

Adaptation to Climate Change in the Tourism Sector in the Fiji Islands

Summary Report of the Initial Stakeholder Workshop

Convened by the Fiji Ministry of Tourism with the United Nations World
Tourism Organisation and the United Nations Environment Programme



WORLD TOURISM ORGANIZATION
ORGANISATION MONDIALE DU TOURISME
ORGANIZACIÓN MUNDIAL DEL TURISMO
ВСЕМИРНАЯ ТУРИСТСКАЯ ОРГАНИЗАЦИЯ
منظمة السياحة العالمية



1 Introduction

The Fiji tourism industry faces major issues resulting from climate change, such as shoreline and beach erosion, temporarily reduced water availability, interrupted supply chain, coral bleaching, and physical damage to property. A project is currently being developed that aims to demonstrate adaptation initiatives that will reduce the vulnerability of the tourism sector, and its natural and human resource base, to the impacts of climate variability and change. These demonstration activities enhance the sustainability of the natural resources and the quality of life of the people of Fiji.

Funding has been provided by the **Global Environment Facility (GEF)** to develop a full project proposal aiming at a 3-4 years project with possibilities for up to one million USD funding from GEF. The Implementing Agency is the United Nations Environment Programme (UNEP), and the Executing Agency is the United Nations World Tourism Organisation (UNWTO). The Fiji Ministry of Tourism is the coordination agency in Fiji. In this capacity the Ministry of Tourism convened a stakeholder workshop on the issue of climate change and tourism. A stakeholder consultation round before the workshop was held as well.

The goal of the consultation meetings was to inform key stakeholders about the project, to collect information and perspectives and record feedback on the proposed outline of the project. The workshop aimed at further discussion of the topic of climate change and tourism, identification of key issues, and gaining support for the project. Information, knowledge and expertise on climate change and variability and its interactions with the tourism sector were shared through a wide range of expert presentations and discussions. Current policies and policy gaps were discussed, as well as the need for capacity building and training.

The workshop was held at the Holiday Inn, Suva, on the 2 and 3 of May, 2006. Mr. Masirewa, CEO of the Ministry of Tourism, opened the workshop. A wide range of Government representatives, local authorities, NGOs, Academia, regional organizations and donor agencies were present, however, only very few industry representatives participated.

2 Climate change concerns for tourism and adaptation measures

Several presentations provided information on climate variability and climate change impacts (J. Terry, K. Koshy, University of the South Pacific). The key impacts that were discussed included

- Cyclones (about 10 per season in the South Pacific) and high wind speeds
- Big waves, sea surges
- Sea level rise
- Water shortage
- Intensive rainfall events and flooding; landslides
- Drought and the risk of wildfire

- Coral bleaching and damage to reefs from cyclones
- Health impacts

Those impacts pose a risk to tourism infrastructure, tourists, tourism staff and local communities.

Adaptation to climate change is a continuous process that involves the adjustment of society to *risks* arising from climatic extremes. There are rules for adaptation:

1. Economically efficient
2. Advance social goals
3. Environmentally sustainable
4. Win-win measures are preferable.

During the workshop and in a session dedicated to impacts and adaptation a range of climate impacts and possible adaptation measures were identified (see Table 1). In addition, some generic measures to increase adaptive capacity were discussed. These include:

- Education programmes (e.g. USP degree programmes);
- Awareness raising, capacity building (see further below);
- Policy enforcement;
- Information sharing;
- Frameworks for consultation and coordination.

Table 1 Climate change impacts and possible adaptation measures

<i>Climate impacts</i>	<i>Possible adaptation measures</i>
Tropical cyclones	<p>Cyclone-proofing of buildings</p> <p>Insurance to transfer risk</p> <p>Window shutters; tree-trimming</p> <p>Warning system in place and preparedness, e.g. evacuation plan, storage of supplies</p> <p>Early warning option to use text messaging (e.g. Vodafone)</p>
Coastal erosion and beach loss	<p>Erosion control (preferably through soft engineering and environmental conservation measures and avoiding hard structures)</p> <p>Beach nourishment</p> <p>Mangrove rehabilitation</p> <p>Use traditional knowledge and practices</p> <p>Diversify tourism product away from “the beach”, e.g. ecotourism / cultural tourism</p>
Coral reef bleaching	<p>Conserve reefs and enhance their resilience through:</p> <p>Reduction of water pollution (sewage treatment)</p> <p>Mangrove rehabilitation to reduce sedimentation</p> <p>Controlling outbreaks of pests – e.g. crown of thorns starfish (tourist participation)</p>
Reef damage (erosion)	<p>Traditional tabu (reserve) systems to allow reef regeneration</p> <p>Environmental practices in diving, snorkelling and boating activities</p>
Sea level rise	Setting back of structures
Sea flooding and storm surge	<p>Setting back of structures, sufficient height of buildings</p> <p>Natural shelter belt (e.g. coconut trees)</p> <p>Enforce the 30 m set-back</p>
River flooding	<p>Drainage improvement; dredging</p> <p>Land use plans</p>
Landslides	<p>Erosion control (e.g. reforestation)</p> <p>Drainage control</p>
Droughts and water shortage	<p>Rainwater storage facilities (esp. outer islands)</p> <p>Water conservation (e.g. guest education, water-saving devices, reusing of waste-water), Compost toilets (instead of flush toilets)</p>
Wildfires	
Thunderstorms (causing power blackouts)	
Health	Eradication programmes
- Dengue fever outbreaks	Control of breeding grounds
- Bacterial	Hygienic standards (e.g. water storage)
- Filariasis	
- Respiratory diseases	

3 Adaptation barriers

Several barriers and gaps to successful adaptation have been identified. Most importantly there are policy and capacity gaps and a lack of coordination; these are discussed separately further below. The lack of data and information or the lack of *access* to information has been mentioned many times and pointed out specifically by J. Hughes, Department of Town and Country planning in her presentation on coastal tourism development. Moreover, very little information is available on erosion rates and the effectiveness of measures that seek to stabilize shorelines and beaches.

In other cases, data are available but not used by tourism. R. Kumar from the Meteorological Service pointed out that climatic information that could be of interest to the tourism sector is available (e.g. forecast relating to El Nino or seasonality); so far this opportunity is not exploited. Climate monitoring could be improved if the tourism industry participated more actively in the collection and use of climate data. At present, four tourist resorts work with the Meteorological Service. Climate risk profiles produced by the Meteorological Service could also be used in decision making for new developments.

A lack of access to information was also discussed in the licensing process that involves a wide range of agencies, each with their own capacities and procedures. Sharing of information on a particular tourist development would assist the decision making of agencies such as the Department of Town and Country Planning. The compilation of relevant information would also include land use maps by the Ministry of Agriculture.

Often climate is only one of many interacting factors that lead to an environmental impact. Prime examples include the risk of flooding (for example in the case of Nadi as presented by S. Serau from the Nadi Town Council and M. Mataki from the University of the South Pacific) or coral bleaching (discussed in more detail by Monifa from the WWF South Pacific). It is important to increase our understanding of those causes to develop effective adaptation measures.

A major concern is the emergence of large-scale developments and integrated resorts that are being built in various locations in Fiji. These are poorly understood in relation to the changes that they might induce in terms of microclimate, ocean currents, marine life and erosion effects. This is particularly concerning in areas where mangroves are cut down at a larger scale and land is reclaimed, i.e. landscapes are changed substantially. Synergies with a GEF funded project by WWF South Pacific on climate change impacts on mangroves and marine life will be explored further.

Insurance as a measure of risk transfer is in place for most of the bigger tourist resorts. Smaller operators can not afford the high insurance premiums, and in some areas insurance is not available because of high risks, for example in the cyclone-prone Yasawa Islands. Alternatives such as group schemes have been discussed, but not put in place so far.

There is also a lack of data on how tourists are affected by diseases that prosper under certain climatic conditions. For example, there are no statistics on the cases of dengue fever attracted by tourists. Monitoring of “country of origin” for hospital admissions would provide useful information for both the Ministry of Health and the Ministry of Tourism to assess those risks.

4 Frameworks, policies and regulations

4.1 Climate Change Policies

The Pacific Plan aims to strengthen regional cooperation and integration; it was endorsed by Leaders at the Pacific Islands Forum meeting in October 2005. It has been agreed in principle that climate change adaptation and mitigation efforts are linked to the Pacific Climate Change Framework 2006-2015 (being developed by SPREP). The Fiji Department of Environment developed the national Climate Change Policy, which is currently in Cabinet for Approval. The Director of the Department of Environment, Mr Nasome pointed out that awareness raising, capacity building and mainstreaming are key elements of the climate change policy. This policy will also provide a foundation for including climatic risks in other legislation, for example Environmental Impact Assessment (see below).

The Climate Change Policy provides a very useful, overarching framework, but developing a specification for tourism is critical for its successful implementation in the tourism sector. The development of a tourism hazard map (with a particular focus on climate) would be useful, for example to assess suitable areas for development (this should be linked to Tourism Development Areas (TDA)), but also to identify key concerns and potential adaptation measures (e.g. water scarcity).

A Climate Change Country Team is in place, but this does not include the Ministry of Tourism at this stage.

4.2 Disaster Management

The above-mentioned Pacific Plan also noted the need to develop the Pacific Disaster Risk Reduction and Disaster Management Plan: Framework for Action 2006-2015. This framework has been developed by SOPAC and its guidelines can be used as a starting point for a tourism-specific risk and disaster management plan. The guidelines are:

1. Governance – Organisational, Institutional, Policy and Decision-making Frameworks
2. Knowledge, Information, Public Awareness and Education
3. Analysis and Evaluation of Hazards, Vulnerabilities and Elements at Risk
4. Planning for Effective Preparedness, Response and Recovery
5. Effective, Integrated and People-Focused Early Warning Systems
6. Reduction of Underlying Risk Factors

Using these guidelines ensures that the tourism plan allows for a sector-specific implementation of the more generic Framework for Action. This ensures an overall coordinated approach.

Being aware how crises impacts on visitor arrivals, the Fiji Visitor Bureau have a disaster management task force in place that coordinates a five-stage process:

- STAGE 1: Initial communication
- STAGE 2: During the event
- STAGE 3: Post event

- STAGE 4: Consultation
- STAGE 5: Bounce back (ongoing)

The communication channels in the case of a disaster are visualized in Figure 1. It is important to clarify which industry members (especially small operators) are included in this network. The workshop participants pointed out that cyclones are less of a concern as the lead time is usually sufficient to inform everybody. Tsunamis are a bigger threat as the time between warning and event is much shorter.

The FVB system for disaster communication should be integrated with activities by the Disaster Management Office, and it could also be complemented by activities that deal specifically with disaster preparedness and reduction. In the case of climatic disasters, these are adaptation measures, for example training of hotel staff for evacuating guests.

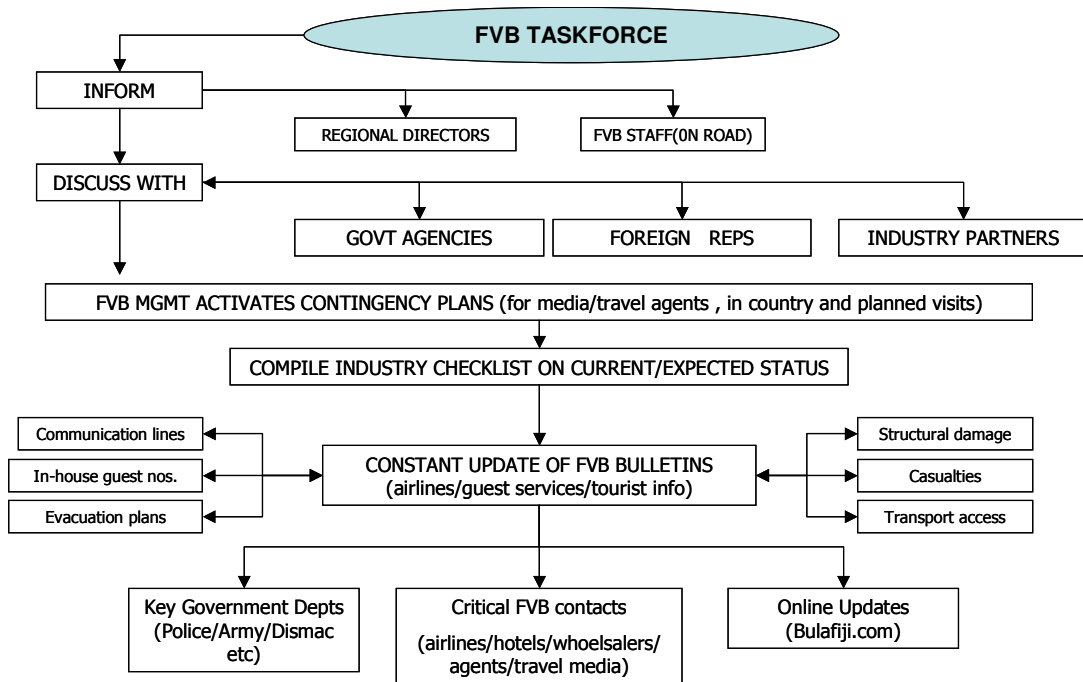


Figure 1 Communication system maintained by the Fiji Visitor Bureau Disaster Taskforce (B. Gavuka, CEO Fiji Visitor Bureau)

Some regulation is in place that helps to reduce the risk of climate change impacts. One key regulation is the requirement for an Environmental Impact Assessment (EIA). This is administered by the Department of Enviroment. So far, risks and hazards are not systematically included in the EIA process. The now passed Environmental Management Act (EMA) will provide more executive power to the Department of Environment to develop such extensions. The EIA is also critical to assess the environmental impacts of a tourism development in relation to ecosystem disturbance or impacts on the local communities. It would be important to ensure that large-scale tourism developments do not compromise the resilience of ecosystems and people to climatic risks.

Another important regulation is the building code, currently administered by the Ministry of Health. The building code is based on Australia/NZ standards, and prescribes, for example, that structures need to withstand wind speeds of 60 km per hour. Climate change is not considered in the building standards. The building standards are currently reviewed and there could be an opportunity to include new knowledge about climatic risks.

A regulation for coastal developments prescribes that structures have to be set back from the high water mark by 30 meters (6 m in the case of rivers). The Department of Town and Country Planning oversees this regulation in their approval of new developments. In some cases, this regulation is waived and closer building to the shoreline is allowed. This is often in response to pressure put on by the developers. The minimum distance of 30 m from the high-tide mark is a long-standing standard and does not take sea level rise or other climatic changes into account. No regulation exists for over-water bungalows as this is a new concept for Fiji that developers borrowed from Tahiti and the Maldives. In the absence of specific regulation, the Department of Town and Country Planning approved over-water bungalows in two occasions (Momi Bay and a resort in the Yasawa Islands) with a height above sea level of 2.5 meters. This height was suggested by an EIA consultant. It is urgent to develop standards for the new product of over-water bungalows.

A general problem is the lack of implementation and enforcement. This is largely due to a lack of resources and capacity. Currently, health inspectors at council level monitor compliance with laws (for example also hygienic standards), but environmental compliance (e.g. with EIA) is not covered.

4.3 Sustainable Tourism

The Ministry of Tourism is currently reviewing their Master Plan; this is an excellent opportunity to include some aspects of climatic risks, especially in the context of designating TDAs. The Ministry of Tourism spearheads an interagency Committee and is also member of the National Tourism Council – a forum where public and private sector stakeholders meet to discuss tourism issues.

Environmental Impact Assessment is the most important regulation to ensure that negative environmental impacts are minimized. Social components are considered as well, but in areas of high development a better integration of local concerns is required. However, Strategic Environmental Assessment is increasingly employed to assess wider environmental impacts beyond one concrete development.

Water supply and wastewater treatment are key concerns for the industry. In some cases in the Yasawa islands, for example, drinking water is of poor quality as it is supplied through a local stream that may suffer some form of water pollution. Some resorts catch rain water, however there are some health risks associated with poor maintenance of catchment areas (e.g. roofs). Monitoring of water quality is required to ensure health standards for both tourists and locals.

Poor wastewater treatment and other non-tourism related land use practices (e.g. from sugar cane production) have been mentioned as a source for declining water quality, sedimentation, algae growth and pressure on marine life and coral reefs. Inadequate disposal of solid waste either directly into the sea or into uncontrolled dumps (and resulting leachate) add to the pollution of water. Most of the smaller tourist operations operate septic tanks that are inadequate for treatment as retention periods are very

short (as a result of high water consumption by tourists). Some places have now extended their system to increase retention (by operating several stages) and filtering sewage. Most vessels do not treat or collect their wastewater; the common practice is to discharge at sea. The lack of coordination (i.e. integrated catchment management), monitoring and control have been discussed.

The Fiji Hotel Association had subscribed all their members to Green Globe 21 to lift the environmental standard of the industry. Only few resorts have renewed their affiliation and very few have proceeded to benchmarking or certification. The Ministry of Tourism explores the possibility of a Fiji-owned certification scheme (“Green Fiji”). This could include dimensions of risk management and provide a *best practice* standard for risk and disaster management.

5 Capacity building and training needs

While certain institutions naturally have a high awareness and understanding of climate change, it has been commented in the stakeholder interviews and at the workshop that the general awareness of climate change is very low. This has been experienced at community level (through the WWF Climate Witness programme), at industry level and with government agencies. The low industry representation at the workshop could be one indicator of low awareness of the climate risks posed to the industry.

Awareness raising will therefore need to involve all levels of tourism; i.e. the individual operator, the community that is involved in a tourism operation, local councils, industry bodies, and government agencies. The stakeholder consultation and the workshop are already a first step in awareness building. Organisations such as SPTO, FVB and FIHTA play an important roles in awareness raising and education.

In addition to awareness raising, training is needed. There is a general perception, for example, that training in disaster preparedness is necessary, for example to ensure tourism operators know how to act in the case of a cyclone warning. There is concern that new players in the tourism industry who have not experienced a hurricane underestimate the risk and destructive forces of a cyclone. It was also repeatedly mentioned that the larger operators are likely to be better prepared than the smaller ones. Specific training will be required for small tourism operators who have little resources to implement comprehensive risk management strategies.

Existing frameworks and tools will be useful for this project. These include, for example, CHARM as a tool for risk decision-making, and the Climate Witness Community Toolkit developed by WWF South Pacific. The Disaster Management Office and SOPAC are involved in training for disaster preparedness. Specific training modules can be developed for tourism. Training will also be needed in disaster communication. The FVB plays a key role in this respect.

The Department of Environment already works with Ministry of Education on including environmental dimensions into school curriculum; this approach could be followed in collaboration with the University of the South Pacific to include climate change aspects into tourism programmes and tourism case studies into climate change studies.

6 Coordination

The cross-cutting issue of lack of coordination has been discussed in the context of licensing for new tourist developments. New developments involve a very wide range of agencies, starting with the Fiji Trade and Investment Board, and in the case of native land the Native Land Trust Board. Decisions made at those levels do not necessarily take environmental, social or risk aspects into account. Only at a later stage, developments need to undergo EIA process, and they also need to provide a Construction Environmental Management Plan (CEMP) and an Operational Environmental Management Plan (OEMP). All of those are administered by the Department of Environment, but information exchange with the Department of Town and Country Planning is critical so they know these plans are in place before they approve a particular development. The proposed Tourism Industry Act [draft] makes reference to the enforcement of EIA as a condition to giving of license. It also suggests that the Department of Environment is represented on the licensing body and encourages the sharing of information between the two departments.

The Department of Town and Country Planning's jurisdiction is for developments above the high water mark. It is the approving authority for all tourism development proposals, but relies on the Department of Environment to provide guidance on EIA assessment. For other developments, for example reclaimed land or over-water bungalows, the Department of Lands is responsible. So far, the Department of Lands has not developed a policy for new products of over-water facilities.

Often, in the development process mangroves are cut down, as for example in the case of Denarau Island and Momi Bay. Mangroves are important protective barriers in the case of cyclones and big waves, but they also provide the basis for local communities' livelihoods through fishing. The Ministry of Lands, Ministry of Agriculture and Native Land Trust Board need to discuss the issue of mangroves and develop a coordinated approach and policy. Resource owners also need to be involved in this process and have more ownership. The question was raised who is responsible for the shoreline in particular (e.g. in relation to erosion problems). One possible stakeholder could be the National Parks Office. The public access to the foreshore was another important issue mentioned in the discussion.

In the licensing process, agencies at the later stages, such as the Department of Town and Country Planning are under enormous pressure from the developer. The developer or investor who has resolved land use arrangements and who has been issued with a certificate of investment expects no further hurdles on the path to development. When they learn about processes and regulations they need to comply with they become frustrated. Considerations of risks are not included in this process yet.

Information on climate change and risks should be integrated into all phases of the licensing process. This relates to coastal developments but also to infrastructural issues such as water supply (e.g. the construction of boreholes). Exchange of information between the involved agencies needs to be improved.

7 Next steps in the project development

7.1 Project Steering Committee

The Ministry of Tourism will coordinate for the establishment of a Project Steering Committee. The role of the PSC will be to:

- Act as an advisor for the project development and implementation
- Advocate the project
- Ensure integration with regional and national policies, other related initiatives or projects

To this end, the PSC will meet annually once the Medium-sized project has been approved, as well as for special sessions if needed, and ongoing telecommunication will be ensured. For the current project development phase the PSC is asked to participate in a meeting in August to add input into the final stages of the proposal development. PSC members are willing to offer advice to the Ministry of Tourism or the consultant in-between meetings.

To address the lack of industry participation an industry workshop will be held to discuss the concern of climate change for tourism operators and establish partnerships for this project.

7.2 Demonstration activities

The stakeholder discussions so far indicate that the project will address three themes:

1. Disaster preparedness and management
 - CHARM application to tourism
 - Hazard maps
 - Policies/regulations for new products (e.g. over-water bungalows)
 - Climate risk component in EIA and SEA
 - Climate monitoring (partnership between hotels and the Meteorological Service)
 - Preparedness and emergency planning (e.g. best practice; training, insurance)
2. Resource management
 - Erosion control (soft structures, use traditional knowledge)
 - Water management (inc. water quality, wastewater management)
 - Mangrove conservation (including policy gaps in licensing processes)
 - Waste management
 - Land reclamation impacts
 - Flooding

- Coral reef management
3. Social, community issues
- Increase climate change resilience of local communities
 - Health issues
 - Product diversification, cultural tourism
 - Integrated approach for adaptation
 - Consultative mechanism for other land use
 - Community-managed reserves
 - Community-hotel partnerships (community outreach, support, revenue sharing)

There will be cross-cutting issues such as specifying the national Climate Change policy to tourism sector, enforcement of legislation, improving coordination, evaluation of current practices, increasing awareness, voluntary certification (e.g. Green Fiji)

Further consultation will be undertaken to identify sites for demonstration activities. The workshop participants discussed the following criteria for selection:

- Vulnerability: sites where climate threats and impacts are present;
- A variety of adaptation measures can be implemented and demonstrated;
- Willingness of local authorities and stakeholders to participate;
- Intensive tourism use now or in the future;
- The demonstration activities can build on existing activities and add value to them;
- Variety of sites (different geographical areas and scales, sites that represent new development and mature destinations, large and small scale operations);
- Co-funding opportunities.

The project proposal will be developed over the next three months.

8 Appendix

8.1 Workshop Agenda

2 May 2006

CHAIR	Marika Kuilamu, Ministry of Tourism	
9.00	WELCOME AND INTRODUCTION	Napolioni Masirewa, CEO Ministry of Tourism
9.15 – 9.45	Background to the project	Gabor Vereczi, UNWTO
Climate change and variability in Fiji		
9.45 – 11.00	Climate Change impacts in Fiji	James Terry, University of the South Pacific
	Climate change adaptation	Professor Kanayathu Koshy, University of the South Pacific
	Meteorological data and risk profiles	Ravin Kumar, Fiji Meteorological Service
<i>11.00 – 11.20 Morning tea</i>		
Implementing climate change adaptation		
11.20 – 12.30	Tourism and climate change in Fiji	Susanne Becken, Lead consultant
	CHARM – a decision making tool for risk management	Tukatara Tangi, SOPAC
	Climate change adaptation and risk management strategies – the role of cost benefit analysis	Paula Holland, SOPAC
<i>12.30 – 13.30 Lunch</i>		
Tourism and climate factors in Fiji		
13.30 – 15.15	Tourism strategy for the Pacific: environmental/climate issues	Peter Dawkins, SPTO
	The hotel industry's perspective on climate change and variability	Brendon Stanbry, Fiji Island Hotel and Travel Association
	The Fiji Visitor Bureau's role in disaster management	Bill Gavoka, Fiji Visitor Bureau
	Tourism, Conservation and Climate	Monifa, WWF South Pacific
<i>15.10 to 15.30 Afternoon Coffee</i>		
15.30 – 16.00	Sustainable Tourism Development	Banuve Kaumaitotoya, Ministry of

		Tourism
16.00 –17.00	Stakeholder discussion on climate impacts, and adaptation measures	Chaired by James Terry, University of the South Pacific

3 May 2006

CHAIR	Marika Kuilamu, Ministry of Tourism	MINISTRY OF TOURISM
9.00	SUMMARY OF FIRST DAY	Gabor Vereczi, Susanne Becken
National policy perspectives		
9.15 – 10.30	Climate change policies in relation to tourism	Epeli Nasome, Department of Environment
	Coastal tourism development	Jacqueline Hughes, Department of Town and Country Planning
	Disaster and risk management	Joeli Rokovada, Disaster Management Office
10.30 – 11.00	Morning tea	
11.00 –13.00	Stakeholder discussions on policy needs	Chaired by Napolioni Masirewa, CEO Ministry of Tourism
	Stakeholder discussions on capacity needs in the public and private sector	
13.00 – 14.00 Lunch		
Local and industry perspectives		
14.00 – 15.15	Adapting to climate variability and extreme events – Navua case study	Melchior Mataki, University of the South Pacific
	Perspectives of local councils in tourism zones – Nadi case	Sakaraia Serau, Nadi Town Council
	Climate change adaptation and risk management strategies – the role of cost benefit analysis	Paula Holland, SOPAC
15.15 - 15.30	Afternoon Coffee	
15.30 –17.00	Discussions on next steps Follow-up activities, coordination mechanism, partnerships, potential contributions for co-financing	With particular input by representatives of development agencies

8.2 Key organisations

Organisation	Key points	Relevant partnerships/relationships	Role in project
Ministry of Tourism	Advocates sustainable tourism, supports small (eco)tourism operations, policy development and recommendations; new Master Plan	Department of Environment, Ministry of Health, Fiji Visitor Bureau, USP	Coordinates project
Department of Environment	Focal point for UNFCCC; National Communications, approve EIAs, climate change policy, Environmental Act	Ministry of Health, Disaster Management Office, Ministry of Agriculture, Lands Department, Meteorological Service, Ministry of Forestry and Fisheries, SPREP	Key partner for policy development and enforcement
Meteorological Service	Climate observation; issue warnings, work with sectors on climate and climate change issues	Department of Environment, Disaster Management Office, Fiji Visitor Bureau, several hotels, FIHTA, agriculture (e.g. food for tourists), hydrology (water), public works (roads etc), FEA etc.	Climate data and observation, key role in early warning system
Disaster Management Office	Responsible for disaster management, work closely with SOPAC, implement CHARM, training activities	Department of Environment, SOPAC, Meteorological Service, Councils	Coordination of disaster management, training capacity
Department of Town and Country Planning	Approve developments (inc. set back from shore); depend on EIAs undertaken, require good supply of information for their approval process	Department of Environment, Department of Mineral Resources	Policy development and enforcement
Ministry of	Administer building codes; work with border control on	Department of Environment, Councils	Monitoring, policies

Health	diseases, food hygiene, water quality monitoring		
University of the South Pacific	Wide range of research, including on climate change modeling / adaptation, cyclones, erosion , marine issues and sustainable tourism, involved in tourism master plan	Ministry of Health, Disaster Management Office, Department of Environment, WWF, SPREP	Provide expertise and research capacity; esp. in Integrated Coastal Management, climatic changes and tourism.
SOPAC	Risk/disaster management, mapping; CHARM, cost benefit analysis	Department of Environment, Disaster Management Office, Department of Lands	Provide expertise in the areas of disaster management, mapping, water supply
WWF South Pacific	Awareness raising for climate change; start marine-based GEF project	University of the South Pacific	Awareness raising, expertise in marine biodiversity
Councils	local issues; can recommend on new developments; have health inspectors, local infrastructure, e.g. drainage	Ministry of Health, Disaster Management Office	Implementation of adaptation, local support
Department of Lands	Involved in new development (when land is claimed), role for new policy re overwater bungalows, work with	Department of Mineral Resources, Department of Town and Country Planning, SOPAC	
SPREP	Regional climate change framework	Department of Environment	Regional communication and coordination
Ministries for Agriculture	Erosion, sedimentation, climate change will affect crops/yield/land use	Meteorological Service, Department of Environment	Wider land use planning
Ministry of Fisheries and Forestry	Fisheries deals with marine biodiversity, coral reefs	Department of Environment, Meteorological Service, WWF South Pacific	Marine biodiversity, mangroves

SPTO	Regional marketing organization, develop a new strategy	Fiji Visitor Bureau, SPREP	Communication networks
Fiji Visitor Bureau	National marketing agency, work closely with businesses on disaster management	Meteorological Service, FIHTA, tourism operators	Communication networks, disaster management and recovery
Fiji Hotel and Tourism Association	Represent hotel and diving industry; lobby at government level; short term concerns including some aspect of sustainability	Fiji Visitor Bureau, Meteorological Service, hotel and dive operators	Communication networks, industry training
Fiji Ecotourism Association	Represents 60 small businesses (20 paying members)	Small tourism operators (mainly Yasawa Islands)	Communication networks, industry training
Native Land Trust Board	Manage land on behalf of native landowners, negotiate with developers	Native landowners	New tourism developments
Fiji Trade Investment Board	Issue investment certificate for new developments		New tourism developments

8.3 Participant list

Names	Status	Address	Representative
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