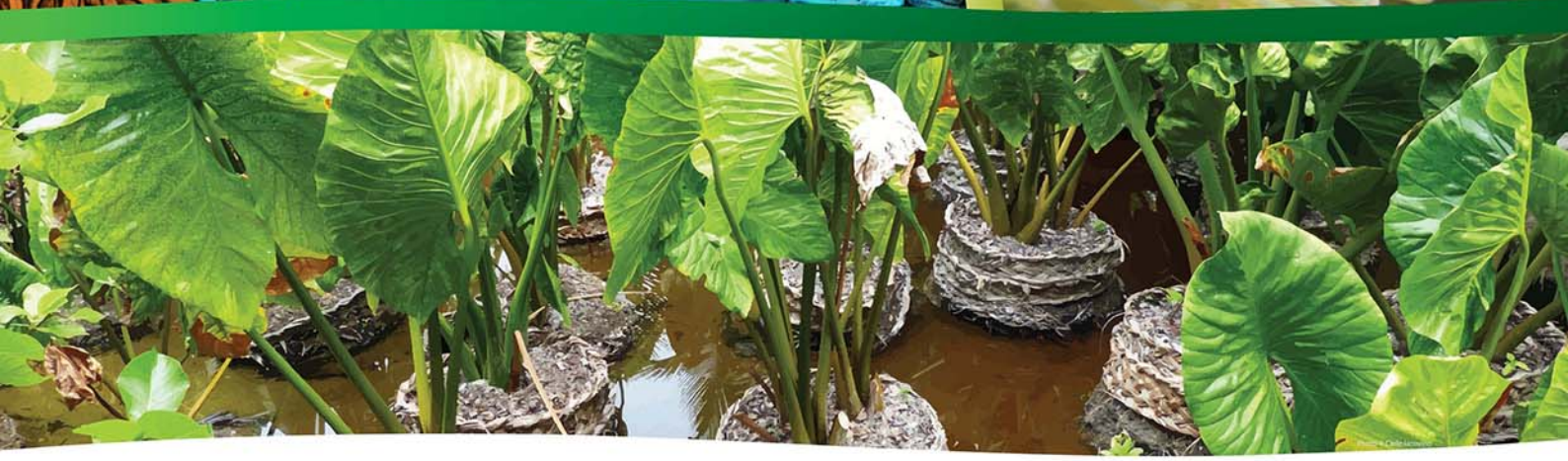

9th PACIFIC ISLANDS CONFERENCE ON NATURE CONSERVATION AND PROTECTED AREAS

2-6 December 2013
Laucala Bay, Suva, Fiji

REPORT OF CONFERENCE

SPREP
Secretariat of the Pacific Regional Environment Programme

Roundtable
for nature conservation in the Pacific Islands

9th PACIFIC ISLAND CONFERENCE ON
NATURE CONSERVATION AND PROTECTED AREAS

CONTENTS

DAY 1: MONDAY 2 DECEMBER

SESSION 1

Opening Ceremony

The 9th Pacific Islands Conference on Nature Conservation and Protected Areas was formally opened in Suva, Fiji by His Excellency the President of Fiji, Ratu Epeli Nailatikau. His Excellency's speech is attached as Annex I.

Official Handover of Conference Chair

The Chair and host of the 8th Conference, Papua New Guinea, officially handed over the Chair to Fiji, the host of the 9th conference. The representative of Papua New Guinea, Mr Gunther Joku, noted that people benefit from conservation activities and stressed the importance of promoting conservation in support of government development initiatives such as roads, health and education. He also noted the importance of a whole of government approach in conservation and establishment of protected areas, including working with private sector and non government agencies. He raised the issue of resource mobilisation to support these initiatives including looking at the way donors are organised and how international funds are used to support conservation and protected areas establishment.

All presentations are available at www.sprep.org/pacificnatureconference.

SESSION 2

Climate Change and Conservation in the Southwest Pacific, Dr Tim Flannery, Australian Climate Council

Dr Tim Flannery presented information on the current status of atmospheric and ocean warming, and sea level rise. He stated that in order to stabilise the world's climate, most of the planet's fossil fuel reserves would need to stay in the ground and the move to a decarbonised economy was imminent. He made reference to the two degree Celsius limit and stated that the remaining global budget for CO2 emissions from fossil fuel combustion is about 600 billion tonnes if we are to stay within this limit. Dr Flannery also suggested that the drivers for change may be more immediate – for example, China's new focus on reducing air pollution (found to be reducing life expectancy in Northern China by up to five years). Investments in solar and wind power were also increasing and costs for these were declining significantly.

Conference Agenda, Objectives and Report on Key Achievements, Taholo Kami, PIRT-IUCN

The Chair of the Pacific Islands Roundtable for Nature Conservation, Mr Taholo Kami, presented an overview of the past five years and noted that the conference is a gathering of government agencies, NGOs, community-based organisations, donor agencies, partners and experts. It will set the conservation agenda for the Pacific islands region for the next five years and further celebrate successes and achievements to date. He outlined the objectives, which included reviewing the 2008–2012 Strategy and formulating the new Action Strategy; promoting natural solutions to address impacts of climate change; reviewing the National Biodiversity Strategy and Action Plans (NBSAPs) and assessing progress; and continuing work on the Convention on Biological Diversity (CBD) Programme of work on protected areas and islands.

Mr Kami also noted the work of the Roundtable for Nature Conservation which has increased coordination and collaboration among national, regional and international organisations and highlighted the need to strengthen links with countries via NBSAPs or similar conservation and development strategies and with CROP agencies and regional and national NGOs.

State of Conservation Report – Synthesis, Stuart Chape, SPREP

Mr Stuart Chape noted that significant achievements and commitments have been made in conservation and that there was a need to assess the status of biodiversity and conservation in Oceania. This assessment is intended to assist with development of the next Action Strategy or its equivalent and would also serve as the start of a long term, periodic monitoring process. A consortium led by IUCN had been commissioned to undertake the work and Mr Chape presented a summary of the findings.

The report found that environment and development issues are increasing particularly in mining and logging, pollution and waste, coastal development, unsustainable fishing, invasive species and climate change. Emerging issues include deep sea mining.

The report identified that while Pacific people have always been reliant on natural resources for their livelihood, ecosystem services were even more pertinent today including for example, for food security for growing populations, recreational uses and carbon sequestration. The presentation outlined the methodology used to conduct the State of Conservation in Oceania assessment and summarised the report findings.

The following were identified as critical issues to be addressed over the next six years:

- *Achieving CBD 2020 Aichi targets*
- *Translating multilateral environmental agreements (MEA) and national commitments to concrete action beyond policies: laws, enforcement, capacity, awareness and education, community participation*
- *Ecosystem approaches at scale – replicating approaches*
- *Protecting biodiversity that can sustainably support livelihoods and food security*
- *Providing the level of resources needed to deal with manageable threats, especially invasive species*
- *Implementing ecosystem-based adaptation approaches to climate change impacts that sustain ecological services*
- *Taking monitoring and assessment seriously to understand the scale of threats and change and develop appropriate responses.*

Strategic Priorities for Nature Conservation and Protected Areas for the next five years and beyond, David Sheppard, SPREP

Director General of SPREP, Mr David Sheppard, provided an overview of the Action Strategy for Nature Conservation and Protected Areas 2008–2012 and advised on the work conducted on its review. The review found that the Vision, Mission and Goals in the 2008–2012 Action Plan were still valid and should be retained in the next (2014–2020) version; while the Objectives identify broad priorities for action, they are not specific enough to achieve the purpose of five year milestones and the absence of specific and measurable targets makes it difficult to assess its outcomes and

accountability. Additionally, it was noted that the 2008–2012 Action Strategy did not fully achieve the goal of widespread ownership and utilisation.

The Director General further advised that the eight Guiding Principles provide a fundamental "Code of Conduct" for implementing projects and delivering nature conservation effectively in the Pacific region.

He noted that in spite of the successes, many challenges remain, particularly in areas of capacity and sustainable financing, and on the management of key issues such as invasive species. The level of loss of species and biodiversity remains a major concern at the regional level as outlined in the IUCN Red List. He further stressed that the changing climate also has major implications for biodiversity and ecosystems of the region and there is a need to better prioritise and target conservation actions. Mr Sheppard urged all delegates to participate in ensuring the next Action Strategy meets the goals and priorities for the region.

Discussion

The following recommendations and comments were made:

- That the Action Strategy be developed in a precise way in terms of what we wish to achieve and to ensure that the strategy is then "marketed" to donors, including the GEF secretariat and at various regional and international meetings.
- The importance of community involvement - many species of conservation concern are also relevant for the subsistence of local communities, so the issue of sustainability of harvest is very important; instead of focusing on species we should focus more on resilience of ecosystems and establishment of refuge areas.
- Practical solutions are needed that are in tune with the local community – an example is the execution by SPREP of a NZ-funded turtle conservation project (initiated by Lui) in six countries, which will need to tackle the issue of sustainability of harvesting and the issue of subsistence versus conservation.
- There are clear gaps in the old Action Strategy. For instance, too much focus on primary and pristine ecosystems (for example, primary forests) while we should also integrate human-created ecosystems (for example, agro-forestry ecosystems) that still contains valuable biodiversity. Another example of overlooked ecosystems are the coastal forests (different from mangroves) and beaches: these ecosystems are difficult to quantify but they are at the frontline in the adaptation to climate change. They can't be quantified by GIS and local communities are best placed to know their status of conservation. Recommended that these be integrated in the revised strategy together with a concern for the loss of traditional knowledge, since we cannot conserve a species efficiently if we do not know its name and cultural relevance.
- There is a need to recognise the social and political dimensions of some conservation issues (agreed that this is important and that good science is needed in order to inform decision makers).
- Noted that the large number of active conservation agencies in the Pacific means that we need to find a mechanism to have a clear accountability and shared responsibility, with clearer targets to be achieved.
- Suggested that the Aichi targets provide a sound framework from which to identify good indicators (this is because Aichi targets were already agreed by all countries of the region). Additionally, linking the Action Strategy to Aichi targets will also allow link to the NBSAPs.
- The issue of deep sea mining should be captured by the Action Strategy as this is the key emerging conservation issue for the years to come. Suggested that the environment community needs to step in

and take a stronger position on DSM, possibly starting with a dedicated working group. Also noted that we need to know more about the conservation implications of DSM.

- The lack of sufficient data was highlighted – on species as well as on new issues such as deep sea mining. Noted that we need to invest more on science and to expand our knowledge.
- On the issue of ownership of the new Action Strategy, it was suggested that it was important that everybody give their input during the next days and next months and that delegates take the opportunity to make sure their voices are heard and that the new strategy is more relevant to countries (for instance, more achievable targets that are more meaningful to countries).

Free Flow Sessions

A series of exhibits were put up by members of the Pacific Islands Roundtable for Nature Conservation and other partners to enable participants to better understand that work of these agencies. These were placed in the foyer of the main venue and available throughout the conference.

Celebrating Conservation Successes

This was an event held in the evening of Monday 2 December to honour leaders in conservation through the Pacific Island Environment Leadership Awards. Details of the Awards are available at this link http://www.sprep.org/pacificnatureconference/piela..

DAY 2: TUESDAY 3 December

Fiji Conservation Highlights

The daily programme for the week included a brief session presenting highlights in conservation from Fiji.

The first presentation of the week was by Dr Stacy Jupiter. She highlighted the work of local NGOs in a number of conservation activities through strong partnerships. Initiatives mentioned included the Department of Forestry's REDD projects across two islands in Fiji; Conservation International's reforestation project in Ra Province, which involves planting native and fruit trees; WWF partnering for nurseries for riparian area restoration; and Nature Fiji's work on sago palm restoration. The Fiji Government was also in the process of issuing commemorative stamps to highlight mangroves while the private sector has been engaged through a carbon offset programme and mangrove replanting.

Dr Jupiter also provided an update on the Programme of Work on Protected Areas (PoWPA) work in Fiji, noting that the country has effectively protected over 16% of inshore habitats; 2.7% of terrestrial areas are also protected and will increase to 14% with the recent endorsement by the National Environment Council to protect prioritised areas of forest. The presentation is available here.

SESSION 3

Surviving the Anthropocene: Natural Solutions for Ensuring Resilient and Sustainable Development, Nick Sekhran, UNDP

Dr Sekhran discussed the challenges of living with a changing climate in conjunction with additional pressures of growing populations and development activities. His presentation raised the question of what will be required by this planetary system to support nine billion people, particularly in the context of climate change and ocean acidification. He noted that there is a need to maintain ecosystems and ecosystem services (natural solutions) as an insurance mechanism in the face of climate change and other pressures.

The presentation also raised the point that several activities that are impacting the environment simultaneously are being addressed in isolation from each other (for example, forest loss, ocean acidification, IAS, impacts of mining etc). There is also a need to be careful not to be distracted with climate change but to consider a whole range of impacts. Issues of energy, food, biodiversity, patterns of settlement and consumption, (urban sustainability - footprint issues) need to be considered in an interrelated manner and not in isolation. The need to balance environment versus economic/social needs was also raised.

Dr Sekhran discussed the idea of resilience as the capacity of a system to absorb disturbance and stated that the key issue is finding how to avoid moving from one undesirable stage to another and identifying the thresholds of change. He noted several examples in the Pacific where EBA is being applied to manage change and stressed the importance of up-scaling these.

SESSION 4

Celebrating Conservation Success Stories

Palau – Mr King Ah-Sam presented on the Palau Protected Areas Network (PAN), which supports the goals of the Micronesia Challenge. The presentation outlined the processes required to establish the PAN including a sustainable financing mechanism (green fee and a trust fund) and challenges and opportunities for the PAN.

New Caledonia – Dr Nathalie Baillon spoke on participative management of the reefs and lagoons of New Caledonia. Her presentation outlined the management mechanisms and successes and wins achieved through the marine protected areas.

Cool Islands – Dr Teina Rongo presented findings of the Cook Islands Marine Park rapid reef assessment. Details of the assessment are outlined in his presentation.

Nauru – Mr Asterio Appi presented a short film outlining the recent rapid biodiversity assessment conducted in Nauru and discussed the value of such initiatives in better guiding establishment of protected areas and initiatives in conservation. He acknowledged the strong partnerships between a number of organisations that enabled the BIORAP to be conducted.

SESSION 5

Panel Discussion on Natural Solutions

Chair: Nenenteiti Teariki-Ruatu, Kiribati
Panel Members: Nigel Dudley, WCPA, Stuart Chape, SPREP, Milika Sobey, IUCN
Presentations were made by each of the panellists. All presentations are available online and are summarised below.

Stuart Chape – Natural Solutions: Need for Ecosystem-based Adaptation to Climate Change in the Pacific Islands

Director of Biodiversity and Ecosystems Management at SPREP, Mr Stuart Chape, discussed the issues around effective application of natural solutions to address climate change. He suggested that non climate change issues need to remain centre stage while adding climate change to the conservation agenda. He made particular note of the resilience that natural systems provide against many of the impacts of climate change. Mr Chape noted that it was important to identify links and relationships between factors such as invasive species, climate, biodiversity, flooding and human health and safety in order to best apply EbA. He outlined a number of non climate change factors that hamper climate change resilience such as poor watershed catchment management and deforestation and added that long-term integrated solutions were necessary with an emphasis on maintaining ecosystem services for as long as possible. He drew on examples from the Maldives and New Orleans comparing cost of using ecosystem-based approaches versus infrastructure solutions.

Nigel Dudley – Protected Areas as Natural Solutions

Dr Dudley's presentation discussed the effectiveness of protected areas as delivery mechanisms for ecosystem services and outlined a series of publications by WWF and World Bank that discuss the argument for protection. He discussed services provided by protected areas that include: improved water quality, protection of the genetic pool of species/crop diversity; fisheries protection (LMMAs); disaster risk management; maintaining medicinal herbs; providing spaces for wellbeing and exercise; linking to faith groups/spirituality; boosting poverty reduction; and mitigating climate change by providing ecosystem services and sequestration.

Dr Milika Sobey – Pacific Mangrove Initiative

Dr Sobey presented on the Pacific Mangrove Initiative (PMI). This is a regional initiative currently chaired by SPREP and IUCN and focuses on mangrove ecosystems as an adaptation solution. It coordinates mangrove conservation across the region by strengthening the knowledge base on mangroves through inventories of mangrove species; mapping of mangrove areas (exercise still in process in Tonga); before and after cyclone imagery of shoreline health systems in Samoa; and calculating the total carbon stocks for PNG. The purpose for collecting baseline information is to help countries know what they have and how to develop it. For example, an economic valuation of mangrove assets has resulted in the development of mangrove management plans in Fiji while identification of total carbon stock for the Rewa mangrove area (inclusive of carbon emitted due to mangrove conversion) could potentially be used by policy makers to make informed decisions regarding conservation.

It was stressed that political commitment is very important and that challenges include shifting from small projects to becoming a regional programme (strong partnerships needed) and influencing higher level governance.

Discussion and Comments

- On the challenges of collecting and analysing data in the Pacific, Dr Sobey suggested that for mangrove data collection, there is a need to make sure methodology is easy to follow, replicate and monitor. She added that

problems had been encountered with taxonomy of species but that positive lessons included using a country manager to ensure that all types of data are stored safely. Technical resource people would visit the country and demonstrate how the data was to be collected and analysed and, in some cases, the technical personnel stayed in-country to collect the data with national counterparts.

- The issue of funding to support science based baseline data collection was raised. Dr Dudley noted that innovative approaches are needed to collect data such as building capacity in communities. He also suggested that donors will be happy to include data collection as part of a project but not necessarily fund a project dedicated to data collection in entirety. Mr Chape referred to the recent rapid bio-assessments in Samoa noting that this was valuable in establishing baseline. A similar BIORAP assessment would be undertaken in Tonga soon. The need to strengthen monitoring capacity as an ongoing process was also stressed. Dr Sobey mentioned south-south cooperation where personnel from Fiji's Ministry of Forestry were able to go to Solomon Islands to do forestry assessment (TA).

- Suggested that since not all areas have mangroves, that coastal forests be included in a regional programme.

- Capacity building of government officials was acknowledged by all as an ongoing need especially as national project coordinators often come from government ministries.

- On the issue of assisting countries to identify priorities, it was suggested that integration of climate change and disaster risk reduction in sectoral plans and policies was necessary along with the need for coordination at government level. Joint national action plans are an example of mechanisms that can assist in coordination. Stressed that if processes continue to operate in silos then there is a chance that countries will have conflicting priorities.

- Dr Sobey discussed the example of the Nadi River basin flooding and stated that natural solutions are not just about natural ecosystems but also include training of communities on how to reduce loss. Dr Dudley also noted that EbA has its limits and that there is a need to be honest in terms of this.

- The point was made that holistic approaches require involvement at all levels within a country... from policy and identification of priorities of ecosystem services that support sustainable development right down to sub-national and community level.

PARALLEL SESSIONS

Seven parallel sessions were run in the afternoons of Tuesday, Wednesday and Thursday. The session reports as provided by the session convenors are attached as annexes to this report. Outcomes and recommendations from the parallel sessions were also fed back to the Action Strategy and Declaration drafting committees.

DAY 3: WEDNESDAY 4 DECEMBER

FIJI CONSERVATION HIGHLIGHTS

A presentation was made on community resilience projects in Fiji and on the importance of holistic approaches in planning and execution of activities as well as the idea of promoting community champions, learning from each other and empowering communities to drive action, including through volunteerism.

SESSION 6

Keynote Address: Building Resilience: A Village Perspective, Tusani Joe Reti

Mr Reti provided a historical background to past nature conservation conferences and outlined a range of conservation initiatives in the region. These have ranged from training, capacity building and outreach for media, youth, parliament, private sector, government agencies; regional campaigns for conservation of species; conservation action plans; and national and regional commitments. He noted that while there is a long way to go, it is important to learn from these past achievements and not lose the lessons gained.

In his presentation he also discussed the idea of partnerships and participation, using examples from his village (Savaia). Mr Reti suggested that lessons from past activities should consider those groups we have not yet reached out to, for example, village elders and church ministers and other influential groups within communities. He raised the idea that church ministers had to be successfully engaged to lead or support village based conservation efforts – and that this was a pool of skilled people who need to be inspired and empowered to work with the rest of the community to become more effective custodians of our environment. Mr Reti also suggested that terrestrial conservation was perhaps no longer valued due to loss of communal ownership and that therefore, future public awareness and education should focus on family, etc rather than on government agencies.

Mr Reti also highlighted activities from his village designed to inspire and motivate the community toward conservation. These include the annual taro harvest and agricultural show, engagement of village children and youth in the programmes, a village market (which encourages sustainability through agriculture), involvement of women in cultural activities such as fine mat weaving and celebrations; and involvement in the church. He suggested that perceived barriers such as scientific knowledge or money could be overcome by the will of the people: "nothing is impossible if you put your heart and mind to it."

Keynote Address: Ecosystem-based Adaptation: A Perspective from a Fijian Terrestrial Ecologist, Nunia Thomas

Ms Thomas presented on the work of Mareqeti Viti/Nature Fiji in terrestrial conservation in Fiji and highlighted work on the Fiji petrel and conservation on Taveuni. In her presentation she also outlined various initiatives designed to build community resilience, and stressed Ecosystem-based Adaptation, addressing the issue of invasive species and partnerships such as the Satoyama Initiative as key to success. She also cautioned against making everything a climate change issue at the local level; stated that relevant and applicable government policies were essential; and that knowledge of biodiversity and agro- and ethno-diversity and their role in the ecosystem was needed.

SESSION 7

Celebrating Conservation Successes

Presentations were made by Logo Seumanu of Niue; Ratita Bebe of Kiribati; Niualuga Evaimalo of Samoa; and Seini Fotu of Tonga.

The presentations discussed the experiences of promoting community-based conservation areas in different communities. Funding, community support, communal ownership making it difficult to control resource use, lack of trust and the need for greater awareness/understanding of value of ecosystems were identified as key to enabling successful community conservation programmes.

SESSION 8

Panel Discussion on Community Resilience

Chair: Elizabeth Erasito
Panel: Hon. Jackson Kiloe, Premier of Choiseul; Dr Jimaima Lako, USP; Alifereti Tawake, LMMAThe three presentations highlighted different aspects of community resilience. Premier of Choiseul, Hon. Jackson Kiloe, discussed the participatory partnerships from community level through to government and donors in the Choiseul Province. Dr Jimaima Lako discussed the various food and nutrition challenges for Pacific Islands and provided experiences from a food security project designed to catalyse conservation and improved watershed management. Mr Alifereti Tawake provided an overview of the Locally Managed Marine Areas Network (LMMA) and its successes in the context of building resilience. He raised the issue of how this type of networking could be scaled up to include all Pacific communities as well as better engaging governments. Mr Tawake also made the point that a resilience lens is needed to plan for the future and a strategic approach is needed.

PARALLEL SESSIONS

Please refer to Annex for reports on the parallel sessions.

DAY 4: THURSDAY 5 DECEMBER

SESSION 9

Keynote Address: Hon. Henry Puna, Prime Minister of Cook Islands

Prime Minister of the Cook Islands, the Honourable Henry Puna, spoke on sustainable financing and sustainable development. In his statement, he discussed the need for cautious development and suggested that the way we use our natural resources should be in balance with our need to secure long-term benefits and fruitful partnerships. Increased public awareness and pressure has helped to ensure that appropriate policies and approaches are in place. He outlined several initiatives in the Cook Islands to illustrate successes in long-term management of the natural environment and discussed the value of the user pays principle in terms of sustainable financing.

SESSION 10

Celebrating Conservation Successes

Presentations were made by American Samoa, Federated States of Micronesia, and Tokelau.

American Samoa discussed the design and benefits of the new AS Environment Protection Agency LEED Platinum Certified Green Building. Federated States of Micronesia discussed the Invasive Species Task Force of Pohnpei, its history and achievements. Tokelau provided an overview of its fisheries policy, which enables management of both inshore and offshore fisheries.

SESSION 11

Panel discussion on green/blue economy for sustainable development

Chair: Taule'ale'ausumai La'avasa Malua

Panel: Dermot O'Gorman, WWF Australia; Warwick Pleass, Pleass Global Ltd; Dr Greg Sherley, UNEP

Dr Dermot O'Gorman discussed how WWF is working to transform global markets in order to address threats to biodiversity. His presentation highlighted the fact that the greatest drivers of biodiversity loss are food crops, energy crops, pasture and forestry. WWF has taken the approach to target the supply chain (as opposed to consumers or primary producers/extractors) on the premise that about 300-500 companies control 70% of consumer choice. By shifting demand of these companies, WWF aims to change 50% of production to be more sustainable and responsible.

Mr Warwick Pleass discussed the role of businesses in achieving results towards sustainable development and noted the many sustainable development initiatives that have started, floundered and been abandoned in the Pacific. He suggested that businesses communities and industry should take the lead in sustainable development and not leave it to NGOs and government. Businesses should have as much incentive and interest in the environment and not just let shareholder profit interests guide them. He noted the Mamanuca Environment Society – an organisation created by

private sector (resorts) aimed at protecting their marine environment. Mr Pleass also shared his organisation's vision for biodegradable plastic bottles, "green" building, reducing reliance on fertilizers and herbicides, and other activities designed to reduce environmental impact.

Dr Greg Sherley, UNEP Pacific Regional Focal Point/delegated Head of Agency and Task Manager, referenced UNEP's paper on the Green Blue Economy concept, "Green Economy in a Blue World – a synthesis report". He stressed that the marine and terrestrial environments are more than just economy – they are part of our cultural and spiritual existence as well. Dr Sherley noted that most of the features of a "green-blue economy" are predicated on the reasoning that a world-wide transition to a low carbon economy will not be possible unless the seas and oceans are a key part of these urgently needed transformations. He further stated that regardless of terminology used (blue/green), essentially the issues are the same and unchanged and have been around since before Rio. He outlined (referencing the synthesis report) a number of specific areas for action, which include: sustainable fisheries, developing renewable energy sources, rethinking production and use of nutrients, the need for high quality data to make informed decisions in other areas of the economy (such as tourism in the face of sea level rise and acidification), and taking a cautionary approach to deep sea mining, given our lack of understanding of these ecosystems, to avoid unintended consequences that may occur through the loss of unaccounted for ecosystem services.

YOUTH PRESENTATION

The Pacific Youth Environment Network (PYEN) presented a short film highlighting their vision for the future and the importance of youth involvement in decision-making processes. They stressed the need for youth to be viewed as leaders of today and the parents of tomorrow.

PIPA PRESENTATION

A youth representative from Kiribati provided an overview of the Phoenix Islands Protected Area (PIPA) programme and noted that it is the biggest Marine Protected Area (MPA) in the UNESCO world heritage sites. The importance of partnerships and working together to maintain the MPA was highlighted. The presentation was followed by a song to highlight the value of the PIPA to its people.

PARALLEL SESSIONS

Please refer to Annex for reports on the parallel sessions.

DAY 5: FRIDAY 6 DECEMBER

SESSION 12

Conservation Case Studies from the Pacific

Dr. Christine Pöllabauer presented the 2014-2018 Action Strategy on behalf of the President of the Southern Province of New Caledonia (Dr Cynthia Legeard). She noted that New Caledonia has a unique governance structure with a President for each of the three provinces. New Caledonia has the world's highest endemic biodiversity per unit area and the country has established a network of Protected Areas, with the aim of bringing 80% of the country's Protected Areas into the network. The Southern Province Action Strategy outlines multiple actions, which include: training for locals, forestry management, composting of waste, waste reduction, more efficient energy use, development of community-based mangrove planting, and targeting invasive species including deer, pigs and rabbits. Dr Pöllabauer noted that the funding mechanism provides funding to youth and retired volunteers working on conservation actions.

SESSION 13

Special Presentation of Key Outcomes from the High Level Session

The Attorney General of Fiji, Mr Aiyaz Sayed Khaiyum presented the key outcomes from the high level session held on Thursday afternoon. The outcomes statement proposed ten actions seen as key to deliver nature conservation in the Pacific region over the next five years. The statement highlights the need for leadership commitment and the Attorney General stated that these points would be given serious consideration before April when countries would meet to make commitments.

SESSION 14

Action Strategy Framework

Mr Peter Thomas presented the draft Regional Framework (Action Strategy) for Nature Conservation and Protected Areas in the Pacific Islands Region 2014 - 2020 and noted that a comprehensive consultative process had been conducted prior to the conference. This contributed significantly to the development of the revised strategy. He also acknowledged the dedication of the drafting committee and the input from the parallel sessions.

Mr Thomas outlined new and emerging conservation issues incorporated into the new document and explained that a large focus was on how organisations, agencies and civil society can work more effectively together to deliver sustainability and replication of conservation effort in a cost effective manner. He highlighted the inclusion of Access and Benefits Sharing to ensure that any commercial gain from Pacific island resources is returned to local owners and custodians of the resources and also noted that there was strong recognition of the importance of faith-based organisations in progressing nature conservation in the Pacific. This is still seen to be essential for linking to communities, even in a world where modern mechanisms of social media and other forms of electronic communication are being increasingly used.

The essential output of the conference as reflected in the draft Framework is the theme of building economically, socially and environmentally resilient communities. Mr Thomas suggested that it was necessary to look at holistic approaches for the management of resources throughout the region and to view this integrated approach as a powerful way to achieve multiple goals.

With regard to monitoring and measuring progress, it was noted that there is a desire to link the Framework to targets to measure progress in the region. The document should be integrated with the 2020 Aichi targets, which have been agreed to by CBD Parties. This would need to also be considered in the context of NBSAPs. Mr Thomas stressed that it was not intended to create a new reporting structure, but that since countries will have an obligation to report against Aichi targets, this approach would also allow monitoring of the Framework.

Mr Thomas also noted that the Framework attempts to address mainstreaming and how it can be used to mobilise partners and resources.

The draft Framework was adopted by the conference.

Conference Declaration

Mr Kosi Latu presented the draft Conference Declaration, which had been dubbed the **Laucala Declaration** to avoid confusion with other statements titled "Suva Declaration". The Laucala Declaration notes that 98% of the Pacific island region is ocean, and effective management of ocean resources is fundamental. It highlights the need to link effective use of traditional knowledge to science in the delivery of effective nature conservation.

Comments from the floor requested that the following points be considered and incorporated in the declaration:

- Deep Sea Mining, climate change and genetically modified organisms;
- The impact of human population in terms of increased pressure on ecosystem services (noted that a more direct reference is needed);
- Improve the overall structure – for example, applauding and recognising efforts would be better in the chapeau (they are currently addressed directly within the specific area of relevance); and pull out regional, sub-regional and national processes so they are clearly stated and addressed in one place;
- Include a direct reference to the newly developed draft Framework within the declaration;

It was agreed that the document be adopted in principle, with one final electronic opportunity for comment and input after the conclusion of the meeting.

Announcement of New Chair of the Pacific Island Roundtable and Secretariat

Mr Taholo Kami, Director of IUCN Oceania Regional Office, was unanimously voted to continue as the Chair of the Pacific Island Roundtable for Nature Conservation.

NEXT STEPS

The Director General of SPREP thanked the Government of Fiji for hosting the high level session, noting that it had provided a key opportunity to move from directions and goals to implementation. In terms of next steps, SPREP will:

- upload all documents to the SPREP website (conference page);
- compile and circulate proceedings;
- work closely with PIRT and the Government of Fiji to take this forward to key events - SIDS 2014 and World Parks Congress; and
- use the opportunity of the mid-term review of its strategic plan to reflect the outcomes of this conference.

Mr Taholo Kami, as Chair of the Roundtable, thanked the Government of Fiji for the call for a meeting in April, and added that he looked forward to a large Pacific presence at the World Parks Congress and that the Roundtable will take a lead role in this coordination.

OFFICIAL CLOSING CEREMONY

Prime Minister of Fiji, Commodore Voreqe Bainimarama, was the chief guest at the closing event of the conference. In his statement, the honourable Prime Minister said it was the duty of Pacific island people to contribute to the conservation effort. He stated that Pacific people have taken their beautiful surroundings and abundant natural resources for granted for too long and reflected on the paradox of using the ocean as a food source and a refuse dump at the same time. He highlighted addressing climate change and reducing global carbon emissions as an urgent imperative.

Prime Minister Bainimarama said the outcomes of the conference should be enacted and Fiji was willing to be part of "a grand coalition" to achieve the objective of the Action Strategy.

PARALLEL SESSION REPORTS

Seven parallel sessions were run each day on Tuesday, Wednesday and Thursday. The session convenors provided summaries of the sessions and outcomes and these are reproduced here.

TUESDAY 3 DECEMBER

1. Protected Areas Establishment – Natural Solutions, Funding Opportunities, and Community-based Participatory Planning in a Pacific Island Context.

Convenor(s): Mr Bruce Jefferies

Name(s) of presenter(s): Bruce Jefferies (SPREP), Nigel Dudley (IUCN World Commission on Protected Area/Equilibrium Research, Charles Besancon (Secretariat CBD), Paula Deegan (CCNet and CCNet Australia), Naohisa Okuda (Global Biodiversity Strategy Office, Japan Ministry of the Environment).

Summary of key points presented:

- Nigel Dudley – global perspective on multiple benefits of protected areas establishment, planning and management.
- Charles Besancon – update on LifeWeb Initiative financing for biodiversity conservation.
- Paula Deegan – Open Standards for Conservation Action, with particular reference to recent adaptations for use with Aboriginal communities in northern Australia.
- Naohisa Okuda – report on recent protected areas conference in Asia.

Questions and comments

1. How can enforcement be funded?

Enforcement is generally regarded as part of ongoing management of protected areas that should be funded by governments, though that may be changing. For example, WWF recently committed to a nine year tiger project that includes an enforcement component. Enforcement is a difficult area that tends not be addressed, and funding it is problematic.

2. Articulation of values of protected areas was very useful. Who undertakes ecosystem services valuations?

Very few complete valuations have been undertaken. Valuation of watershed values is a well-developed field (compare carbon sequestration and storage). The 'Natural Capital' website is helpful. Valuations of ecosystem services provided by protected areas can help countries significantly increase funding for PAs - Brazil and Mexico have both been successful in this regard. Important to be aware that some indigenous groups reject the concept of valuing ecosystem services and there is some resistance internationally to use of the term 'ecosystem services'.

3. Who pays for ecosystem services? Communities need clarity about how much they will be paid, and by whom.

It's easiest if you have a clearly-defined beneficiary group, and a single agency (for example, a water company) is paying. It's complicated if there are disparate beneficiaries. Ecosystem service payments clearly do work in some places.

Recommendations/outcomes agreed

- Compliance and enforcement issues in protected areas require more concerted focus and funding, and this will likely remain a core function for governments.
- We need concrete examples of successful ecosystem service valuations and funding arrangements to inform consideration of their potential application in the Pacific.

2. Coral Triangle Pacific (ADB-CTP)

Convenor(s): Mr Etika Rupeni

Summary of key points presented:

The session presented best management practices, lessons learned and successes from five ADB Coral Triangle initiatives on coastal management in the Pacific in Timor, PNG, Vanuatu, Solomon Islands and Fiji. Key points raised included:

- The need to recognise women as agents for change.
- The need for care in the use of terminology to avoid misperceptions. A point was made regarding the use of the term "best practice". It was *argued that the phrase limits the effective output of any practice used for projects implemented for the PICs.* The term *"conservation" was viewed as an "NGO word" in Solomon Islands so has been replaced with "*Resource Management" to make the concept acceptable at the community level.
- There is a need to be able to visualise the future of important sectors i.e. fisheries as projected for 2030.
- Terrestrial (ecological) areas should be included into the regional focus and the need for more NGO involvement should be recognised.
- A Memorandum of Understanding (MOU) has been effective for establishment of MPA Sites (for example, in Kimbe Bay and Manus Island in PNG). This MOU made it possible for community level enforcement mechanisms to be effective.
- Local provincial offices should be used for community involvement – PNG LMMA used an "influencer" to help bridge traditional and scientific gaps. Provincial offices have taken the initiative to set up their own hub for learning and teaching networks.
- Important to involve the traditional owners from the beginning of the processes for any policy made in benefiting their communities and natural resources.

Recommendations/outcomes agreed

- There is a need for more capacity building activities for community-based projects.
- Other activities such as gravel extraction and improper waste management need to be addressed in order to prevent exacerbating negative impacts.
- Involve government and community at beginning of project to ensure enforcement of policies.
- The linkage of terrestrial resources with marine should be clear enough from bottom up and top bottom approaches. We should consider the local provincial office as needed for implementation of project activities.

Concluding remarks:

- All presentations highlight the need to strength environmental laws for the benefits for the PICs.
- All lessons learnt should be based from experience to ability to say that it is the best practices without second thought.

3. Ecosystem Approaches for Island Environments and Societies: UNEP's Medium Term Strategy in the Pacific

Conveners: United Nations Environment Programme (UNEP) - Dr Greg Sherley (UNEP Apia, Samoa) and Mr Jerker Tamelander

Name(s) of presenter(s): Dr Greg Sherley (UNEP), Mr Naoya Furuta (IUCN), Dr. Stacy Jupiter (WCS, Fiji), Ms Salanieta Vunimoli (Live and Learn Fiji), Ms Sarah Mecartney (UN-Habitat) and the Lami Town Council.

Summary of key points presented:

- Dr Sherley provided an overview of UNEP's Pacific work programme and medium term strategic plan. He described alliances of UNEP with Pacific agencies, including NGOs, and outlined UNEP's priority areas.
- Mr Naoya Furuta discussed ecosystem-based disaster risk reduction and management and presented on the IUCN Partnership for Environment and Disaster Risk Reduction (PEDRR).
- Dr Stacy Jupiter introduced a publication titled "Pacific Island Ecosystem Management Principles, Case-studies and lessons learned" and, drawing on case studies from the publication, she discussed various principles that characterise the concept of Island Ecosystem Management (IEM). Dr Jupiter also noted that many pilot studies are extremely expensive, making replication and longevity a challenge.
- Ms Salanieta Vunimoli discussed the work of Live and Learn and its work on REDD+, which commenced with establishing community-based REDD plus pilot activities in Fiji and Vanuatu. She outlined ongoing work such as establishing the Drawa cooperative (six communities working together on the REDD+).
- Ms Sarah Mecartney spoke on Lami Town Council's experience with ecosystem management approaches towards climate change adaptation in an urban setting. The basic premise is to secure/conserve some natural environments in urban areas as a means of adaptation in conjunction with engineering/infrastructure options and policies. Challenges encountered in the Lami project included limitations within the Lami Town Council in terms of decision making; little value attributed to ecosystems; vulnerable or poor communities moving into critical areas; and developers moving into highly valued locations especially in the case mangrove areas.
  - Some of the specific actions taken and impact of this at local level were outlined. Activities included – recycling, mangrove planting, nursery and fertilizer sales, community action plans etc; design of phase two with UNEP, SPREP, UN Habitat – including EBA and ridge to reef inclusion.

Questions and comments

1. UNEP Pacific database will allow early access to information on global resources that are facilitated or provided by UNEP.
2. MEA capacity development project will enable support for good governance and technical information. Australian National University indicated interest in collaborating and providing support in the design of the project.
3. UNEP projects endeavour to coordinate the GEF STAR projects with the SPG to enable the small grants programme to be integrated into the design of the GEF projects. Noted that UNDP (responsible for nine GEF 5) projects should be picking up on this.
4. Lessons from Lami Town Council – need to improve awareness in other councils earlier; spend more time in design finding out what the locals wanted/needed; seek more opportunity for coordinating with consultation with council and other agencies to make sure alignment with community aspirations (advantage though, of having council involvement).

5. Difficulty selling the EBA without serious money. Need to get past selling the concept and instead, seek and find money solutions which means environmentalists need to reach outside the environment box. Build in more economic rationale but also recognise subjective values (example from French Polynesia - rat damage was assessed at a monetary level to justify rat control – even though the motivation of the project was biodiversity conservation).
6. Monitoring and evaluation and communicating the results is one potential way to resolve the differences between sustainable harvest and cultural expectations (of what can be harvested).
7. Communicating the complexities of issues at a local level is a challenge, particular difficulty in marrying local traditional rights with national objectives.
8. Use of environmental champions is a good way to influence leaders on some issues.
9. Suggestions for dissemination of lessons learnt: real time learning systems such as is used in the corporate sector could be possible use for environmental workers - this will require adequate resourcing; models exist such as those of WHO for gathering and disseminating information; USP learning exchange with multi contributor input – needs management – this is open to modification and improvement; knowledge products need careful design for user purposes; doing the needs assessment is really important.

Follow up:

- Move from presentation style to dialogue method of running the session.
- UNEP to follow up with Dr Lorrae van Kerkhoff of Australian National University and investigate their involvement in the GEF 5 Capacity Development project with a view to including good governance.

Recommendations:

- Systematic and comprehensive dissemination mechanisms that are open to all are needed in the region.
- Scale issues for case studies – ensuring they have wider inclusive influence.

4. Pacific Mangrove Initiative: a Partnership Approach to Coastal Ecosystem Management

Conveners: Dr Milika Sobey-IUCN ORO

Name of Presenters: Dr Wulf Forstreuter (SPC-SOPAC), Julie Ward (MESCAL Samoa), Viliame Waqalevu (IUCN), Dr Sobey (IUCN), Dr Eric Verheij (MARSH Project), Ipul Powaseu (PNG Assembly of Disabled Persons).

Summary of Key Points Presented

Dr Wulf Forstreuter discussed the processes involved in the mapping of mangroves in Fiji, Solomon Islands and Tuvalu, and noted that analysis for Fiji has shown an increase in vegetation area compared to 40 years ago while Tuvalu has seen a decrease in vegetation area. Analysis for Solomon Islands is still under way.

Ms Juney Ward provided an update on the mangrove management in Samoa under the Pacific Mangrove Initiative and MESCAL. She noted that while Samoa does not have an institutional framework for mangrove conservation, an MPA by-

law in the district of Safata covers mangroves. A mangrove co-management institutional framework has been developed with village mayors, a working committee, volunteers and with government support.

Mr Viliame Waqalevu described results of an assessment of mangroves in the Rewa Delta to determine carbon emissions from mangrove loss. Based on the assessment, which found that mangroves contain approximately 1,700 tonnes of carbon dioxide equivalents per hectare (tCO2e/ha), it was estimated that 500 hectares of mangroves store as much carbon dioxide as Fiji emitted from burning fossil fuels in 2009. Using conservative values for verified carbon credits, mangroves are valued between FJD 8500 and FJD25,000 per hectare if conversion is avoided. To offset emissions from mangrove conversion, between two and three hectares of additional mangroves would need to be either restored or permanently conserved. These strategies are in line with the ongoing country level strategies involving reducing emissions through avoiding deforestation and degradation (REDD+).

Mr Vainupo Jungblut of SPREP provided a brief overview of the Ramsar convention (160 parties with Kiribati being the latest Pacific island country). The convention looks after five main types of wetlands (mangroves included). Under partnership with IUCN, a database has been created that incorporates monitoring techniques. Data from Samoa and Tonga has been uploaded while still awaiting response from other countries to incorporate their data into the database. A regional wetlands action plan framework also exists to assist countries to develop their specific plans.

Dr Eric Verheij provided an overview of the Mangrove Rehabilitation for Sustainably Managed Healthy Projects (MARSH). MARSH is implemented as a partnership between communities, government and NGOs under management of IUCN Oceania Regional Office to address climate change issues in mangroves. It is being implemented in at least 30 sites in five priority provinces in Papua New Guinea, Solomon Islands and Vanuatu. The goal is to empower communities and increase capacities of national institutions in the rehabilitation and management of mangrove forests to increase resilience to the impacts of climate change. MARSH has completed the selection of 33 sites in PNG. In the Solomon Islands, MARSH is building on the existing work by the MESCAL project. Dr Verheij also outlined a host of activities planned as the next steps for the project, which include establishing baseline maps for all sites, mangrove vulnerability assessments, supporting the establishment of a legal framework that enables communities to manage their mangrove resources, training/awareness/capacity building drafting/revising of coastal natural resource management plans, and establishment of a mangrove curriculum at UPNG, among others.

Mr Ipul Powaseu (PNG Assembly of Disabled Persons) presented on the MARSH project from the perspective of including marginalised groups in all aspects of the project. This includes people with disabilities and disability-specific initiatives, which enable and empower people with disabilities to participate fully. He noted that there is a lack of data in PNG to determine how many children with disabilities are in school and that only 1-2% of people with a disability in low income communities receive the rehabilitative services they need. The challenge is to contextualise and implement the Disability Inclusive Strategy and ensure it is part of the action plans of all partners at community and individual level.

<u>Questions and comments:</u>

1. Availability of data (difficulty in releasing and obtaining)
    - Need better coordination; country very protective with data because of fear of commercial gain – suggested that the issue needs to be addressed in terms of benefits to the country, for example that allowing data to be readily available can serve to help bring in funding assistance.
    - Data is only available if it has been reviewed (Samoa) and if there is an MOU with the users; availability also depends on the sensitivity of the data.
    - Important to ensure the data is accurate.

2. What are some of the successes in mangrove work?
   - Samoa - successful in the town area but slow generation.
   - Tonga - varying degrees of success, have issues with pigs taking the seedlings.
   - Fiji - replanting has been successful, mostly carried out by commercial houses, leadership project, forestry and success will depend on the longer term.

3. What is the cost of replanting and maintaining one hectare of mangroves? This information could help improve understanding for developers.
   - Don't really have a cost of replanting but from looking at the actual cost of replanting mangroves, cost is quite low - the ecological costs of the loss of mangroves are much higher.
   - Suggested that obtaining the costs of mangrove replanting in small project schemes could provide an idea of what the costs would be like.

4. How we can build the Pacific Mangrove Initiative to be a regional programme?
   - Most agree that for funding purposes it would be best to just leave it as it (leave it to the current strategy - retain what's happening).
   - Need to link all polices to allow government to be responsible for mangroves just like in forestry (PNG).
   - Comment: Adding on, the marine and terrestrials are well covered except for the management of mangroves and we would like to learn more about the management of mangroves.
   - Updates from the PMI meeting: partners who are involved in the PMI updated the stakeholders on the activities they had carried out so far.
   - Requesting active participation from the other partners.
   - Produce a mangrove charter - similar to what West Africa has. This charter is to be agreed by the governments (of the Pacific islands) and provide guidelines to what should be done and that will show the commitment of the countries.
   - Some participants (from Kiribati and New Caledonia) are interested in the PMI work.

<u>Recommendations</u>

- Need to tackle the issue of making data readily available.
- The idea of biological off-set is slowly coming in to Fiji, parts of Denarau (Naisoso Island one of the property developers) and the first developers to do off-sets with the mangroves they removed.

5. Pathways to Resilience in Customary Landholder Communities

(Revised Title: Pathways to Community Resilience for Conservation and Sustainable Resource Management)

Co-conveners: Gillian Goby, Kristi Abbott, Chris Filardi, Pip Cohen, Johanna Johnson

Name of Facilitators/Presenter: Presentation 1 - Pip Cohen (WorldFish), Presentation 2 - Katy Soapi (Tetepare Descendants Association) and Gillian Goby (MCC), Presentation 3 - Johanna Johnson (C2O), Presentation 4 - Kirsti Abbott (University of New England)

Lead facilitators: Chris Filardi and Gillian Goby

Overview:
In the Pacific, community-based approaches are the mainstream way in which conservation and natural resource management are implemented. This parallel session drew on the experiences of communities and government and non-government representatives from across the Pacific to understand the attributes of resilient Pacific communities and to understand what threatens and strengthens community resilience. The session also explored how the resilience of communities affects their success in implementing and benefiting from community-based conservation and resource management. Participants from across Oceania contributed to all aspects of the session.

The overarching objective of this session was to explore community resilience in the Pacific, and understand the interactions of aspects of community resilience with sustainable resource use and conservation activities:

a) What does a resilient Pacific community look like?
b) How does the resilience of communities affect the implementation of conservation and sustainable resource management?
c) What are the pathways to enhance community resilience?

Summary of key points presented:

Initial presentations created a launch pad for discussions to explore and discuss key issues to be documented.

Presentation 1 - In the Pacific, due to the tight linkages between societies and the natural environment (in terms of food, livelihoods and lifestyles) communities are often referred to as part of social-ecological systems. Considering this, a resilient social-ecological system is defined as one that "absorbs stress and reorganises itself following disturbance, while still delivering benefits for the community" (adapted from WorldFish 2013). From the scientific literature and practical experiences, several attributes of community resilience have been identified. These include a sufficient resource base for local needs and sustainable use of natural resources (which in the context of increasing pressure on resource use is often promoted by conservation or natural resource management actions), aspects of good governance (including inclusive decision making, conflict resolution, decision-making considering short and long-term perspectives and implementing and enforcing decisions), learning (through learning-by-doing and/or via connections to others) how to stabilise favorable situations, navigate change, how to change unfavorable situations, and adaptive capacity (financial and technical capacity, and knowledge to support the ability to adapt). All of these aspects are interlinked and contribute to community resilience.

Break out group synthesis - As a group we identified and discussed key attributes that engender resilience specifically to Pacific communities. The defining factors included:

- Good governance and leadership (including Church and spiritual base);
- Cultural identity (strong traditional structure, keeping traditional ecological knowledge alive, pride, land rights/customary tenure);
- Inclusivity (engaged communities in decision-making, gender balance, partnerships, communication);
- Access to basic needs (clean water, sanitation, healthcare, food security);
- Healthy environment; and
- Shared community long-term vision (innovation, food security).

Contributions also raised that resilient communities were:

- Better placed to enable sustainable resource management;
- Sustainable financing mechanisms (Trust funds);
- More able to innovate;
- More financially literate; and
- Able to explore technology and renewable energy.

Presentation 2 – Observations from community-based resource management case studies in the Solomon Islands were highlighted. The relationship between community resilience and community-based conservation (natural resource management) were explored. It was highlighted that;

- A healthy ecosystem was important to supporting community resilience; and
- A more resilient community was better able to implement/support/manage conservation/NRM initiatives.
- Partnerships focused on fostering resilience can be hindered by or enhanced by cultural aspects of social alliances involved.

The factors that both challenge and support community resilience (and the ability of communities to maintain their conservation and natural resource management activities) were also discussed. It was recognised that these two opposing forces can often be the same factor. A table of these was provided but the influence of culture, governance, and ability to have long term vision were highlighted in the case study as being influential to community resilience.

Presentation 3 – A case study from the Torres Strait described a successful visioning exercise for climate change adaptation which assisted community members to identify elements of a resilient and prosperous community. This vision was used to assist in planning activities for the community and to highlight some of the factors that can strengthen community resilience including good governance; leadership, self –reliance (food and renewable energy); and a healthy ecosystem. The process of adaptation planning was also highlighted as a tool that communities can use to recognise important assets, assess vulnerability and identify opportunities to build their resilience.

Presentation 4 - Invasive species represent a major threat to the resilience of communities across the Pacific. It was highlighted that the invasion of species can represent a substantial 'shock' to lives, livelihoods and natural systems in the Pacific and transform the way in which people live and their relationship with the natural environment. An example of the destruction of key agricultural products in Tokelau was described, as well as

elimination of a keystone species on Christmas Island in the Indian Ocean. Developing confidence and capacity for managing invasive species can enhance resilience. Suggestions for this pathway include:

1. Species identification and education
2. Prioritisation and decision-making
3. Linking to information and resources (PII, PIP)
4. Learning from others
5. Building capacity and succession planning
6. Acknowledging expertise and showcasing

Whole group discussion - Participants at the session discussed and identified threats to community resilience, and ways in which community resilience can be strengthened by the actions of communities themselves and also by non-government organisations, research organisations and government and regional agencies. Elements that strengthen community resilience were identified as:

- Recognition of secure rights and access to land and sea (including resources) and ability of communities to participate in decisions over these.
- Focus on building internal capacity (management and technical).
- Financial literacy and empowerment.
- Well educated and informed community members.
- Retaining and transferring (between generations) traditional ecological knowledge (and all local knowledge).
- More inter-generational planning and succession plans.
- Sense of ownership and unity regarding initiatives (including for conservation).
- Adaptive approaches to management.
- Prioritisation of food security and opportunity for alternate livelihoods.

Questions and comments

This whole session followed an interactive and participatory process. All of the outputs and recommendations were a result of questions, issues raised and discussions from participants. These key outcomes are summarised and described above, however some additional issues raised during the session are also captured below.

- 90% of land owned by people. Ownership is being over ridden by corporate rights. Customary rights are being lost.
- Realise the challenges faced by Pacific community in relation to security of rights and maintaining control of land/water resources. To be recognised in the Action Strategy.
- The retention and inter-generational transfer of traditional ecological knowledge is a real issue.
- To be documented and proposed to be included in the Action Strategy.
- When we discuss resilience are we talking about development?
- There was agreement that there is a difference between a resilient community returning to a current state and wanting to return/progress/develop to an improved state.
- Collaboration between private, government, NGO and communities to explore commercial opportunities for livelihoods can contribute to strengthening community resilience.

Key points for follow up action

a) There was a commitment by the panel convenors that the synthesis of this session would be fed back to participants and importantly fed into the Action Strategy.
b) A communications support pack will be provided to all participants that included: PDFs of all the presentations; an audio-visual clip from the session; and key outcomes from the day.
c) An email list will be established to help facilitate on-going communication and sharing on community resilience issues.

Recommendations

Participants strongly supported the specific inclusion of community resilience into the new Action Strategy for Nature Conservation. It is also proposed that the attributes of resilient Pacific communities (as identified by participants above) are to be considered and included alongside any formal definitions used in the conference outputs or Action Strategy.

The outputs from this session were discussed in subsequent sessions for input into the conference proceedings and the draft Action Strategy. The following text was proposed:

Principle 9

Implementing conservation and natural resource management that supports the resilience[1, 2] and prosperity [because resilience can also refer to the resilience of a negative state i.e., poverty in a community, a degraded reef] of Pacific communities.

International and national partners and communities will commit to:

- Recognising that the resilience of Pacific communities is strongly linked to abundant resources and biodiversity, and yet that there are intensifying and emerging threats to natural resources, biodiversity and cultural heritage;
- Using ecosystem-based and adaptive management approaches and principles;
- Building adaptive capacity of communities and self-reliance;
- Basing actions on best available information and ongoing learning (including via learning-by-doing, learning networks);
- Supporting and fostering communities' abilities to innovate;
- Supporting the retention and inter-generational transfer of local or traditional ecological knowledge [this assumes the value of traditional ecological knowledge in conservation is recognised elsewhere];
- Recognising the importance of the security of rights and access to resources on the land and in the sea;
- Supporting and enhancing both short and long-term perspectives in decision-making.

Concluding remarks by the facilitator

Considering the theme of the conference, this was a particularly important session. Note that there currently is no description of the meaning of resilience, or the importance of community resilience in the current Action Strategy. The outcomes from this session can make an important contribution and address that gap.

Additional notes:

- ✓ The session was a valuable opportunity to get meaningful input from over 40 participants from a broad range of stakeholders across the Pacific into defining what a resilient pacific community was/looked like.
- ✓ A number of actions/recommendations were proposed on how to strengthen community resilience. Many of these relate to the principles in the Action strategy.
- ✓ High level guiding statements and some key actions regarding community resilience were developed to feed into the draft Action Strategy.
- ✓ The establishment of a network of people working in community-based or customary landowner settings across the Pacific to share ideas and lessons learnt.

6. Economic and Cost-Benefit Analysis of Mitigating Impacts of Climate Change across the Pacific

Convenor: Suzie Greenhalgh (Landcare Research)

Presenters: Landcare Research NZ and USP

Overview:
Expected changes in climate in the Pacific: average temperatures have increased; rainfall patterns are changing; ocean temperature is rising; ocean salinity is changing; sea level continues to rise. Therefore, we can expect increases in climate-related disasters and risks. We need to take steps to mitigate and adapt to these.

Economics can be used to:

- Estimate the 'true' cost of projects for budgeting purposes - ideally more than just the wage and capital costs;
- Rule out projects with net costs - reduces the scope of the feasibility study and avoids intervening when it is not worth it;
- Identify priorities across multiple projects - can rank order possible options; avoid investing in an *ad hoc*solution before identifying the problem and considering all possible remedies; and
- Efficiently allocate limited funds - best use of time and money.

Pike Brown (Landcare Research)
Economic costs of natural disasters in Ba Province, Fiji in 2002, based on survey data

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Flood Risk Assessment at the Ba Catchment in Ba Province on Viti Levu, Fiji.

- Three major climate events in the last four years.
- 1:50 yr flood in 2009
- 1:50 yr flood in January 2012
- 1:25 yr flood in March 2012
- Cyclone Evan in December 2012

Ba catchment population – 45,879; province population – 231,730 (64% Indo-Fijian, 35% iTaukei-Fijian; 92% Urban, 8% Rural); 34% poverty rate (25% of total poor in nation). Ba is area of high vulnerability (due to exposure climate risk and poverty).

Community and household surveys were used to assess the impact of these events with much of this information being used in cost-benefit analysis and community resilience assessments.

In 2012, 295 household surveys were carried out along with 28 community level surveys.
- Questionnaire covered demographics, education, health, agricultural production, livestock, fishing, forest, and non-timber forest products, wage-based income, time allocation, disasters, and resilience.
- 2700+ data points per household
- Data collection enabled through use of tablets, resulting in detailed and high quality data

Disaster Warning:
- Most received disaster notification via radio, TV
- Warning from DISMAC and other government agencies less effective and effectiveness differed with village.

Disaster Response:
- Some of the more common responses were moving village assets, household goods and livestock, harvesting crops early and buying provisions.

Damage:
Annual income and damage as a share of income

	Annual income	Jan floods	March floods	Cyclone Evan
iTaukei-Fijian	$8,070	26%	9%	77%
Indo-Fijian	$8,580	15%	11%	39%

Summary Conclusions:
- Cyclone Evan caused most damage in 2012 (in comparison to January and March floods)
- iTaukei-Fijian household more affected than Indo-Fijian household in regard to income
- Most economic damage is done on crops
- Disaster risk in Fiji is increasing (Ba vulnerable – exposure and poverty)
- Damages are local and event specific, concentrated on agriculture

Adam Daigneault (Landcare Research)

Ecosystem-based adaptation to climate change in Fiji – cost benefit analysis of managing ecosystems to reduce disaster risk

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Many options are available to governments and communities to help people adapt to climate-related disasters. These options are described as hard, soft and ecosystem-based (EbA) approaches:

- Hard: most effective defence against climate related loss and damage, for example, levies, seawalls. Tend to be expensive, short lifespan, and high maintenance costs.
- Soft: generally relate to human behaviour, for example, raising awareness.
- EbA: using nature and ecosystems to protect against climate-related disasters, for example, forest or mangrove planting. Often many co-benefits from these options.

This assessment used household and community survey data (see above presentation) and hydrological modelling to compare the costs and benefits of a selection of hard and EbA approaches to mitigate disaster-related climate risk. This assessment follows the steps laid out in a newly developed set of guidelines for cost-benefit analysis (CBA) in the Pacific developed by Landcare Research, SPC, SOPAC, SPREP, PIFS, and GIZ (due for release early in 2014 through SPC).

The following assessment focuses the January and March 2012 flooding events in the Ba catchment, Ba Province, Viti Levu, Fiji. The assessment compares riparian buffers (EbA), upland afforestation (EbA), floodplain vegetation (EbA), riverbank reinforcement (hard), raising houses (hard) and dredging (hard).

The preliminary results of the CBA under a climate scenario where a 1:50yr storm event becomes a 1:25yr storm event were outlined. It was noted that the results of the CBA for current climate conditions were similar except the benefits of all options are less pronounced and cost-benefit ratio for floodplain re-vegetation is not positive.

Despite some of the other obvious benefits not being directly measured, such as soil fertility maintenance, biodiversity and habitat values and spiritual values, the EbA approaches were more cost-effective than hard approaches, both under current climate and with more extremes in climate.

Future additions to this analysis will include incorporating impacts on demography, age, etc. and will be extended to the Penang (Rakiraki) River catchment in Ra Province in Viti Levu, Fiji.

Bill Aalbersberg (USP-IAS)
Ecosystem-based Adaptation to Climate Change – Community resilience

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Pacific communities are not built on monetary things – other aspects to look at in regards to adaptive capacity and vulnerability. Determinants of adaptive capacity commonly identified in the literature are infrastructure and information and technology.

Ability to access and use resources requires: social capital; human capital; equity and justice; cognitive elements. The framework to determine the resilience, vulnerability, and adaptive capacity is regarded according to various aspects at a Pacific context.

- Human capital – health security; change agent
- Social capital – community direction; leadership
- Belief systems – Traditional value; willingness to accept change
- Resources and distribution – land access; fisheries access; income access.

Details of the Framework:
- Semi Quantification Likert Scale for selected adaptive capacity - a scale from 1-5 for all the listed factors.
- The framework has been modified for the Ba EbA study where households were asked to answer 25 questions on resilience using a sliding scale.

Livai Tora (Koko Siga Fiji) and Andrew McGregor (Earth Systems)
Economic analysis of planting of planting breadfruit orchards as a climate change adaptation strategy for the Pacific Islands

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Many Pacific nations, according to the Food Import Capability Indicator (FICI), are considered highly vulnerable for food security. In particular rice, which accounts for about half of all food imports in the Pacific and is a food staple, is vulnerable to climate change.

Pacific nations have a comparative advantage in switching to their traditional staples, such as breadfruit. Breadfruit has a number of advantages. It efficiently uses solar energy and is relatively undemanding of soil. It also has a high

tolerance to climate extremes, has potential to sequester carbon, is high yielding and could be converted to high quality gluten free flour and paste products.

The ACIAR Pacific Breadfruit Project (PBP) is underway to establish breadfruit as a commercially viable option for small land holder orchards. Trial orchards have been established in Sigatoka, Nadi and Ba areas of Fiji. Research through the Centre for Pacific Crops and Trees (CePACT) is also underway on propagation options for breadfruit and on financial returns of different intercropping options including kumala (sweet potato), eggplant, cassava and pineapple. The sales from breadfruit have been estimated at $1,900 in year five, $9,500 in year six and $19,000 in year seven (assuming 45c/kg price for breadfruit).

Anna Rios Wilks (SOPAC)
Cost benefit analysis of storm surge hazard mitigation in Rangiroa, Tuamotu Islands, French Polynesia

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Rangiroa is the second largest atoll in the world and is vulnerable to storm surges. Its width ranges from 300metres to 500metres and the highest point is only a few metres above sea level. There is concern about the impact of increased storm surges with changes in climate.

To assess the options to mitigate this risk, a 1:50yr storm event was modelled with a king tide. Bathymetry data was used to determine location and depth of inundation and this was used in the assessment of costs and benefits.

The options considered were a seawall, MTR anticyclone building kits elevated 1.5 metres, elevating houses by one metre with concrete pillars, and creating a setback zone. Implementing these options now or gradually over the next 50 years was also assessed. While a mix of these options has not yet been evaluated, this could be the best option.

The CBA analysis suggests that the best options are gradual implementation of MTR kit homes and gradually elevating buildings by one metre. These were inexpensive and had low social and cultural costs, as the intervention was only carried out when new houses were constructed over the next 50 years.

Policy implications:

- In the future the focus should be on options that elevate floor level of buildings to at least one metre
- Continue to work in the provision and maintenance of cyclone shelters.
- Need to be cognisant that these options could also give a false sense of security as elevating houses will not alleviate the need for shelters currently being provided by the government.

Discussion

Q1- Did you evaluate coral reef management as an option to reduce wave damage?
A: Coral reefs do offset waves. However, it will not work as an option with large storm surges as in this type of extreme event the waves are so high that they pass over the reef.

Q2 – Can you discuss the option of relocation?
A: Future relocation may be considered as a possible option. However, this option was not currently popular with the community.

Q3 – Does the project connect to the DRR programme?
A: Yes, it does.

Nicolas Pascal (Criobe)

A financial economic case for public investment in MPAs: evidence from CBA conducted in Vanuatu (9MPAs) and Fiji (5MPAs)

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For Marine Protected Areas (MPAs), there are a number of issues currently facing decision-makers including:

- Are MPAs a good public investment? Who are the beneficiaries?
- What regulatory actions, incentives should be put in place?
- How can I develop stable financing sources?

There is also an acknowledgement of spill-over effects from an MPA and these should be better quantified when answering the questions listed above. To address these questions, areas in North Efate, Vanuatu (nine MPAs) and along the Coral Coast of Viti Levu, Fiji (five MPAs) were assessed. The key ecosystem services from coral reefs were identified as tourism (recreation), commercial fishery (food), subsistence fishery (wild foods), protection against coastal flooding (natural hazard protection) and bequest value.

It was estimated that 83% of direct MPA benefits accrued to private tourism businesses, 10% to villages in the MPA and 7% to villages not in the MPA. The average annual cost per MPA in Fiji was FJD13,000 in Korolevu and FJD7,500 in Navakavu. The average establishment cost per MPA was FJD14,000 in Korolevu and FJD29,000 in Navakavu. NB: these costs are from different sources. The annual costs on a per square kilometre basis are greater than USD10,000 in Korolevu and less than USD2000 in Navakavu, which are in the medium to low range of international MPA costs.

Looking at MPAs as a public investment, the benefit-cost ratio is greater than 20 (over 25 years and 10% discount rate). The return on investment since the creation of the MPAs was estimated at 12:1 in Korolevu and 1.7:1 in Navakavu. This means, for example, that FJD1 invested in the MPA, produced FJD12 of benefits for society after 5-10 years.

In conclusion:
- MPAs have proven to generate benefits mainly improving nature tourism attractiveness and maintain coastal protection.
- Tourism business owners are the main beneficiaries followed by village households.
- The community-based approach seems an effective management option (under certain conditions).
- Level of investment per MPA is limited.

Discussion

Q1 – If you live in a village near a hotel, there is often a symbiotic relationship with the community as villagers receive food from the hotels and employment. Were these secondary benefits taken into account in your analysis?
A: These benefits were not taken into account. We focused on the 'sea, sun and sand' benefits which is the key reason for investing in coral reefs and provide the main tangible benefits.

Q2 – Do you know the most effective thing to fund to ensure the MPA is cost-effective?
A: The investment of benefits is left to the government.

Q3 – Do you ask private businesses to invest in monitoring of the MPAs as they receive the highest benefits?
A: We try to look at all the different aspects, not just tourism. An agreement must be set in place to ensure there is collaboration between the community and the private businesses.

Isoa Korovulavula (USP-IAS and PACE-SD) and Jeremy Cole (DAI)

The application of participatory multi-criteria analysis for determining the Infrastructure Prioritization Index (IPI) for coastal community adaptation in the Pacific

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The common approach to complex decisions is to use a reductionist approach (for example, economic instruments/policy or legislation). This usually deals with one aspect of many dimensions of the problem or provides a way to simplify real-world complexity.

What this does not provide is any conceptual framework for explaining how communities/landowners select the best or most appropriate intervention (for example, land use, biodiversity conservation strategy, etc.) for their communities.

A multi-criteria decision analysis (MCDA) provides an alternative mechanism to evaluate options to address complex issues like how communities can adapt to climate change.

The MCDA process evaluates and ranks alternatives based on a community's preferences (weights) for multiple criteria and values that are held for these criteria. Some key aspects of the MCDA approach to resource management include:

- It is more robust than benefit cost analysis;
- It recognises human activities within a partial setting that are motivated by multiple and often competing criteria and/or constraints;
- It does not require monetary valuation of criteria;
- It facilitates the assessment of trade-offs between criteria to be measured and evaluated;
- It is comprehensive, knowledge based, and stakeholder orientated.

A variation of MDCA is the infrastructure prioritisation index (IPI), a systematic process that will empower and motivate priority communities – including women, young and advocates for the disabled. Key components include:

- Infrastructure
- Socioeconomic
- Environment
- Resilience exercise

These components are scored by community members and aggregated to identify which infrastructure projects are most beneficial to the community. The recommendations are then evaluated for technical feasibility and ability to be implemented under existing budget constraints.

Discussion

Q1- With MDCA, one of the points is that it is quite flexible with acquiring and analysing data. In the last slides you added the numerical categories that may affect this. Those numbers have specific meaning but you are removing flexibility and replacing it with some rigidity by giving numerical values that are subject to the village interpretation.
A: We do try to have it as flexible as possible but present it this way due to time constraints. In a one day exercise, our explanation may be too much for the villagers to fully comprehend. This is not fixed as the numbers may change with the continuous process of a villager's interpretation and comprehension of information.

Q2- One might totally sabotage the project as numerical additives may skew the results.

A: Sustainability is part of the exercise. Rushing communities is dangerous. Knowledge is abundant in the village, and this information is very helpful in informing and supporting a typical benefit-cost analysis.

Suzie Greenhalgh (Landcare Research) - Concluding remarks

Understanding the costs and benefits and non-financial factors that can and will affect the successful implementation of solutions and options for communities to adapt to climate-related disasters is important. Quantifying costs and benefits enable decision-makers to identify the most beneficial options. Considerations of non-financial factors enable us to better understand where and what may be the most appropriate options, even if another option may provide better cost-benefit ratios. In some instance, understanding who benefits also provides the opportunity to target those beneficiaries to identify sustainable financing mechanisms for the implementation and on-going maintenance of ecosystem-based approaches.

What is compelling is that analyses comparing hard versus ecosystem-based approaches to reduce disaster risk showed that the ecosystem-based approaches were the most financially beneficial. Perhaps even more compelling was that this was without accounting for some of the less tangible benefits such as improved soil fertility maintenance, biodiversity and habitat values and spiritual values that also flow from these approaches.

Session 7: Scaling Up and Down – Marine Spatial Planning in the Pacific Region

Primary Convenors: SPREP
Co-convenors: Sangeeta Mangubhai, GIZ (MACBIO), IUCN
Name of the Facilitator/presenter: Tim Carruthers, Sangeeta Mangubhai

Summary of key points presented:
The presenters discussed best practices in Marine Spatial Planning in the Pacific, noting that multiple resource uses require an integrated solution to management of marine resources through zoning. The Pacific Oceanscape Framework encompasses a vision for integrated management of Pacific marine resources, which will require engaging participatory processes for decision-making regarding coastal fisheries, biodiversity conservation, deep sea mining, etc.

The Coral Triangle Initiative and its positive attributes were outlined: showcasing the provincial government as organised, attracting development partners, identifying areas of significance (culturally/biodiversity), addressing ridge to reef connectivity, focus beyond species and sites, expand to bigger scale: threats on land link to livelihood, culture seascapes/landscapes approach: helps people to appreciate holistic approach to conservation work and making critical decisions.

Lessons from a case study on the application of MSP in Kiribati were discussed noting that the exercise is expensive; there was limited community involvement, engagement and participation; in the outer islands, the priority is livelihoods and income generation - where the people can utilise their resources; the tragedy of the commons persists - major threat to public goods on land and at sea; partnerships at all levels is essential.

A Marine Spatial Planning process in Fiji was outlined with benefits noted as: make reserves more effective; increase habitat representation; protect critical areas for reef resilience. Lessons included the need to ensure representation of all interests in planning as some stakeholders may have louder voices.

A presentation was made on large scale integrated management in New Caledonia outlining the methods used, issues relating to data, socio-economic aspects, progress in terms of the strategic analysis and the actual resultant zoning (ongoing). This has resulted in consensus on the creation of a marine park with further discussion on this to occur in 2014.

In Palau, work has been done to integrate Marine Spatial Planning into Palau's Protected Areas Network. Lessons include the fact that securing local engagement is a long term effort and that data needs to be centralised.

Summary of Questions and Issues

- Mapping was introduced as a way for the people to map out their threats/targets in their divisions.
- Data collection and updating is an expensive process.
- Important to consider different "voices" from within communities - some do not speak their concerns, so it is better to let them write down their concerns in paper and voice out their matters to the provincial councils.
- Ongoing challenge of accessing information, including from governments.
- Communities afraid to share important sites - used later as evidence in court cases.
- Different languages and cultures (e.g PNG, Micronesia) makes scaling up challenging.
- Almost impossible to do Marine Spatial Planning without terrestrial input, there has to be a linkage there.
- Deep sea benthic data a critical gap - need for accurate bathometry/bathymetry data to identify seamounts and potentially significant areas to support zoning of deep sea areas.
- Need strong collaboration between key ministries, particularly marine resource ministries and environment agencies to share data for integrated MSP when they are available.
- Economic value of resources to make predictions, for example, future return or loss as a result of marine management decisions.

WEDNESDAY 4 DECEMBER

1. Recovery, Resistance and Restoration – Building Resilience on Islands through Invasive Species Prevention and Management

Primary Conveners: Souad Boudjelas, Ray Nias

Facilitator: Alan Saunders

Presenters: Souad Boudjelas, Dave Moverley, Yalap Yalap, Adam Daigneault, Elizabeth Munro, Ratita Bebe, Ray Nias.

Summary of key points presented:

- Good progress has been made, since 1997, on a firm regional foundation to advance invasive species management but invasive species are an ever-increasing threat to biodiversity and livelihoods and there is a strong need to move from foundations and increase the pace and scale of action on the ground.
- Pacific Island leaders recognise the need for action and are communicating this at PIF level.
- Many organisations (and donors) can provide support to countries; however political will is required to increase action on the ground.
- External sources of donor funding (CEPF/RNHP) to civil society in 2005 enabled NGOs to lead the way in invasive species management and the benefits continue today.
- Success comes from good partnerships with a strong foundation of community support.
- Projects should align biodiversity priorities with community needs and national priorities.
- Real effectiveness comes from the community taking ownership of a project and using what they have to address issues in ways significant to them.
- Guidelines providing a framework for countries/agencies to develop programmes have been endorsed by SPREP and SPC member countries.
- Not one of the nine thematic areas of the Guidelines has received a 50% level of achievement across the region.
- Economic analysis using the triple bottom line of ecosystem services can justify the removal of invasive species to communities.
- Lessons learned from one motu can be used on others.
- Expeditions that tackle multiple islands at one time produce significant economies of scale.

Key points for follow up actions

- There is a need for more ecological baseline data.
- There is a need to utilise global agencies to achieve local action.
- There is a need to address Objective 5 in the Review of the Pacific Plan as there is not a specific mention of invasive species.
- There is a need to identify what is successful, keep learning and implement those learnings rapidly.
- There is a need to constantly raise biosecurity awareness with our communities through many different media.

- There is a need to give marine invasives a strong focus; currently this is not the case, largely due to lack of knowledge and work in this area.
- There is a need to identify and map existing invasive species. Many countries are only dealing with 'new' ones, but there may be many sleepers already in countries

Recommendations:

Prevention is key; countries need to take a strong stance on biosecurity at national and internal borders to protect their biodiversity and their communities.

Concluding remarks by the facilitator:

Never has it been a more urgent time for invasive species management; a number of opportunities are now available and we need to tap into these.

2. Challenges and Opportunities for the International Partnership for the Satoyama Initiative (IPSI) from Pacific Perspectives

Convenors: United Nations University Institute of Advanced Studies (UNU-IAS), Secretariat for the Pacific Regional Environment Programme (SPREP)

Primary conveners: Ms Aya Takatsuki

Presenters: Mr Wataru Suzuki, Ms Katarina Atalifo, Ms Aya Takatsuki, Mr Bruce Jefferies , Mr Simon Small

Summary of Key Points and Discussion:

- Promotion of sustainable use of production landscapes and seascapes are very beneficial in biodiversity conservation, for securing human wellbeing and enhancing local resilience.
- Information sharing, producing good cases on the ground level, building of local capacity and education are important. In this sense, the Satoyama Initiative and its international partnership, IPSI (International Partnership for the Satoyama Initiative) is one of the most useful tools among others.
- In the Pacific region, the challenge exists in integrated management of landscapes/seascapes, lack of awareness of local community on the importance of sustainable use of natural resources.
- Sub-national government bodies such as provinces should play greater role in landscape/seascape approach.
- It is advised to keep the collaborations focused, and in taking advantage of the knowledge we share, strengthen the capacity.
- It is also encouraged to group up community initiatives and keeping them contemporary and relevant.
- Mobilising and operationalising are the keys at this stage.
- Collaboration with other relevant networks, partnerships and organisations to implement the projects should be encouraged to maximise synergies and mutual strengthening.

3. Ecosystem-based Adaptation – A Social, Economic and Ecological Imperative in the Pacific Islands

Primary Convener: Secretariat of the Pacific Regional Environment Programme (SPREP)

Name of Presenters: Paul Donohoe (SPREP), Bureau of Meteorology Australia, Government of Japan, GIZ, CHICCHAP Programme

Summary of Key Points:

Seven presentations were made on the following topics:

1) Natural Solutions and Resilient Pacific Communities
2) Working towards a Performance Framework on Ecosystem-based Adaptation for the Pacific Islands
3) Ecosystem Management for Disaster Risk Reduction and Climate Change Adaptation
4) Disaster Risk Reduction and Protected Area-discussion at the 1st Asia Parks Congress
5) Australian Bureau of Meteorology, Seasonal Forecast in the Pacific and in Relation to the Activities in Biodiversity
6) Coping with Climate Change in the Pacific Island Region (CCCPIR), GIZ
7) Choiseul Integrated Climate Change Programme (CHICCHAP)

The recommendations from the discussions are:

- Ecosystem-based Adaptation (EbA) approaches should be encouraged and increased as an important natural solution approach to maintain intact ecosystems while building resilience in Pacific islands.
- Successful EbA must be founded on strong governance, integration of resource management sectors and strong partnerships between stakeholders.
- Data gaps on biodiversity, ecosystems as well as climate and non-climate pressures should be filled to enable geographic mapping of EbA opportunities
- Increased awareness of EbA approaches and implementation at different national and sub-national scales in a variety of Pacific Islands contexts is needed (i.e. whole island, atoll, terrestrial and marine)
- Projects should focus on capacity building at multiple levels to ensure continued commitment beyond external project funding while donors need to recognise that EbA actions are long-term and ongoing support is required for project sustainability.
- Develop tools to compare EbA, hybrid and non-EbA solutions (natural infrastructure and hard engineering) in a variety of Pacific contexts, including cost-benefit analysis
- Better monitoring and evaluation of EbA efforts to assess effectiveness and share lessons learnt.

4. Achieving Internationally Agreed Coral Reef Targets in the Pacific – Partnerships to Strengthen Coral Reef Assessment and Ecosystem Service Approaches for Planning, Management and Financing

Primary Conveners: ICRI and UNEP Coral Reef Unit (Jerker Tamelander)

Co-conveners: SPREP, Kousapw Palikir Community Group FSM

Name of the Facilitator/presenter: Anne Caillaud, Jerker Tamelander and Paul Anderson.

Summary of key points presented:

- The International Coral Reef Initiative (ICRI) is a partnership among governments, international organisations, and non-government organisations, which aims to preserve coral reefs and their related ecosystems in a framework of sustainable use.
- ICRI has had several success stories, including a programme aimed at eradicating the crown of thorns starfish in Pohnpei, FSM by using the COTS as fertiliser.
- Healthy reefs can produce 35 tons of fish per km/yr.
- A fifth of the world's coral reefs have been lost - in the Pacific 50% of reefs are threatened, 20% very high threat.
- UNEP is working with SPREP and ICRI in the Pacific toward addressing coral reef management through a partnerships approach to mobilise UNEP affiliated centres and regional seas in collaboration with governments, technical organisation and private sector.
- Tracking long-term reef change is critical for understanding the effects of multiple stressors and identifying appropriate planning and management responses at national as well as regional levels.

Recommendations:

- More active participation. In the past there was a strong social network which gave people a contact for questions - a peer learning network - good interactions with workshops and professionals.
- There is still monitoring going on but is not cohesive or easy to pull together.
- Challenges are continuity, government reliance and capacity as well as funding.
- Long-term data is needed for setting priorities and planning responses.
- When the regional coordination is funded there also should be resources to actually go out and do the monitoring!
- Recommend a simple framework/database that can be used for entering/storing monitoring data.
- Need standardised reporting requirements so multiple monitoring methods can be used and compared. (live reef cover and fish biomass).
- Other environments (mangroves and seagrass), marine invasive and socioeconomic data needs to be gathered.

5. Lessons from the Micronesia Challenge: Building an Effective Climate Change Toolkit For Community Engagement and Using Social Marketing to Build Local Support and Ownership of Key Conservation Initiatives

Primary Conveners: MCT and Rare

Name of the Facilitator/presenter: Gerald Miles, Rare; gmiles@rare.org

Summary of key points presented:

Gerald Miles from Rare opened the session with a brief overview of the history and scope of the Micronesia Challenge (MC) commitment. In 2006, at the 8th Conference of the Parties of the UN Convention on Biological Diversity, the leaders of Micronesia declared the Micronesia Challenge – a commitment to effectively conserve at least 30% of the near-shore marine resources and 20% of the terrestrial resources across Micronesia by the year 2020. The President of Palau was inspired by a similar commitment by Fiji and invited his fellow chief executives to join him in a first-of-its-kind regional commitment that went beyond the commitments under the CBD.

Michael Guilbeaux from Rare then presented an overview of Rare and the strategies they employ to achieve behaviour change. Mike also presented on the MCT-Rare Program for Island Resilience in Micronesia, featuring the current cohort of eleven Campaign Managers and their projects.

Ann Singeo from the Ebiil Society presented on her Rare Pride Campaign, providing an example of community driven solutions from the communities of Ngarchelong in Palau. Key projects highlighted include fisheries monitoring, watershed restoration, and capacity building through a Youth Conservation Camp.

Eugene Joseph from the Conservation Society of Pohnpei followed with a presentation on the development of a community-based climate change adaptation toolkit, and how the toolkit has been used and adapted for Pohnpei, including development of vulnerability assessment and local early action plans (VA-LEAPs) with 12 communities who are now looking for funding support to implement activities in their plans.

Trina Leberer from The Nature Conservancy, represented Micronesia Conservation Trust (MCT), and presented on MCT and efforts to sustainably finance the various activities and projects being implemented under the framework of the Micronesia Challenge.

Gwen Sisior then provided an example of how Palau is implementing their Protected Areas Network (PAN) Fund and building their MC endowment to achieve their sustainable finance targets for achieving the goals of the MC. Gerald then wrapped up the session highlighting the linkages of each of the components presented.

Questions and Comments

Q1. What are the options for funding support for communities who are ready to go (for example, Ngarchelong, the 12 communities in Pohnpei with completed VA-LEAPs) and for broader cross-cutting issues (for example, invasive species prevention)?

PAN Funds are available for the implementation of management plans for PAN sites on Palau; MCT announces periodic calls for proposals for community projects associated with areas of biodiversity significance (ABS), but is in

the process of updating their priorities and this criteria may change; the interest income from the MC endowment in the jurisdictions will provide supplemental funding that may be used for sites and cross-cutting issues.

Q2. Any plans to roll out more Rare cohorts in other parts of the Pacific?

Reference was made to a possible Pacific cohort, with the demand seemingly calling for a very integrated approach – one that brings help to communities with integrated solutions to reef to ridge, fisheries, mangrove conservation, and adaptation/resilience (for example, similar to case study presented by Ann Singeo).

6. UNDP GEF Small Grants Programme Community Based Adaptation

Primary Conveners: UNDP-implemented GEF SGP

Co-conveners: Pacific Disability Forum

Name of the Facilitator/presenter: Dr. Terence Hay-Edie

Summary of key points presented:

- Overview of the GEF SGP and Pacific Regional Programme.
- Overview of the AusAID-funded SGP SIDS Community Based Adaptation Programme.
- Fiji CBA Project Case Study Presentations *Coping with Change on Yadua Island*, National Trust of Fiji and *Safeguarding Water Resources on Rotuma to Sustain Food Security for Building Climate Resilient Communities*, LajeRotuma, and *Rehabilitation of Climate Change Damaged Coastlines at Laucala Beach Estate,* Nasinu Town Council.
- *Community Based Adaptation in Kiribati: A Case Study of Rurete Community.*
- *Using Participatory Video as a Tool for Vulnerability Assessment towards Building Community and Ecosystem Resilience to Climate Change Impact on Water Security Lelepa Island, Vanuatu.*
- Pacific Disability Forum: Disability and Climate Change – Building Inclusive Programmes. Supported by the PNG Assembly of Disabled Persons.
- SGP Pacific National Coordinators Panel Discussion.

Questions and Comments:

Q1. Does SGP have a format for Community Based Adaptation Plans?
No standard template but can help provide guidance. SGP has guidance on how to plan the project and lessons and experiences to share.

Q2. What happens to SGP projects if disasters strike during implementation?
SGP is about lessons learnt. For example, the Yadua project in Fiji experienced a natural disaster and SGP is working with the proponents to adapt plans and address new issues.

Q3. Why does SGP fund things government should be doing?
SGP only funds activities that are not funded through other agencies or annual national budgets. SGP works in partnership with government. There is no duplication. In PNG the SGP works through government/local or customary systems – decisions are made on a case-by-case basis.

Q4. Noted the need to include persons with disability in the adaptation dialogue and to identify specific ways to do this.

Q5. Can SGP allocate STAR funds to support local government who are on the ground, and who can ensure sustainability of some community initiatives?
SGP is small and meant to be focused on supporting communities. It was noted again that SGP encourage the government to partner with grantees. In Vanuatu, they develop the SGP CPS with government partners to ensure they have their say. In the Solomon Islands they are working with government to co-fund a strategic project addressing logging. Further, they can't co-finance with GEF MSP and FSPs, it has to be core funds.

Q6. What is the best way for communities to bring proposals to the NSC?
The community is encouraged to come into the office. They also have information with government ministries such as agriculture, fisheries and environment. The best way in Tonga has been word-of-mouth due to the successful results of the SGP project. They no longer need to advertise. They work with local communities and advise them on focal groups. In Samoa the best way is by having a strong network with the communities. They need to see where SGP can support implementation of the Community Development Plans. They also have partnerships with government, CBOs and faith-based organisations to support proposals.

Q7. How do you justify Global Environmental Benefits for Small Projects?
SGP projects do contribute to GEBs. Select 1 or 2 GEBs to report on when planning projects.

7. Deep Sea Mining

Title of session: Seabed mining

Primary Conveners: Sally Bailey WWF-South Pacific

Co-conveners: SPC (SOPAC), SPREP

Presentations were made as follows:

1) Deep Sea Minerals and Mining in the Pacific Islands Region
AkuilaTawake, Team Leader – Deep Sea Minerals (DSM) Project, Ocean and Islands Programme, Applied Geoscience and Technology Division of the Secretariat of the Pacific Community (SPC)

2) Environmental Management of Deep Sea Minerals in the Pacific: A Legal Perspective
Hannah Lily, Legal Advisor, Deep Sea Minerals (DSM) Project, Ocean and Islands Programme, Applied Geoscience and Technology Division of the Secretariat of the Pacific Community (SPC)

3) Environmental Perspectives of Deep Sea Mineral Activities
Sefanaia Nawadra – Director, Environmental Monitoring and Governance (SPREP) Secretariat of the Pacific Regional Environment Programme

4) WWF position on deep sea mining and a new approach in the Pacific and Coral Triangle
Paul Gamblin – Coordinator of Marine Extractives and Conservation project for Southwest Pacific and Coral Triangle; Marine Policy Manager at WWF-Australia.

Summary of Main Points:

What are the main issues that need to be considered for DSM around food security, livelihoods, biodiversity, others?

1. There are major data and research gaps around how seabed mining (exploration and production) would impact (directly and indirectly) food security (including possible pollution of tuna stocks), livelihoods, species (including turtle, sharks, seabirds) biodiversity, ecology, potential medical uses.
2. It should be described as 'seabed mining' rather than 'deep sea mining' because some areas being explored/proposed for mining (for example, in PNG) are close to shore for example, 13 - 30km to the nearest reef/shoreline.
3. Governments have limited capacity to respond to the impacts of DSM, including community-related issues.
4. Need to apply the precautionary principle.
5. What job opportunities and economic benefits for Pacific Islanders (versus expatriates) and beyond proposed taxes etc.
6. Need to look holistically, cost/benefit and who will be impacted by each.

If governments decide to proceed with releasing exploration areas for DSM, what environmental analyses should be done to inform/precede this process?

1. Require implementation and development of tools to support Marine Spatial Planning Ecosystem valuation.
2. A number of surveys and studies such as baseline environmental surveys on fauna and hydro dynamic modeling to understand ocean processes, geological and social economic studies to ensure best practice and sharing of information in a way that communities can access and understand.
3. Build a network of experts in the region that can assist as an independent advisory link.
4. Build a credible EIA process which includes risk assessment, noise pollution and ecological valuation, with independent third party reviewer of the EIA report.

How should community/stakeholder consultation be done on DSM, including before exploration permits are issued?

1. Government should create a legal obligation for tailored, regulated consultations (including translations) at national, provincial and local levels to happen before any activity occurs.
2. The consultation should transparently provide detailed information and research (for example, impacts on livelihoods) to all stakeholders – communities are key – on all aspects of the project and the wider context (including legal aspects) using a range of methods including interactive, web-based.
3. In areas of customary ownership governments need to seek free, prior and informed consent.
4. Research should be independent of the private sector and interested parties.
5. Consultants should be funded by government (or through industry contributions but at arm's length from projects).
6. Consultation should be as early as possible, before investments are made and areas released for exploration. Hearing concerns early can benefit industry too.

How can interested stakeholders help foster a wider debate and provision of information on DSM?

1. There are many interested stakeholders from communities, science, consumers, decision makers from government, regional agencies and businesses.
2. Raise awareness in stakeholders of information gaps, but use a different approach such as 'ridge to seabed', and mapping to enable discussion of cumulative impacts and a more holistic understanding of scenarios.
3. Build a sympathetic identity for deep sea ecosystems and biodiversity.
4. Development of a regional taskforce on multi-stakeholder marine spatial planning.
5. Funding of an overall strategy for data collection on seabed ecosystem to input into NBSAP.
6. Development of independent information support for example, regional repository.

THURSDAY 5 DECEMBER

1. Species Conservation – Meeting of the PIRT Species Working Group

Primary Conveners: Mark O'Brien, Birdlife International and Helen Pippard, IUCN Oceania

Name of the Facilitator/presenter: Mark O'Brien

The following presentations took place:

1) Crowd-sourcing (e-bird, i-naturalist), by Mark O'Brien

2) Tonga Megapode Surveys, by Ana Fekau

3) Fiji's Partulid snails, by Gilianne Brodie

The purpose of these presentations was to give the SWG some ideas of the type of activities that the group could be involved in. For example, would it be useful for the SWG to get involved with improving Pacific information in this way. Following these presentations, an overview of the proposed new Action Strategy was presented, in order to see where species activities could fit.

Species Work is proposed under Objective 4, linking to Aichi Target 12. It was also proposed that a link to Target 6 might be considered. There was discussion on the Key Performance Indicators but it's unclear if these will remain in the Action Strategy/Framework in favour of using NBSAP indicators instead.

Question and discussion points

1. The issue of translocations was highlighted, in regard to the Tongan Megapode, but with relevance to any species. A species may be moved from one place to another in order to try and protect its survival, but then the effects of this movement need to be assessed –to ensure it does not become invasive for example. There should be reference to translocation work and following correct guidelines in the Action Strategy.
2. Potential activities of the group could be revising and amending regional strategies – for example, the Marine Species Action Plans. But recognising that we need to focus on Action, not just on drafting.

3. The role of species recovery plans, and in particular monitoring these for their effectiveness was suggested as something that the SWG could be interested in. The KPIs associated with the Action Strategy identified this as being a measure of use for Objective IV. The IUCN Red List index was also suggested as a second potential KPI.
4. Red List training carried out by IUCN was seen as useful – and we need to discuss how to keep these sorts of activities going, how to sustain this interest and improve technical skills.
5. The key issues for the SWG are to work out what our role is and then how to operate, before we can decide on any issues.
6. The maintenance of the listserv was seen as a positive outcome – it is seen as an important mechanism for getting information out to people, creating partnerships and sharing knowledge and exchanges.
7. It was suggested that a review of species work and activities be carried out – this was begun following the RT meeting in 2010/11, but needs to be re-invigorated with clear objectives as to why we are doing this. The SOCO report could be useful here.
8. Following the structure of the PIP (Invasives WG) was suggested. In other words, having a full time coordinator, applying for external funding, etc. However, without deciding exactly what our role is, this would be premature and perhaps unnecessary. It was recognised that any activities or objectives of the SWG should not be a burden or additional work to already busy people, given the voluntary nature of the group.
9. The issue of who to coordinate was discussed – IUCN Oceania was suggested due to links with species programme, but also recognising that species is only a part-time role there. The coordinating role should be written into someone's ToR, whether paid or voluntary. Once it is clear how the Action Strategy/framework will look, it may be easier to see where this coordinating role should sit – at IUCN, or SPREP or elsewhere.

<u>Key points for follow up actions</u>

- Once the Action Strategy/Framework is finalised, people shall be asked for further input on the activities and objectives of the SWG through the listserv.
- The key role of the SWH needs to be resolved. Is it a monitoring group, a coordination group, or should it be expanding to do extra, funded, work?
- The coordination role needs to be decided – it was recognised that a dedicated person is required, and this should happen once the Action Strategy/Framework is clear.
- A framework for species work then needs to be drafted.

<u>Recommendations:</u>

- People felt that species work would relate to Objective 4 and to Aichi Target 12. This would restrict the focus of the Species Action Group on threatened species. A request whether Target 6 (relating to sustainable harvesting, etc) should also be included did not receive the support of those present. Actual work of the SWG is difficult to decide without a finalised Action Strategy.
- To stay in touch on the listserv – to try to work together and make the listserv work so that momentum about species issues is maintained. Whilst a coordinator is needed, it's up to everyone working on species conservation to be involved to work at coordinating and monitoring species issues in the Pacific.

2. Access and Benefit Sharing - Incentive for Conservation and Source of Livelihood?

Primary Conveners: Dr. Andrews Drews in cooperation with Natural Justice and the GEF Small Grants Program

Co-conveners: Harry Jonas, Lena Fey

Name of Facilitators/Presenter: Dr. Andrew Drews, Terence Hay-Edie

Summary of Key points presented:

ABS- An incentive for Conservation (Dr. Andrew Drews)

- Renaissance of natural products in drug development:
  - Screening of existing compounds and combinatory chemistry did not achieve the hoped amount of more and new chemical entities.
  - From 1940s to 2010, 175 small molecules were approved for cancer treatment, of which 85 (49%) are natural products or direct derivatives (44 out of 128 since 1980).
  - Natural products exhibit a greater diversity and variability.
  - Traditional knowledge continues to provide the lead.
  - Marine organisms provide more unique and diverse compounds than terrestrial organisms.
- Marine biodiversity and ABS:
  - The international legal debate on marine biodiscovery concentrates on areas beyond national jurisdiction.
  - The vast majority of marine excursion and collection are undertaken in national waters within the EEZs.
  - The Pacific Region is covered by EEZ's to a large extent.
  - Marine ecosystem accessible for scuba divers(40m) are within EEZ's.
  - EEZ's also cover deep sea ecosystems, especially in the Pacific.
- Lead for HIV/AIDS cure from Samoan healer:
  - Prostratin, which comes from the bark of the mamala tree (*Homalanthus nutans),* flushes the HIV virus out of cells where it hides.
  - Paul Cox, a US ethnobotanist, learned in 1985 of the tree bark's properties from a Samoan healer in Falealupo.
  - The Falealupo Covenant of 1989 constitutes PIC and MAT providing financial support to the community and for conservation (unit 2001>USD 480,00).
  - The US based AIDS Research Alliance (ARA) and the Government of Samoa agreed in 2001 that 20% of ARA's profit from prostatin will be returned to the Samoa people.
  - The chiefs and knowledge holders are not aware about these developments - the Falealupo Covenant is silent about third party transfers, renegotiation, IPRs, licence fees and royalties.

Nagoya Protocol (Dr. Andrew Drews)

- Adopted in October 2010 under the auspices of CBD, the Nagoya Protocol is an internationally agreed and binding framework for access to genetic resources and the fair and equitable sharing of benefit arising from their use. It enhances legal certainty and transparency for users and providers by:
  - Creating predictable condition for accessing genetic resources and traditional knowledge associated with them;

- Promoting adequate benefit sharing where genetic resources leave the territory of the provider country and associated traditional knowledge is being utilised.
- Supporting mechanism to monitor and ensure stakeholders compliance with mutually agreed terms and national ABS regulatory frameworks.

Questions and Comments

Q1. Do you think that natural remedies will be used more by doctors and on which country?
Yes, traditional remedies will be used by doctors and also statics shows that 60-80% of drugs in the market are traditional remedies.

Q2. Is there going to be conflict between the traditional healers and that pharmaceutical company?
No, there is no conflict. Traditional healers and resource owners are shareholders into the company, this is to bring back power and ownership of resources to the traditional healer and resource owner.

Q3. How many countries have signed and agreed to Nagoya Protocol?
27 have signed and agreed to the Nagoya Protocol. A total of 52 countries are needed for the Protocol to come into effect.

Recommendations

Governments need to set up proper procedure on how to consult with communities and other companies.

3. Community Centred Management and Policy: Learning from Experience

Primary Conveners: Locally Managed Marine Area Network

Co-conveners: Institute for Applied Sciences, University of the South Pacific; Wildlife Conservation Society-Fiji; Conservation Society of Pohnpei; Papua New Guinea Centre for Locally Managed Areas; Seaweb Asia Pacific

Name of the Facilitator/presenter: Wendy Tan

Overview:

Participants shared stories and lessons learned about community centred marine resource management in the Pacific. Members from the Locally Marine Managed Area Network kicked off the discussion and participants were encouraged to ask questions and share their own stories. Participants from Fiji, PNG, Solomon Islands, Micronesia, Tonga, and Hawaii shared their stories.

Key points:

- Important for the community to identify what needs to change, agree on an approach, and measure its effectiveness through monitoring.
- Bottom up approaches take more time initially but long-term sustainability is improved.
- The more participatory an approach the more successful the conservation outcome.
- Focus is on community wellbeing not community conservation.
- Low funded projects have been more successful.
- Better conservation outcomes achieved when more is done at the local level.
- Important to trust the community.

- Effective to train influential community members to be trainers and spokespeople instead of having outsiders conduct training (for example, PNG LMMA).
- Communities can be categorised by level and experience of knowledge.
- Don't start at conservation 'hot-spots', start with 'low hanging' fruit.
- Community willingness is very important to site success.
- LMMA Network connects communities.
- Cross-site visits (peer to peer learning) between marine managed communities are a valuable learning tool.
- An integrated stakeholder approach carries more weight with government and can get policies created.
- Participatory planning should not be limited to community focus, important to expand range of stakeholders and scope of involvement.
- If customary laws are not effective, good to introduce local level laws and provide for advisory and site committees.
- Building block for conservation is at the local level.
- LMMA communities are now consulted and recognised and lessons learned integrated into government policies – network links has given them a voice.
- Large NGOs can assist with national data collection.
- Try to supplement community data with rigorous scientific data, while communities can and do monitor what is important to them.
- Consistency very important when working with community.
- Important not to spread yourself too thin - need to have enough resources to work with communities.
- In the Solomon Islands, dive operators have to pay to dive MMAs.
- Solomon Islands has a protected area tool-kit for developing community plans.
- Need to consider pros and cons for a national government resource system.
- Community based approaches are flexible through time and can fit different local contexts.
- In the Solomon Islands, research into MMA effectiveness has shown that they most benefited invertebrates, but this was variable. CPU higher if harvested after traditional closure (tabu).
- Some management measures are more socially acceptable and easily implemented.
- Networks were the only way communities were linked and receiving information broadly.

Common Challenges:

- Common challenge is showing the effectiveness of MMAs – difficult to collect rigorous scientific data.
- Participants recognised that it is very important to get organised and conduct biological monitoring but it is unrealistic to expect communities to collect data to monitor biodiversity. Communities can and do monitor, in their own ways, or can be trained in the basics, for what is important to them.
- Poaching/enforcement is still a challenge.
- Short donor funding time-frames are challenging as it's difficult to implement projects and show their effectiveness. Minimum funding needs to be five to ten years. Need more realistic time-frames, and better understanding of building blocks towards long term results and impacts.

Recommendations/Follow up:

Pacific communities need to be recognised and supported in what they can, and already do, and on what is important for them. At the same time, communities must be brought in, in a genuinely inclusive manner, to larger scale planning (i.e. ecosystem, watershed, ICM, provincial, policy development). Communities should be viewed as actors (not targets) and partners by NGOs, scientists and government. Scientific research can support community needs and objectives, as well as feed analysis into government, donor and NGO planning, policies and programmes.

Therefore initiatives that can support communities in this way should better supported – social networks, local NGO/CBO efforts, decentralised government extension, etc. There is a lot of experience based on efforts over the last decade-plus by LMMAs across the Pacific, LMMA Network and partners, that should be built upon and tapped for dissemination, scaling up and assisting future initiatives.

Additional comments:

Informal "tok-story" session was very successful. Over 70 participants from countries across the Pacific. Many participants stayed until 6pm to continue their discussions and enjoyed the free-flowing format and the opportunity for informal but very informative exchange.

4. BIOPAMA

IUCN/Tony O'Keefe

Facilitator: Nick Cox, IUCN

Summary of session content and key points:

1. **BIOPAMA Pacific – what's on offer?, Tony O'Keeffe IUCN**
   Points raised by participants

   - No clear regional idea of what constitutes a "PA" in the Pacific – need a good set of definitions – and a map that displays all types of "protected areas", areas of biodiversity significance, areas where some sort of conservation management is occurring
   - Make sure BIOPAMA program is lining up with each countries identified needs, ie; the issues and directions outlined in NBSAPs, PoWPAs

2. **Information Tools – Steve Peedell, EC-JRC**
   Points raised by participants

   - WDPA % figures are skewed by not including many areas that have a non IUCN status or where countries or communities do not provide information
   - There are big data compilations around already; eg Coral Triangle Initiative Atlas
   - Need to respect information sensitivity from communities – must be clear and agreed protocols for usage - build in authentication control to manage sensitive data
   - Need for open source info availability and offline information especially where there is slow internet quality, band width issues
   - There is limited capacity to translate data and information and to turn it into useful decision-making formats - need to communicate data to stakeholders because if it isn't understood it won't be used
   - Helpful data systems can be proposed, but may be difficult for end users to grasp initially
   - There is a capacity building need for people that have to access, interpret and use data - data access, viewing and even manipulating needs to be so easy that anyone can do it

- Different organisations, and government ministries acquire data but it is not kept centrally and not available to wider audiences, requires approvals to share - a central directory is needed of what data is available and who has it - data is there and available but someone needs to do the chase up – need to work closely in with government ministries and not just expect information material to be provided. A common regional issue is that ministries do not always share their data.
- Proxy/surrogate data may often provide sufficient usability (global data sets)
- Identify what the minimum amount / type of data is needed and aim to have that – data that is quick, easy, necessary
- Much data that has been collected during research or projects has simply disappeared - need a country protocol about data provision and be more aggressive in chasing up researchers and project managers for their reports
- Expand the existing Pacific Environmental Information Network PEIN (SPREP)

3. **Facilitated group session / questions and responses**
   What are your most common data and information use needs?

- Complete PA network, location overview, important for legal reasons
- Location of High Conservation Value areas HCV's and Ecologically and Biologically Significant Areas EBSA's
- Point of origin invasive species data, hot outbreak sites, what invasive species occur at locations, what are their pathways, potential invasives to watch for
- Land / forest cover change trends - high resolution forest cover data to inform REDD+
- Knowledge of what similar eco-regions are doing
- Information at the specific site based / community level / individual PA
- Tenure, land ownership, management arrangements
- Fish stock status, turtle nesting, spawning aggregations, primary productivity
- Monitoring of illegal, unreported, unregulated IUU fishing to support enforcement/compliance with international obligations
- Identification and locations data on endangered, vulnerable, Red List, CITES, habitats
- Threats to ecosystems – threats inc. landuses, sources of threats, degree of significance
- Locations of logging, mining, infrastructure concessions should be a core data overlay
- Management objectives and plans
- Important habitat within PAs
- Valuation of ecosystem services to inform national policy
- Carbon stock assessments
- Disease vectors, ciguatera, coral diseases, marine diseases
- Relevant plans - from broad strategic down to community level
- Resilience monitoring, ie certain tree species, - climate change adaptation observations
- Socio economic profiles, ie tourism snapshots
- Relative extents and distribution of habitat types, ie seagrasses
- What key information is missing and is required
- Updated monitoring records

How would you use these information tools to address key issues and challenges for your country?

- Useful for NBSAPs
- Monitoring and evaluation of commitments and management efforts
- Develop management plans and information plans
- Inform financial investment
- Useful as an outlet for relevant educational tools and media
- Ability to aggregate information
- Supporting research purposes
- Search for funding opportunities
- As a communication tool - to share and distribute information
- Validation of traditional knowledge
- Enhanced EIA reporting
- To enhance existing regional and national information networks that exist for a variety of environmental management topics

What capacity building support do you need for information management?

- Familiarization sessions required when introducing new data systems
- Provide a 'helpline', a 'go-to' person for technical support
- How to keep databases updated
- How to collate data and store in one location
- Need to address the issue of people changing roles, new people commencing, and how to ensure continuing training provision

4. **Capacity needs – what do we know?, Tony O'Keeffe IUCN**
   Points raised by participants

   - Capacity is the most pressing regional issue for PA management – need to build professionalism in BC&PA management – masters level scholarships should be attached to any major funding programs/projects; eg, GEF-PAS projects
   - Learning from others and other countries in terms of progress, experiences, lessons learned is strongly desired – well documented examples of what's worked and what hasn't is a vital element of learning and capacity building
   - The best planners are often local implementers however they need assistance with a structured approach
   - Skills levels of government officers varies greatly within and between countries - very high to very low
   - Capacity building priorities and actions should be based around what has been identified in NBSAPs and POWPA's
   - Mentoring is a big need – simply having access to an experienced and supportive go-to person
   - Using data requires a level of expertise and capacity development

5. **Facilitated group session / question and responses**
   What is the one capacity building action that will achieve the greatest benefit to conservation in your country / the Pacific region?

- Strong leadership, particularly in upper to middle management – no short term fix but a clear need to initiate
- Build buy-in and support – help mainstream national recognition (eg; Fiji Environment Council)
- Involve community leadership
- Facilitate cross-ministry integration where there are natural resource management issues and decisions that require coordinated approaches
- Support the existing 'cadre' to develop capacity, skills, qualifications
- Build the ongoing/future 'cadre' of suitably qualified people – under and post grad level – investment in the future, provide course modules appropriate to regional context
- Training and mentoring plans are required
- Recognised 'Conservation Coaches' are available and should be utilised
- Study leave support is needed – short term study/ training options are preferable (resigning from a position is sometimes the only option to allow time to pursue ongoing study)
- Secondments are a useful skill building arrangement
- 'soft skills' - understanding how to use information to make decisions, how to connect up various data for specific purposes, inform stakeholders and community, develop and write policy, capacity to collect good quality data and then analyse and interpret it
- Establish a local practitioners network as a core group for targeted training and to offset the remoteness and minimal resources base of small developing countries, aid communications and information sharing
- Ensure awareness of online modules – ie; open standards for the practice of conservation

6. Additional short discussion – record of group input

What / the issue	Who / the audience	How / the action
Policy making (at central level informed by provin level)	Parliamentarians Provincial government Conservation officers	Case studies Petitions Campaigns Presentations High quality media (audio visual, films)
Improving attitudes toward the nat environment	Churches Religious groups	Conservation sermons
Invasives can be removed	Media Civil society	Media Campaigns Success stories
Minimal resources to stop illegal activ	The enforcers Industry	Training – know your role/powers and hov discharge them

'I can get away with it' attitude	Police Agencies EPA, DOE Prosecutors Judges Community Leaders	Monitoring for compliance Understanding of economic/social ramifications Connections to livelihoods Develop champions

7. Key outcomes from the session

- Session participants gained an impression of the scope of the BIOPAMA program and what it proposed to offer and achieve in the region
- BIOPAMA officers from IUCN and JRC had an opportunity to engage directly with a range of individuals involved in nature conservation and protected areas management work and improved their understanding of key regional challenges and needs in terms of data needs and information systems and capacity building
- The session input will be used as important reference material in guiding the rollout of the program

8. Links to the Action Strategy for Nature Conservation (2013 – 2017)

- The input provided by participants at this session is strongly consistent with point 5. information for decision making, and point 6. capacity development, contained in the High Level Session Statement on 10 Key Actions to Achieve nature Conservation Outcomes in the Pacific that was delivered at the conclusion of the Conference.

5. The Economics of Ecosystem and Biodiversity (TEEB)

(Revised Title: The Economic Valuation of Marine and Coastal Ecosystem Services)

Name of Presenters: Sangeeta Mangubhai (IUCN), Christian Neuman, Tim Carruthers (Coastal and Marine Adviser, SREP), Dr.Milika Sobey (IUCN-MESCAL Project), Brian Kastl

Summary of Key Points presented:

Presentation 1: Introduction to the Valuation of Ecosystem Services and its Role in Policy and Decision Making in the Pacific

- Discussed ecosystem services as nature providing benefits to households, communities and economies either directly or indirectly (goods - fish, wood, medicines; services - shoreline protection, water purification, regulating climate).

- Observation that everything the economy produces requires raw materials and energy provided by nature and everything the economy produces returns to nature as waste - leads to tough decisions about how to best manage resources.
- Biodiversity continues to be undervalued for a variety of reasons.
- Need to consider biodiversity in terms of 'Natural Capital' – along with financial, physical and human capital.
- There are trade-offs to be considered between resource protection, management or exploitation.

Presentation 2: The Economics of Ecosystems and Biodiversity (TEEB) for Oceans and Coasts

TEEB is hosted by UNEP and has a scientific team at UFC, with over 500 contributors across partner institutions.

TEEBs mission is to make nature economically visible through the following key objectives:

- Identify policies that would benefit from better information;
- Develop a research strategy that better leverages current knowledge;
- Connect stakeholders to the knowledge on coastal and marine ecosystems;
- Observe and map societal, cultural and biophysical values;
- Develop concept designs and prototype a variety of possible solutions; and
- Support stakeholders collectively implementing solutions and options.

Presentation 3: A Comparative Analysis of Ecosystem-based Adaptation and Engineering Options for Lami Town, Fiji

- The study identified and mapped vulnerability hotspots (river bank erosion, vulnerable bridges, coastal erosion, coastal flooding, industrial subdivision, business districts) and identified ecosystem and engineering adaptation options (ecosystem based options, engineering options, policy options).
- Least cost analysis identified adaption actions from low cost to high cost:
    - Low costs (reduce coral extraction, reduce upland logging, monitoring and enforcement).
    - Medium costs (replant stream buffer, increase drainage, reinforce rivers, replant mangroves).
    - High costs (build sea walls).
- Cost of doing nothing: potential damage were estimated at FJD 463 million (20 year time frame)
    - Damage avoidance was then the first benefit of taking action.
- Lessons learnt:
    - Economic valuation of ecosystem services was highly valuable.
    - Provide a framework to start accounting for previously hidden benefits.
    - Critical lack of primary pacific island data on ecosystem valuations limits benefits transfer.

Presentation 4: Valuation of Mangrove Ecosystem Services to Improve Mangrove Management in the Pacific

- The MESCAL project objectives and highlights from the different project sites (Samoa and Vanuatu) were presented. The aim of MESCAL is to increase climate change resilience of Pacific islands and improve livelihoods through co-management and restoration of mangroves.
- Activities include: baseline assessments, governance, economic assessment, carbon sequestration, knowledge and information and communication and learning
- Lessons learnt: Although low species diversity in Samoa, coastal protection afforded by mangroves readily acknowledged by villages; dependence on mangrove resources as a source of income and protein in Vanuatu is much more significant in Crab bay than Eratap; dearth of resource economists in the region for economic valuations.

Presentation 5: Payments for Ecosystem Services (PES): A feasibility study in Pohnpei, Federated States of Micronesia

- The study was based in Pohnpei where native vegetation provides consistent, high-quality in-stream water supply. Sakau farming has compromised these ecosystem services, threatening water security and marine livelihoods. Focus is on empowering farmers to protect these ecosystem services by growing on lower areas and using dry litter pig pens.

- Lessons learned: PES is most useful for investment in targeted ecosystem services when specific land uses are at tipping points; Sources of funding that are closely linked with the ecosystem services will be most sustainable; stated preference methods are helpful first steps for valuation, but should be followed by additional assessments and valuations.

Presentation 6: Environmental Valuation and Cost Benefit Analysis, Supporting Decision Making in the Pacific

- A case for conducting Cost Benefit Analysis (defined as a "framework for identifying, valuing and comparing the 'total economic costs and benefits' of an intervention or regulation") was made based on examples from Palau and Kiribati.
- Total economic cost/benefit = private + social costs and benefits.
- Several questions raised - impact to society; who gains and who loses; consideration of market and non-market costs and benefits; Is (or was) the project socially beneficial or a good investment; when is it appropriate [to do a CBA); do we need to value all environmental services; is valuation enough?
- Challenges: Complexity of ecosystems; non-market valuations inadequate; suited to top-down decision making; resource intensive.

Presentation 7: What Impacts to Expect From Economic Valuations of Coral Reef?

- Can inform and convince-policy makers, local stakeholders and multilateral agencies to re-locate public resources and or apply new regulations to coral reef management.
- Noted that most economic valuations have mostly been used for informative purposes, and mostly been commissioned by public organisations.
- Effect on policy decisions was varied and in general, lower than expected - time span may be too short to accurately evaluate the effectiveness of these studies.
- Suggestions:
    - As a decision tool: better matching of economic studies to policy questions is required.
    - New trend: focusing on the costs of having a healthy state of ecosystems.
    - As a communication tool: urgent need to establish a real communication strategy by audience: international and local decision-makers; budget makers; planificators; NGOs; scientists; opinion formers; public.

<u>Questions and Discussion:</u>

- The validity of the valuation - how long does it stay valid for? For example, if assessing the value of the forest, the value of the forest must be different before a cyclone?
    - Yes values are not permanent they are dynamic. Countries need to track.
    - It depends on the ecosystem, small changes are much more difficult to evaluate than with or without comparison.
    - Economist should never give you one number, decision-makers like one number.
    - There will always a range of values and it's important to make decision-makers understand what those values signify.
- When you talk about the total damages they seem to be very high. Are you assuming there's going to be 30 million dollars damage per year, it seems you over estimated by not putting the return period or is it the case that every year the council expects 30million??

- Good point-it was based on a certain number of businesses, number of households and certain numbers of infrastructure/direct credit costs.

➢ How do you choose the places where you supposed to replant mangroves?

- Along the coastline and where either mangroves used to grow or in shallow areas adjacent to mangroves.

➢ With the results, what are the next steps?

- There has been some mangrove replanting in some areas in Lami.
- Also there has been mangrove clearing, One of the challenges is the multiple jurisdiction that make decisions on this which is a challenge.

➢ Costs associated with reduced logging in the water shed are very low (explanation?)

- More recognised that the watershed data, of the comparison of the upper slope was limited.
- It was recognised as a limitation.

➢ The collective costs of the project were there any policy outcomes first?

- An exercise in progress.
- With the values we get from the Fiji economic valuation report will complement the revised national mangrove management plan.

➢ How many of the districts in Samoa are aware of the results of this valuation?

- Five villages visited with the reports.

➢ What are the implications of valuing the mangroves that had already been preserved?

- Request from the Samoan government to get values as reference data
- It was easier and because of time and financial constraints
- For mitigation and awareness.

➢ Hope you would change ridge to reef approach to coast to lagoon especially for atoll islands because we don't really have those high mountain areas. Is there any consideration of including soil fertility in your cost benefit analysis?

- Asked to do cost and benefit of different soil techniques for farmers in Taveuni.
- There a lot of different scientific techniques reviewed

6. The Sub-Global Assessment (SGA) Network: The role of Ecosystem Assessments in Supplying the Evidence Base for Bridging the Science-policy Interface

Convenors: UNEP-WCMC and SPREP (Matthew Ling and Sefanaia Nawadra)

Primary conveners: Brian MacSharry: UNEP-WCMC

Name of presenter: Brian MacSharry

Summary of points presented:

- Ecosystem assessment in the Pacific will have a different approach [to that of other parts of the world] because of the different cultures and traditions in the region.
- The effectiveness of the ecosystem is based on the connection between people and environment.
- Collecting data is very important because there is a need in consistency and data collected about assessment should be stored in one particular area.
- UNEP welcomes interested organisations to get involved in the assessment analysis.

7. Tree Kangaroo Conservation Programme

Convenors: Mikal Nolan

The purpose of the session was to showcase the YUS Conservation Area and landscape as a model programme for conservation outcomes at a protected site in PNG.

Summary of key points presented:

- Importance of tree kangaroo conservation.
- Benefits of the programme at the local community and regional level.
- Seeking alternate routes to minimise human pressure on tree kangaroo for food substance like having poultry farms, fish ponds, etc.
- Tree kangaroo population has increased.

Questions and Discussion

1. What role do local and site-based organisations play in SPREP and how best to foster their contribution to the Action Strategy?

   a) Poor communication between the higher level to that to the grass roots that has fostered disconnection. Need to hear that organisations do want to share their opinion and given input from all levels at not that with higher ups.
   b) Set aside small groups for each small voice and opinion to be heard. Need more engagement and gathering of views at local level to be included in the Action Strategy. Create time and space for involvement of these

various organisations. Poor knowledge of the participants' background, organisation and involvement at the various discussion meetings [a challenge].

Concluding remarks by the facilitator

This was an opportunity to share the tree kangaroo story with a broader audience – which is lacking in PNG. There is no precedence to learn from hence this open discussion was an important feedback process.