tourism and transport development as well as low carbon transformation and climate adaption strategies.</td><td>(a) Include all BGGTP development in national & provincial financing programs, as well as bilateral and multilateral funding programs</td><td>Short</td></tr>
<tr><td>(b) Explore the most effective means to establish a Green Growth sustainability financing facility to underpin green growth development. This should consider rationalizing current visitor fees and charges and investigate innovative international financing sources</td><td>Short/Medium
Ref 6.2, 7.2</td></tr>
<tr><td rowspan="3">11.2 Industry should prioritize education and training, authenticity and low carbon transformation programs in its financing support initiatives</td><td>(c) Incentivize green jobs, PPP, innovation, low carbon actions and link with infrastructure and capacity building</td><td>Short</td></tr>
<tr><td>(d) Link tourism, trade and export promotion financing</td><td>Short</td></tr>
<tr><td>(e) Demonstrate economic value of tourism to leverage additional promotional funding.</td><td>Short</td></tr>
<tr><td rowspan="2">11.3 Investigate pricing structures as a tool to manage tourism volume growth</td><td>(f) Highlight tourism in infrastructure and education funding and include in international capacity building support programs</td><td>Medium</td></tr>
<tr><td>(g) Establish programs for tourism carbon credits</td><td>Medium</td></tr>
</table>

STRATEGY 12: IMPROVE LAND USE-PLANNING		
Ensure the green growth tourism process is integrated into a stronger land and planning system for Bali		
Strategies	**Priority Actions**	**Timeframe**
12.1 Establish a dialogue between National, Provincial and Regency Governments and private sector tourism stakeholders around developing a more effective land use planning system in Bali to reflect the evolving tourism green economy	Areas to consider within this dialogue include: Greater dispersal of tourism development Evolving tourism precincts in centre and north and limiting development in south Developing destination management plans around critical precincts Impact of new airport and other transport infrastructure on zoning and development control The opportunity for a One Island Planning System sensitive to tourism green growth needs	Medium
12.2 Institute planning controls to adapt to future climate change risk	(a) Government to complete 2050 coastal inundation map for Bali and set coastal planning development guideline accordingly	Medium
12.3 Create open space/conservation areas to enhance the tourism experience, community amenity and biodiversity	(a) Based on assessment and future growth areas, establish an island wide open space plan including for community activity (b) Based on the open space plan establish core protected areas having strong development controls recognizing a minimum forest cover target of 30% (c) Investigate establishing a system of marine protected areas to enhance marine conservation where environmentally sensitive tourism activity is supported.	Medium Medium Medium
12.4 Integrate farming into tourism value chain	(a) Review existing development and zoning plans to encourage sensitive tourism development in agricultural village zones	Medium

6 Key Performance Index (KPI's)

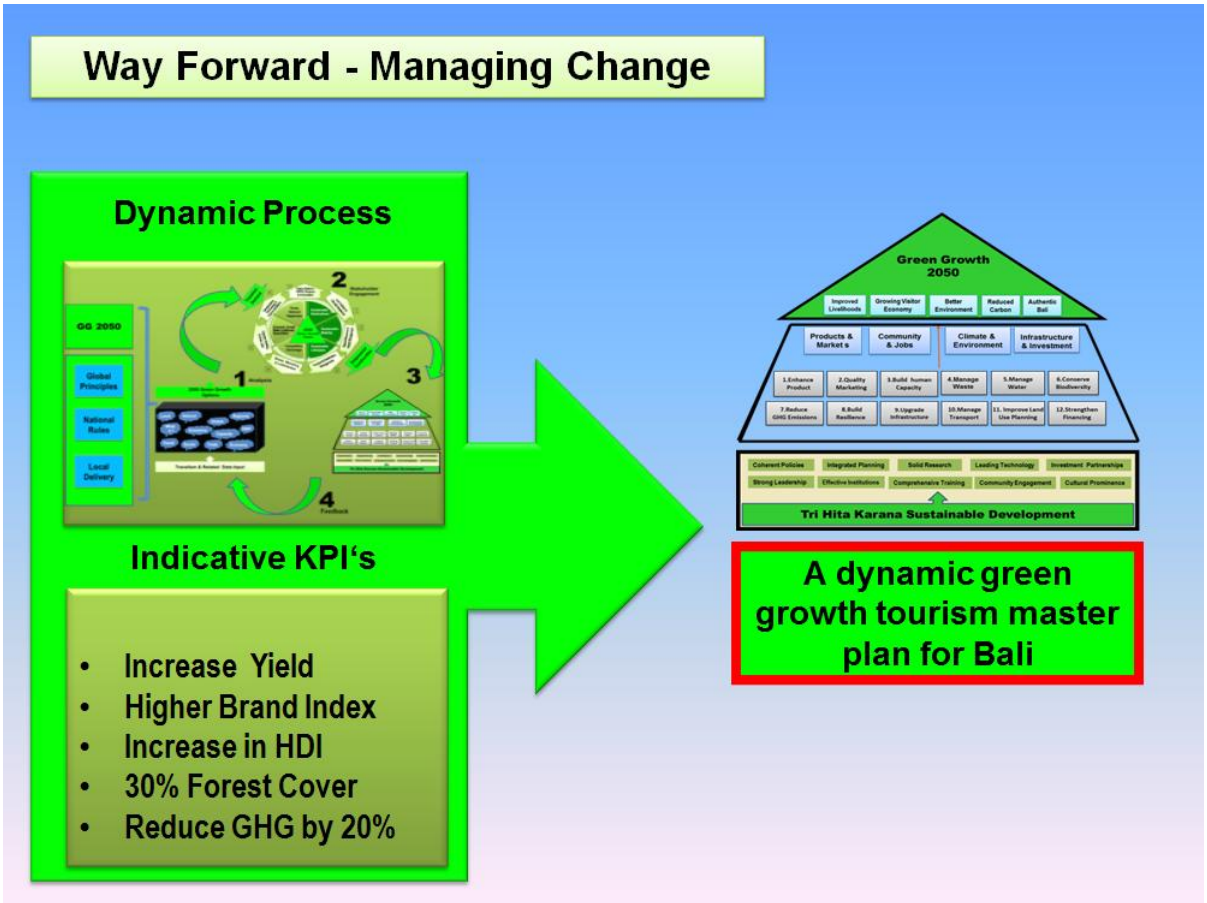
Green Growth Roadmap
Objectives & indicative KPI's

Objective	KPI
1) Improved livelihoods for Bali residents	(a) Increase Bali Human Development Index (HDI) (b) Increase tourism related jobs (c) Increase community satisfaction with tourism
2) Grow Bali visitor economy	(a) Increase visitor yield (b) Increase GDP from tourism
3) Better Bali environment	(a) Increase forest cover to 30% as per national target (b) Reduce water use per visitor (c) Increase solid waste recycling from hospitality
4) Reduce carbon from Bali tourism	(a) Reduce GHG emissions from Bali tourism enterprises & activities by 26% by 2020 in line with national commitments
5) Authentic Bali	(a) Increase positive brand recognition (b) Increase customer satisfaction

Core to the success of any plan is clear objectives which are measurable .The roadmap is framed by five objectives fundamental to achieving green growth within the Bali context. Critical to the success of the plan is the ability to set a measuring framework and to test results in a changing environment.

The environment, in which a global industry like tourism operates, is constantly changing. Any roadmap's successful implementation has to have the capacity to adapt to this change. This is a central feature of the design of the Green Growth 2050 Roadmap. The dynamic process of research, stakeholder engagement, analysis, strategy development and feedback review is central to this model. In such a dynamic environment KPI's act as a benchmark to measure progress towards success.

7 Conclusion / Next Steps



In order to progress the Balinese economy toward Green growth, the following recommended next steps will need to be implemented:

1. Indonesian Government to endorse and adopt the roadmap strategy

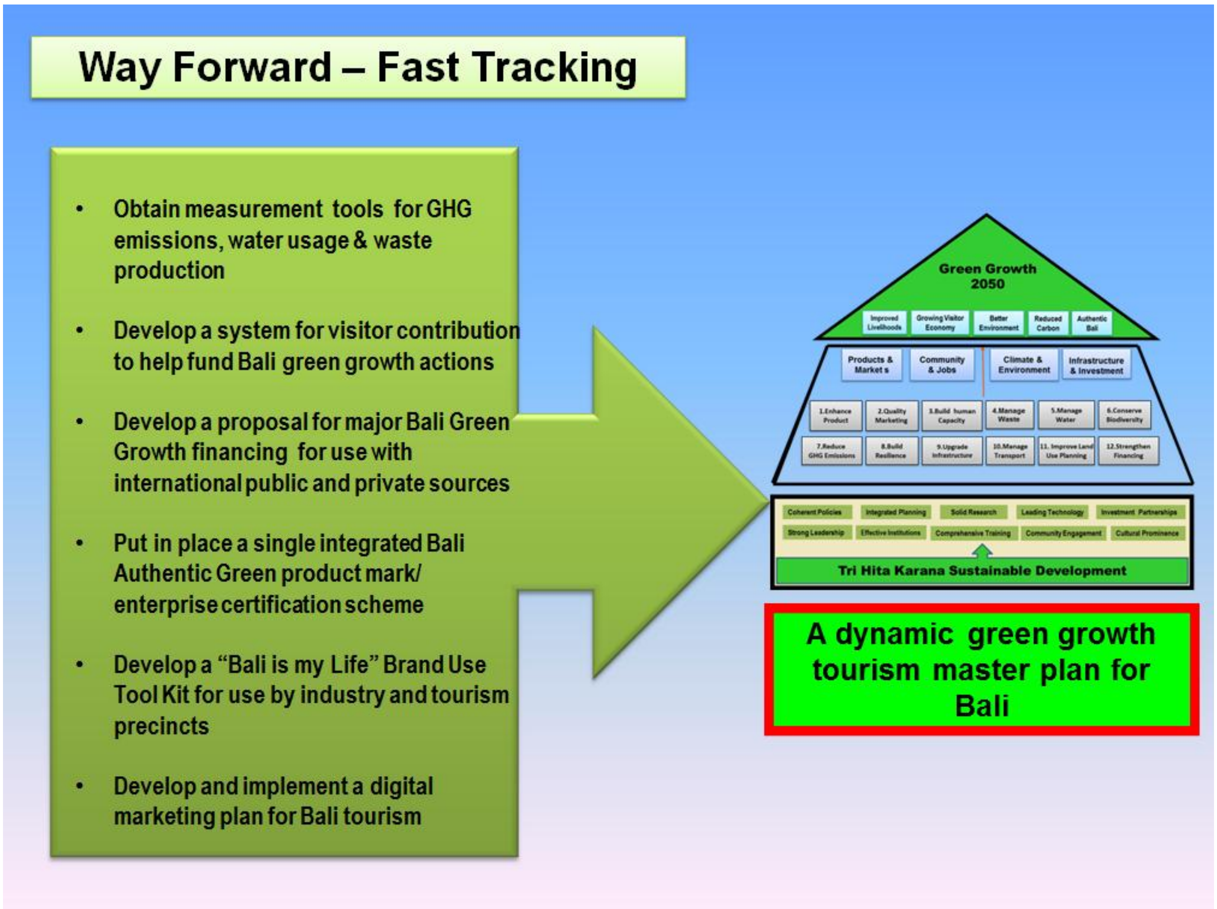
2. Present the roadmap to the Governor at a workshop in Denpasar and the Minister at a workshop in Jakarta

3. Establish a Green Growth Roadmap Implementation Taskforce from National, Provincial and Regency Governments jointly chaired by the Minister and the Governor to oversee the implementation of the Roadmap's strategies

4. Establish a small, skilled and dedicated Roadmap taskforce secretariat

5. The Roadmap taskforce will need to assign priority actions identified in the roadmap to the relevant Government agency making them responsible for their implementation and production of an annual report from each Government agency on implementation progress


Way Forward – Strategic Directions
MASTERPLAN
ACCELERATION AND EXPANSION OF INDONESIA ECONOMIC DEVELOPMENT 2011-2025
REPUBLIC OF INDONESIA
Green Growth 2050
Tri Hita Karana Sustainable Development
A dynamic green growth tourism master plan for Bali
NATIONAL TOURISM DEVELOPMENT MASTER PLAN (NTDMP/RIPPARNAS) 2010 – 2025
PETA JALAN ROAD MAP MENUJU
BALI GREEN PROVINCE
"Bali is the gateway for the main economic activity of tourism in Indonesia"
Tri Hita Karana Authenticity


Way Forward – Fast Tracking
• Obtain measurement tools for GHG emissions, water usage & waste production
• Develop a system for visitor contribution to help fund Bali green growth actions
• Develop a proposal for major Bali Green Growth financing for use with international public and private sources
• Put in place a single integrated Bali Authentic Green product mark/ enterprise certification scheme
• Develop a "Bali is my Life" Brand Use Tool Kit for use by industry and tourism precincts
• Develop and implement a digital marketing plan for Bali tourism
Green Growth 2050
Improved Livelihoods
Growing Visitor Economy
Better Environment
Reduced Carbon
Authentic Bali
Products & Market s
Community & Jobs
Climate & Environment
Infrastructure & Investment
1.Enhance Product
2.Quality Marketing
3.Build human Capacity
4.Manage Waste
5.Manage Water
6.Conserve Biodiversity
7.Reduce GHG Emissions
8.Build Resilience
9.Upgrade Infrastructure
10.Manage Transport
11. Improve Land Use Planning
12.Strengthen Financing
Coherent Policies
Integrated Planning
Solid Research
Leading Technology
Investment Partnerships
Strong Leadership
Effective Institutions
Comprehensive Training
Community Engagement
Cultural Prominence
Tri Hita Karana Sustainable Development
A dynamic green growth tourism master plan for Bali

6. Promotion of this new, bold, Green Growth direction for Bali tourism internationally, in particular at the Rio + 20 UN conference in 2012

7. The seeking of international support and finance for implementing key elements of the roadmap strategies by raising international awareness for this new green growth direction.

And to fast track the next steps to full implementation, the following recommendations are put forward:

1. Obtain measurement tools for GHG emissions, water usage & waste production

One of the key recommended Roadmap strategies was for industry to collaborate with Government to have available simple, bespoke, online measurement and educational tools to assist businesses to take action and report annually on GHG emissions, water usage and waste production -- "you can only manage what you can measure". There are many such measurement tools provided by environmental management consultants and auditors or accessible on line. One such system that the authors have worked with is supplied by Evolution. At a very modest cost a destination manager could use the Evolution on line tool customized for the destination that could be made available to all tourism enterprises to measure monthly their emissions and usage. The destination manager could aggregate emissions and usage destination wide to monitor progress towards targets

2. Develop a system for visitor contribution to help fund Bali green growth actions.

As the Roadmap is implemented it is clear that visitors themselves will be one of the most important beneficiaries and will rightly be expected to make an appropriate financial (as well as behavioural) contribution to the transformation. It is equally clear that a patchwork of taxes and charges for tourists from local, national and international sources is likely to be inefficient, inconsistent and unpopular. What is needed is a coherent systems approach that optimizes such charges coupled with an education system that allows visitors and residents to understand why the system is in place and what the money is used for. One such system in the greenearth.travel network is "Fair tourist" which not only helps to achieve these goals but also incorporates an important education component for travellers and hosts.

3. Develop a proposal for major Bali Green Growth financing for use with international public and private sources

The roadmap notes that a global shift will be made in the way that international and regional funds become available to support Green Growth transformation and that these will come from a variety of sources, such as the UN, the World Bank family and bilateral or regional development financing as well as covering a range of activities such as infrastructure, clean energy, poverty reduction or capacity building. By putting in place a locally centred PPP (public-private program) that targets such funds and meets the criteria for their dispersion, will give Bali and Indonesia an early mover position in accessing what will become an increasingly competitive and crowded application space.

4. Put in place a single integrated Bali Authentic Green product mark/enterprise certification scheme

A key focus of the Roadmap is an authentic Bali. Bali's authenticity is conveyed by many aspects including its strong natural and cultural attractions. But key component are the authentic Balinese arts, craft and food products and services. Such products and services must always be of the highest quality and authenticity and if not will quickly detract from the Bali experience and its value.

Similarly those enterprises which ensure high environmental and social performance need to be rewarded by effective promotion. Consequently a key recommended strategy in the Roadmap is to implement a single Bali authentic green product and service certification scheme. There are numerous such schemes inexistence running very successfully. (E.g. organic certified; green globe certified).

5. Develop a "Bali is my Life" Brand Use Tool Kit for use by industry and tourism precincts

A Brand Tool Kit is the development of a range of resources to help Bali Tourism's industry marketing partners to better promote the essence of Bali's tourism brand – "Bali is my life" to the world. This will help ensure that the brand messaging being presented by all promotional partners is a consistent, strong, unified image of the Bali experience.

The types of resources in such a Brand Toolkit include:

Information on how express with words a compelling reason for travellers to visit Bali

Ideas on how to incorporate the brand messages into advertising and promotional materials, using clear, simple, evocative images that show travellers who are engaged in—and enjoying—their experiences

Images that best express and evoke what Bali offers travellers that reinforces the brand idea that "Bali is your life".

6. Develop and implement a digital marketing plan for Bali tourism

Given the continually growing shift of consumers to online information search and booking for travel, the development of an E-marketing plan, using digital technologies such as websites, mobile devices and social networking is now a critical and cost effective way to help reach Bali's customer base, create awareness of the brand and to sell the destinations, activities and visitor services of Bali. The Digital Marketing Plan will select the best mix of a wide range of tactical digital marketing options including:

Display Advertising

Email Marketing

Pay-Per-Click Advertising (PPC)

Online Public Relations

Search Engine Optimization (SEO)

Affiliate Marketing

Social Media Marketing (SMM)

Viral Content Campaigns

Conversion Rate Optimization (CRO)

8 Appendix / Data Sources

1. Bali Tourism Forecast 2011 – 2020 Prof Turner Using PATA forecast model

2. Bali GDP and Employment Forecast 2007 – 2020 Australian TSA modeller Dr Hoque

3. Bali Visitor Satisfaction Survey Dr Filep (Victoria University)

4. Bali Resident Tourism Satisfaction Survey Dr Filep (Victoria University)

5. GHG Emissions from Tourism Sector Ms Law (Victoria University), Dr Hoque

6. Water Usage from Tourism Sector Prof De Lacy, Ms Law (Victoria University), Dr Hoque

(1) Number of visitors arriving to Bali by region/country, 2010-2020 ('000)

Turner, L. (2011) *A long term visitor forecast for Bali – Technical Report.* Victoria University/ Monash University, Melbourne, Australia

Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Africa	13	14	18	20	22	25	28	31	34	38	40
Americas	113	132	139	149	159	170	181	193	203	210	220
Asia Pacific	1,746	1,848	2,183	2,451	2,650	2,885	3,077	3,313	3,431	3,598	3,808
Australia	648	704	758	801	845	881	918	933	948	965	979
China	197	211	230	248	267	287	307	327	346	364	382
Japan	246	179	157	187	195	224	240	259	275	287	306
Europe	614	591	582	586	595	613	637	671	712	753	804
Russian Fed	65	77	89	103	118	136	157	173	188	203	216
UK	104	100	97	106	118	130	143	156	168	184	209
Total international	2,493	2,592	2,929	3,213	3,433	3,700	3,932	4,217	4,388	4,607	4,881
Domestic	4,646	5,251	5,746	6,288	6,881	7,246	7,731	8,247	8,629	9,076	9,532

(2) Economic impact of tourism on GDP and employment in Bali, 2010-2020

Hoque, S. (2011) *A forecast of the impact of tourism on GDP and employment in Bali – Technical report.* Monash University, Melbourne, Australia

	2007	2010	2011	2012	2013	2014
Tourism GDP (billion rupiah)	19543.38 (46.16%)	26980.54	28424.87	30807.53	33168.63	35373.07
Tourism employment (000)	815.66 (40.56%)	1119.88	1177.65	1277.45	1375.47	1466.00
Growth rate (%)	-	-	5.16	8.47	7.67	6.58

Notes: Figures in parenthesis show contribution of tourism to total Bali economy in 2007.

	2015	2016	2017	2018	2019	2020
Tourism GDP (billion rupiah)	37497.80	39749.24	42383.89	44323.45	46565.94	49210.91
Tourism employment (000)	1554.95	1648.10	1757.53	1837.60	1930.41	2040.45
Growth rate (%)	6.07	5.99	6.64	4.56	5.05	5.70

(3) Visitor satisfaction study

Filep, S. (2011) *Understanding visitors to Bali – Technical Report* Victoria University, Melbourne, Australia

Purpose: To gain an understanding of visitor satisfaction with Bali

Key groups: Asian, Chinese, Australian, European (18+, even gender split, 240 surveys, well educated; hotels and resorts across Bali)

Core finding : satisfaction is high across the four groups – nature and culture are key attractions

Motivation drivers: beaches , warm climate, local food, traditional villages, palaces and temples, shopping

Ideal holiday experiences: Chinese - indulgence/luxury in beach settings and spa resorts; Asians and Europeans - interactions with locals; Australians: local food and enjoying the beach

Ideal images: natural themes (sun, mountains, water, sky, beaches) and cultural themes (local food, villages, temples)

Room for improvement: transport infrastructure, waste management

Intention to re-visit: low for China (20%); over 50% for other groups

(4) Resident perception study

Filep, S. (2011) *Understanding resident perceptions of tourism in Bali – Technical Report,* Victoria University, Melbourne, Australia

Purpose: current perceptions of tourism and future visions for Bali

Key groups: <u>tourism area residents</u> and <u>non-tourism area residents</u> (18+,even gender split, 200 surveys, well educated, almost half work in tourism, most lived in their area between 2 and 10 years).

Core finding: mixed perceptions

Positive perceptions : economic growth, more jobs, sharing culture with visitors, generally positive view of tourists

Negative perceptions: both groups (traffic congestion, pollution, concerns over price increases); tourism group (higher levels of stress); non-tourism group (uneven job opportunities from tourism)

Visions for Bali: better infrastructure (roads, bridges, public transport), less pollution, better sewage systems, better planning and land use, equal opportunity for education and health**;** more than 80% want Bali to change.

(5) Bali tourism GHG emissions in KtCO2

Law, A., Hoque, S. (2011) *GHG emissions from the tourism sector in Bali – Technical Report,* Victoria University, Melbourne, Australia

Tourism element	GHG emissions, KtCO2	Share (%)
ACCOMMODATION	**319**	**6.40**
5 star hotel	14	0.29
4 star hotel	57	1.13
3 star hotel	57	1.15
2 star hotel	45	0.89
1 star hotel	106	2.13
Non-classified hotel	40	0.80
LAND TRANSPORT	**1,012**	**20.30**
ATTRACTIONS/ACTIVITIES	**na**	**na**
WATER TRANSPORT	**30**	**0.59**
AIR TRANSPORT	**3,624**	**72.70**
International	2591	51.97
Domestic	1,033	20.73
TOTAL	**4,985[4]**	**100.00**

[4] *Equivalent to 1,250,000 cars each travelling 20,000 km pa*

(6) Water consumption – hotels

Very early and approximate estimates, (no reliable data available for water usage in tourism sector – acquiring such data will be a high priority)

DeLacy, T., Law, A., Hoque, S. (2011) Water usage from the tourism sector in Bali – Technical Report, Victoria University, Melbourne, Australia

Type of Hotel	Water Consumption in m³ *Lower Bracket*	*Upper bracket*
Classified hotel		
5 star hotel	68,629	554,748
4 star hotel	14,197	2,513,580
3 star hotel	552,229	4,417,830
2 star hotel	573,976	4,591,808
1 star hotel	1,592,115	12,736,921
Non-classified hotel		
< 10	98,544	788,348
10 - 24	189,299	1,514,395
25 - 40	87,501	700,010
41 - 100	150,846	1,206,772
> 100	16,537	132,298
Total Hotel	**3,643,874**	**29,156,710**
Total Bali (in 2008)	**128,442,000**	**128,442,000**
Share of hotels (%)	**2.84**	**22.70**

→ lower bracket: 2.84%

→ upper bracket: 22.70%

- Figures based on small number of audits of 4-5 star hotels in Bali
- Figures for 1 – 3 star hotels adjusted according to international data on hotel water consumption

A Green Growth 2050 Roadmap

for Bali Tourism

PART TWO

SUPPORTING DOCUMENTS

A Green Growth 2050
Roadmap for Bali Tourism

PART TWO

Greenhouse gas (GHG) emissions from the tourism sector in Bali

Technical Report, 01/12/2011

Alexandra Law, Serajul Hoque

Introduction

This study was conducted as part of the Green Growth 2050 Roadmap for Bali Tourism Project, which was commissioned by the Ministry of Tourism and Creative Economy (previously the Ministry of Culture and Tourism) in late 2011 and provides an estimate of Bali tourism's greenhouse gas (GHG) emissions.

Aims

The aim of this study was to provide an estimate of Bali tourism's GHG emissions, with a breakdown of emissions by subsector. Currently there are no systematic methodologies for accounting of tourism's GHG emissions and reliable data is often unavailable (Becken & Hay, 2007). Based on the limited available data and models, the aim was to provide an estimate with enough accuracy to allow for green growth strategy development for Bali tourism.

Background

Indonesia is a major emitter of GHG emissions, particularly through deforestation and land use change which accounts for 51% of the total, and in response, the country has committed to target of 26% reduction of carbon 51 emissions from Business as Usual (BAU) in 2020 (Ministry of Environment, 2010). This has wide ranging implications for Bali tourism. With a share of over 46% of Bali's economy (BPS & Department of Culture and Tourism, 2009), tourism is one of the most important economic drivers of the province.

However, Bali tourism is also vulnerable to climate change risks, through direct and indirect impacts (Ministry of Environment, 2007), and as a result of GHG emission from its operations.

Despite tourism's important role for Bali and Indonesia, and despite increasing national mitigation efforts, Bali tourism's GHG emissions are not currently measured and recorded. This not only hinders adaptation to increasing pressures to mitigate GHG emissions from tourism, but also presents a barrier to take advantage of potential opportunities presented by worldwide emerging green economy.

Methods

When GHG inventories are carried out, tourism is often implicit in other sectors such as transport (Becken & Hay, 2007). This results in fragmented data availability for tourism, requiring expert assumptions to be made to fill in the gaps. GHG estimates of tourism are also complicated by varying data sources and formats between individual destinations and a "horses for courses" approach may be required to estimate in a particular destination (Becken & Hay, 2007). The methodology applied in this study was adapted from Scott et al. (2008) and World Economic Forum (2009) who estimated global GHG emissions from tourism.

For this study, GHG emissions from accommodation, land transport, air transport and water transport were estimated to provide an understanding of source and magnitude of GHG emissions by subsector and both top down as well as bottom up approaches were applied.

Hotel (Star Rated)	Electricity per room occupied (MJ/room)
5 star	1421
5 star	429
5 star	276
5 star	768
5 star	222
4 star	380

Table 1: Figures for electricity use per room night of Bali hotels as provided by GreenGlobe

Accommodation

GHG emissions for Bali's accommodation sector were estimated by applying the methodology of the World Economic Forum (2009). Tourism volume (guest nights or room nights) was multiplied by energy use (per guest night or room night) and an emissions factor per energy unit. Figures on tourism volume are published by Badan Pusat Statistik (BPS) Provinsi Bali (2010), which categorizes accommodation in Bali into 1- 5 star hotels as well as unclassified hotels. A small number of audits from hotels in Bali provided energy consumption figures for room nights in 4-5 star hotels. Figures for 1-3 Star hotels and unclassified hotels were adapted from international figures as reported by Trung and Kumar (2005) and the Carbon Analysis Indicator Tool (CAIT) by the World Resources Institute (2011) produced a figure of 0.192 kgCO2e/MJ for the carbon intensity of electricity consumption in Indonesia.

Land Transport

Very little information on tourism land transport was available at the time of the study. Based on data availability a top-down approach was chosen. Figures provided by the Pertamina Bali office gave an overview of annual oil consumption for land transport by type of fuel (table 2). The share of tourism was calculated assuming similarity between tourism's share of the economy and share of fuel consumption. This was then multiplied with figures for GHG emissions per litre of fuel consumed as published by the Australian Government (2008).

Air Transport

The global airline industry publishes detailed data, including GHG emissions by specific aircraft, flight routes and passenger volume, allowing precise calculations. However, such detailed calculations are time intensive, particularly when different types of aircraft are considered, and were not possible in the timeframe of the project. For the purpose of this study an estimate of distance travelled by visitor region multiplied by GHG emissions per trip as published in the IATA emissions calculator were deemed sufficient. This provided GHG emissions for international air transport from Asia, Australia, Europe, America, ASEAN countries as well as domestic flights.

Water Transport

GHG emission figures for water transport in Bali are not readily available; however BPS publishes figures on tourism volume on Ferries travelling to and from Bali on the Ketapang to Gilimanuk as well as the Lembar to Padangbai routes. Number of passengers was multiplied by the return distance and multiplied with the average CO2 emissions per passenger kilometre (ShipPax Information - BOLT Consulting, 2008). Cruise ship emissions were also of particular interest, however data availability was very limited. A top-down approach was applied for a very early estimate. Total worldwide emissions of cruise ships (World Economic Forum [WEF], 2009) were multiplied with the percentage of trips calling in Bali and Bali's share of each of those trips. The percentage of trips calling at Bali was estimated by calculating the share of visitors arriving in Bali by cruise ship (ANTARA News, 2011) compared to total international cruise ship passengers (CLIA, 2011a). Bali's share of the trips was estimated by assuming an average cruise trip of 7 days (CLIA, 2011b) and assuming a stay of 1 day in Bali.

Results

The results show a particularly high share of emissions by the air transport and land transport subsector. Air transport has a limited technical emission reduction potential, especially in the short and medium term (Scott, Peeters, & Gössling, 2010), however there are a range of reduction opportunities available for Bali's land transport. Currently there are only limited public transport options and no railway, resulting in a high dependence on private vehicles. Whilst the accommodation sector had a small share in comparison, findings from this study highlight other GHG reduction opportunities in this subsector.

Subsector	GUG emissions (KtCO2)	Share (%)
Accommodation	280.54	5.67
Land Transport	1,012.10	20.46
Water Transport	29.52	0.60
Air Transport (Int.)	2,590.71	52.38
Air Transport (Dom.)	1,033.23	20.89
Total	4,946.11	

Conclusion

Like most tourism destinations around the world, Bali will be under increasing pressure to manage its GHG emissions. Globally emerging legal frameworks (such as the emissions trading scheme in the EU), growing costs of carbon and increasingly pro-environmentally orientated customers are forcing destinations to adapt (Gössling, 2011). Due to Indonesia being a major emitter of GHG emissions, Bali can be expected to under added pressure.

The estimates in this study provide a better understanding of the source and magnitude of GHG emissions from Bali’s tourism sector and its sub-sectors. However, they also highlight the need for Bali to produce and continuously monitor a detailed GHG emissions inventory for tourism.

GHG Emissions of Bali Tourism

ACCOMMODATION									
Classified hotel							kgCO2e	KtCO2e	
5 STAR	Room nights (annual)	57,190.54	Energy Use per Room Night (MJ)	623	Emissions factor kgCO2e/MJ	0.192	6,840,903.71	**6.84**	Total ACC: 280.54 KtCO2e
4 STAR	Room nights (annual)	349,108.29		380		0.192	25,470,940.71	**25.47**	
3 STAR	Guest nights (annual)	1,840,762.46	Energy Use per Guest Night (MJ)	162		0.192	57,255,075.56	**57.26**	
2 STAR	Guest nights (annual)	1,903,687.00		122		0.192	44,591,964.29	**44.59**	
1 STAR	Guest nights (annual)	4,537,528.10		122		0.192	106,287,058.21	**106.29**	
Non-classified hotel									
< 10 rooms	Guest nights (annual)	285776.27	Energy Use per Guest Night (MJ)	122	Emissions factor kgCO2e/MJ	0.192	6,694,023.35	**6.69**	
10 - 24 rooms	Guest nights (annual)	567898.19		122		0.192	13,302,447.20	**13.30**	
25 - 40 rooms	Guest nights (annual)	300421.07		122		0.192	7,037,063.14	**7.04**	
41 - 100 rooms	Guest nights (annual)	507849.87		122		0.192	11,895,875.35	**11.90**	
> 100 rooms	Guest nights (annual)	49611.79		122		0.192	1,162,106.57	**1.16**	
LAND TRANSPORT							kgCO2	KtCO2	Total LAND 1,012.10 KtCO2
Premium	Litres consumed by land transport in Bali (2010)	675,944,000	tourism percentage of economy	46.16%	kgCO2 per litre	2.3	717,636,225.92	**717.64**	
Diesel		228,624,000		46.16%		2.7	284,938,663.68	**284.94**	
Pertamax		8,973,000		46.16%		2.3	9,526,454.64	**9.53**	
WATER TRANSPORT							kgCO2	KtCO2	
Ketapang - Gilimanuk	Number of pax by harbour	2,450,931	Distance return	12	kgCO2 per passenger km	0.12	3,529,340.64	**3.53**	Total WATER 29.52 KtCO2
Lembar - Padangbai		545,191		154		0.12	10,075,129.68	**10.08**	
Cruise Ships	Worldwide emissions in kgCo2	34,000,000,000	Share of trips calling at Bali	0.33%	Bali's share of trip	0.1429	15,920,179.37	**15.92**	
AIR TRANSPORT							kgCO2	KtCO2	
Asia	number of pax	853,347	kgCO2 for return flight per pax			911.14	777,518,585.58	**777.518586**	Total AIR 3,623.94 KtCO2
Australia		470,678				700.41	329,667,577.98	**329.667578**	
Europe		594,282				1821.9	1,082,716,432.98	**1082.71643**	
America		109,155				2993.7	326,781,689.70	**326.78169**	
ASEAN		229,168				323.02	74,025,847.36	**74.0258474**	
Domestic		1,942,168				532	1,033,233,376.00	**1033.23338**	
							Total	**4,946.11**	**KtCO2**

References

ANTARA News. (2011). Foreign tourist arrivals in Bali up by 13%. Retrieved from http://www.visitindonesia.com.au/June2011.php

Australian Government. (2008). Reducing greenhouse gas emissions. Department of Sustainability, Environment, Water, Population and Communities Retrieved 25/11/2011, from http://www.environment.gov.au/settlements/transport/fuelguide/environment.html

Becken, S., & Hay, J. E. (2007). Tourism and climate change: Risks and opportunities. Clevedon, Buffalo: Channel View Publications.

BPS, & Department of Culture and Tourism. (2009). Bali Tourism Satellite Account 2007 Jakarta, Indonesia: Statistics Indonesia (BPS) and Department of Culture and Tourism.

BPS Provinsi Bali. (2010). Bali in Figures 2010. Denpasar, Bali, Indonesia: Badan Pusat Statistik (BPS) Provinsi Bali.

CLIA. (2011a). 2011 CLIA cruise market overview. Retrieved from http://www.cruising.org/sites/default/files/misc/2011FINALOV.pdf

CLIA. (2011b). Cruise Market Profile Study. Retrieved from http://www.cruising.org/sites/default/files/pressroom/Market_Profile_2011.pdf

Gössling, S. (2011). Carbon management in tourism: Mitigating the impacts on climate change. Oxon (UK) and New York (USA): Routledge.

Ministry of Environment. (2007). National action plan addressing climate change. Jakarta,Indonesia: Ministry of Environment, Republic of Indonesia.

Ministry of Environment. (2010). Indonesia second national communication under the United Nations Framework Convention on Climate Change. Jakarta: Ministry of Environment, Republic of Indonesia.

Scott, D., Amelung, B., Becken, S., Ceron, J. P., Dubois, G., Gössling, S., et al. (2008). Climate change and tourism: Responding to global challenges. Madrid, Paris: World Tourism Organization (UNWTO), United Nations Environment Programme (UNEP).

Scott, D., Peeters, P., & Gössling, S. (2010). Can tourism deliver its “aspirational” greenhouse gas emission reduction targets? Journal of Sustainable Tourism, 18(3), 393-408.

ShipPax Information - BOLT Consulting. (2008). Ferry Shipping Conference 08: Building bridges in the industry. Retrieved from http://www.shippax.se/page/page.asp?id=58

Trung, D. N., & Kumar, S. (2005). Resource use and waste management in Vietnam hotel industry. Journal of Cleaner Production, 13(2), 109-116. doi: DOI: 10.1016/j.jclepro.2003.12.014

World Economic Forum [WEF]. (2009). Towards a low carbon travel and tourism sector. Geneva, Switzerland: WEF.

World Resources Institute. (2011). Climate Analysis Indicators Tool (CAIT). Retrieved 28/11/2011 http://cait.wri.org

Water usage from the tourism sector in Bali

Technical Report, 01/12/2011

Terry De Lacy, Alexandra Law, Serajul Hoque

Introduction

This study was conducted as part of the Green Growth 2050 Roadmap for Bali Tourism Project, which was commissioned by the Ministry of Tourism and Creative Economy (previously the Ministry of Culture and Tourism) in late 2011 and provides a water consumption estimate of Bali's accommodation sector.

Aim

The aim of this study was to estimate the source and magnitude of water consumption of Bali's accommodation sector, including a breakdown of water consumption by accommodation type and class, and provide an estimate of tourism share of Bali's overall water consumption.

Background

Bali has limited access to water supply. The island already suffers from a water deficit which will increase with a rise in population and economic activities (Republic of Indonesia, 2007). Tourism activities represent over 46 % of Bali's economy (Statistics Indonesia & Department of Culture and Tourism, 2007) and as such can be expected to contribute significantly to Bali's water consumption. However, no reliable data of water usage of tourism is currently available.

Methods

In the absence of detailed and reliable secondary data the aim was to provide an estimate of two scenarios: current water consumption under a best practise scenario and an estimate of consumption in a business as usual scenario. Estimates were based on a small number of audits of 4-5 star hotels as outlined in table 1.

Water consumption figures for 1-3 star hotels and unclassified hotels were then adjusted according to international data on hotel water consumption as reported by Trung and Kumar (2005) and multiplied with the room nights in each category as published by the Badan Pusat Statistik (BPS) Provinsi Bali (2010). Finally, the estimates for hotel water consumption were compared to Bali's overall water consumption of 128,442,000m³ (BPS Provinsi Bali, 2010) in the year 2009.

Estimates provided in this study are very early estimates only-based on a limited number of audits and involving broad assumptions made by expert in the field. However, these estimates allow an understanding of Bali tourism's role in overall water consumption for policy and strategy development, by comparing the lower (best practise) and upper (business as usual) bracket, not only for accommodation overall but also by hotel class and category.

Results

The estimated figures show that in a business as usual scenario the share of Bali's hotels of overall water consumption could be as high as 22.7% if no water conservation measures are implemented (table 2). The best practise scenario indicates the share could be as little as 2.84%.[1]

Hotel (Star Rated)	Water/room occupied (M3/room)
5 Star	9.7
5 Star	1.2
5 Star	1.9
5 Star	4.6
5 Star	1.9
4 Star	1.3

Table 1: Figures for water consumption of Bali hotels as provided by GreenGlobe

Water Consumption in m³		
Type of Hotel	**Lower**	**Upper bracket Bracket**
Classified hotel		
5 star hotel	68,629	554,748
4 star hotel	14,197	2,513,580
3 star hotel	552,229	4,417,830
2 star hotel	573,976	4,591,808
1 star hotel	1,592,1151	12,736,921
Non-classified hotel		
< 10	98,544	788,348
10-24	189,299	1,514,395
25-40	87,501	700,010
41-100	150,846	1,206,772
> 100	16,537	132,298
Total Hotel	**3,643,874**	**29,156,710**
Total Bali (in 2008)	**128,442,000**	**128,442,000**
Share of hotels	**2.84%**	**22.70%**

Table 2: Results of water consumption estimates by hotel class and category

[1] *The estimate for 1-star hotels was particularly high due to the large number of establishment in this category.*

Conclusion

This preliminary study highlights not only the need to conserve water within the tourism sector but also the opportunities for Bali to do this. The best practise and business as usual scenarios were both based on water consumption figures from Balinese hotels (not overseas benchmarks) proving that significant water consumption reductions within the sector can, and to some extent already have been achieved. This emphasizes the need for individual hotels to adopt water conservation measures and also the importance of providing hotels with incentives or regulations to do so. Tourist numbers in Bali are forecast to double by 2020 (), indicating that water consumption of Bali tourism in a business as usual scenario is not sustainable under current water policies and strategies.

References

BPS Provinsi Bali. (2010). Bali in Figures 2010. Denpasar, Bali, Indonesia: Badan Pusat Statistik (BPS)Provinsi Bali.

Republic of Indonesia. (2007). National action plan addressing climate change. Jakarta, Indonesia: State Ministry of Environment.

Statistics Indonesia, & Department of Culture and Tourism. (2007). Bali tourism satellite account 2007. Indonesia.

Trung, D. N., & Kumar, S. (2005). Resource use and waste management in Vietnam hotel industry. Journal of Cleaner Production, 13(2), 109-116. doi: DOI: 10.1016/j.jclepro.2003.12.014

Tourism arrival forecasts for Bali through to 2020

Technical Report

Professor Lindsay Turner

Tourist arrivals forecasting is normally projected into the short to medium term up to five years ahead. In such cases it is not necessary to allow for an error measurement, provided the forecasting is completed professionally and using modern methodology, as the level of accuracy is commonly within less than 15% error and as little as 5% error in the short term. In this case where forecasting is projected ahead some ten years, based upon actual data from 2000 to 2010, it is necessary to allow for error measures. As such the forecasts presented here have a scenario projection that allows for an upper and lower bound on the forecasts.

The scenario is not simply a confidence interval calculated as a percentage variation, but is unique to each series, and calculated taking into account the variability of the series. The lower and the upper bound are calculated separately and account for the potential of the models to over and under forecast, so the bounds are of different widths above and below the series. In this way the upper and lower bounds provide more practical and realistic assessments of likely variations in the projected numbers.

The forecasts themselves are generated using three quantitative models where the accuracy of the forecasts from each model are compared within the known sample data using the last three years from 2008 to 2010 inclusive. In this way it is possible through trial and error to determine which methodology is most capable of adjusting to the given series and to generate accurate forecasts. The three models used are the Time Varying Parameter Model (econometric), the Causal Structural Model (econometric) and the Basic Structural Model (time-series). The independent economic causal variables used include CPI adjusted for inflation, an Airfare index on the cost of travel, average disposable income and regional GDP. In two series - Other Countries and Japan, where initially accuracy was elusive, an ARIMA model was used for Japan with an extended arrivals series and a neural model was used for Other Countries.

The forecasts have taken into account shocks to the existing arrivals series by including intervention variables, but do not allow for future shocks that remain unknown. There will be shocks that disturb a forecast series moving so far ahead to 2020, and therefore it is not realistic to assume that the final forecast values will be achieved. However, the forecasts are what could be achieved in a perfect and unaffected socio/economic world. Such arrivals growth would also require the necessary support infrastructure needed to meet the demand. In this context the forecasts can also be used as a measure of the loss in arrivals caused by external and unpredictable shock events (natural disasters, economic downturns and so forth) and the loss caused by inadequate planning for the support of such arrivals demand.

Questions can be raised as to whether the projected arrivals from Europe can be sustained under the current Euro crisis. Also there are questions raised by the introduction of new departure and carbon taxes in Europe. These issues reflect most strongly on the high projected growth from the UK. Fortunately, a significant part of the European growth is projected for Russia which is less affected by these concerns. Moreover, most growth remains focused upon the local Asia Pacific region where the economies that comprise the larger arrivals appear to have strong future growth potential. It is likely that the USA will slowly recover financially more reliably than Europe, and this also supports the projections for overall arrivals growth. Additionally, both China and India have the potential to offer higher rates of growth than currently being evidenced, and may exceed the current forecasts.

Visitor Forecasts to 2020 with scenarios

Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Upper		14,921	18,197	20,435	22,948	25,769	28,938	32,496	35,051	38,827	41,136
AFRICA	14,973	14,428	17,595	19,759	22,189	24,917	27,981	31,421	33,892	37,543	39,776
Lower		14,054	17,139	19,247	21,614	24,272	27,256	30,607	33,014	36,571	38,746
Upper		135,872	143,823	153,638	164,123	175,323	187,287	199,035	209,510	216,808	226,925
AMERICAS	113,094	131,570	139,269	148,773	158,926	169,771	181,357	192,733	202,876	209,943	219,740
Lower		127,899	135,583	144,622	154,492	165,034	176,297	187,356	197,216	204,086	213,609
Upper		30,870	36,813	41,331	43,902	46,836	50,365	52,717	57,583	60,888	63,597
Canada	24,362	29,873	35,624	39,996	42,484	45,323	48,738	51,014	55,723	58,921	61,543
Lower		28,939	34,511	38,746	41,156	43,907	47,215	49,420	53,982	57,080	59,620
Upper		84,747	91,747	96,896	102,336	107,043	112,753	117,443	121,984	125,480	129,455
USA	72,145	81,750	88,503	93,470	98,717	103,258	108,766	113,290	117,670	121,043	124,877
Lower		80,663	87,326	92,227	97,404	101,885	107,319	111,783	116,105	119,433	123,216
Upper		2,027,011	2,382,983	2,667,428	2,876,048	3,122,667	3,324,012	3,571,439	3,692,221	3,865,631	4,086,289
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
Lower		1,657,258	1,948,296	2,180,854	2,351,419	2,553,052	2,717,669	2,919,962	3,018,711	3,160,489	3,340,896
Upper		843,727	908,281	960,165	1,012,163	1,055,094	1,100,343	1,117,533	1,136,184	1,156,005	1,172,385
Australia	647,872	704,233	758,114	801,420	844,821	880,654	918,422	932,770	948,337	964,881	978,553
Lower		595,499	641,061	677,681	714,381	744,681	776,618	788,750	801,914	815,903	827,464
Upper		251,690	260,810	272,235	284,936	295,576	309,634	319,990	333,657	344,281	355,075
China	196,863	209,654	217,251	226,768	237,348	246,211	257,921	266,547	277,932	286,781	295,773
Lower		168,415	174,518	182,163	190,662	197,781	207,188	214,117	223,263	230,371	237,594
Upper		21,337	25,552	28,456	32,368	34,232	36,459	39,179	41,203	43,055	44,918
Hong Kong	15,172	19,655	23,537	26,212	29,816	31,533	33,584	36,090	37,954	39,660	41,376
Lower		17,218	20,618	22,962	26,119	27,623	29,420	31,615	33,248	34,742	36,245
Upper		60,731	78,671	91,886	104,104	117,375	130,694	144,456	156,769	171,082	183,866
India	40,777	55,498	71,892	83,968	95,133	107,260	119,432	132,008	143,260	156,339	168,022
Lower		50,265	65,113	76,050	86,162	97,145	108,170	119,560	129,751	141,596	152,178

Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Upper		198,650	174,015	208,035	216,477	248,456	266,056	287,955	304,840	318,633	339,535
Japan	246,465	178,980	156,784	187,436	195,042	223,854	239,712	259,442	274,655	287,083	305,915
Lower		153,941	134,850	161,214	167,756	192,537	206,176	223,146	236,231	246,920	263,117
Upper		139,391	141,466	144,944	148,864	152,144	156,138	160,209	163,052	166,677	170,100
Korea ROK	124,964	125,952	127,827	130,970	134,512	137,475	141,084	144,763	147,332	150,607	153,700
Lower		109,843	111,478	114,219	117,308	119,892	123,039	126,248	128,488	131,344	134,042
Upper		191,597	209,686	227,930	244,738	260,791	273,255	288,246	304,231	323,772	340,862
Malaysia	155,239	169,750	185,777	201,940	216,832	231,054	242,097	255,379	269,541	286,854	301,995
Lower		148,022	161,998	176,092	189,078	201,479	211,109	222,690	235,040	250,137	263,340
Upper		129,666	151,828	165,821	178,601	191,825	204,973	221,998	235,240	248,948	262,206
Singapore	94,791	113,245	132,601	144,822	155,983	167,533	179,016	193,885	205,450	217,422	229,001
Lower		101,581	118,943	129,905	139,917	150,277	160,577	173,915	184,289	195,028	205,414
Upper		148,483	161,134	172,490	178,545	184,777	191,201	201,668	206,808	212,450	218,505
Taiwan	122,682	134,581	146,047	156,340	161,828	167,477	173,299	182,786	187,445	192,559	198,047
Lower		114,932	124,724	133,514	138,201	143,025	147,997	156,099	160,078	164,445	169,132
Upper		664,966	654,768	659,182	669,113	688,906	716,801	754,658	800,580	846,424	904,109
EUROPE	613,774	591,344	582,275	586,200	595,032	612,633	637,440	671,105	711,943	752,711	804,010
Lower		525,705	517,642	521,132	528,983	544,631	566,684	596,612	632,917	669,160	714,765
Upper		113,537	107,877	103,779	111,954	118,353	126,043	137,400	145,300	155,061	168,363
France	106,113	94,931	90,198	86,772	93,607	98,957	105,387	114,883	121,488	129,650	140,772
Lower		72,622	69,001	66,381	71,609	75,702	80,621	87,885	92,938	99,182	107,691
Upper		83,721	75,071	79,112	84,917	94,013	101,492	108,410	114,935	121,534	128,304
Germany	84,207	69,843	62,627	65,998	70,841	78,429	84,668	90,440	95,883	101,388	107,036
Lower		54,966	49,287	51,940	55,752	61,724	66,634	71,176	75,460	79,792	84,237
Upper		72,836	64,855	71,062	75,832	81,291	88,324	94,715	100,986	106,545	112,013
Netherlands	75,312	61,783	55,013	60,278	64,324	68,955	74,921	80,342	85,661	90,377	95,015
Lower		49,235	43,840	48,036	51,260	54,950	59,705	64,025	68,263	72,021	75,717

Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Upper		84,893	98,214	113,085	129,455	149,032	171,971	189,773	206,402	222,585	236,688
Russian Fed	65,117	77,341	89,477	103,025	117,938	135,774	156,672	172,890	188,040	202,783	215,632
Lower		64,781	74,946	86,294	98,785	113,724	131,228	144,813	157,502	169,851	180,613
Upper		114,919	111,070	120,921	134,728	149,236	163,502	178,035	192,453	210,117	239,006
UK	104,375	100,454	97,089	105,700	117,769	130,451	142,921	155,625	168,228	183,669	208,921
Lower		87,485	84,555	92,054	102,565	113,610	124,470	135,534	146,510	159,957	181,949
Upper		7,365	7,617	7,897	8,448	8,746	9,028	9,348	9,648	9,980	10,239
Middle East	6,600	6,092	6,300	6,532	6,988	7,234	7,467	7,732	7,980	8,255	8,469
Upper		114,919	111,070	120,921	134,728	149,236	163,502	178,035	192,453	210,117	239,006
UK	104,375	100,454	97,089	105,700	117,769	130,451	142,921	155,625	168,228	183,669	208,921
Lower		87,485	84,555	92,054	102,565	113,610	124,470	135,534	146,510	159,957	181,949
Upper		7,365	7,617	7,897	8,448	8,746	9,028	9,348	9,648	9,980	10,239
Middle East	6,600	6,092	6,300	6,532	6,988	7,234	7,467	7,732	7,980	8,255	8,469
Lower		5,026	5,198	5,389	5,765	5,968	6,160	6,379	6,584	6,810	6,987
Upper		296	303	313	328	338	348	358	369	381	394
Other Countries	231	249	255	264	276	285	293	302	311	321	332
Lower		171	175	181	190	196	201	207	214	221	228
Upper		2,850,432	3,207,690	3,508,893	3,741,009	4,021,749	4,266,414	4,567,334	4,747,379	4,978,051	5,269,093
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
Lower		2,330,113	2,623,833	2,871,425	3,062,464	3,293,152	3,494,268	3,741,124	3,888,656	4,077,336	4,315,231
Upper		5,763,509	6,307,060	6,901,952	7,552,774	7,953,475	8,486,036	9,052,651	9,471,950	9,962,623	10,463,335
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
Lower		4,699,440	5,142,640	5,627,702	6,158,368	6,485,091	6,919,330	7,381,335	7,723,223	8,123,306	8,531,577

Visitor Forecasts to 2020

REGIONS	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	192,733	202,876	209,943	219,740
Canada	24,362	29,873	35,624	39,996	42,484	45,323	48,738	51,014	55,723	58,921	61,543
USA	72,145	81,750	88,503	93,470	98,717	103,258	108,766	113,290	117,670	121,043	124,877
ASIA	1,746,38	1,847,90	2,183,13	2,451,09	2,649,64	2,885,46	3,076,98	3,313,38	3,430,97	3,598,40	3,808,24
Australia	647,872	704,233	758,114	801,420	844,821	880,654	918,422	932,770	948,337	964,881	978,553
China	196,863	211,234	229,826	248,208	267,320	287,370	307,198	326,858	345,815	364,145	381,988
		107.3%	108.8%	108.0%	107.7%	107.5%	106.9%	106.4%	105.8%	105.3%	104.9%
Hong	15,172	19,655	23,537	26,212	29,816	31,533	33,584	36,090	37,954	39,660	41,376
India	40,777	55,498	71,892	83,968	95,133	107,260	119,432	132,008	143,260	156,339	168,022
Japan	246,465	178,980	156,784	187,436	195,042	223,854	239,712	259,442	274,655	287,083	305,915
Korea	124,964	125,952	127,827	130,970	134,512	137,475	141,084	144,763	147,332	150,607	153,700
Malaysia	155,239	169,750	185,777	201,940	216,832	231,054	242,097	255,379	269,541	286,854	301,995
Singapore	94,791	113,245	132,601	144,822	155,983	167,533	179,016	193,885	205,450	217,422	229,001
Taiwan	122,682	134,581	146,047	156,340	161,828	167,477	173,299	182,786	187,445	192,559	198,047
EUROPE	613,774	591,344	582,275	586,200	595,032	612,633	637,440	671,105	711,943	752,711	804,010
France	106,113	94,931	90,198	86,772	93,607	98,957	105,387	114,883	121,488	129,650	140,772
Germany	84,207	69,843	62,627	65,998	70,841	78,429	84,668	90,440	95,883	101,388	107,036
Netherlan	75,312	61,783	55,013	60,278	64,324	68,955	74,921	80,342	85,661	90,377	95,015
Russian	65,117	77,341	89,477	103,025	117,938	135,774	156,672	172,890	188,040	202,783	215,632
UK	104,375	100,454	97,089	105,700	117,769	130,451	142,921	155,625	168,228	183,669	208,921
MIDDLE	6,600	6,092	6,300	6,532	6,988	7,234	7,467	7,732	7,980	8,255	8,469
Other	**231**	**249**	**255**	**264**	**276**	**285**	**293**	**302**	**311**	**321**	**332**
TOTAL	**2,493,05**	**2,591,58**	**2,928,83**	**3,212,61**	**3,433,05**	**3,700,30**	**3,931,52**	**4,216,68**	**4,387,97**	**4,607,18**	**4,880,57**
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

Impact of tourism on GDP and employment in Bali, 2010-2020

Serajul Hoque

The focus of this report is on the forecast of the impact of tourism on gross domestic product (GDP) and employment in the Bali economy from 2010 to 2020 (see Table 1). In this Report we also present tourism GDP and employment by major tourism sector in Bali for the year 2007 and 2020 (see Table 2). We begin with a brief discussion of the importance of tourism forecast data for Bali economy, followed by description of the derivation method. Finally, we discuss about the tourism GDP and employment forecast estimates for Bali.

Tourism forecasting can play a vital role by providing tourism investors, industry and government with important information and support for future development of the Bali tourism industry. Forecasting is particularly relevant to implement the new national development strategy for the Bali and to achieve its goal in order to operate as a tourism economic development zone as well as the national strategy of Bali as the gateway for the main economic activity of tourism in Indonesia.

Tourism GDP and employment for Bali from 2010 to 2020 are derived using information from Bali Tourism Account 2007 and Lindsay Turner's A Long-term Visitor Forecast for Bali. At first, we derive annual growth rate of Bali's domestic inbound (tourists from other regions in Indonesia) and international inbound (Tourists from foreign countries) tourism using Lindsay Turner's Visitor Forecast figures until 2020. We assume that annual growth rate from 2007 to 2010 is average of growth rates from 2010 to 2020. We then apply these growth rates to 2007 domestic inbound and international inbound tourism GDP to derive the same from 2010 to 2020. Total tourism GDP for Bali from 2010 to 2020 is sum of domestic inbound and international inbound tourism GDP for the same period. Tourism employment for Bali from 2010 to 2020 is derived using the same method as tourism GDP. Tourism GDP by tourism industry sector is derived by disaggregating total Bali tourism GDP in 2020 using tourism industry's shares of total Bali tourism GDP and employment in 2007. The similar method is applied to derive tourism employment by tourism industry in 2020.

Table 1 presents the impact of tourism on GDP and employment in Bali in 2007 and as well as from 2010 to 2020. It can be seen that the contribution of tourism to total Bali economy in 2007 is 46.16 per cent for GDP and 40.56 per cent for employment. Table 1 also shows that tourism's contribution to Bali's GDP in 2020 will be 49,211 billion rupiah compare to 19,543 billion rupiah and the corresponding figures for tourism employment are 2,040,000 persons and 816,000 persons.

Table 2 provides the break-down of tourism GDP and employment by tourism industry sector for the year 2007 and 2020. For example, contribution of Hotel industry to total Bali GDP in 2007 and 2020 is respectively 3,995 billion rupiah and 10,059 billion rupiah and the corresponding figures for tourism employment are 44,120 persons and 110,370 persons.

Table 1: Impact of tourism on GDP and employment in Bali, 2007, 2010-2020

	2007	**Contribution of tourism to total Bali economy, 2007**	**2010**	**2011**	**2012**	**2013**
Tourism GDP (billion	19,543	46.16%	26,981	28,425	30,808	33,169
Tourism employment	816	40.56%	1,120	1,178	1,277	1,375

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Tourism GDP (billion	35,373	37,498	39,749	42,384	44,323	46,566	49,211
Tourism employment	1,466	1,555	1,648	1,758	1,838	1,930	2,040

Notes: Estimates for 2007 in columns 2 and 3 are taken from Bali Tourism Satellite

Account 2007 and forecasts from 2010 to 2020 are author's calculations[2]

** Statistic Indonesia and Department Of Culture & Tourism (2009)*

[2] *Turner (2011)*

Table 2: Impact of tourism on GDP and employment by tourism sector in Bali, 2007 and 2020

Economic sector	2007		2020	
	GDP (Billion Rupiah)	Employment (000)	GDP (Billion Rupiah)	Employment (000)
Agriculture	1,748.26	144.59	4,402.18	361.71
Mining and quarrying	166.93	5.38	420.34	13.46
Manufacturing	2,777.61	251.68	6,994.12	629.6
Electricity, gas & water	283.17	1.31	713.03	3.28
Construction	1,254.34	86.04	3,158.47	215.24
Trade	1,063.46	73.62	2,677.83	184.17
Restaurant	2,137.80	62.79	5,383.05	157.08
Hotel	3,994.95	44.12	10,059.42	110.37
Land transport	798.73	29.81	2,011.23	74.57
Water transport	86.06	1.18	216.7	2.95
Air transport	1,381.89	0.93	3,479.65	2.33
Services allied to trans	322.23	6.62	811.39	16.56
Communication	650.92	9.19	1,639.04	22.99
Other services	2,877.02	98.38	7,244.44	246.11
Total	19,543.38	815.66	49,210.89	2,040.40

Notes: Figures for 2007 in columns 2 and 3 are taken from Bali Tourism Satellite

Account 2007 and figures for 2020 are based on author's calculations.

References:

Turner, L. (2011), A long term visitor forecast for Bali – Technical Report, Victoria University, Melbourne, Australia.

Statistics Indonesia and Department of Culture & Tourism (2009), Bali Tourism Satellite Account 2007, Jakarta, Indonesia.

Development of Green Growth Road Map for Bali 2050

Preliminary Analysis: Resident perceptions of tourism in Bali

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November 2011

Introduction

This report provides results from a survey conducted in Bali in October 2011 to gather information regarding residents' perceptions of tourism on the island. The survey respondents were separated into two groups: 1) residents from a tourism area and 2) residents from a non-tourism area. Tourism area respondents include those who live in Kuta, Sanur, Jimbaran, and Nusa Dua while non-tourism respondents live outside those four areas. A total of 200 surveys were collected and analysed (100 from the tourism area and 100 from the non-tourism area). All respondents were over the age of 18. Data collection and analysis were coordinated by Dr. Sebastian Filep from the Centre for Tourism and Services Research, Victoria University, Australia. Surveys were anonymous and self-administered and were collected with the help of research assistants. Each survey had a qualitative and a quantitative component to capture a wide range of resident views and perceptions. The forthcoming sections outline key findings for the two groups of respondents.

Demographic findings

Within the tourism area sample, there is a mostly even gender split (54 males and 46 females); the dominant age group is 18 to 35 (70%) and 21% of the tourism area residents are between the ages of 36 and 45. The tourism area respondents are generally well educated: 39 completed university education while 54 completed senior high school and secondary school. The respondents in this area generally live with other people (65), but they are mostly single (54). Many respondents have lived in the tourism area for 2-5 years (39) and between 6 to 10 years (24). Tourism area respondents generally work in the tourism sector (63%). They typically work in art shops, cafés, hotels, restaurants, currency exchange offices, spas and car rental companies. However, only 30% of respondents' family members work in the tourism sector, suggesting further opportunities for employment.

Within the non-tourism area sample, the ratio of male to female respondents is also almost equal (53 males to 49 females). Non tourism residents are somewhat older than the tourism group (63% are in the 26 to 45 age bracket). They are equally well educated. They are mostly university graduates, such as, Diploma, Bachelor and Master degree holders (54) while another dominant group are senior high school graduates (34). As with the tourism sample, the respondents live with other people (80) and 59 of them are married. Many have lived in the non-tourism area for more than 6 years (67). Unlike residents in the tourism area however, these residents usually work in the sector not related to tourism (79), such as in education (e.g. teaching), personal care services (e.g. babysitting) and in administration. Some were also unemployed (housewives and students). For the minority of non-tourism area respondents who work in tourism (21), the line of work varies but usually involves hotel work; work at tourist and souvenir shops, travel agencies and at car rental businesses.

General perceptions

The respondents in both groups were first asked to think about Bali in the next twenty years and describe services and facilities they would ideally like to have.

They were asked to think of the quality of life of their community in answering this question. In general, the surveys show that both groups of residents have quite similar views about the future of Bali. The respondents want Bali to have better (1) infrastructure and transportation systems, (2) better education and (3) better health facilities in the next twenty years.

Respondents in the tourism area want improvements in transportation and infrastructure in the city. They want less traffic congestion and more public transportation options. Specifically, they want new highways, damaged roads to be fixed and more buses, ferries and a monorail. Residents in the non-tourism area suggested similar transportation options, but they also mentioned they would like to see a bridge connecting the islands of Jawa and Bali and a toll highway. In terms of better education, both groups propose more scholarships for outstanding students and poor people and education that respect the traditional culture and Balinese language. However, more respondents in the non-tourism area (53) pay attention to educational issues than in the tourism area (39). Respondents in the tourism area (40) have mentioned that poor people need better access to health facilities in their neighbourhood. Respondents in the non-tourism area (53) are similarly concerned about the availability and quality of health facilities. They suggest having health service facilities spread more equally to remote areas.

In the next question, the respondents were instructed to write down words that first come to their mind when they think of tourism in Bali. The purpose was to gauge their overall impressions of tourism on the island. The answers from respondents were then classified as positive, negative, and neutral. Common positive words for both groups were: good, clean, amazing, stunning, attractive, island of the Gods (41% of tourism residents) and beautiful, good, clean and cultural - arts, traditions, customs, wisdom (52% of non-tourism residents). Clearly, the tourism residents were less positive about tourism than the non-tourism residents, suggesting room to improve perceptions of tourism. Residents in the non-tourism area appear to be more concerned about Bali's culture and customs than the residents in the tourism area, possibly suggesting greater opportunities for culturally sustainable tourism outside of Kuta, Sanur, Jimbaran, and Nusa Dua regions.

Major negative words by both tourism –area respondents and non-tourism respondents were traffic congestion and crowding. Neutral words were typically beach, hotel and tourist.

Lastly the respondents were asked how they would like tourism in Bali to change. If they did not want it to change they were asked to explain why. Both groups mainly believe that Bali has to change its tourism in the future (81 tourism residents and 85 non-tourism residents). Services and facilities that support tourism need to be improved. The respondents want less pollution (reduction in vehicle usage), better infrastructure for public facilities, better sewage systems for tourists and residents and better spatial planning for buildings and land use.

Overall, the analysis of these general views of the respondents' shows that the Bali community has mixed perceptions about tourism. They agree that they benefit from tourism economically and tourism helps them in preserving and promoting their culture. However, negative impacts of tourism, such as pollution, traffic congestion, environmental damage and overused sewage systems need to be addressed.

Specific attitudes towards tourism

In the quantitative analysis, respondents were asked more specific questions about tourists and tourism impacts. Residents in both areas (92% of tourism residents and 91% of non-tourism respondents) would like to see more tourists come to Bali since tourism provides economic benefits to their family and community. The majority strongly disagrees with the statement that tourism only benefits the outsiders and rich people. However, residents in both areas are reluctant to allow their children to work in the tourism field - only 35% respondents in the tourism area and 26% of respondents in non- tourism area agree with the statement: "I would be happy for my children to work in the tourism industry". This may suggest a level of unease with working conditions in the tourism sector. Similarly, respondents from both areas (62% of tourism and 61% of non-tourism residents) agree that tourism causes prices to increase, implying that tourism, despite its economic benefits, might put a strain on household costs. It is imperative therefore that the local community directly benefits from tourism revenue.

Community health and well being

A separate section of the survey examined overall levels of health and well-being of the resident groups. The objective was to gain further insights into the quality of life of residents in Bali. Overall, respondents in these two groups are relatively healthy, despite their earlier outlined need for better health facilities. Thirty-five respondents in the non-tourism area indicated that they are very healthy and 43 are somewhat healthy, while 30 tourism area respondents stated they are very healthy and 43 somewhat healthy. However, respondents in the tourism area have slightly higher levels of anxiety, sleeping difficulties and fatigue (up to 7% difference) possibly suggesting a slightly greater degree of stress in the tourism area. Similarly, respondents in the tourism area experience sadness more often (33) compared to those from the non-tourism area (31).

Social impacts of tourism

Finally, the resident groups were asked about 14 specific social impacts that tourism may have on a host community, based on earlier studies of social impacts. The impacts related to issues such as economic benefits, delinquent behaviour due to tourism, availability of services due to tourism, cultural pride, and environmental impacts of tourism, costs and access to services. The questions were divided into three parts. The first part asked whether the respondent agreed that the impact occurred while parts B and C asked about the impact on personal quality of life and the overall community. The highest level of agreement by tourism area residents was found regarding the economic benefit of tourism (88.9%). On the other hand, most tourism area respondents (82.8%) believe that tourism causes the increase of prices of goods and services such as property values. Only a small proportion of tourism area respondents (19.2%) believe that tourists deny local residents access to public facilities, for example, access to roads, parks, sporting facilities, and public transport. This suggests relatively high level of tolerance of tourists in public spaces. The results of the preliminary social impact analysis for the non-tourism area residents are not much different. The highest level was of agreement was with infrastructure development due to tourism (80.2%) and economic benefits (66.3%). Similar to tourism area respondents, small proportion of non-tourism area respondents (7%) believed that tourists deny local residents access to public facilities. Tourists, overall, appear to be welcome in public spaces.

Conclusion

In general, the results of this survey show that the majority of residents feel that the overall impact of tourism on the community and personal quality of life is positive. They believe that tourism benefits the culture and stimulates the economic development in Bali. However, there are some negative impacts that are indirectly as well as directly related to tourism and that should be addressed. These include: traffic congestion, pollution, levels of stress in the tourism zone, price increases and concerns about tourism employment opportunities. Analysis shows employment opportunities could be spread more evenly around Bali if tourism extends to other regions. There are also opportunities to engage with the cultural richness of non-tourism areas and foster culturally sustainable and community based tourism initiatives in regions outside Kuta, Sanur, Jimbaran, and Nusa Dua.

Development of Green Growth Road Map for Bali 2050

Preliminary Analysis:
Understanding Visitors to Bali

Centre for Tourism and Services Research
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November 2011

Introduction

This report provides results from a self-administered anonymous survey conducted in Bali in November 2011. Two hundred and forty tourists were surveyed and divided into four groups: 1) Australian 2) Chinese, 3) Mixed Asian (Malaysian, Singaporean, Indian, Japanese, Taiwanese, Thai and Korean tourists); and Mixed European tourists, including the UK/Ireland respondents. These are respondents from the dominant and the emerging markets in Bali. Following consultations with the Bali Tourism Board, the respondents were selected at hotels, resorts and other tourist venues in Kuta, Nusa Dusa, Sanur and neighbouring areas. The aim was to understand tourists' key motivation drivers to visit Bali, their current levels of satisfaction and gain insights into ideal Bali holiday experiences. Data on trip frequency, length of stay and intentions to re-visit was also collected. Key demographic characteristics were also recorded. The forthcoming sections outline major results for the four groups.

Motivation drivers and overall satisfaction

The results in Table 1 show that the majority of visitors surveyed are attracted by the natural environment and culture. The four groups were asked to indicate what attractions and activities motivated them to visit Bali (e.g. beaches, lakes and volcanoes, palaces and temples, spas and wellbeing resorts, traditional villages, local food/restaurant/markets, music and dance, shopping, etc.).

Table1: Key motivation drivers

	Australia		Asia		China		Europe	
Attraction/Country	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
Beaches	86	14	92	8	96	4	67	33
Lakes and Volcanoes	44	56	65	35	62	38	52	48
Palaces	42	58	71	29	76	24	65	35
Museums	14	86	29	71	26	74	17	83
Traditional village	46	54	61	39	60	40	65	35
Spas and wellbeing	40	60	41	59	64	36	19	81
Adventure activities	44	56	43	57	48	52	27	73
Local food	68	32	67	33	66	34	56	44
Music and dance	48	52	16	84	18	82	27	73
Flora and Fauna	20	80	10	90	2	98	33	67
Shopping	60	40	80	20	68	32	33	67
Warm climate	76	24	45	55	38	62	70	30

Beaches are the key motivation for the Chinese, Asian and Australian groups (96%, 92%, and 86% respectively); the Europeans are somewhat less attracted by the beaches (67%) but are more attracted by Bali's warm climate (70%). In terms of culture, local food is a significant motivation driver for the groups (above 60% for the Australian, Asian and Chinese groups); palaces and traditional villages were other popular cultural motivations. Shopping was a more popular activity with the Asian and the Chinese groups (80% and 68% respectively), while interest in more upmarket experiences (such as spas wellbeing resorts) is the highest among the Chinese group (64%). Museums were the least popular motivation driver across the four groups (Australia – 14%; Asia – 29%; China – 26%; and Europe – 17%). Another less popular motivation driver was interest in flora and fauna, although the interest in the other natural environment features (such as lakes and volcanoes, climate and beaches) was very high.

A separate section investigated overall levels of satisfaction, focusing on respondents' moods and feelings. Based on a larger study of visitor experiences in the United States, the satisfaction themes of education, escapism, arousal, memory, entertainment, aesthetics and overall quality of the experience were measured. The key themes are shown in Table 2.

The highest and the lowest scoring averages are similar among the four groups. The themes of memory and overall quality are the highest scoring themes for the four groups (with an average score of 6.5 out of the maximum 7 points for memory and 6.4 for the overall quality); the overall quality was represented by items such as: "I feel happy"; and "I feel well". The memory was represented by items such as: "I won't forget my experiences". On the contrary, the items that represented escapism (such as "I feel I can escape from my reality in Bali") was less popular with the respondents (average score of 4.3 points across the groups). The results are in agreement with the visitor study from the United States which had similar averages. Structuring the antecedents of fulfilling experiences in this way allows Bali's destination marketers to better understand what variables influence tourists' perceptions of the island. In the long term, each dimension of experience may need to be further elaborated into meaningful sub-themes.

Table 2: Satisfaction themes

Samples and themes	**Highest scoring items**	**Lowest scoring items**
Australia Memory and Quality (high scores) Escapism (low scores)	I won't forget my experiences. I feel happy.	I feel I can escape from my reality in Bali.
Asia Memory and Entertainment (high scores) Education (low scores)	I will have wonderful memories of this trip. This trip has helped me be with others who enjoy the same things as I do.	I am learning a lot.
China Memory and Quality (high scores) Escapism (low scores)	I won't forget my experiences. I feel well.	The experience in Bali is making me imagine being someone else.
Europe Memory (high scores) Escapism (low scores)	I won't forget my experiences. I will remember many positive things about this trip.	I feel like a different person in Bali.

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Europe Memory (high scores) Escapism (low scores)	I won't forget my experiences. I will remember many positive things about this trip.	I feel like a different person in Bali.

Ideal holiday experience

In addition to the current levels of satisfaction, the four groups described their ideal experiences they would like to have in the future. References to natural beauty (e.g. pristine beaches) and cultural aspects (delicious local food, Balinese dance and traditional music) are the most common ideal experiences for all 40 respondents who answered this section (10 per group). The findings thus show that nature and culture are central to the Bali visitor experience, both in terms of current drivers and future expectations.

The Chinese describe ideal holiday in Bali as one involving pleasure and indulgence. Eight out of ten Chinese respondents described their ideal holiday experiences as involving relaxation and romance in a beach environment; 2 out of 10 respondents mentioned they would like to have a servant on their ideal holiday. This might suggest a real desire for luxury, pleasure and excess by this group. The mixed Asian sample (consisting of respondents from Thailand, Japan, Korea, Taiwan, Malaysia and Singapore) placed more emphasis on the Balinese people and local culture in their ideal holiday descriptions (7/10). A male Singaporean respondent stated:" The Balinese culture is an important thing to keep. I like Balinese people. They are very friendly and so beautiful...."

Ideal holiday experiences by the Australian sample suggest a desire for traditional Balinese and Indonesian food, reported by 6 out of 10 respondents. A female Australian respondent said: "My ideal experience would involve beautifully prepared traditional food; the Australian men were equally fascinated by local food: "I want good traditional, Indonesian cuisine". The European sample in its descriptions equally suggested the importance of local food (4/10), but, like the Asian sample, references to interactions with local people and experiencing the culture in a broader sense (traditional villages, temples, music, dance) are more common (7/10). A female respondent from the Netherlands said: "My perfect experience is to talk with the local people and see how they live; and a male tourist from Poland stated: "I would prefer staying in a rural place even if the conditions are basic. But I would expect it to be clean".

The respondents also noted some room for improvement in the quality of visitor experiences. The visitor groups want Bali that is rich in culture and full of natural beauty but also free of traffic jams, pollution and too much waste. An Australian male respondent said: "Create more hygiene. I want the rubbish removed"; and a female respondent from the Netherlands noted: "I'd like to say that Bali needs better roads. There are too many traffic jams and I am wasting my time trying to get from one place to another". All four samples want better transport infrastructure and better waste management (reported by 50% of the 40 respondents). Attention to these issues would enhance the quality of the visitor experience in Bali. This finding corresponds with the desire for better transport infrastructure and waste management noted by the Bali residents.

Ideal images

Preliminary analysis of ideal images of Bali (where ten tourists from each group were asked to draw their ideal holiday) further shows the predominance of images featuring cultural themes (especially traditional villages, authentic food and temples) and the natural environment. Tourists and locals are also commonly portrayed in the ideal images. The Chinese group has possibly a greater desire for exclusivity than the other samples with no images of locals present in their drawings. This may strengthen the finding from the ideal holiday descriptions, that this group desires more indulgence and luxury. Ideal images of culture with or without locals are more common for Mixed Asian and Mixed European respondents (shown 3 times and 5 times respectively). For the Australian and the Chinese group, images of tourists in natural environments are more common (featuring 11 times in the Chinese images). The natural environment however features strongly in images of all four tourist groups. The results are shown in Table 3.

Table 3: Ideal Images per Sample

Sample	Tourists and locals	Natural environment	Cultural themes
Australia	8 (tourists and locals)	6 (sun, mountains, water, sky, beaches)	1 (local food) 1 (villages)
China	4 (tourists)	7 (sun, mountains, water, sky, beaches)	2 (local food)
Asia	6 (tourists and locals)	7 (sun, mountains, water, sky, beaches)	1 (temples) 1 (villages) 1 (food)
Europe	5 (locals)	8 (sun, mountains, water, sky, beaches)	1 (food) 3 (temple) 1 (hotel)

Table 4: Visitors intention to re-visit Bali

Sample	Yes (%)	No (%)	Maybe	N
Australia	84	2	14	50
Asia	57	0	43	49
China	20	2	78	50
Europe	67	2	31	52

Intention to re-visit, length of stay and frequency of previous trips

Following this overview of current and ideal experiences, questions on intentions to re-visit Bali, trip frequency and duration were asked. As can be seen in Table 4, the Chinese group is the most uncertain sample in its intention to re-visit the island. It is imperative that the quality of the visitor experience of this group is maximised. Data from the National Bureau of Statistics of China shows that outbound travel from China increased at a compounded annual rate of 18.5% between 2000 and 2010, from 10.5 million to 57.4 million; while some of this growth is going to Bali, there are opportunities for further growth. Key Asian competitors with Bali, like Japan, the Maldives, the Philippines, South Korea, and Thailand are also registering strong international visitation growth of 60% to 80% between 2000 and 2010.

In terms of previous trip frequency and length of stay, the results show that the Australian market remains the most relevant. Average length of stay is the longest for the Australian market (18.5 days on average for this sample, followed by 17.3 days for the European sample); the frequency of previous visits to Bali is the highest for Australians – 64% of the respondents visited Bali more than once. This confirms the importance of the Australian market to Bali, despite the rise of the Chinese visitor numbers. The lowest previous trip frequency was recorded for the Chinese sample (28% visited Bali more than once), possibly because the Chinese market is a newly emerging market. The results are shown in Tables 5 and 6.

Demographic findings

Lastly some useful demographic data were obtained. The four tourist groups have an approximately even gender split. In the Australian group, 56% of the sample is male; the Asian group is more balanced with 51% males, while the Europeans and the Chinese are represented with slightly more female tourists: 61.5% and 58% respectively. In terms of age, there are differences between groups. The Australian and the Asian sample is younger with 52% and 57% respectively below the age of 35. The Chinese group is represented by an even younger population while the European group has a significant representation of older tourists, with 26.9% being over the age of 56. Many respondents in the four samples are tertiary educated with the most educated being the Europeans - 82.7% have completed tertiary education and 30.8% have completed a PhD or a Master's degree. The Australian group is the least educated group with 54% having completed tertiary education.

Conclusion

In general, the preliminary results of the 200 quantitative and the 40 qualitative surveys show that the level of satisfaction with the Bali tourist experience is high across the four groups. In terms of motivations, the tourists continue to be attracted by Bali's natural features and environment and the island's cultural richness and beauty. However an analysis of ideal holiday experiences has shown that transportation and waste management on the island needs improvement. This will boost the quality of the tourist experiences on the island. The Chinese tourist group was seeking authentic, indulgent, luxurious experiences; this desire for exclusivity for this group is also portrayed in the ideal images for this sample. There is also an interest in the relatively new forms of tourism such as spa and wellbeing resorts and adventure activities (such as rafting and horse riding), opening doors to a greater mix of tourism experiences on the island. Most of the visitors (56% and above) intend to visit Bali again, apart from the Chinese group (20%). More effort may need to be directed at attracting the Chinese markets to Bali. Culturally and environmentally sustainable high yield and low impact luxury tourism might appeal to this growing and increasingly wealthy market. Destination marketing in Bali may need to respond to the fast changing motivation drivers and needs of consumers, but images and themes of natural beauty and rich culture should continually be emphasised

Table 5: Length of stay in Bali

Sample	Minimum (days)	Maximum (days)	Mean	N
Australia	5	180	18.5	49
Asia	3	84	9.4	47
China	5	7	5.6	50
Europe	3	60	17.3	50

Table 6: Frequency of previous trips

Sample	Just once		More than once	
	Frequency	%	Frequency	%
Australia	18	36	32	64
Asia	28	57	21	43
China	36	72	14	28
Europe	34	67	17	33

Green Growth Roadmap for Bali Tourism
Visioning Group Workshop Outputs

Two workshops were undertaken in this study, i.e. the first workshop at the beginning of the study (Friday, 23rd and Saturday 24th September 2011), and the second workshop at the end of the study (1st December 2011). The first workshop was followed by two FGDs, namely: the first FGDs (Thursday, 13th October and Friday 14th October 2011), and the second FGDs (Thursday, 3rd November and Friday 4th November 2011). Number of participants who actively involved in the workshops and FGDs were 67 persons. They came from various backgrounds, namely:

1. Government officials (32 persons)

a. Provincial Government Officials:
14 persons

From various government offices : Tourism (Pariwisata), Culture (Kebudayaan), Environment (Lingkungan Hidup), Forestry (Kehutanan), Planning Board (Bappeda), Trade and Industry (Industri dan Perdagangan), Public Works (Pekerjaan Umum), Agriculture (Pertanian), Transportation (Perhubungan), Energy (Pertamina), Electricity (PLN).

b. Local Government Officials:
18 persons from nine local government (regencies): Tourism office (Pariwisata) and Planning Board (Bappeda).

2. Businesses / Industries / Professionals (28 persons)

a. Tourism Associations: 19 persons

From various tourism associations:

Bali Tourism Board, Kuta Executive Club, PHRI Bali, ASITA Bali, Bali Hotel Association, Bali Villa Association, KADIN Bali, PAWIBA, SIPCO Bali, PATA Bali, Bali Dwe, PUTRI Bali, Organda Bali, HPI Bali, etc.

b. NGOs: 5 persons

From various NGOs: Wisnu Foundation, Conservation International Indonesia, Parasparos, Bali Organic Association, and MUDP Bali.

c. Businesses: 4 persons

From several companies: PT. BTDC (tourism resort area), PT. Garuda Indonesia (airline), and Hotel Discovery Kartika Plaza.

3. University (7 persons)

From various academic backgrounds: Postgraduate School in Tourism Udayana University, Research Centre for Environment Udayana University, Research Centre for Culture and Tourism Udayana University, and STP Bali.

Based upon the first workshop, at least 20 key issues regarding tourism development in Bali were raised by the participants. The issues, namely:

1. Environmental problems (destruction, pollution, degradation)

2. Losing exotic and beautiful view

3. Energy (lack of energy supply, green and solar energy access)

4. Role (involvement) of local people

5. Traffics (traffic jam, crowded, traffic management)

6. Waste (plastic waste, waste management)

7. Water (water crisis, water supply, exploitation of groundwater)

8. Degradation of tourism objects

9. Land (limited of land availability, land use change)

10. Population (migration and urbanization)

11. Culture & tradition (degradation, destroy, traditional Bali changing)

12. Infrastructure in tourism object

13. Tourists (no need to get more tourists to Bali)

14. Carrying capacity & sustainability

15. Redefinition of Bali (identity)

16. Tourist guides

17. Transportation infrastructures (roads, bridges, etc.)

18. Tourism destroy - beach cases

19. Global warming

20. Attitude and behaviour of Balinese

During the FGDs, the participants were divided into four visioning groups. Each visioning group discussed about different topics. The topics were the seven pillars of green growth.

(1) The First visioning group discussed about Pillar 1 (Climate Resilience and Innovation), Pillar 2 (Low Carbon and Technology Shift), and Pillar 3 (Natural Resource and Waste Management).

(2) The Second visioning group discussed about Pillar 4 (Brand, Marketing and e-Distribution).

(3) The Third visioning group discussed about Pillar 5 (Capacity Building and Green Jobs).

(4) The Fourth visioning group discussed about Pillar 6 (Infrastructure and Communications) and Pillar 7 (Policy Reform, Public and Private Partnerships, and Finance).

The results of the FGDs were proposed strategies and programs related to the seven pillars. The proposed strategies and programs are outlined below.

There are 7 pillars in the Green Growth Roadmap for Bali Tourism which are:

1. Climate Resilience and Innovation

2. Low Carbon and Technology Shift

3. Natural Resource and Waste Management

4. Brand, Marketing and e-Distribution

5. Capacity Building and Green Jobs

6. Infrastructure and Communications

7. Policy Reform, Public and Private Partnerships (PPP's) and Finance

Based upon the results of two workshops and two focus group discussions involving all tourism stakeholders (government officials, tourism businesses and professionals, NGOs and community leaders) who were divided into four visioning groups, strategies were defined for each pillar. Every strategy was also outlined further into several programs. All pillars, strategies and programs in detail are outlined below.

PILLAR 1: CLIMATE RESILIENCE AND INNOVATION

Strategies for Pillar 1:

1. Government policy to control population and population growth.

2. Green area program.

3. Improving efficiency of water uses.

4. Local community involvement and participation in tourism sector in order to alleviate poverty.

5. Relocate development of tourism facilities in order to anticipate the rise of seawater caused by global warming.

6. Improve tourism destination management in order to anticipate an increasing tourism demand.

1. Strategy 1: Government policy to control population and population growth.

Programs for Strategy 1:

a. Suggesting the government to establish a mechanism to prevent migration to Bali by developing economic activities beyond Bali.

b. Establish a tight immigration policy.

Establish a tight investment policy to prevent small and medium scale foreign investment in Bali.

2. Strategy 2: Green area program

Programs for Strategy 2:

a. Undertake indigenous and native vegetation's planting program (Green Province).

b. Establish the one man one tree program.

c. Establish the kids planting program (Kecil menanam besar memanen).

d. Conserving backyard with natural vegetation (teba).

e. Hotel should have a backyard with natural vegetation.

f. Promote bamboo plantation as a measure to absorb carbon and to conserve water.

3. Strategy 3: Improving efficiency of water uses.

Programs Strategy 3:

a. Undertake water use efficiency program in all level of society and industries.

b. Increase the utilisation of treated wastewater by public and industry sectors.

c. Develop rain water harvesting program

4. Strategy 4: Local community involvement and participation in tourism sector in order to alleviate poverty.

Programs for Strategy 4:

a. Develop community based rural tourism program (e.g. Pengelipuran and Bayung Gede).

b. Develop ecological rural tourism program (e.g. JED: Tenganan, Kiadan, and Ceningan)

c. Develop ecotourism program (e.g. Sambangan, Lemukih-Sekumpul, Lembongan, Petulu, Sangeh, Kedaton, Monkey Forest and geotourism Batur).

d. Develop arts performances for tourists.

e. Develop culinary program for tourists (cooking class and gastronomy).

f. Develop arts training program, cultural class, etc. for tourists.

5. Strategy 5: Relocate development of tourism facilities in order to adapt to the rise of seawater caused by global warming.

Programs Strategy 5:

a. Establish new tourism destination at the middle/upland land (higher than coastal level).

b. Develop a special form of building (rumah panggung) for tourism facilities if developed near the beach.

c. Develop alternative non-coastal tourism activities and attractions.

6. Strategy 6: Improve tourism destination management in order to anticipate an increasing tourism demand

Programs for Strategy 6:

a. Develop Destination Management Organization (DMO) Program that aware of the climate change issues.

b. Establish a policy that supports environmentally friendly products (e.g. eco-product / natural product / organic product, etc.)

c. Undertake integrated marketing and promotion program for eco-product / natural product / organic product (amongst government institutions at two government levels).

d. Provide support to the program of 'one village has unique products'.

PILLAR 2: LOW CARBON AND TECHNOLOGY SHIFT

Strategies for Pillar 2:

1. Public transportation policy in Bali

2. Appropriate transportation management.

3. Reducing emission from tourism related activities (accommodation and transportation).

4. Use a low energy and environmentally friendly (low carbon) technology.

5. Community education for efficient energy use.

6. Waste management in tourism activities (reduce, reuse, recycle and composting, hazardous and toxic waste treatment).

7. Development and use of alternative energy sources.

8. Incentive and disincentive policy for investor.

9. Government regulation for hotels to plant trees.

10. Research and development in alternative energy sources

11. CSR (corporate social responsibility) program by the investors.

1. Strategy 1: Public transportation policy in Bali

Programs for Strategy 1:

a. Age limitation of operated public transportation.

b. New mass and eco-friendly public transportation development (e.g.: electrical train, LPG bus, sea transportation linking various coastal and sea tourism attractions/ destinations).

c. Financial support to public transportation in order to reduce ticket price.

2. Strategy 2: Appropriate transportation management

Programs for Strategy 2:

a. Providing convenience and save public transportations, and cheap fares.

b. Providing a high quality public transportation facilities (bus stop, bus shelter, bus station and bus lane, highway sign), and well maintained.

c. Providing Commuter Park (with sufficient car park) near the bus station.

d. Expanding public transportation route to reach residential and school area.

e. Improve human resources who manage public transport.

3. Strategy 3: Reducing emission from tourism-related activities (accommodation and transportation)

Programs for Strategy 3:

a. Maximizing local food consumption to decrease carbon emission from food distribution/ transportation.

b. Encouraging the use of bicycle by providing bike-lane.

c. Publishing carbon emission from hotels, therefore it can be used as a reference by visitors in choosing hotel.

4. Strategy 4: Use a low energy and environmentally friendly (low carbon) technology.

Programs for Strategy 4:

a. Replacing electricity appliances (AC, lamp, etc.) with lower / saving energy appliances.

b. Using low carbon technology appliances (e.g. appliances that use non-fossil energy sources).

c. Using alternative energy resources (e.g. solar energy, tidal energy, wind energy, etc.)

d. Giving reward and incentive for tourism industries that is efficient in energy uses.

5. Strategy 5: Community education for efficient energy use

Programs for Strategy 5:

a. Dissemination to the community regarding carbon cycles and its impact to environment and human being.

b. Dissemination to the community regarding energy efficiency usage and decreasing the use of fossil energy

c. Dissemination to the community regarding the use of non-fossil energy resources.

6. Strategy 6: Waste management in tourism activities (reduce, reuse, recycle and composting, hazardous and toxic waste treatment).

Programs for Strategy 6:

a. Reducing waste production.

b. Undertake waste separation (organic, paper/plastic, bottle/can) since the beginning (at the waste generation).

c. Undertake regular waste collection undertaken separately between recycle and non-recycle.

d. Undertake reuse, recycle and composting to reduce the amount of waste dumping to landfill.

e. Handling hazardous and toxic wastes by keeping it at the specific place, and then collected by legal hazardous waste collector.

7. Strategy 7: Development and use of alternative energy sources

Programs for Strategy 7:

a. Development and use of solar energy

b. Development and use of wind energy

c. Development and use of tidal energy

d. Development and use of geothermal energy

8. Strategy 8: Incentive and disincentive policy for investor.

Programs for Strategy 8:

a. Giving incentives to tourism industries that use eco-friendly and low carbon technology.

b. Charging higher taxes (disincentives) to tourism industries that do not use eco-friendly and low carbon technology.

c. Establishing a regulation regarding the application eco-friendly and low carbon technology for investors.

9. Strategy 9: Government regulation for hotels to plant trees.

Programs for Strategy 9:

a. Hotel must plant trees with minimum of 4 trees within100 m2 in its area, or trees can be planted in other places.

b. Hotel must have trees planting program at outside its area, at least once in a year.

c. Hotel must donate 1 tree per room per year to be planted. Coordination must be made with the Forestry Government Office.

d. Hotel should involve its guests in the trees donation program.

10. Strategy 10: Research and development in alternative energy sources

Programs for Strategy 10:

a. R&D in biofuel energy sources.

b. R&D in biogas and waste energy sources.

c. R&D in solar energy sources.

d. R&D in micro hydro energy sources.

11. Strategy 11: Implementation of CSR (corporate social responsibility) program

Programs for Strategy 11:

a. CSR for environmental conservation program.

b. CSR for program dissemination of energy saving and reducing the use of fossil energy sources.

c. CSR for supporting community program on waste management (e.g. solid-waste bank program).

d. CSR for R&D in alternative energy sources which are eco-friendly, and low carbon.

PILLAR 3: NATURAL RESOURCE AND WASTE MANAGEMENT

Strategies for Pillar 3:

1. Bali one island management

2. Master plan for managing natural resources and waste management

3. Community education on waste management

4. Replanting forest / forest conservation

5. Government issues licenses to the hotel industry (including waste management system)

6. Minimize of using deep well

7. Plan for water supply to supply industry, accommodation and residential

8. Policy for more uses of marine resources

9. Using customary law (hukum adat) to protect the environment

10. Bali requires a huge wood volume per year. Find the solution

11. Land reform

12. Punishment and reward mechanisms in the utilisation of natural resources and waste management.

1. Strategy 1: Bali one island Management

Programs for Strategy 1:

a. Undertaking a study on "Bali as one island management" from various perspectives, including philosophy, law, geography and socio cultural perspectives.

b. Disseminating the Bali one island management concept and its benefit to all tourism stakeholders, government and community.

c. Developing an holistic Bali tourism destination management considering all steps, namely: planning, organising, implementing and monitoring/controlling.

d. Establishing MOU between provincial government and regency/municipal government regarding their tasks and roles in managing Bali tourism.

e. Developing integrated tourism promotion efforts among the provincial government and regency/municipal government.

f. Distributing development of tourism infrastructures to all regencies in Bali in order to reduce the concentration of tourist activities in Southern Bali.

g. Developing integrated transportation network which could reach all tourism destinations/attractions in Bali.

2. Strategy 2: Master plan for managing natural resources and waste management

Programs for Strategy 2:

a. Identification of natural resources which are considered to be tourist attractions, and their management.

b. Developing natural resources data base in Bali.

c. Undertaking research on natural resources management that involve all stakeholders.

d. Developing a master plan on Bali natural resources management.

e. Undertaking integrated natural resources conservation.

f. Zoning on conservation and water catchment area.

g. Undertaking integrated monitoring and controlling on natural resources management in Bali.

h. Identification of waste generation and its recent management

i. Undertaking research on waste management in Bali.

j. Establishing one institution who will manage solid waste and wastewater in Bali.

k. Establishing a standardise waste management system (infrastructures, human resources, equipment's, etc.).

l. Establishing a regulation (law) on solid waste management in Bali.

m. Establishing plastic and solid waste recycling centres in Bali.

n. Providing integrated waste processing plant as an alternative energy sources at each regency in Bali.

o. Using solid waste as an alternative raw material to produce many products (e.g.: building material, organic fertilizer (composting), handicrafts, and other products).

3. Strategy 3: Community education on waste management

Programs for Strategy 3:

a. Dissemination waste management to the society (through mass media: TV, newspaper, flyer, extension program, etc.)

b. To include knowledge on waste management into the school curriculum.

c. Using mass media to educate people on environment conservation.

d. Train community on how to undertake recycle from household's waste.

e. Involving traditional organization (e.g. banjar) in managing household solid waste in their own area.

f. Establishing several pilot projects on community based waste management (e.g. solid waste bank).

g. Undertake evaluation on solid waste management through unscheduled inspection, clean and healthy village certification and competition.

h. To include solid waste management and natural resources conservation into the traditional customary law (awig-awig).

4. Strategy 4: Replanting forest / forest Conservation

Programs for Strategy 4:

a. Reguler re-identification of forest area in Bali, including on how much of them in bad conditions.

b. Establishing a reforestation policy, especially at the production forest.

c. Undertake regular reforestation program, involving local community, tourists, tourism industries, etc.

d. Undertake training on forest conservation.

e. Law enforcement for illegal logging.

f. To improve local community awareness on forest conservation.

g. Establishing a strict control and monitoring program on forest uses.

h. Replanting more trees on dry land and unproductive land.

i. Establishing "green-tax" for tourism industries (hotel, restaurant, etc.) in order to support reforestation and replanting trees.

5. Strategy 5: Government issues licenses to the hotel industry (including waste management system)

Programs for Strategy 5:

a. Regulation on waste management standard for tourism industries in Bali.

b. Establishing independent auditors to asses waste management system in tourism industry in Bali.

c. Limited and selective new licenses for hotels and other tourism business within the water catchment area.

d. Establishing Tri Hita Karana (THK) Awards and Accreditation as a model for tourism industry standardization di Bali.

6. Strategy 6: Minimize of using deep well

Programs for Strategy 6:

a. Conducting a survey on deep well capacity in Bali.

b. Establishing an independent team to monitor and control the use of deep wells in Bali.

c. To limit the use of deep well by introducing a high tax mechanism.

d. Law enforcement for illegal use of deep wells.

e. To limit the issues of new licenses for deep well exploitation.

f. To increase the capacity of clean water supply by the Government

Water Supply Company (PDAM) in order to reduce the use of deep wells.

7. Strategy 7: Plan for water supply to supply industry, accommodation and residential

Programs for Strategy 7:

a. Undertake a study on water balance (supply and demand) in Bali.

b. Conduct an identification of surface water potential in Bali.

c. Build infrastructure to collect water from the river (estuary dam) before flowing down to the sea. The water can be used as raw water in producing clean water supply.

d. Build a water treatment plant to process the surface water from the river into clean water supply.

e. Build artificial lake/reservoir to store rain water in order to increase clean water supply.

f. Establish a regulation on the utilization of water from the river to supply tourism businesses and households in Bali.

g. Build infrastructure or develop technology to treat seawater into clean water supply.

h. Setting up a new competitive selling price for the clean water supply from surface water.

i. Find out spring water sources that can be utilized as the source of clean water supply.

j. Undertake a regular maintenance program for the water supply infrastructures (dam, reservoir, water treatment plant).

k. Build rain water storage at each household and at every tourism business as an alternative water supply.

8. Strategy 8: Policy for more uses of marine resources

Programs for Strategy 8:

a. Undertake identification of marine resources for tourism development.

b. Establish a regulation to utilize marine resources for tourism business by involving local community.

c. Establish an independent agency for monitoring the utilization of marine resources. The agency should include government, police, community representative, academician, and marine business practitioners.

d. Develop a marine conservation program to conserve Coral Sea, ornamental fishes, etc.

e. Community education on sustainable utilization of marine resources.

f. Establish the zoning of marine resource uses for various activities, such as socio-cultural activities, tourism, other economic sectors, and environmental conservation.

g. Utilise local marine resources by providing seafood menu in hotels and restaurants (culinary tourism).

9. Strategy 9: Using customary law (hukum adat) to protect the Environment

Programs for Strategy 9:

a. Incorporate government regulation or law into customary law in order to protect the environment.

b. Undertake dissemination of the customary law on protecting the environment to the all stakeholders.

c. Revitalise the role of customary village organisation in environmental conservation.

d. Disseminate the implementation of Tri Hita Karana and other local wisdoms on environmental management and conservation in the customary village (Desa Pakraman).

e. Establish coordination between tourism industry, community and the association of customary village organisation (Majelis Madya Desa Pakraman) on protecting the environment.

f. Develop a program to convert all protected forests to become sacred forests.

g. Establish a regulation that requires newly married couples to plant a minimum of 5 trees per couple.

h. Conduct a religious sermon that educates people to be aware of the importance of environmental conservation.

10. Strategy 10: Bali requires a huge wood volume per year. Find the solution.

Programs for Strategy 10:

a. Conduct a survey on the demand of timber per year in Bali.

b. Establish a policy on the utilisation of the forest industry to meet the demand of timber for handicrafts and housing in Bali.

c. Establish a policy to bring timber from outside Bali to meet the demand of timber for housing and handicraft industry in Bali.

d. Establish a policy that does not allow a commercial logging in Bali.

e. Establish a policy that all woodcraft companies should get certification of their products to ensure that the timber does not come from the conservation forest.

f. Utilise non-wood materials for production of furniture and handicraft.

g. Conduct a study on alternative material sources to replace timber.

11. Strategy 11: Land reform

Programs for Strategy 11:

a. Identify land use in Bali (land survey).

b. Establish a new policy on land use in Bali in order to protect agricultural land.

c. Undertake a survey on all abandoned land, if no owner, the land is taken over by the government for planting trees.

d. Impose a higher tax for the abandoned land.

e. Establish a policy on the restrictions of land ownership in order to limit land speculation and land abandonment.

12. Strategy 12: Punishment and reward mechanisms in the utilisation of natural resources and waste management

Programs for Strategy 12:

a. Develop a program or mechanism of reward and punishment in the utilisation of natural resources and waste management in Bali

b. Undertake dissemination of the mechanism of reward and punishment in the utilisation of natural resources and waste management in Bali to the community.

c. Strictly law enforcement by the relevant government of any violation of the utilisation of natural resource uses and waste management in Bali.

d. Implementing a reward system for tourism businesses who apply the principles of natural resource conservation, and a punishment system for tourism businesses that violate the principles of natural resource conservation.

e. Establish a competition and standardisation mechanism for tourism business who undertakes environmental conservation (e.g. THK Awards).

f. Establish a compensation system to the local government (regency) who has conservation area or water catchment area, through the equitable distribution of tax revenue.

g. Encourage tourism businesses to utilize alternative sources of water (e.g. rain water, surface water and treated wastewater) as a source of clean water supply, by giving a government incentive.

h. Keep the surface water sources to be not polluted by giving penalties to industries, businesses or households who contaminate the surface water sources.

i. Provide incentives to the customary villages that have been practicing environmental conservation in Bali.

j. Establish a sanction or punishment mechanism to the community who violate customary law regarding illegal logging.

PILLAR 4: BRAND, MARKETING AND E-DISTRIBUTION

Strategies for Pillar 4:

1. Tourism product quality improvement.

2. Tourism attractions based on Tri Hita Karana philosophy.

3. Tourism facilities identification survey and maintenance.

4. Implementation of Bali branding.

5. Study of carrying capacity.

6. Expansion in MICE market.

7. Increasing the number of high-end tourists (quality tourists).

8. Accommodating all types' tourists who give positive impacts on the community.

9. Proportional budgeting for tourism marketing and promotion based on tourist taxes (Pajak Hotel dan Restoran / PHR).

10. Upgrading of IT infrastructures and Human Resources recruitment.

11. Upgrading of hotel and MICE facilities.

12. Update database regularly.

1. Strategy 1: Tourism product quality Improvement

Programs for Strategy 1:

a. Improve waste management at tourist destinations and attractions.

b. Improve sanitation condition at tourist destinations and attractions.

c. Improve surface water management

d. Improve transportation facilities at tourism destinations and attractions.

e. Manage street vendors and freelance tourist transport at tourism destinations and attractions.

f. Integrated street-sign and e-information.

g. Improve community wellbeing (no slum area)

h. Improve the level of safety and the safety insurance at tourism destinations and attractions.

2. Strategy 2: Tourism attractions based on Tri Hita Karana philosophy

Programs for Strategy 2:

a. Dissemination of THK philosophy for government officers who issue tourism development permit or tourism business permit.

b. Establish a regulation based upon THK philosophy for investor and business operation.

c. Law enforcement for the implementation of THK philosophy (reward & punishment).

3. Strategy 3: Tourism facilities identification survey and maintenance

Programs for Strategy 3:

a. Regular database updating annually.

b. Tourism infrastructures maintenance by join efforts of government, private sector and community.

c. Financial support funding by government (through APBN/APBD) for tourism infrastructure maintenance.

d. Financial support funding by tourism businesses (CSR) for tourist attractions which are managed by the community.

4. Strategy 4: Implementation of Bali branding.

Programs for Strategy 4:

a. Implement the branding (Bali is my life), internal dissemination of the branding through traditional performances (e.g. bondres and wayang) to the public and schools.

b. Implement the branding (Bali Shanti Shanti Shanti), external promotion of the branding to show the world that Bali is peaceful through various events such as 'Gema Perdamaian', 'Monument of humanity' at Ground Zero Kuta, and TV advertisement on a High Definition Video (30 second).

c. Regulation on postcard contents. There should be no postcard which does not reflect the Bali spirit and etiquette.

d. Massive socialisation for all level of society through all media.

5. Strategy 5: Study of carrying Capacity

Programs for Strategy 5:

a. Undertake carrying capacity study for Bali.

b. Establish a regulation of Bali's carrying capacity based upon a carrying capacity.

c. Establish a regulation regarding the land use for housing (maximum 30% of the total land).

6. Strategy 6: Expansion in MICE Market

Programs for Strategy 6:

a. Promote Bali as a MICE destination (involvement in various MICE trade show, MICE Bureau membership, Word-professional association membership).

b. Undertake Farm Trip hosting for domestic and international MICE events.

c. Undertake Media coverage for national and international events.

d. Re-establish the Bali Convention Bureau for promoting Bali as a MOUSE destination.

7. Strategy 7: Increasing the number of high-end tourists (quality tourists)

Programs for Strategy 7:

a. Undertake marketing for several target markets (MICE, senior citizen, and professional) who have high spending and educated tourists.

b. Undertake marketing for a specific target market (student as the future high-end tourists).

c. Improve the quality of infrastructures, sanitation, safety, communication, IT, and technology to support high-end tourist market.

8. Strategy 8: Accommodating all types' tourists who give positive impacts on the community.

Programs for Strategy 8:

a. Develop rural tourism with target markets of retired persons, students (Bachelor & Master degree).

b. Empower the village community through their involvement in rural tourism activities (e.g. providing accommodation / homestay, tourist guide, providing local products for tourists).

c. Develop camping ground for students.

d. Develop spiritual tourism (e.g. at village of Sidemen and Budakeling at Karangasem Regency, and village of Pemuteran at Buleleng Regency).

e. Develop rural ecotourism (e.g. at village of Petulu – Gianyar Regency, village of Undisan – Bangli Regency, village of Plaga – Badung Regency, and village of Pinge –Tabanan Regency).

9. Strategy 9: Proportional budgeting for tourism marketing and promotion based on tourist taxes (Pajak Hotel dan Restoran / PHR).

Programs for Strategy 9:

a. Establish a policy regarding the use of tourist taxes (PHR), including for tourism marketing and promotion purposes (need MOU amongst governments).

b. Establish budget allocation for tourism marketing and promotion (about 20% to 30% of the tourist taxes / PHR).

c. Undertake marketing and promotion planning based upon budget allocation.

10. Strategy 10: Upgrading of IT infrastructures and Human Resources recruitment.

Programs for Strategy 10:

a. Provide a communication satellite exclusive for Bali area (Bali as the backbone).

b. Expand the IT networking in Bali therefore there will be no blank spot area in Bali.

c. Upgrade the internet bandwidth.

d. Establish a high quality IT school in Bali.

e. Employee the professional IT human resources.

f. Certification program for the IT human resources.

11. Strategy 11: Upgrading of hotel and MICE facilities

Programs for Strategy 11:

a. Extend of function halls in several hotels that usually host MICE events.

b. Upgrade the electricity capacity at the MICE location (especially for exhibition).

c. Upgrade the capacity of hotel's local area network (LAN).

d. Improve the accessibility to reach Bali (e.g. airport, highway, public transport, seaport, etc.)

e. Improve the MICE facilities: simultaneous interpreting system, disable facility, docking, bounding warehouse, VVIP access, Import policy for exhibition equipment's.

f. Develop a new big MICE facility with a minimum capacity of 10.000 pax.

g. Undertake competence certification program for MICE's human resources to improve the quality of MICE's human resources in Bali.

12. Strategy 12: Update database regularly

Programs for Strategy 12:

a. Develop Bali tourism website portal with up to date information.

b. Undertake regular Bali tourism survey in various aspects (e.g. tourism facilities, tourist attractions, infrastructures, characteristics of tourists, tourist satisfaction, and community satisfaction).

PILLAR 5: CAPACITY BUILDING AND GREEN JOBS

Strategy for Pillar 5:

1. Involve local community since the beginning of village tourism development.

2. Develop community based tourism, particularly agritourism.

3. Direct economic contribution from tourism to community through CSR by tourism industry.

4. Get a certain proportion of the Ngurah Rai Airport tax for Bali.

5. Develop a close mutual relationship between agriculture and tourism.

6. Priority is given to non-star rated hotel with good quality for community based development or rural tourism.

7. Increase skill and knowledge for staffs at homestays at local community.

8. Develop alternative tourism (spiritual tourism, ecotourism, wellness tourism).

9. Train staffs in rural tourism for a specific tourism market (e.g. Bedulu village with its European market).

10. Use technology for local food suppliers to get more added value from the local foods.

11. Develop Volunteer Tourism (voluntourism).

12. Establish a tourism cooperative (induk koperasi pariwisata).

13. Engage the knowledge of carrying capacity, sustainability and green growth into the senior high school's curriculum.

1. Strategy 1: Involve local community since the beginning of village tourism development.

Programs for Strategy 1:

a. Undertake inventory of tourism potentials in rural areas such as agritourism, spiritual tourism, etc.).

b. Disseminate the planning of village tourism development.

c. Conduct training for villagers who involve in the village tourism. The topics will be introduction to village tourism, service excellences, FB services, food production, make up rooms and tour guiding).

d. Conduct training on production of local products that may be needed by tourists.

e. Establish local working group at each village that has been develop as a village tourism attraction.

f. Establish regulation in order to maintain the cleanliness and environment preservation.

g. Establish village tourism management to manage each village tourism attraction.

h. Undertake a competition among the tourism villages (cleanliness, accessibility, management, community welfare, etc.).

2. Strategy 2: Develop community based tourism, particularly agritourism.

Programs for Strategy 2:

a. Undertake inventory of agritourism potentials in Bali.

b. Set up a master plan for agritourism development in Bali.

c. Disseminate the planning for agritourism development in Bali.

d. Prepare for the human resources for agritourism.

e. Provide technical assistance for the production of agricultural produces.

f. Provide financial supports for infrastructures for agritourism development in Bali.

g. Design tourist packages that contain something to see, to eat, to do, to buy, and to learn.

h. Establish collaboration with tourism industries to support the pilot projects of village agritourism in Bali.

i. Promote agritourism through online media (such as internet).

3. Strategy 3: Direct economic contribution from tourism to community through CSR by tourism industry.

Programs for Strategy 3:

a. Establish a program to provide technical assistance for art groups in the village by utilising the CSR funds.

b. Provide scholarships for students from rural tourism areas by utilising the CSR funds.

c. Establish a program to provide technical assistance to empower villagers to run the security program at their tourism villages by utilising the CSR funds.

d. Develop facilities that support rural tourism development (such as toilet, sidewalk, garden, cleanliness and sanitation at the tourist attractions) by utilising the CSR funds.

e. Establish a program to provide technical assistance to develop local industry that utilise local raw materials.

f. Establish a coordination forum among tourism industries in order to manage and distribute their CSR funds.

g. Establish a reward system for industries who implement the best practices on their CSR funds.

4. Strategy 4: Get a certain proportion of the Ngurah Rai Airport tax for Bali.

Programs for Strategy 4:

a. Establish a negotiation team to get a certain proportion of revenues from the Ngurah Rai Airport for Bali Province.

b. Undertake a protest rally to the PAP and BUMN Office in Jakarta in order to get a certain proportion of revenues from the Ngurah Rai Airport for Bali Province.

c. Support a development of a new airport in which Bali's government gets involve in investment and management of the new airport.

5. Strategy 5: Develop a close mutual relationship between agriculture and tourism.

Programs for Strategy 5:

a. Develop agritourism and ecotourism.

b. Develop agricultural produces and maximise its utilisation for tourism industries (foods, beverages, fruits, spas and handicrafts).

c. Establish a regulation regarding the utilisation of a farming landscape as a tourist attraction in order to give direct benefits to the farm owners.

d. Establish a regulation governing the utilisation of local agricultural produces for tourism industries.

6. Strategy 6: Priority is given to non-star rated hotel with good quality for community based development or rural tourism.

Programs for Strategy 6:

a. Establish a free and easy procedure to obtain license for homestays without neglecting green growth requirements.

b. Establish an easy procedure to obtain license for non-star rated hotels, without neglecting green growth requirements.

7. Strategy 7: Increase skill and knowledge for staffs at homestays at local community.

Programs for Strategy 7:

a. Undertake need analysis for human resource development training.

b. Conduct training programs on service excellences, professional attitudes, complaint handling, room division operations, FB operations, and kitchen operations for homestay's employees.

c. Conduct training programs on marketing management, finance management and human resource management.

8. Strategy 8: Develop alternative tourism (spiritual tourism, ecotourism, wellness tourism).

Programs for Strategy 8:

a. Undertake inventory of alternative tourism potentials in Bali.

b. Set up a master plan for alternative tourism development in Bali.

c. Disseminate a plan for alternative tourism development in Bali.

d. Prepare for the human resources for alternative tourism.

e. Provide technical assistance for production of agriculture produces for wellness tourism (such as natural soap, body scrub, shampoo, massage oil, aromatherapy oil, and organic food and drinks).

f. Provide financial support for alternative tourism development.

g. Design alternative tourism packages that contain something to see, to eat, to do, to buy, and to learn.

h. Establish collaboration with tourism industries to support alternative tourism development in Bali.

i. Promote alternative tourism through online media (such as internet).

9. Strategy 9: Train staffs in rural tourism for a specific tourism market (e.g. Bedulu village with its European market).

Programs for Strategy 9:

a. Undertake need analysis for human resource development training at tourism village with a specific market.

b. Conduct training on guiding techniques, professional attitude, and foreign languages for local guides.

c. Conduct training for FB staffs on local foods and beverages production.

d. Conduct training for accommodation providers on room division operation.

e. Conduct training for villagers about basic knowledge and information regarding village tourism.

10. Strategy 10: Use technology for local food suppliers to get more added value from the local foods.

Programs for Strategy 10:

a. Undertake need analysis for technology that can be utilised to process local products.

b. Provide a pilot project for processing local foods (including the provision of machinery if necessary).

c. Provide technical assistances for marketing local products.

d. Provide financial supports for local supplier (through bridging loan from cooperatives or banks).

11. Strategy 11: Develop Volunteer Tourism (voluntourism).

Programs for Strategy 11:

a. Undertake inventory of any projects that can be used as an object for volunteerism.

b. Establish to collaborate with volunteerism operators from outside Bali or overseas.

c. Establish a marketing and promotion institution for volunteerism.

d. Establish a standard operation procedure to handle volunteer tourists involving related government (especially immigration).

12. Strategy 12: Establish a tourism cooperative (induk koperasi pariwisata).

Programs for Strategy 12:

a. Invite tourism stakeholders to establish tourism cooperative, and disseminate the tourism cooperative plan.

b. Establish tourism cooperative, composing cooperative rules, and obtain members.

c. Develop cooperative action plans to support its members to get bridging loan to finance their activities.

13. Strategy 13: Engage the knowledge of carrying capacity, sustainability and green growth into the senior high school's curriculum.

Programs for Strategy 13:

a. Engage carrying capacity, sustainability and green growth development into senior high school's curriculum.

b. Engage Tri Hita Karana (Balinese Philosophy: harmonious relationships between human and God, human and human, human and environment) into senior high school's curriculum.

PILLAR 6: INFRASTRUCTURE AND COMMUNICATIONS

Strategies for Pillar 6:

1. Re-invent local culture. Bali has many places with rich culture but not well developed yet.

2. Develop tourism products: cultural tourism (as a main reason people come to Bali).

3. Law enforcement of all laws related to green growth tourism development.

4. Develop appropriate mass transportation systems.

5. Develop a system to solve traffic congestions at several bottle neck areas.

6. Improve tourist's accessibility to Bali.

7. Develop ICT systems for Cyber City & Cyber Island in Bali.

8. Develop better and bigger new MICE facilities.

9. Revitalize tourist destinations (tourist attractions) that are available in Bali.

1. Strategy 1: Re-invent local culture. Bali has many places with rich culture but not well developed yet.

Programs for Strategy 1:

a. Undertake inventory of local culture and make documentation (book).

b. Empower local community to manage their culture as tourist attractions.

c. Develop culture resources to strengthen and empower Balinese culture and develop natural resources to support Balinese culture.

d. Revitalize museum as a Balinese culture representation, and very close relationship between cultures to nature. (E.g. Nyepi or silent day is the only one in the world).

e. Promote the indigenous Balinese local wisdom on culture and nature.

f. Revitalise the associations and NGOs that concern to Balinese culture.

g. Government facilitates regular communication for all tourism stakeholders.

h. Undertake re-investment on Balinese culture and nature.

2. Strategy 2: Develop tourism products: cultural tourism (as a main reason people come to Bali).

Programs for Strategy 2:

a. Revitalise tourist attractions with the provision of educative content and attractive packaging to strengthen the attractiveness of tourist attractions.

b. Involve professional institution to revitalize cultural attractions (need to establish the professional institution).

c. Communicate the revitalization of cultural attractions to all tourism stakeholders through an attractive document.

3. Strategy 3: Law enforcement of all regulation related to green growth tourism development

Programs for Strategy 3:

a. Apply severe punishment and heavy penalty for people who break the regulation related to green growth tourism development.

b. Undertake anti-corruption campaigns.

c. Consistent law enforcement of the regional regulation (Perda) number 16/2009 regarding Master Plan of Bali.

d. Consistent law enforcement of the regional regulation (Perda) regarding cultural tourism.

4. Strategy 4: Develop appropriate mass transportation systems.

Programs for Strategy 4:

a. Improve the quantity and quality of mass transportation systems (urgent).

b. Develop alternative mass transportation systems that reach all city cities, regencies and districts in Bali.

c. Develop a Blue Print for Public

Transportation in Bali based upon a comprehensive research.

d. Develop a train or monorail network.

5. Strategy 5: Develop a system to solve traffic congestions at several bottle neck areas.

Programs for Strategy 5:

a. Build storey parking lots in Bali (airport, Kuta, and Denpasar) in collaboration between private sector and government).

b. Revitalise the existing central parking area at Kuta.

c. Undertake law enforcement consistently on parking regulation.

6. Strategy 6: Improve tourists' accessibility to Bali.

Programs for Strategy 6:

a. Build a cruise terminal in Singaraja (Buleleng).

b. Build another new airport.

c. Build a marina for live boards and yacht in Serangan Island.

7. Strategy 7: Develop ICT systems for Cyber City & Cyber Island in Bali.

Programs Strategy 7:

a. Provide communication providers with affordable price, high speed connection and a wider coverage.

b. Bali has its own satellite.

c. Develop online taxation systems.

d. Develop online road traffic systems.

e. Develop online resident registration

(ID).

8. Strategy 8: Develop better and bigger new MICE facilities.

Program for Strategy 8:

a. Build another new convention centre with appropriate capacity to accommodate international events.

9. Strategy 9: Revitalize tourist destinations (tourist attractions) that are available in Bali.

Programs for Strategy 9:

a. Establish professional and independent management institution to manage tourist attractions.

b. Empower the institutions that manage tourist attractions.

c. Develop regular maintenance program, product diversification, and marketing strategy.

PILLAR 7: POLICY REFORM, PUBLIC AND PRIVATE PARTNERSHIPS AND FINANCE

Strategies for Pillar 7:

1. Involve all stakeholders (government, private sector, local community, NGO, Media)

to work hand in hand in all steps of tourism development in Bali.

2. Special autonomy at provincial level, particular in tourism sector in order to manage tourism in Bali.

3. Coordination between three levels of government (central government, provincial government, and regency/district government).

4. Synchronize the three levels of government regarding the implementation of regulations, and no corruption when enforcing the regulations.

5. Develop a visitor contribution/fee system for environmental and cultural preservation.

6. Improve facilities and services for the convenience of visitors, since their arrival until departure.

7. Enquire developed countries to assist.

1. Strategy 1: Involve all stakeholders (government, private sector, local community, NGO, Media) to work hand in hand in all steps of tourism development in Bali.

Programs for Strategy 1:

a. Establish an independent institution that accommodates the interests of all tourism stakeholders (government, private sectors, local community, NGOs, media).

b. Establish a regular meeting program among all tourism stakeholders to share ideas and to supervise the tourism development in Bali.

2. Strategy 2: Special autonomy at provincial level, particular in tourism sector in order to manage tourism in Bali.

Programs for Strategy 2:

a. Develop consensus regarding Bali's tourism management (a stronger authority is given to the provincial government).

b. Undertake a study on the policy to preserve Balinese culture.

3. Strategy 3: Coordination between three levels of government (central government, provincial government, and regency/district government).

Programs for Strategy 3:

a. Develop a common goal of all tourism stakeholders in managing Bali tourism.

b. Undertake a regular coordination meeting for all tourism stakeholders.

4. Strategy 4: Synchronize the three levels of government regarding the implementation of regulations, and no corruption when enforcing the regulations.

Programs for Strategy 4:

a. Hold a regular coordination meeting of all tourism stakeholders and involving the central government.

b. Synchronize all regulations, therefore they do not overlap.

c. Establish a Focus Group Discussion (FGD) forum involving three levels of government (central government, provincial government and regency government).

5. Strategy 5: Develop a visitor contribution/fee system for environmental and cultural preservation.

Programs for Strategy 5:

a. Establish a professional institution which is accountable, independent and transparent assigned to manage tourist fees or contribution for environmental and cultural preservation.

b. Establish a fees contribution mechanism therefore visitors are willing to contribute to environmental and cultural preservation.

c. Conduct a survey to identify visitors' willingness to contribute/pay the fees.

d. Approach central government, asking the share of income from Visa on Arrival for Environmental and Cultural preservation.

6. Strategy 6: Improve facilities and services for the convenience of visitors, since their arrival until departure.

Programs for Strategy 6:

a. Establish a system that provides faster services for Visa on Arrival.

b. Establish faster and more hospitable immigration and custom services.

c. Improve facilities and services at the airport (including taxi, porter, baggage claim, lost and found, currency exchange and public restrooms).

d. Build and operate an international hospital.

e. Establish and operate an emergency system with international standard.

7. Strategy 7: Enquire developed countries to assist.

Programs for Strategy 7:

a. Government and tourism stakeholders conduct serious comparison study to other world class tourist destinations.

b. Undertake tourism data exchange with other countries.

c. Establish collaboration with countries that have successfully developed sustainable tourism.

d. Utilise an international consultant in developing sustainable tourism.

e. Develop collaboration in tourism marketing.