Proceedings of the Helping Islands Adapt workshop

Acknowledgements:

I would like to extend the Steering Committee's appreciation and thanks to everyone who contributed to the success of the Helping Islands Adapt workshop, and who have ensured that its momentum is being maintained throughout the world.

The workshop had an urgent challenge: to influence discussions on invasive species management at a series of international fora, the first of which was to begin only three weeks after the workshop closed. This required the participants to prepare and agree the content of a preliminary report during the week of the workshop.

The workshop aimed to equip island countries, and countries with islands, with the tools and information needed for urgent responses to the threats associated with alien invasive species. This required the combined wisdom that emerged from the workshop to be documented, initially through the Helping Islands Adapt website http://www.conference.co.nz/index.cfm/ISW10/index.cfm/ISW10 and now through the availability of these proceedings.

The success in achieving these goals, and the availability of content for these proceedings was made possible only by the commitment and professionalism of the workshop's steering committee and all of its participants, including the teams of facilitators and 'harvesters' and of course the sponsors who made the workshop possible. Their cooperation has continued beyond the actual workshop and has provided an invaluable international support network. Those countries, agencies and individuals are too numerous to mention here, but are listed in appendix 5 of this document.

I would also like to make special mention of the contributions of the workshop partners from around the world. They contributed both financially and by being part of the steering committee, to ensure that everything came together to achieve these demanding goals.

Kia ora koutou (Thank you all)

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ISBN: 978-0-478-14819-0

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1. Workshop Background

The *Helping Islands Adapt* workshop was held in Auckland, New Zealand between the 11th and 16th of April 2010 to support regional action against invasive species on islands, in order to preserve biodiversity and adapt to climate change. It arose from decisions under the *Convention on Biological Diversity* (CBD) relating to invasive alien species and island biodiversity, and was hosted by the Government of New Zealand with support from a number of partner organisations and countries.

The workshop focused on four major island regions: the Caribbean, Coral Triangle, Indian Ocean and Pacific, and involved participation by 82 people from 24 countries and territories, and 29 national, regional and international organisations (see participants list in Appendix 5).

The workshop was specifically designed to allow for the maximum exchange of experience and support between representatives from diverse island regions working in invasive species management. It also included a field inspection of one of the Department of Conservation's invasive species management projects on Rangitoto Island in Auckland's Hauraki Gulf.

The workshop built on efforts under the *Cooperative Islands Initiative*, a partnership launched at the *World Summit for Sustainable Development* and the *CBD 6th Conference of the Parties* in 2002. Its intended outputs had been agreed by the organiser's steering committee and set out as a 'road map' that was used to ensure clarity of the workshop's intended purpose, outputs and outcomes.

An overview of the workshop, its sponsors, participants and conclusions was developed during the workshop and submitted to the 14th 'Subsidiary Body on Scientific Technical and Technological Advice (SBSSTA 14) to the Convention on Biological Diversity (CBD) in Nairobi 10-21 May 2010. That report is provided in full in Appendix 5 to these proceedings.

2. Helping Island Adapt workshop 'Road map'

Purpose

To identify and strengthen mechanisms that enable effective and sustainable invasive species management[1] for islands.

Intended workshop outcomes

1. Lessons from regional collaboration and coordination in the Pacific and other island regions showcased.

Outputs:

1. Workshop participants identify common factors for successful regional coordination on invasive species and climate change adaptation to IAS threats as well as common obstacles or pitfalls.
2. Workshop participants gain a better understanding of, and develop stronger networks among, ongoing regional and global invasive species efforts.
3. Workshop produces a summary of current regional and global invasive initiatives and makes that accessible on the Global Invasive Species Programme website.

2. List of actions[2] prepared to strengthen invasive species management in regions, building on existing regional strategies and other guidance.

Outputs:

1. Each region identifies a prioritised list of strategic actions to strengthen mechanisms of coordination of regional efforts on issues relating to one or more priority invasive species or pathways.
2. Each participating country and agency identifies at least one action that they can take to advance its understanding of the linkages between invasive species and climate change, and early actions for adaptation to mitigate future IAS impacts.

3. Networks and resources necessary identified to support implementation of the actions on IAS and the links with climate change adaptation.

Outputs:

1. Specific roles and actions for existing regional and global networks are identified to support priority actions in each region, and/or to catalyse early action to address the linkages between invasive species and climate change.
2. Each region identifies at least one partner to assist in developing the human and/or financial resources needed to succeed.

4. Key steps identified to catalyse support at the 10th Conference of the Parties to the Convention on Biological Diversity (CBD COP10) implementing the recommendations of the workshop to inform, strengthen, and build regional initiatives for the prevention and management of IAS on islands.

Outputs:

1. Workshop participants draft language, for consideration at the CBD SBSTTA in May 2010, as input to COP10
2. Regions to propose how best to launch the workshop report at COP10.

[1] Management is inclusive of prevention and incursion response

[2] Actions - these might relate to coordination, partnerships, processes, leadership, prioritisation, strategy, capability etc

3. Setting the scene for the workshop

Sunday 11 April 2010

Welcome

Nicky Wagner MP (Deputy Chair of Parliament's Local Government and Environment Select Committee) on behalf of Hon Kate Wilkinson, Minister of Conservation.

Nicky Wagner welcomed participants to New Zealand and to the workshop. She stressed the significance of the biodiversity threats posed by invasive species and the degree to which they are recognised by the government of New Zealand. She noted that, in 2009, Biosecurity New Zealand released a report on the costs that pests impose on agencies and individuals managing them and addressing their impacts, as well as the production losses they cause in New Zealand. The report found that invasive species cost New Zealand around two and a half billion dollars, equating to just under 2% of its gross domestic product. She also noted recent reports that estimate the damage from invasive species, including human health, worldwide as totalling more than 1.4 trillion US dollars annually, equating to around 5% of the global economy.

Monday 12 April 2010

Introductions

Spencer Thomas (Workshop Chair).
Granada's Ambassador and Special Envoy for Multilateral Environmental Agreements, and Deputy Chairman of the Alliance of Small Island States' Negotiating Team under the United Nations Framework Convention on Climate Change.

Spencer Thomas described the significance of invasive species and stressed their impact on biodiversity and the economy worldwide. He acknowledged the strong support of countries and agencies that had contributed to making the workshop possible and the extensive and senior representation of participants who had come together to take up its challenge.

He explained how the workshop would inform key processes that support multilateral environmental agreements, such as through the Subsidiary Body for Scientific Technical and Technological Advice and the Conference of Parties to the Convention on Biological Diversity; the Commission on Sustainable Development and the United Nations General Assembly. Through this process, the 2011-2020 Strategic Plan for Conservation would be able to reflect the significance of invasive species when updating targets for addressing biodiversity loss, which in turn would be addressed in national biodiversity strategy and action plans.

New Zealand's approach to invasive species management

Nicola Holmes (General Manager Conservation Engagement, Department of Conservation).

Nicola Holmes expanded on Nicky Wagner's message concerning the costs of damage caused by invasive species. She described the Department of Conservation's work in demonstrating that conservation is essential to a nation's survival, underpinning its economic activity and quality of life. Furthermore, Nicola noted that healthy ecosystems contribute to the economy and save unnecessary costs in pest control and mitigation of their effects.

Nicola related New Zealand's experience to the theme of this workshop, recognising that invasive species management is an issue that demands international collaboration, and commending the Pacific's implementation of the 'Cooperative Islands Initiative' as a model for other regions.

CBD Statement

Junko Shimura, CBD Secretariat on behalf of Dr Ahmed Djoghlaf, Executive Secretary, Convention on Biological Diversity.

Junko Shimura read a statement from Dr Ahmed Djoghlaf to the delegates of this workshop, which stressed the importance and unique vulnerability of island biodiversity, noting that small island developing states depend on the conservation and sustainable use of their biodiversity for their sustainable development. He recognised the workshop as unique in its wide coverage of island states. He applauded the contributions made by the government of New Zealand and surrounding countries, and of the support provided by the many partner countries and agencies that made the workshop possible. He noted New Zealand's leadership in the creation of biosecurity systems that facilitate international trade and protect the health of New Zealanders while ensuring the welfare of the environment, flora and fauna, marine life and Maori resources.

He drew attention to the *2011-2020 Strategic Plan for Conservation*, which will consider updated targets for addressing biodiversity loss, and be incorporated in each party's revision of its *National Biodiversity Strategy and Action Plan*. Development of the Strategic Plan will be informed by the outcomes of this workshop, for consideration at the *14th Subsidiary Body for Scientific Technical and Technological Advice*, which will be held in May Nairobi, Kenya, and then report in to the *10th Conference of Parties to the Biodiversity Convention* for submission to the *65th session of the United Nations General Assembly* in September.

He concluded by confirming that this workshop will provide precious information for the strategies of island states in safeguarding biodiversity, and so strongly guide the international community as it decides how to take the next steps regarding regional implementation of biodiversity safeguards.

Significance of invasive species and climate change

Dr Matt McGlone, Landcare Research

Matt McGlone summarised his review of the science relating to climate change as it will affect small island ecosystems. Having reviewed a range of evidence of change since the turn of the 20th century, he concluded that New Zealand's biodiversity had not altered significantly in response to the one degree Celcius average rise in temperature. He advised that the magnitude and timing of climate change threats are nebulous and unpredictable. He nevertheless highlighted the urgent need to address invasive species and other threats to biodiversity, even in spite of the difficulties in predicting the impacts of future climate change.

4. Regional perspectives

Invasive species eradications on the Islands of Mexico

Alfonso Aguirre-Muñoz, Executive Director Grupo de Ecología y Conservación de Islas, A.C., Mexico

Alfonso Aguirre described his agency's 15-year programme to study and combat invasive alien species on Mexico's offshore islands. *Grupo de Ecología y Conservación de Islas* is a non-profit organisation that has worked with the community, international research organisations and donors, and the Government of Mexico, to restore over 50,000 hectares of land and eradicate 55 invasive alien species. While gratified with the successes to date and the advances made in achieving the support of the local communities and Mexican Government, he sees his greatest challenge to be continued access to funding.

Meeting the invasive species challenge in the Pacific region

Dr Souad Boudjelas (Programme Manager, Pacific Invasives Initiative),
Mr Taholo Kami (Regional Director, IUCN Oceania and Chair of the Roundtable),
Dr Alan Tye (Invasive Species Officer, Secretariat of the Pacific Regional Environment Programme),
Mr Warea Orapa (Coordinator Plant Health Team, Secretariat of the Pacific Community),
Mr Phil Andreozzi (Senior Policy Analyst & Regional Coordinator, US National Invasive Species Council),
Ms Nenenteiti Teariki-Ruatu (Deputy Director, Ministry of Environment, Lands and Agriculture Division, Kiribati); and
Mr Don Stewart (Director, BirdLife International Pacific Programme)

This presentation illustrated some of the key partnerships for cooperation and collaboration on invasive species existing in the Pacific. This presentation highlighted the successful elements of these which includes:

Pacific Invasives Partnership (PIP)
This is the key coordinating body of non government organisations, donors, technical assistance groups and regional intergovernmental organisations under the auspices of the Pacific Roundtable for Nature Conservation. It has been successful in enabling members to work together on supporting Pacific island countries, territories and communities to address invasive species issues and, in particular, in identifying gaps that need concerted effort. The Pacific Invasives Partnership is guided by Regional Guidelines for Managing Invasive Species in the Pacific (SPREP, 2009), which advises international and regional organisations and national entities and institutions to identify priority needs and actions as well as ways to coordinate their work.

Lessons from regional partnerships:

- Its difficult to try to do things alone: Strength in unity
- Shared vision with different objectives, priorities and strengths
- Partners contribute differently
- Effective cooperation requires good communication
- Important to clarify partners' roles and responsibilities
- Joint work planning is essential
- Acknowledge and celebrate success and achievement of shared goals

Pacific Invasives Initiative (PII)
The Pacific Invasives Initiative's mission is to strengthen the capacity of Pacific Island Countries and Territories to effectively manage invasive species threats. Amongst its achievements are:

- Increased effective action on the ground
- 30 agencies having gained knowledge and skills
- 4 training courses developed and delivered

- Processes and tools developed
- Funds leveraged
- Support for 6 successful eradication projects
- Many other projects currently being planned or undertaken with PII support

Lessons learned

- Starting small is best
- Building solid relationships is fundamental
- Institutional capacity is essential
- Celebrate and communicate success
- Rigorous planning, based on best practice, is essential
- Invest in good programme design with key stakeholders
- Delivering on social and economic goals is essential and requires the right partners.

Pacific Invasives Learning Network (PILN)
This is a peer learning network for Pacific invasive species workers and agencies, which acts as a main link between PIP and the Pacific Islands Countries and Territories. PILN complements the efforts of the Pacific Invasives Initiative. It works with multi-sector and multi-agency teams at the national level to share experiences and skills in invasive species issues and links and connects people in different sectors and countries. Dr Tye outlined that it had been successful through rapidly sharing experiences, skills and resources among the 14 countries and states involved in the network to date.

What has worked:

- Enables multi-sectoral action at a range of levels
- Helps people identify their priorities (the battles they can win) and supports what they want to do
- Simple and very cost-effective
- Action oriented
- Recognises and supports the growing body of expertise within the Pacific
- Catalyses action by fostering and sustaining enthusiasm

Pacific Ant Prevention Programme
The Pacific Ant Prevention Programme supports implementation of a regional ant prevention plan to prevent red imported fire ant (RIFA) and other invasive ant species with economic, environmental and social impacts, entering and establishing in or spreading between, or within, countries of the Pacific Region. It lays out recommended procedures, organisation and measures required to achieve the goal.
Lessons learned:

- Regional approach to specific invasive threat can be warranted (e.g. tramp ants, biocontrol programmes for shared problems)
- A dedicated coordinator with a sole focus on the programme is essential, as is regular training and reinforcement.
- Building partnerships is critical for success and a huge amount of goodwill is available particularly from experts.

Micronesia Regional Invasive Species Council (RISC)
The RISC was created by Chief Executives of five countries and territories of Micronesia who had some affiliation through their relationship with the United States. It directly advises those Chief Executives and helps to coordinate and collaborate regionally on the threat of invasive species.
A highlight for the RISC is the US Department of Defense's recent efforts to develop a Regional Biosecurity Plan for Micronesia as a result of the military buildup on the island of Guam. This plan is a blueprint for the entire Micronesian region for the effective prevention of new invasive species incursions and to minimise additional invasive species damage.

5. Technical presentations

Tuesday 13 April 2010 - evening

Application of a geographic information system

Prof Fabio Attorre (Sapienza University of Rome)

Fabio Attorre described a simple, low-cost geographic information system that can be used for data collection in the field, printing basic maps and reports and assisting with prioritising of management interventions. He also introduced Senan Ali's work on Socotra.

Invasive species management in Socotra, Yemen

Senan Ali (Bangalore University)

Senan Ali's presentation related to his work on the management of invasive alien species from Yemen's island of Socotra. Socotra is globally important for biodiversity conservation because of its exceptionally rich and distinct flora and fauna. 37% of Socotra's plant species, 90% of its reptile species and 95% of its land snail species do not occur anywhere else in the world. Socotra is of particular importance to the Horn of Africa's biodiversity hotspot and, as one of the most biodiversity rich and distinct islands in the world, has been termed the "Galápagos of the Indian Ocean". Socotra's invasive species programme works with the communities, academic institutions and donors. Amongst its significant challenges is the management of goats, which were introduced within the last millennium. They are protected by the community for their economic value and the social status that they give their owners. The programme team is working with the community to explain the impact of the goats but also to suggest alternative and more sustainable economic solutions for the community.

Invasive alien species management in Japan

Masaki Ushiba, Nature Conservation Bureau, Ministry of the Environment, Japan

Masaki Ushiba provided a comprehensive report on invasive alien species management in Japan. His presentation was in three parts, describing Japan's invasive species legislation; mongoose eradication case studies; and the effects and challenges of invasive species management.

Japan has four pieces of legislation that together protect its wild fauna and flora:

- the Plant Protection Act;
- the Domestic Animal Infectious Diseases Control Act;
- the Infectious Diseases Prevention Act; and
- the Invasive Alien Species Act (2004).

The purpose of the Invasive Alien Species Act is to prevent damage to ecosystems, agriculture, forestry and human safety. The Act designates invasive alien species that can be kept only with a permit from the Minister. The permit allows them to be kept in facilities that meet prescribed standards but does not allow them be released into the wild. It also regulates the importation of uncategorised alien species and requires the development and implementation of invasive alien species control plans, authorised by competent ministers, for implementation by local communities and non-government organisations.

Masaki Ushiba then presented some case studies on the eradication of mongoose from islands with high biodiversity values and summarised the effects and challenges of invasive alien species management in Japan, including the effects of global warming on Japan's biodiversity since the latter half of the 1950s.

6. Workshop methodology

Monday 12 April 2010

The Department of Conservation's team of facilitators worked closely with the steering committee to develop a process that would assist the workshop participants to achieve each of the agreed outputs and outcomes. Their facilitation at the workshop took three forms:

(a) introducing participants to the methodology that was to be followed;
(b) guiding participants with its application; and
(c) 'harvesting' the results – through typed notes and graphic recording.

Invasives café

Participants worked in small and often changing groups, reflecting their regional focus or particular interests. Questions and issues were addressed by members of the groups and summaries of their discussions and conclusions were recorded by the team of 'harvesters'.

The process began by participants addressing four basic questions:

- What are you most motivated to address?
- What do you need?
- What's holding you back?
- What could you start doing now?

Tuesday 13 April 2010

Introduction to systems thinking

The technique of 'systems thinking' was introduced to participants, as a method to be used to achieve the workshop's agreed outputs. This approach is based in a more holistic and systemic way of thinking about some of the current challenges that the participants face. It was illustrated using an example from Canada that responded to a problem of dying Douglas-fir trees.

Using a systems thinking model, the investigation could be viewed in terms of three phases:

Information - investigation of **events**: pests, water and acid rain;
Knowledge - investigation of possible **patterns** (Where else do we see this?)
Wisdom - consider **enabling structures** (What is the underlying system?)

While the trees were initially thought to being killed as a result of stresses from pests, water or acid rain, a further investigation into the broader patterns of association led to a more detailed and focused examination of the underlying system. It identified that dams had prevented the passage of salmon and so deprived bears of food. The bears traditionally deposited the remains of the fish in the woods – providing nutrients for the trees. As these vital nutrients were not otherwise available, the close ecosystem was tipped into decline and the Douglas firs suffered.

The reason uncovered by applying systems thinking was quite different from the original starting premise, allowing more effective and sustainable solutions to be developed.

Participants were encouraged to apply a similar approach to the issues identified in the previous session, avoiding premature suggestion of solutions but following this three-stage process.

7. Workshop outcomes

1: Lessons from regional collaboration and coordination.

Identifying challenges and factors for success

In the lead up to the workshop, participants were asked to consider what they perceived to be the main factors for success in invasive species management on islands, and the challenges that have prevented them from achieving such success. After an initial discussion within the working groups, these ideas were then presented in plenary and consolidated. Although the participants within the six island region and thematic groups represented a diverse range of geographies, roles and perspectives, several common factors for success emerged:

- **Framing invasive species as a multi-sector issue.** This theme emerged strongly throughout the discussions – the need to address invasive species not just within a conservation framework, but recognizing its major impact in terms of development, health, fisheries, agriculture, tourism etc.
- **Raising awareness and sharing information**, both within the invasive species management community, and with external stakeholders including domestic governments, bilateral and multilateral donors, private sector and civil society.
- **Adopting multi-country or regional approaches.** This was described as key not only because of the cross-boundary nature of many invasive species threats, but also because participants recognized the increased capacity and coordination that stems from collaborative, regional action.
- **Incorporating into invasive species management activity on the ground into broader frameworks**, such as national level legislation, National Biodiversity Strategies and Action Plans (NBSAPs), or regional initiatives such as the Coral Triangle Initiative (CTI), the Micronesia Challenge or the Caribbean Challenge.
- **Encouraging and strengthening collaborative partnerships**, at a range of levels; from local to national and regional.

Clear common challenges also emerged, many of which seemed to be closely linked:

- **Lack of funding.** This was thought to result from the way in which invasive species management has historically been framed as a biodiversity conservation issue, rather than an issue of economic or social development. Participants also agreed that this issue was more pervasive and complex than simply reflecting an inadequate pool of resources; it was also compounded by short term funding cycles, and problems experienced (particularly by small government administrations and local non-governmental organisations) in accessing excessively complicated granting schemes.
- **Lack of key champions.** This was identified as a major obstacle to raising the profile of invasive species management at high levels within government and as such, ensuring the allocation of adequate funding.
- **Lack of awareness.** Underlying the lack of political will surrounding invasive species management was thought to be a lack of awareness within the general public on this issue, and a perception that this purely a biodiversity conservation issue, and as such, an issue that can be easily deprioritised relative to economic or social development.
- **Lack of coordination.** There is a diverse range of actors involved in invasive species management, issues relating to climate change and the unique challenges faced by islands. Unfortunately, it became apparent that in many cases, there is insufficient communication and coordination taking place between these groups.

Issues specifically identified by each working group are outlined in section 3f below.

Situation analysis to help develop solutions

Using the Systems Thinking methodology outlined above, participants were encouraged to think through the factors underlying the challenges they identified. This was done with a view to supporting participants in addressing the root cause of each challenge, and to discourage them from formulating solutions based on what has been done in the past or what is most easy to implement. Details from these discussions are outlined in Appendix 3c.

One exercise designed to help participants work through this process was the Invasives Café (also described above). Although there were many separate discussions that took place during this session, several strong common themes emerged in response to the four discussion questions:

i. What are you most motivated to act on?

- Lack of public awareness of invasive species
- Being inspired by conservation
- Need to address invasive species in a multi-sector way

ii. What would you need to address this issue?

- More training
- Use of existing networks and information sharing mechanisms
- Stable, long term funding
- Conservation education in schools/communities
- Tools like TEEB Report (The Economics of Ecosystems and Biodiversity) to 'make the case'
- Professional social marketing

iii. What is holding you back?

- Data deficiency stemming from inadequate investment in research
- Money – lack of funding and capacity

iv. How could you start?

- Use existing policies and build on them
- Incorporate guidelines from other regions
- Focus on information sharing, especially through existing and efficient fora
- Adopt legislation for invasive species

2: List of actions to strengthen invasive species management in regions.

After having discussed common challenges and factors for success, and analysed the underlying causes of inadequate invasive species management, participants began to consider starting points for action moving forward. Drawing from the final question in the Invasives Café – how could you start? – Participants identified specific tasks that they themselves could implement personally upon their return home. Participants then worked collaboratively with peers to elucidate tangible actions that they could implement in their working groups. Although these action points were necessarily region/group specific (outlined in more detail in section 3g – Systems thinking)), they broadly clustered around the following themes:

- **Enhancing political will** and support for effective invasive species management
- **Improving communication** and exchange of knowledge and experience between practitioners of invasive species managers through the use of **new and existing networks**
- Increasing efforts to **raise awareness** of the significance of invasive species, particularly in the context of climate change, with external audiences including the broader community
- Supporting the development of **policy and legislation** to support effective invasive species management
- Improve access to **diverse and sustainable funding**

3: Networks and resources to support implementation of the actions on IAS.

In order to develop actions that were both realistic and worthwhile, all participants had to consider what kind of supporting resources and networks would be needed. In addition, some participants also met informally in order to delve deeper into these sources of support. Representatives from the Caribbean for example, convened a Korero session in order to glean lessons learned, particularly from the Pacific region, in establishing a successful regional coordination mechanism (please refer to Korero Session e).

Working groups were also given the opportunity to identify the areas where they felt that they could potentially provide support to other groups. These included, to list a few:

Caribbean:

- Willingness to work together and contribute experiences
- A current provision of elements with good resources albeit specific and scattered resources
- Understanding importance of IAS issue and our own limitations
- Willingness to seek and receive help

Indian Ocean:

- Weed inventory
  - Identification tool kit
  - Management guidance/support
- Successful invasive species management and species restoration projects within regions
  - Demonstration projects / lessons learned
- Strong scientific research base

Pacific:

- Developing partnerships
- Developing regional strategies
- Skills and experiences in invasive species management
- Biosecurity legislation and systems

Global Organisations:

- The Economics of Ecosystems and Biodiversity (TEEB) Report – a framework for assessing economic costs of ecosystem services and biodiversity
- Influencing priorities of global institutions
- Capacity to publicise and engage with CBD inter-agency meeting on IAS with other international agreements
- Utilise UNFCCC climate summit in Mexico as opportunity to highlight invasive species management on islands
- Connect to Global Networks like GLISPA

Technical and Networking:

- Making information available for awareness campaigns – to public and government audiences

4: Key steps to the 10th Conference of the Parties to the Biodiversity Convention.

Participants were also encouraged to consider how the results of the workshop could lead into broader international processes and events, particularly for the remainder of 2010. These included:

May:	Commission on Sustainable Development (New York)
May:	Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity (CBD) (Nairobi)
September:	United Nations General Assembly Special Sessions on Small Island Developing States, Biodiversity and the Millennium Development Goals (New York)
October:	10th Conference of the Parties to the CBD (Nagoya)
December:	16th Conference of the Parties of the United Nations Framework Convention on Climate Change (Cancun)

Overall objectives for invasive species management in the context of these various international processes were identified.

- Promote and advocate the importance of managing, preventing and/or controlling invasive species through the international processes taking place during 2010
- Engage negotiators and potential supporters and sensitise them to the issue
- Provide a message that invasive species can be successfully addresses if islands work together and prioritise
- Provide an opportunity for sharing experiences between countries
- Promote partnerships – globally, regionally and nationally

Appendix 1 - Welcome from Nicky Wagner MP

Deputy Chair of Parliament's Local Government and Environment Select Committee, on behalf of Hon Kate Wilkinson, Minister of Conservation.

Good evening Ladies and Gentlemen

It is my great pleasure to welcome you here today to the Helping Islands Adapt Workshop on behalf of the New Zealand Government. As you can see, my colleague the Minister of Conservation Kate Wilkinson was unable to be here and she sends her apologies. Unfortunately the Minister can't be everywhere, but I am delighted to be able to speak to you on her behalf.

The New Zealand Government and partner organisations would like to welcome you to New Zealand and thank you for participating in this workshop on invasive species management on islands. The workshop has been a long time in planning and it is exciting to see you all here today as you begin your discussions.

The preparation for the workshop has been a true partnership in action, and it is important that we acknowledge the immense efforts and support of the Steering Committee, the Project Management team, and the many organisation and country donors who have put in so much time and effort to get us all here this week. It is an indication of global recognition of the importance of this issue and the timeliness of these discussions. This workshop provides a rare opportunity to bring together key individuals from many of the world's island nations to consider how we can support each other in managing the threats to our biodiversity and ecosystems posed by invasive species.

As you will be aware, islands are home to many of the world's rarest indigenous species. However islands and island biodiversity are particularly vulnerable to the ravages of invasive species. Predicted climate change will only serve to exacerbate existing pressures on what, already, are fragile biodiversity and ecosystems.

Despite these challenges, islands have provided the theatre for some of the most successful and spectacular pest eradication and species recovery programmes in the world. Invasive species work on islands is ground-breaking and exciting. It is an issue that is vital to the economies and wellbeing of many island nations and their people. In addition, resilient and healthy ecosystems are a cost-effective way of managing some of the adverse impacts of climate change.

Island nations share many similar challenges with respect to the effects of invasive species. New Zealand was one of the last major land masses to be settled by humans. Its biodiversity, having evolved in isolation over 80 million years, is particularly vulnerable to the impacts of invasive species. Having evolved in such isolation, our indigenous species did not develop any natural defences against preparatory mammals, as there were none. As a result, we have one of the world's worst records of species extinctions but, over the last few decades, New Zealand has developed an expertise in invasive species management in an attempt to stem this tide of biodiversity loss. This single greatest threat to our biodiversity is the impact of invasive species, both through direct predation and through the rampant destruction of habitat and competition for food sources.

Our initial strategy was to use pest-free, offshore islands, as sanctuaries for indigenous species that could not survive on the mainland under the onslaught of invasive species. This technique proved extremely successful. In fact, so successful that we then turned our attention to removing pest animals and plants from larger and more remote offshore islands so that island species could remain intact and restoration efforts on other islands could begin.

The Minister of Conservation, and many MPs too, are lucky enough to have visited a number of these offshore islands sanctuaries, including Whenua Hou, Kapiti Island and Motutapu Island. Many of these islands are inaccessible to the general public.

As New Zealanders, we have become accustomed to living in an environment where our indigenous biodiversity wages a daily battle to survive in the presence of a myriad of invasive species. It is through the lessons learned from managing these remote offshore islands that the Department of Conservation is now exploring ways and means to replicate the island environment on the mainland of New Zealand.

As many of you will be aware, New Zealand is heavily dependent on our agricultural industry for our economic wellbeing but around a third of our land area is protected for conservation purposes. The services that this protected area network provides for agricultural production is significant and the balance or interdependence of protected areas and productive lands is fundamental to our economic and environmental future. The role of resilient ecosystems is also well recognised in managing some of the impacts of climate change, such as increased storm surge, flood and erosion control.

For New Zealand, the key to securing and protecting the vital services that our natural ecosystems provides is to manage the impacts of invasive species on our indigenous biodiversity, not just on our off-shore islands but also on the mainland.

In 2009, Biosecurity New Zealand released a report on the costs caused by pests to agencies and individuals managing and preventing pest impacts, as well as the production losses they cause in New Zealand. It found that invasive species cost New Zealand around two and a half billion dollars, equating to just under 2% of our gross domestic product. Indeed, recent reports indicate that the estimated damage from invasive species worldwide totals more than 1.4 trillion US dollars annually, equating to around five percent of the global economy.

This workshop brings together many of the people at the forefront of invasive species management on the world's islands, to learn from each other's triumphs and challenges, and to think collectively about how to tackle invasive species management issues. Together, you provide the world's biggest collective resource in addressing this issue. The outcomes from this workshop have the potential to set the foundation for enhanced support, capacity building and global collaboration for many years to come.

I wish you well in your deliberations, I wish you safe travels on your long journey home, and I look forward with interest in seeing the outcome of this workshop evidenced in years to come.

Appendix 2 – Workshop Introduction, by Nicola Holmes

General Manager Conservation Engagement, Department of Conservation.

On behalf of the Department of Conservation, I have great pleasure in welcoming you all to New Zealand.

Thank you for the opportunity to speak to you this morning, at the start of this ground-breaking workshop. New Zealand is of course an island, albeit somewhat larger than many represented here and so we share many challenges with respect to the management of invasive species.

Being so remote from other land masses, our indigenous flora and fauna evolved in isolation over 80 million years. People settled here only some 800 years ago and so our indigenous species have had no time to evolve their defences to the onslaught of alien invasive species.

Also, like most island nations, New Zealanders have a close affinity with the natural environment, which has become part of our national identity and is central to what it means to be a New Zealander. We rely on its presence for our livelihood, economic prosperity and our very wellbeing.

For these reasons we take our management of invasive species very seriously, so what is our approach?

New Zealand's approach to invasive species management

We have looked hard at the impact of invasive species on our ecosystems and how they can best be managed. We put considerable effort into controlling border and pre-border incursion paths, and into managing the impacts of invasive species that have arrived.

Everybody here today will have been exposed to our stringent border control rules. We make no excuses for this. Pests stopped at the border spare us the need to spend billions of dollars every year in pest management.

The Department of Conservation is one partner in a broad relationship with the other arms of government and the community to find better ways of conserving our indigenous biodiversity.

Science and technological solutions are essential parts in our armoury but I would like to spend a few minutes to tell you about another challenge that is equally important.

Valuing conservation

In harsh economic times, our challenge is to demonstrate that conservation is an asset rather than a cost to society. Those of us who live and work for conservation just know its importance but how can we summarise and convey that vision to others whose focus is on economic returns or other services that are essential to a nation's survival and wellbeing, and that it in fact delivers our economic prosperity?

The problem for biodiversity is that we are not inclined to place a dollar value on the services it delivers. We tend to take free services for granted, even though our businesses are integrally dependent on them.

Our government's goal of to get New Zealand's economy growing in a sustainable fashion to deliver greater prosperity, security & opportunities to all New Zealanders.

It is essential to recognise that biological resources provide the raw materials for livelihoods, agriculture, medicines, trade, tourism, and industry. Forests, grasslands, freshwater, and marine and other natural ecosystems provide a range of services, often not recognised in national economic accounts but vital to human welfare: regulating water flows and water quality, flood control, pollination, decontamination, carbon sequestration, soil conservation, and nutrient and hydrological cycling.

In these ways, biodiversity is the foundation and mainstay of agriculture, forests, and fisheries but also to the wellbeing of our people.

We recognise that biodiversity delivers free gifts that we call 'ecosystem services' – things such as catchments for rain, to provide fresh water for drinking, washing, food production and industrial use.

Massey University economists have calculated that biodiversity contributes well over twice the value of our gross domestic product. In today's terms, that is more than $300 billion. They found, that marine ecosystems contributed to two thirds of that total. Healthy biodiversity brings in the dollar, but it also saves us from unwanted costs. For example:

- Forested catchments protect against erosion and floods.
- Healthy estuaries are like the body's kidneys, filtering out sediments and chemicals that wash into streams from farms and towns, keeping coastal waters clean and allowing us to gather safe food from the sea.

The public investment in conservation was initially motivated by the intrinsic value of nature protection. Successive governments have had the foresight to set aside forests, grasslands, freshwater and marine ecosystems for the benefit of all New Zealanders and our visitors. These are our irreplaceable assets upon which our societies depend.

Tourism alone now earns $18.6 billion to our economy each year, representing about 10% of our economy and 18% of export earnings. The asset base that underpins this industry is public conservation land and water.

What this means for the Department of Conservation

In addition to its stewardship role, to protect nature for its intrinsic value, we strive to enhance the value that taxpayers receive from our work. This requires us to strike a balance between intrinsic and enhanced values, and to demonstrate that the two are not mutually exclusive. Preservation and prosperity are interdependent.

In short, to succeed in protecting and conserving the ecosystem services on which we all rely for economic, environmental and social prosperity, we need more people to care about and value conservation, and be prepared to play a part. We need more people, doing more and, for that, we have to help people see that conservation is deeply relevant to our everyday lives. We have to show that managing for healthy biodiversity leads to healthy ecosystems, and healthy ecosystems provide the life-giving services that we depend on for our very existence and for our prosperity.

Relevance for this workshop

This brings us back to the direct theme of this workshop. As part of our biodiversity journey, we have learned a lot of hard lessons and achieved some spectacular triumphs. We also continue to face ever-increasing challenges that reflect the fact that we are no longer an isolated island nation, but part of a large global community.

On the other hand, we must also recognise that management of invasive species is not just a domestic issue. None of us can or should attempt to fight this global problem alone. By working collaboratively, we can improve management of both new incursions and existing invasive species infestations.

A good example of capacity development and generating support for invasive species management is the *Cooperative Islands Initiative* (known as the CII), which New Zealand helped to develop. It was launched at the CBD's 6th Conference of Parties and at the World Summit on Sustainable Development.

New Zealand Aid funded the *Pacific Invasives Initiative* (or the PII): a pilot programme for this initiative, which was formed to address priorities identified in the Pacific region's invasive species strategy. A key component was the *Pacific Invasives Partnership (PIP*), which includes the Pacific Invasive Learning Network partners and the Invasive Species Working Group of the Roundtable for Nature Conservation in the Pacific Islands.

Together these initiatives link the major regional intergovernmental organizations and provide strategic support for demonstration projects, skill-sharing, training, networking and strategy development across the Pacific. They provide a collaborative partnership that will continue to grow and evolve to meet the needs of the region.

The next challenge

It is now timely for the Cooperative Islands Initiative to expand its focus, as originally envisaged, to form equivalent partnerships and responses in other island regions. This week's workshop provides an important platform for exploring realistic possibilities, by bringing together key regions, government representatives, regional organisations, NGOs and donors to focus on the management of invasive species on the world's islands.

The initial premise of the CII was to create a global support network beyond the Pacific, and indeed there are many lessons that the Pacific experience can provide, and many other successful and innovative invasive species management initiatives taking place around the world. This workshop is intended to facilitate the cross-pollination of these ideas, lessons, successes, challenges and triumphs. Its outcomes will build a foundation to progress the cause of invasive species management on islands in an effort to rebuild healthy and resilient ecosystems.

The importance of healthy and resilient biodiversity and ecosystems in the management of climate change impacts cannot be underestimated and it is appropriate and timely that we should now consider how the management of invasive species can help to protect and maintain that resilience in a time of environmental change.

As Nicky Wagner stated in her welcome address yesterday, together, you provide the world's biggest collective resource in addressing the issue of invasive species management on islands. The outcomes from this workshop have the potential to set the foundation for enhanced support, capacity building and global collaboration for many years to come.

Finally, I would like to take this opportunity to acknowledge the work and commitment of the workshop Steering Committee in getting us all here today: The development of this initiative has been a truly collaborative affair with support from so many countries and organisations, as you can see from your workshop handbook.

On behalf of the Department of Conservation, I wish you every success in your discussions and challenge you to think creatively as you consider how to progress this issue globally. This weeks' workshop is a fundamental milestone in an ongoing process and there is a lot riding on your discussions.

Noho ora mai

Appendix 3 - Harvesters' report

Compiled by Laura Whitford, The Nature Conservancy

There were two main components of the workshop; the formal sessions that were mapped out on the agenda (refer to section 3f – factors for success), as well as a series of less formal sessions, which were scheduled and convened by the participants themselves. This component was known as the 'Korero', which means 'talk' in the Maori language.

Formal workshop sessions

For the formal workshop sessions, participants gathered together in working groups according to their island region; the Caribbean, the Coral Triangle, Indian Ocean and the Pacific. In addition, there were two groups of participants that gathered based on cross-cutting institutions; Global Organisations and Networking/Technical groups. In addition to the workshop participants, there was a team comprising five 'harvesters', who were responsible for listening in on the working group discussions, contributing and supporting facilitation where appropriate, and ensuring that main themes and key points of the discussions were captured. Harvest reports were compiled and consolidated by a rapporteur, and at the start of the session each morning, the Workshop Chair, Spencer Thomas, made a brief presentation back to the group to reflect these themes and comments.

Working primarily within these six groups, workshop discussions covered three main areas. Participants:

1. Shared lessons learned; factors for success as well as challenges involved in invasive species management on islands;
2. Developed clear, tangible actions to implement back home, including identifying the networks and resources necessary to realize these actions; and
3. Mapped out steps within international processes to catalyse and support regional efforts.

The outcomes of these discussions are reported in the main body of this report.

Korero (updated 30 June 2010)

Participants were given the opportunity to schedule informal meetings throughout the workshop. These *korero* (talk sessions) covered topics ranging from regional biosecurity plans to challenges and opportunities in overseas territories, and technical and legal discussions on species eradication. The topics and recorded summaries, where available, follow.

Topic	***Convenor (Country/Org)***	***Report/Comments***
International Processes	Stas Burgiel (GISP)	CBD paper*UNEP/CBD/SBSTTA/14/INF/X*
IAS Management in the European Overseas Territories	James Millett (RSPB/UK)	Report a
The importance of invasive species inventories as a standard part of invasive species project design.	Michael Browne (GISIN)	Report b
Biodiversity Indicators for Assessing Vulnerability-Resilience of Small Island Developing States (SIDS).	Keneti Faulalo (UN-DESA)	Report c
Micronesia Biosecurity Plan	Phil Andreozzi (USA/NISC)	Report d
Embryonic Caribbean Invasive Species Management Network/Hub seeking advice & lessons learned	Mat DaCosta-Cottam (Cayman Is)	Report e
Community-based Approaches	Nenenteiti Teariki-Ruatu (Kiribati)	Good group discussion; no summary report
Pacific Regional Project Design	Greg Sherley (UNDP)	No summary report
Caribbean Vertebrate Eradication	Jennifer Wheeler (USFWS)	Good group discussion – included in Caribbean actions
Marine Invasives – Invasive Species Eradications on the Islands of Mexico (DVD)	Nor Aieni Mokhtar (Malaysia)	Excellent video - overview of IAS impacts on livelihoods, infrastructure, health, etc
Rodent & Cat Control	Natasha Doherty & Bill Nagle (PII)	Individual meetings to identify expertise available

3a IAS Management in the European Overseas Territories (OTs)

Convenor: James Millett, Royal Society for the Protection of Birds (RSPB)

- Group recognizes IAS as the primary threat to biodiversity in European overseas territories.
- Notes that the greatest number of highly threatened species for European countries exists in their OTs and that expenditure from governments is disproportionately small when compared to domestic expenditure on biodiversity.
- Currently the UK does not have a strategy or mechanism for invasive species management in all of the OTs. The UKOTs are not included in the UK Non-Native Species Strategy. France has initiated a coordinated programme in the 12 DOMs and TOMs with small amounts of funding attached.
- The group acknowledges the need for all encompassing mechanisms for the management of invasive species on the dependencies and overseas entities of European countries. The group supports initiatives of the EU to enhance environmental protection and the provision of associated funding instruments is important. The group acknowledges greater cooperation between member states of the EU will enhance invasive species management.
- The group notes that the revision of Environmental Charters between the UK government and the governments of UKOTs would support the development of structured invasive species management programs.
- The group highlighted reporting from the overseas territories to the CBD is:
    1. Often inconsistent
    2. Where reporting is undertaken, it is demanding on OT focal points and does not have resources attached
    3. Information from OTs is under-represented

The group requests that the need for strengthened links to the CBD process, the need for stronger policy on invasive species management in overseas countries and territories and the need for associated funding instruments is highlighted to the CBD as we progress towards COP10.

3b The importance of invasive species inventories as a standard part of invasive species project design.

Convenor: Michael Browne, GISIN

- Baseline data/inventories necessary for prioritisation of actions and monitoring results throughout invasive species management activity.
- Additional benefits if national/regional IAS inventories are shared via the Global Invasive Species Information Network (GISIN), because we can quickly develop a global IAS inventory showing ‘which invasive species are where’.
- Important for prevention (pre-screening proposed imports, identifying invasive species threats from neighbours and trading partners, risk assessment, regulation and the listing of organisms of concern, early detection and rapid response, etc.).
- Options for data capture tools including a simple MS Excel spreadsheet that uses GBIF and GISIN standards, the freely available I3N database, and using the Global Invasive Species Database as a repository

Delegates from the Pacific, the Caribbean, the Indian Ocean and the Coral Triangle identified inventory development as a priority, and GISIN has offered support and advice.

For further detail on the use of inventories in invasive species management, please refer to section 3i below.

3c Biodiversity Indicators for Assessing Vulnerability-Resilience of Small Island Developing States (SIDS).

Convener: Keneti Faulalo, UN-DESA

- Invasive species pose the biggest threat to fragile ecosystems and biodiversity loss in SIDS, threatening the ecosystem services and goods that biodiversity provide in support of all sectors and all parts of society. Invasive species are not just problematic in relation to the environment; they are also very much an economic and social issue, and therefore need to be placed in the context of sustainable development, to be understood as a one of the biggest threats to the vulnerability of SIDS.
- UN-DESA is developing a framework for assessing the Vulnerability and Resilience of SIDS in each of the thematic areas identified in the Barbados Programme of Action (BPoA). The criteria and indicators for rating each country's vulnerability comprise environment, economic, and social dimensions. The criteria and indicators for rating each country's coping capacity comprise three dimensions that represent Government actions (policies, plans and projects); capacity building, science and technology measures; and supportive measures (financial resources, technical assistance from regional institutions and the UN system).
- The Korero provided a brief on the methodology and introduced the indicators currently developed in the criteria for assessing vulnerability and coping capacity in the BPoA thematic area of Biodiversity.
- Understanding the significant role of IAS as a key sustainable development issue would help mobilize leadership to champion the issue at the international level. It would be easier to mobilize resources if placed in the context of IAS as a threat to vulnerability through fragile ecosystems and the need to strengthening coping capacity of SIDS.

UN-DESA will hold think tanks in the next few months to refine the criteria and indicators. It is important that the threats of invasive species are well represented in the Biodiversity thematic area.

3d Micronesia Biosecurity Plan

Convenor: Phil Andreozzi, National Invasive Species Council (NISC)

- Participants acknowledged the ground-breaking Micronesia Biosecurity Plan being funded by the U.S. Department of Defense (DoD) and developed by the U.S. Department of Agriculture, Smithsonian Institute, U.S. Geological Survey and the U.S. National Invasive Species Council. The unprecedented development of this proactive plan will serve as an international model of regional and inter-departmental collaboration on invasive species prevention and will benefit islands and regions around the world.
- We applaud the proactive efforts of DoD, federal partners and the Chief Executives of Micronesian countries and territories in the development of the ground-breaking Micronesia Biosecurity Plan and encourage this cooperative, unified spirit to be continue through the implementation phase.

3e Embryonic Caribbean Invasive Species Management Network/Hub seeking advice and lessons learned

Convenor: Mat DaCosta-Cottam

- The concept and need for a dedicated regional Hub was widely acknowledged and supported.
- Any web-based approach needs to be backed by regular (annual) face-to-face meetings.
- Clear actionable objectives for meetings should be identified that focus on practical implementation and on-the-ground results.
- Representatives of OTs, countries, international NGOs and Pacific networks all offered help and assistance as needed.

- While all IAS sectors (including health, tourism, transport, agriculture, border control, NGOs, private NGOs, private industrial, and biodiversity) should be incorporated, one or two champions per country should be identified to communicate into / out of country.
- Important to start small and deliver on small, tangible elements / projects was agreed
- Linking to huge selection of resources on the web is considered essential (refer to section 3j).
- Coordinator should be supported from stable long-term funding source.
- Potentially a long-term process and investment – shouldn't be rushed.
- Establishment of dedicated working groups can help resolve tension between "size and diversity" and "depth" of network.

Group to establish list-server and coordinate aggregation/dissemination of information from/to the immediate group. Group then to export details to their contacts to expand the network. The communications network will share information with other networks (e.g. Pacific). Reporting within the group would be undertaken on a quarterly basis. This process will serve until a more permanent presence is established for the Hub.

3f Factors for Success and challenges identified by six working groups.

Common themes are in **bold.**

Region/issue	*Factors for Success - why*	*Challenge*
Caribbean	**Charismatic champions** Species specific approach Regional collaboration Partnerships within countries **Diverse projects with multi-sectoral approach** Enhanced information exchange	**Lack of funding and resources** **Lack of awareness and political will** Bureaucracy Poor enforcement of policy
Coral Triangle	**Leadership** **Partnerships and collaboration** **Coordinated platforms** including Regional Plan of Action	Threats to food security Trans-boundary issues **Lack of coordination** between various agencies and organisations **Lack of awareness of problem** **Lack of data and info sharing**
Indian Ocean	**Regional collaboration** Existence of national coordination agencies **Several countries with NBSAPs including IS management** **External partnerships** Ability to access international funding Connection with international for a (CBD, Mauritius +5)	**Lack of funding – invasives deprioritised in relation to development issues** Border control and trade **Lack of key links between countries across region** Lack of political stability **Lack of champions**
Pacific	**Coordinating mechanisms and partnerships** Technical support **Strategic approach – incorporation into broader plans like NBSAPs** **Use of cooperative frameworks** to catalyse governmental support **Dedicated staffing and human resources** Starting small and building on success **Messaging and communications** **Biosecurity awareness**	**Difficulties mainstreaming biodiversity and invasives** Need to maintain capacity Challenge in replicating successes Implementation **Lack of resources** National coordination
Global Organisations	Proactive communication with target audiences **Regional or multi-country** approach for planning and implementation **Multi-sector partnerships** **Invasives mainstreamed into large initiatives/frameworks** (e.g. CTI, Micronesia Challenge) **Knowledge exchange** – toolkits, skills, experience	Global agreements not prioritised for funding or implementation at national level **Funding** mechanisms with low efficiency or accessibility for islands **Disconnect with key sectors**
Networking	**Information sharing** Improved awareness	**Lack of communication and coordination**

Region/issue	*Factors for Success - why*	*Challenge*
	Community engagement and collaboration **Specific IS legislation** **Multi-agency partnerships** Access to technology	Lack of international agreement **Lack of funding and inappropriate funding systems** (e.g. short cycles, competitive) Limited capacity Lack of infrastructure (i.e. legislative) Challenges in predicting and measuring

3g Systems Thinking

Group	*Event*	*Pattern*	*Structure*
Caribbean	• Lack of resources or inefficient use of available resources • Influence/ key challenges – • Political and public awareness, • Bureaucracy • Enforcement remain poor	• Response to invasive species is uneven; priorities are health and economy – biodiversity low priority • Resources being spread very thinly due to many ports of entry and large borders • Formal and informal/illegal points of entry • Customs' perception that wildlife crime/biodiversity of low significance. • Opportunity for cost effective, proactive action at borders often lost • Lax enforcement history/traditionally easy going. Seen as new issue so no new money available, so ad hoc issue when it comes to funding. • Lack of knowledge/interest from customs	• Awareness of biodiversity value comparatively low. No one agency to deal with invasive species incursions into country. • Little reward/incentive for bio-security action: customs officers see revenue generated from enforcement around other types of criminal activity as higher priority. • Specific funding for invasive species management not yet established for this "new" issue • A general lack of sufficient technical training/incentives. Some custom officers uninterested.

Group	*Event*	*Pattern*	*Structure*
	Lack of funding	• Small in-country institutions with lack of capacity for fundraising.	• Issues with donor base – access difficult – big donors not connected to local NGOs • Invasive species not appealing – need to use charismatic species • Poor project concepts • Failure to embed Invasive species management in broader conservation issues (i.e. climate change, sustainable development) • Need marketing and communications expertise
	GEF 500 Caribbean project, lots of turnover, need to restart with learning and training each time	• Lack of human capacity. • Low staff retention—small organizations don't provide an enabling environment • Staff with split responsibilities • Low remuneration leads to high stress and flight risk. Applies to both staff in non-profit organisations and public officials	• Career development is a key issue. Difficult to map out a career path. Hard to turn away opportunities that naturally come to brightest and most talented island-based staff • Management issues and conflicts seen as the greatest reason for turnover. Opportunity for personal or career growth/compensation issues secondary problems
Coral Triangle	• Lack of awareness of invasive species and detrimental impacts on economy, food security, environment	• The lack of information leads to continued releases, border incursions, poor co-ordination, lack of education, inadequate policy	• Lack of capacity in local and central agencies • Inadequate monitoring and enforcement • Lack of political support

Group	*Event*	*Pattern*	*Structure*
Indian Ocean	• Communication • La Reunion: hard to talk to neighbours • Information on what is happening is lacking • No communication with Madagascar and Comoros • British made huge reserve with no consultation with Mauritius • Small island groups have no representation, never hear from them e.g. French islands	• No one knows all the islands • Big ocean, small islands • Very different cultures • Very different administrations • Very complex territorial set up • Decisions are made in Europe/continent • Decision makers are not experts • Very different sources of income; some islands with no income, some have income from fisheries, while others rely on tourism, sugar industry etc	• Open borders • Islands influenced by mainland sites • Politics • Ethnic differences • Wars • Environment is a low priority to most governments, only some departments within a government are caring • Invasive species is low priority
Pacific	Mainstreaming invasives and biodiversity	• Lack of Government interest • Impacts obscure to most people • The main environmental NGOs are not doing much about invasives	• Human psychology and the perception of risk • Invasive species has many potential constituencies and is often seen as a secondary issue • Natural biodiversity is not valued and poorly known • Political decision making is reactive, not pro-active • Geography/distance and diffuse problems + obscure to most people • Culture? (Imposed values?)

Group	*Event*	*Pattern*	*Structure*
	Implementation of Invasive Species Management Strategies or Action Plans	• Lack of capacity, funds, resources, people • No supervision, leadership, direction • Not prioritised • Absence of S.M.A.R.T in strategies (Specific, Measurable, Achievable, Realistic, Time bound) • No targets or indicators on NBSAPs • Lack of stakeholder support • Regional guidelines not S.M.A.R.T	Lack of coordination mechanisms
Global Organisations	Global agreements not prioritized, funded or implemented at the national level	Low: • Accountability • Consultation • Motivation • Awareness • Funding • Capacity	• Agreements • Framing of issue • Fire fighting vs. being proactive • Low public awareness
Technical and Networking	Incursions of invasive species (mongoose in the pacific)	Repeated uncontrolled incursions	• Lack of political will and prioritization. • Lack of understanding of potential impacts • Lack of awareness of significance of biodiversity • Response driven exclusively by economy

3h Regional Action Points

Caribbean - *Bob Ramnanan* - *Dalia Salabarria* - *Jennifer Wheeler* - *James Millett* - *Olivia Renshaw* - *Frank Lowenstein* - *Mat DaCosta-Cottam* - *Nelsa English* - *Lloyd Gamble* - *Brad Keitt* - *David Knowles* - *Judy Pierce*	**Network** • The group will be in contact by email over the next 3 weeks and create a distribution list • Subject for emails – Caribbean invasive species
	Framework: defined as a regional approach or system of connected elements • Document existing mechanisms and elements of IAS in the Caribbean – strengths and gaps – regional and national • Appoint a regional coordinator(s) for invasive species at a regional level, replicating the Pacific example – identify champion(s) to advance the appointments of behalf of the region • Develop opportunities for regional get-togethers – E.g. in association with CFCS or other meetings • Continue development of framework – Communication within framework organisations • Report back quarterly
	Marketing • Marketing research (public opinion and attitudes) • Develop marketing tools, drawing on a social market research results • Identify regional and local champions and support them with marketing tools • Report back quarterly
	Data/info and tools • Develop a regional repository website – find a host • Collate the information – find existing data – list in record • Valuation of resource – Training personnel to fill the gaps • Report back quarterly
	Funding • Adopt a regional coordinated approach to donors and “mother” governments for funding as part of the framework for actions on invasive species in the Caribbean • Adopt a pro-active marketing for the benefits of controlling invasive species in the Caribbean • Report back quarterly
	Biosecurity • Develop a model bio-security framework for legislation, institutional and financial managements for Caribbean countries to manage invasive species – An early warning system is a critical part of the Institutional Framework – Ensure thorough marketing efforts that it covers, agriculture, trade, health and environment • Build capacity at regional and national level to manage invasive species • Report back quarterly

Coral Triangle - *Eko Rudianto* - *Emmanuel Isip* - *Prof Dr Mokhtar Nor Aieni* - *Mario Ximenes* - *Barnabas Wilmott* - *Narmoko Prasmadji* - *Krista Singleton Cambage* - *Jo Elphinstone* - *Ed McIsaac* - *Herb Christophers*	**Develop quality information on IAS through research & exchange within CTI and with external networks** • Request CBD Secretariat to compile information on economics of invasive species • Request CTI to conduct workshop on marine invasive species – Each CTI country will put together a list of invasive species – Communicate list to CTI secretariat to share – Invite representatives from other regional groups • Encourage countries to conduct case studies on impact of invasive species • Encourage countries to research IAS and its impacts to economy and food security
	Access more funding & resources and better access to existing resources • Provide a proposal to develop invasive species Action Plan at regional level • Encourage each country to allocate funds to tackle invasive species issues • Develop proposals to study impacts of IS to be submitted for funding • Lobby politicians/legislator to develop legal basis for local funding
	To make IAS a priority in CTI through regional and national processes • Put IAS on the agenda for next CTI meeting – Develop information paper for the agenda item (CTI secretariat) paper should include a definition of marine invasive species and the outcomes of this workshop (especially the action plan endorsed) • Incorporate invasive species into NPOAs • Put IAS on agenda for next CTI Ministerial meeting. • Incorporate invasive species concerns into the development of Climate Change Action Plans
	To develop mechanisms and policies to address invasive species • Encourage countries to develop regulation to address IAS issues & to harmonise existing regulation where it exists • Develop IAS Action Plan @Regional and National level. • Create technical working group to develop mechanisms and policies
	Access more partners involved in supporting CTI on invasive species issues • Develop marketing plan to promote CTI concerns • Lobby to new partners and donors to support CTI on invasive species issues • Promote CTI at International fora/meetings • At national level, conduct donor and partners meetings as a venue for partnership and access funding • The Champion invasive species Network will stay in touch

Indian Ocean - *Senan Ali Saleh* - *Michel Barbe* - *Catherine Julliot* - *Soudjata Radjassegarane* - *Parmananda Ragen* - *Geoffrey Howard*	**Political Support** • Influence French input into EU strategy on invasive species, especially for overseas regions biosecurity legislation/regulations (strategy to be finalised in 2011) • Contact global IAS organisations for support in influencing national decision makers, especially for overseas regions. IUCN, GISP, Arab League, SADC, COMESA, IOC • Organise regional meeting for on invasive species during SBSTTA (of CBD) • Formalise links between NGOs and government institutions with political support
	Sharing - Exchange • Improve knowledge of exchange possibilities/programmes between governments and institutions • Influence institutions to increase exchange opportunities • Seek opportunities to have a workshop on research on invasive species in Indian Ocean • Publish research findings (e.g. abstract) on website (e.g. IOC, GISD – Global Invasive Species Database)
	Sharing - Networks • Contact national focal points (NPPO & RPPOs) of IPPC and CBD to determine the possibility of using them as an IAS network for IO • Determine suitability of IOC (COI) as a network for invasive species • Contact Western Indian Ocean Challenge for adding invasive species to their agenda • Contact other Indian Ocean islands about joining network • Establish an Indian Ocean network - began at the “Helping Islands Adapt” workshop. Indian Ocean Invasive Species Network (English = IOISN) (French = REEOI)
	Legislation – National Level • Raise awareness of decision makers • Consult technical people in the Indian Ocean region to harmonise the development of local legislation proposals on invasive species • Seek advice from World Heritage Commission for border control on Socotra • Mauritius will share the border control experience with the Indian Ocean IAS network • Contact Seychelles to share the border control experience with the Indian Ocean invasive species network
	Legislation – Regional Level • Seek advice from other regions (e.g. Pacific) on legislation • Develop more protocols between islands (e.g. white grub protocol)
	Education and Awareness • Sensitise decision-makers • Develop a strategy for a national campaign • Take ideas from IUCN website (education and invasive species) • Estimate the level of knowledge (before starting) and peoples’ perception of invasive species
	Capacity Building • Determine capacity building needs • Determine institutions involved • Build capacity

	Inventory • Make a list of invasive species for each country • Encourage Indian Ocean countries to share inventories • Investigate constraints of "ADVENT OI" • Explore other options
	Funding • Seek international funds for projects
Pacific[3]	**Sustainable Finance** Develop a regional sustainable finance plan (PIP) • Add to agenda for Round Table meeting • Seek selective global input on the best practices for the plan • Secure funding and implement Approach donors to make the case for funding endowments and longer funding cycles (Regional Organisations) • Add to agenda for Round Table meeting • Seek selective global input on the best practices for the plan • Secure funding and implement Governments to fund permanent designated positions within departments (Individual Countries) • Add to agenda for Round Table meeting • Seek selective global input on the best practices for the plan • Draft a letter from PIP recommending and making the case for permanent IAS positions within governments
	Adopt harmonised biosecurity legislation in all Pacific Island countries using model legislation developed by SPC (SPC/PIP) • SPC to raise this at their meeting with countries • Identify specific Champions within each country **Assist Pacific Island countries and territories in planning the effective management of invasive species, thereby reducing the negative impacts of invasives in their rich and fragile natural heritage, communities and livelihoods.** • Biosecurity • Management of established invasives • Restoration

[3] This workshop recognizes that, for the Pacific, the existing "Action Strategy for Nature Conservation in the Pacific Islands" and the "Guidelines for Invasive Species Management in the Pacific" (which have been endorsed and adopted by all 26 member countries and territories of SPREP and SPC, and all 24 regional and international agencies that are members of the Pacific Invasives Partnership) will be used to formulate priorities and give direction to Pacific invasives management programmes, including those suggested by the workshop

	Capacity Building Establish national focal points at country level for PIP, PII, PILN (PIP/Governments) • Identify suitable person/invite govt to designate suitable person • Letter from PIP to govt to establish mandate/advise on benefits to the county • Develop role description/terms of reference/indication of commitment required/expected Share lessons and outcomes of existing demonstration projects and other projects being implemented (PIP/PII/Governments) • Scoping and resourcing the needs or project • Recruiting consultant • Distributing report/outcomes through existing networks Develop tools for invasive species management (PIP/PII/Governments) • Work with existing networks and countries to ID tools required • Source funding to enable work.
	Public Awareness and Engagement Develop a Communication Strategy (PIP) • Look at other current strategies • Talk to people from RARE programme • Gather baseline information Incorporate into school system • Discussions between Ministries of Education and Environment • Local governments can get volunteers to teach while locals are trained
	Political Will A regional Marketing Strategy that provides complementary and consistent repeated messages to decision makers on the benefits of invasive species control (PIP)
Global Organisations	Effective communications: multi-sector, multi-stakeholder, information exchange • Recruit leaders/champions in key sectors to GISP, CSD, IPPC, STDF, OIE, WTO – SPS, ICAO, IMO, CITES, FAO, UNESCO, WB • Effective multi-sector, multi-stakeholder materials available and gaps filled • Promote/disseminate GISP/other tools for economic risk assessment, legal framework
	Coordinating mechanisms to strengthen interconnected partnerships in regions and globally (STDs, legal frameworks, imp etc). Use existing regional groups if possible • SIDS Ambassadors support funding for regional partnerships in Pacific, Caribbean, AIMS • Focus on large, developed country champions – Italy, Spain, NZ, UK, Mexico, Norway, Germany, Australia, France, Portugal, Japan, Netherlands, USA
	Funding – invasive species on islands is a very high priority identified by countries included in major funding mechanisms • Engage GEF focal points to disaggregate invasive species threat and get allocation a. Traditional environmental/ biodiversity sources b. Opportunities from multi-sector partnerships c. Climate Change Funds strategy

Technical and networking	**Leadership** Identify people, champions, stakeholders Imbed IAS management into big picture Description of legislation and regulation and infrastructure in NZ and Australia to show how it works – lessons learned **Tools** Creating tools supporting analysis of the data Tools and technology for technical assistance Identify research priorities for IAS management Collecting and sharing of IAS information should be a component of project design Tools for Communication Creating a mechanism to share tools and information Technical support tool for sharing technical information Platform for sharing information and existing information Strengthen centralised repository for information (mainstreaming) Better coordination between regional groups, identify needs Promote the availability and accessibility of info to decision makers and the public. Strengthen exchanges and collaboration between countries Receive collect information from other regions Determine the standard content management system this will make information sharing easier **Messages** Key messages for effective communication Cooperate with different countries in countries Id success stories and spread them around Promote the availability and accessibility of info to decision makers and the public. Improve public awareness of IAS impacts Imbed IAS management into big picture **Capacity and Development –** Support technical skills Support good research Improve capacity management at the national/regional level Learning about successful IAS management from other regions Strengthen exchanges and collaboration between countries Receive/collect request from other regions for technical needs Promote long-term research on IAS management and climate change Develop better ways to integrate IAS into other areas Sharing data **Finance** Seek resources for country support Promote the availability and accessibility of info to decision makers and the public. **Research** Promote long-term research on IAS management and climate change

NETWORKING AND TECHNICAL ACTIONS

IDENTIFIED AS HAVING A HIGH DEGREE OF ACTIONABLE POTENTIAL

Actions	Possible	Vision or action	Why is it important	What problem will it address	Assistance required for success	What will successful implementation look like	3 steps to making it happen
Leadership							
Description of legislation and community infrastructure that supports effect IAS management in some countries	Yes High	Action	Best practice	Improve management of IAS within countries Lack of information/models	Availability of documents and staff time from governments	Other countries will be strengthening their legislation and infrastructure	1. Identify those countries with effective implementation and infrastructure, 2. Facilitate the availability of relevant documentation 3. Information hub for IAS management support tools or documentation
Tools - <u>Creating technical tools supporting IAS management, planning and implementation</u>							
Identify research priorities for improved tools and methods (e.g. risk analysis, cost benefit analysis etc)	Yes High	Action	To clarify the needs	Lack of quantifiable information, addressing specific knowledge gaps	Needs assessment	Priorities identified and appropriate tools developed	1. Identify relevant institutions to undertake a needs assessment 2. Prioritise tools and networks to be improved based on the needs assessment 3. Engage tool developers
Collecting and sharing of IAS information should be a component of project design and implementation	Yes High	Action	Ensure that collecting and sharing is planned and budgeted for	Lack of information sharing (e.g. outcome monitoring, duplication of efforts)	Donors/funding agencies make it a priority and focus on outcomes	Information disseminated	1. Project planning includes collecting and sharing
Identify and promote long-term research to investigate the relationship between IAS and climate change adaptation	Yes High	Action	Important to clarify needs and identify synergies	It will provide clarity on priorities for future action	Long-term funding, needs assessment, integrated with wider conservation issues	Tools will be available	1. Identify relevant institutions to undertake a needs assessment 2. Committed funding 3. Develop a network around long-term ecological research and climate change

Tools - <u>Tools for Communication</u>

Creating a mechanism to share information (Portal)	Yes High	Action	No centralised clearing house	Lack of access information	Global agreement (someone to lead this)	Information available	Someone to lead Everyone to contribute

Messages

Identifying and disseminating success stories and outcomes	Yes High	Action	To influence the public and political opinion	Negative perceptions need positive stories	Need those with the success stories to work together	Frequent and regular appearance of successful stories	Need to establish Public Information personnel Communication planning

Strengthening Capacity - <u>Support technical skills</u> to improve capacity at the international/national/regional/local level

Learning from IAS management from other regions	Yes High	Action	More efficient progress	Inefficiency (re-inventing the wheel)	Networking and sharing of information	Successful invasive species management	1. Sharing of successful/unsuccessful stories 2. Committed institutions (governments, etc) and people

3i Why it is important to collect and share invasive species information, and some useful tools and resources

A contribution to the 2010 “Helping Islands Adapt” workshop from the Global Invasive species Information Network (GISIN)

Climate change is likely to aid the spread of invasive alien species (Dukes & Mooney, 1999, Stachowicz *et al.,* 2002). Many countries have decided to collect and share baseline information on invasive species within the context of national plans or other projects because it is a prerequisite for prevention, early detection and rapid response, and could be used to document climate change effects.

However, many countries do not yet collect and share inventory information. Information systems often come as an afterthought and sharing information may be hindered by a fear of the trade implications that a documented pest presence may cause. There is also a lack of awareness of how national inventory information might be helpful over time, particularly in the context of identifying and responding to regional threats and priorities. Collecting and sharing inventory information should be considered as a standard component of invasive species project design, because it has a number of important benefits that outweigh the costs of information sharing.

Preventing the introduction of invasive species
Prevention is more cost effective and environmentally desirable than actions undertaken after invasive species have become established (Olson and Roy, 2005).

- In order to prevent the introduction and spread of exotic harmful species, information is needed about which species are potential threats, where they occur, how they are spread, the damage they do, and what you can do about them. At present, there is no universal reference list of known invasive species that provides this ‘invasion history’ information.
- Prevention measures need invasion history information for: regulation and the listing of organisms of concern; assessing the risk and consequences of importing organisms; border biosecurity; early detection and rapid response; and engaging the support of communities and stakeholders.
- The vast majority of invasive species are poorly understood because our information networks are extremely limited in their global reach. Fewer than 30 (12%) of the world’s countries have online invasive species information systems (Sellers et al., 2004, updated 2010).
- If shared, national inventory information will improve global biosecurity by identifying invasive species threats.
- The process of collecting and sharing information is also a great catalyst for fostering local, national and regional cooperation.

Managing existing infestations
Invasive alien species are now widely regarded as the second greatest threat to biodiversity after habitat destruction. They are also linked to land degradation, and impact negatively on food security and water supplies. Improved management of alien species invasions contributes to healthier and more resilient ecosystems.

- Management operations can be opportunistic, or they can be prioritised according to availability of capacity and resources, actual and potential values impacted, management difficulty and stakeholder attitudes.
- Inventory information assists with setting priorities for management operations and monitoring progress.
- Basic inventory information identifies which invasive species are present, where they occur, and the values they threaten.

Useful tools and resources

It is not necessary to develop an expensive invasive species information management system. Good tools are already available.

- Data capture tools range from standardised spreadsheets (that prompt the user to capture key pieces of information), to sophisticated online databases such as the freely-available I3N database[4] developed by the IABIN Invasives Information Network, which allows network members to collect and share standardized information on invasive species, experts, and projects. The I3N database is operational in 15 Latin American countries.
- A data exchange infrastructure to link invasive species databases has been developed by Global Invasive Species Information Network (GISIN)[5]. GISIN and its many collaborators are also developing a package of decision support tools for early warning, including: distribution maps; models of potential distributions (under present conditions and under different climate change scenarios); country-specific risk scores for invasive species; links to identification tools; and pathway, impact, and management information.
- Detailed information about many of the world's worst invasive species is available in resources such as the Global Invasive Species Database (almost 700 species)[6], which has a strong focus on islands, and CABI's Invasive Species Compendium[7] (about 1,000 species, currently only available to CABI partners). However, there are many more invasive species for which very little information is available. The Global Compendium of Weeds[8] identifies more than 11,000 environmental weeds and there are many thousands of invasive animals (e.g. invertebrate pests). National inventory information will help address information gaps.
- A list of publically available resources for risk assessment[9] and a list of basic risk-assessment questions[10] were compiled during the 2008 Preventing Biological Invasions: Best Practices in Pre-Import Risk Screening for Species of Live Animals in International Trade workshop. I3N has developed a Risk Analysis tool and a Vectors and Pathways Analysis tool[11] to complement the I3N database.
- Information is needed from all parts of the world, because different assemblages of invasive species occur in different places for historic and biogeographic reasons (Worner & Gevrey, 2006). The Global Register of Invasive Species (GRIS) is a prototype tool that will harvest online data and integrate it with invasive species information that is not yet on the Internet to produce a regularly updated and easily accessed reference list of all known invasive species. With adequate funding, this resource will provide online information support for pre-screening of proposed imports, risk assessments and prioritising management activities.

GISIN CONTACTS:

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REFERENCES:

Dukes, JS and Mooney HA. 1999. Does global change increase the success of biological invaders? TREE 14(4):135-139.

Olson, LJ and Roy, S. 2005. On Prevention and Control of an Uncertain Biological Invasion. *Review of Agricultural Economics* 27(3): 491-497.

Sellers E, Simpson A and Curd-Hetrick S, 2004. *List of Invasive Alien Species (IAS) Online Databases and Databases Containing IAS Information.* Updated version accessed online 25 March 2010 at http://www.gisin.org/gisinlist.htm.

Stachowicz JJ, Terwin JR, Whitlatch RB, Osman RW. 2002. Linking climate change and biological invasions: Ocean warming facilitates nonindigenous species invasions. *Proceedings of the National Academy of Sciences.* 99(24):15497-15500.

Worner S. P. & Gevrey, M., 2006. *Modelling global insect pest species assemblages to determine risk of invasion*. Journal of Applied Ecology, 43, 858-867.

[4] I3N database http://i3n.iabin.net
[5] Global Invasive Species Information Network: www.gisin.org
[6] Global Invasive Species Database: www.issg/database and www.invasivespecies.net/database
[7] CABI Invasive Species Compendium: www.cabi.org/isc
[8] Global Compendium of Weeds: www.hear.org/gcw
[9] Risk assessment resources: www.issg.org/events_resources.htm
[10] Risk assessment questions: http://www.gisp.org/publications/policy/workshop-riskscreening-pettrade.pdf
[11] I3N value added tools: http://i3n.iabin.net/tools/web_tools.html

3j Preliminary list of invasive species resources that might be relevant for the focus regions

Michael Browne (GISIN): mtjbro@xtra.co.nz

Global scale:

Global Invasive Species Information Network (GISIN) www.gisin.org

List of online invasive alien species databases www.gisin.org/gisinlist.htm

Global Invasive Species Database (GISD) www.issg.org/database

IUCN Invasive Species Specialist Group www.issg.org

CABI Invasive Species Compendium (www.cabi.org/isc currently only available to CABI partners)

ID Nature Guides www.discoverlife.org/mp/20q

FishBase www.fishbase.org

Aliens-L list serve aliens-l@indaba.iucn.org

PestNet list serve pestnet@yahoogroups.com

Regional scale:

Delivering Alien Invasive Species Inventories for Europe (DAISIE) www.europe-aliens.org

North European and Baltic Network on Invasive Alien Species (NOBANIS) www.nobanis.org

Pacific Island Ecosystems at Risk (PIER) www.hear.org/Pier

IABIN's network of I3N databases in 15 Latin American countries e.g. www.inbiar.org.ar/list_especies.asp

Invasive Species Programme of the Secretariat of the Pacific Regional Environment Programme (SPREP)

Initiative sur les espèces exotiques envahissantes en outre-mer www.uicn.fr/Especes-envahissantes-d-outre-mer.html

CARIPESTNET http://pets.groups.yahoo.com/group/caripestnet

Caribbean Invasive Alien Species Listserve carib_ias_threat@yahoogroups.com

European/Mediterranean Plant Protection Organization (EPPO) www.eppo.org

National scale:

China National IAS Database

Poland IAS Database

US Nonindigenous Aquatic Species (NAS) http://nas.er.usgs.gov

For a comprehensive list, consult www.gisin.org/gisinlist.htm

Identification tools:

LucID is a system for creating, maintaining and distributing interactive identification keys. www.lucidcentral.com

IDAO tool works like the 'identikit' tool used by police to identify suspects.

www.oswaldasia.org/implementations.htm

Information about IAS management projects:

Island Conservation www.islandconservation.org

Pacific Invasives Initiative (PII) www.issg.org/cii/PII

Pacific Invasives Learning Network (PILN) www.sprep.org/piln

Resources that provide coordination, guidelines, toolkits and information about IAS programmes:

The Global Invasive Species Programme www.gisp.org

The Convention on Biological Diversity / Cross-Cutting Issues / Invasive Alien Species
www.cbd.int/invasive/

Report from the Animal Imports Workshop (Guidelines and tools for Risk Assessment)
http://www.issg.org/events_resources.htm

Biosecurity

New Zealand www.biosecurity.govt.nz/

Australia www.daff.gov.au/ba

WHO Sanitary and Phytosanitary Measures - www.wto.org/english/tratop_e/sps_e/sps_e.htm

Pacific

Invasive Species Programme of SPREP http://www.sprep.org/topic/Invasive.htm

Guidelines for Invasive Species Management in the Pacific (2008)
www.sprep.org/publication/pub_detail.asp?id=699

Pacific Invasives Partnership

Pacific Invasives Initiative (PII) www.issg.org/cii/PII

Pacific Invasives Learning Network (PILN) www.sprep.org/piln

Secretariat for the Pacific Community (SPC)

Pacific Ant Prevention Programme (PAPP)

GEF PAS – Prevention, Control and Management of Invasive Alien Species in the Pacific Islands

Regional Invasive Species Committee (Micronesia)

Caribbean

Caribbean Regional Invasive Species Intervention Strategy (CRISIS)

GEF Project – Mitigating the Threats of Invasive Alien Species in the Insular Caribbean

Caribbean Seabird Initiative – Invasives

Caribbean Invasive Species Working Group (CISWG)

Florida and the Caribbean Fire and Invasive Species Learning Network

USDA APHIS Caribbean Safeguarding Initiative (CSI)

Caribbean Invasive Alien Species Listserve carib_ias_threat@yahoogroups.com

CARIPESTNET http://pets.groups.yahoo.com/group/caripestnet

Europe

European/Mediterranean Plant Protection Organization (EPPO) www.eppo.org

Initiative sur les espèces exotiques envahissantes en outre-mer www.uicn.fr/Especes-envahissantes-d-outre-mer.html

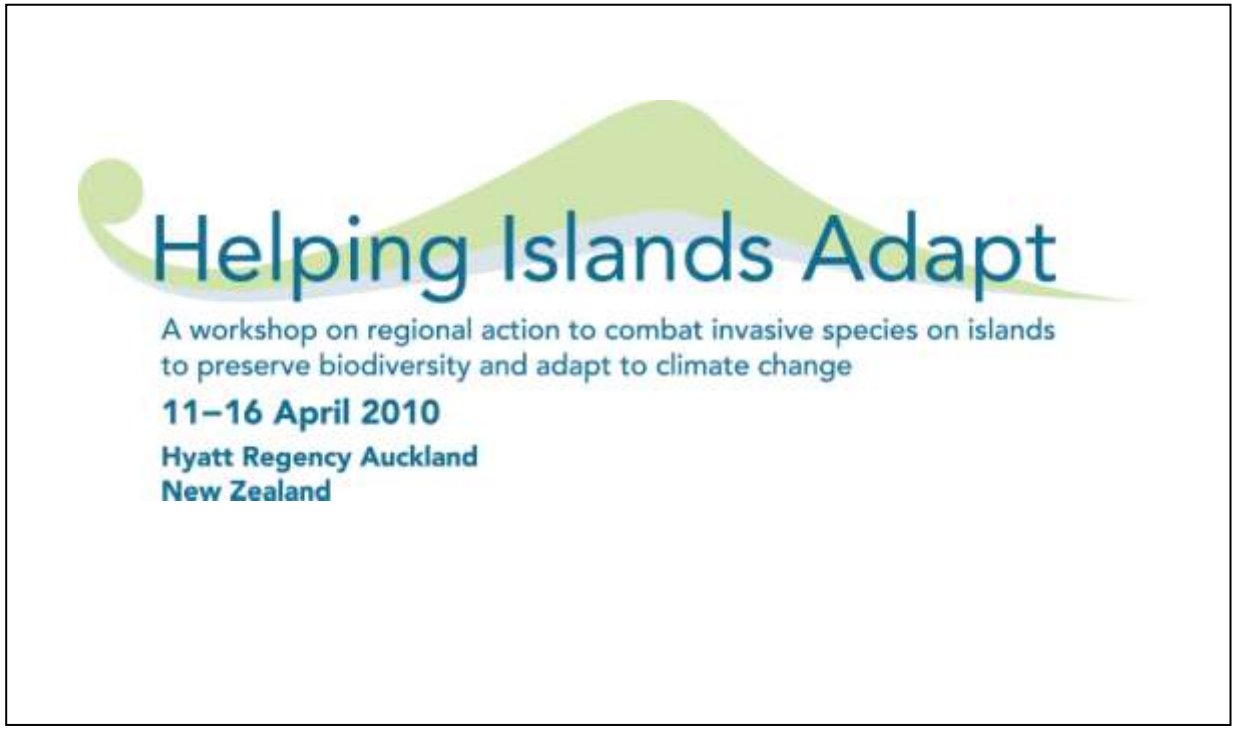
Invasive Species in the UK Overseas Territories: Databases and Awareness

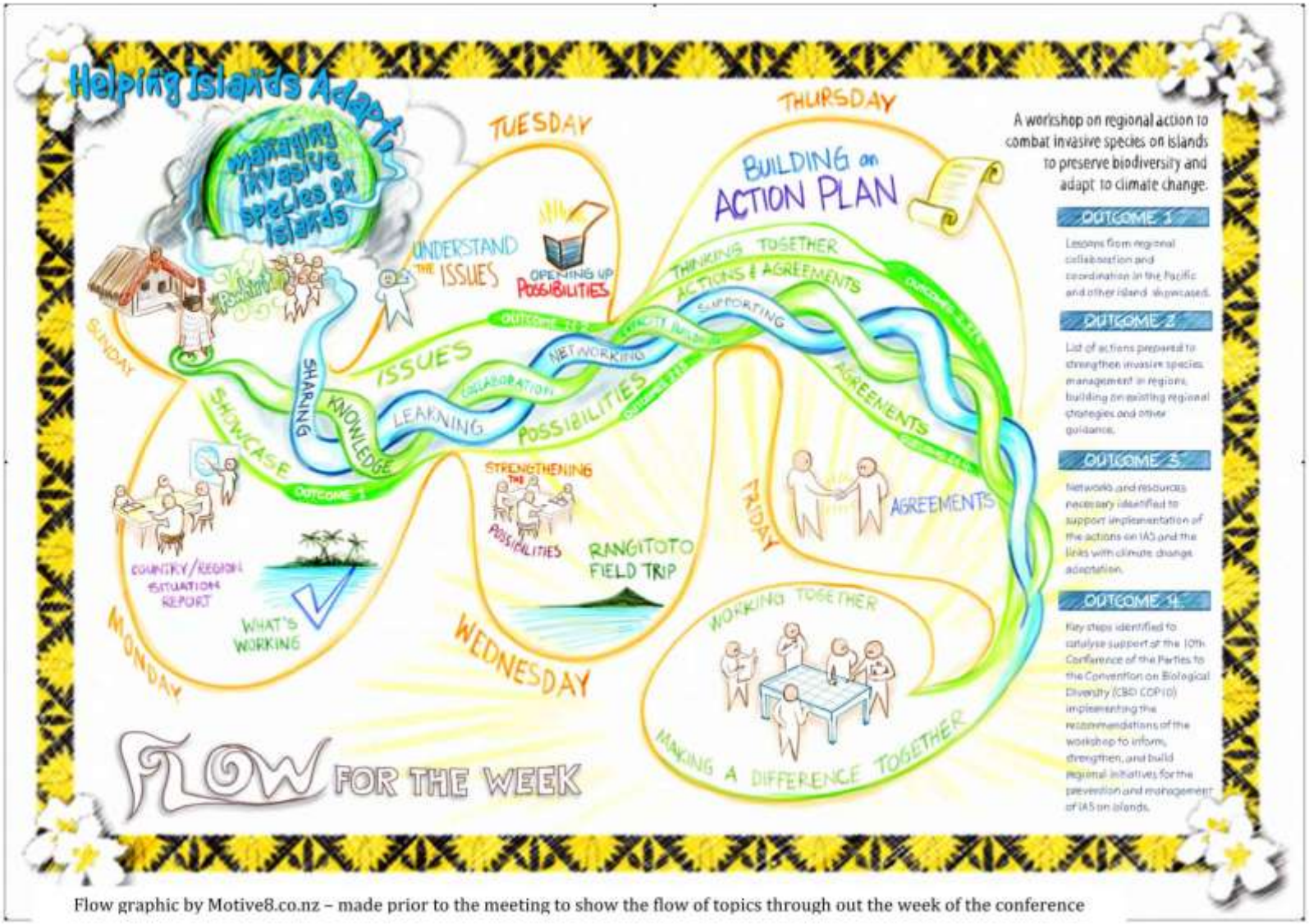
Assessing Large Scale Risks for Biodiversity with Tested Methods (ALARM)
www.alarmproject.net.ufz.de/index.php?pid=4110

Indian Ocean

La Réunion Meeting www.reunion2008.eu

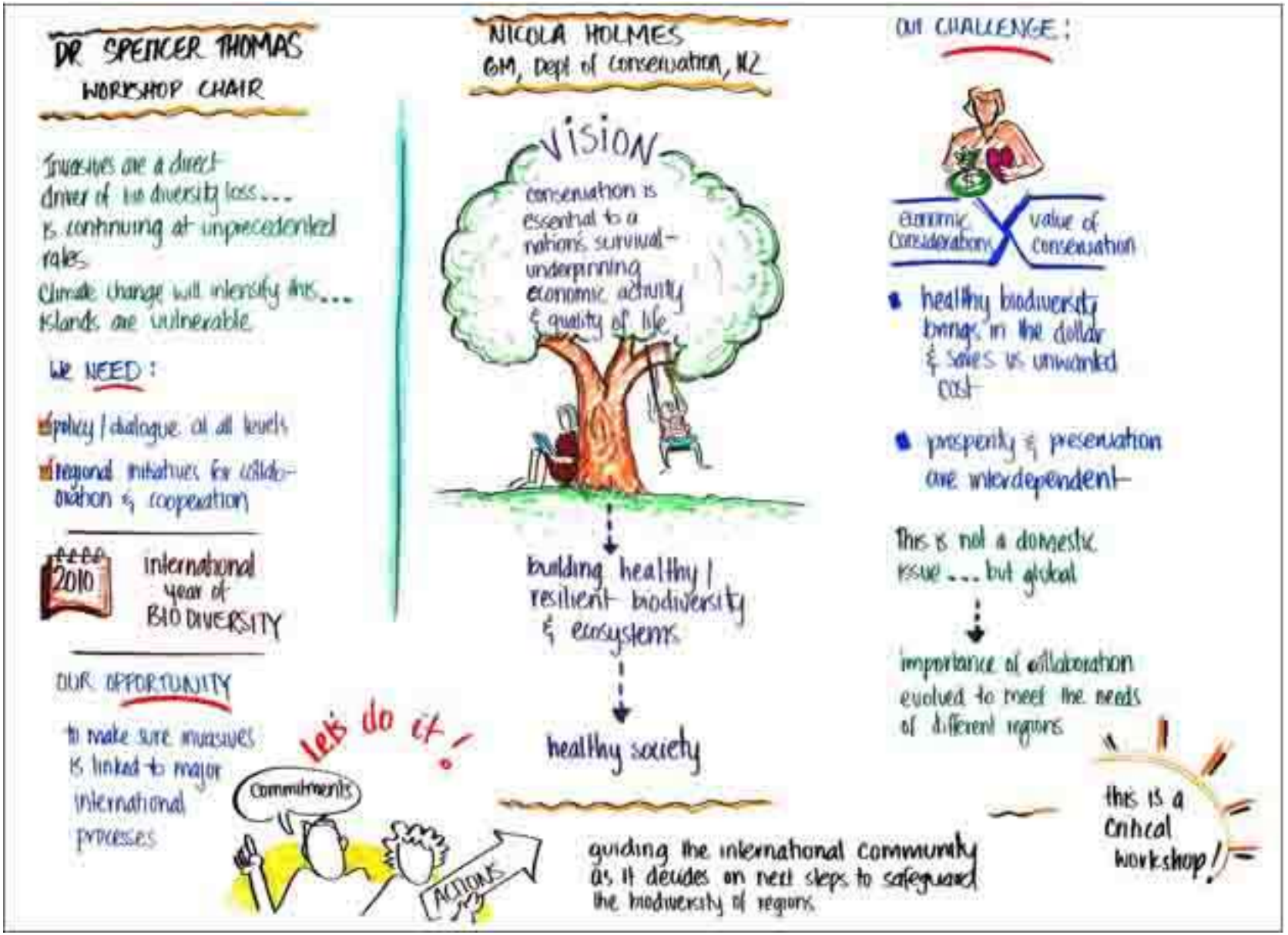
Appendix 4: Simultaneous Graphic recording – by Mary Brake

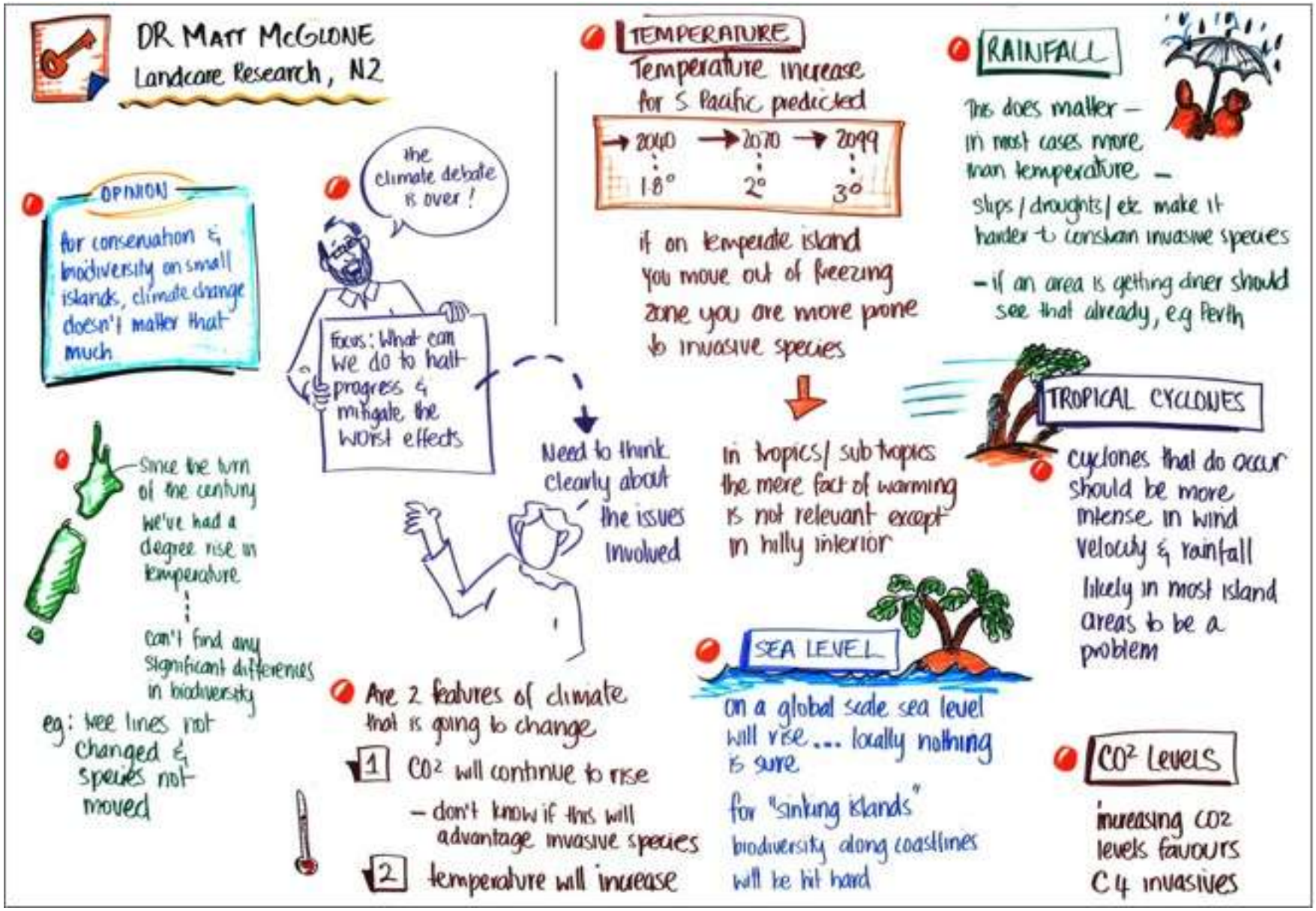




Flow graphic by Motive8.co.nz – made prior to the meeting to show the flow of topics through out the week of the conference


HELPING ISLANDS ADAPT
11-16 APRIL 2010
AUCKLAND, NEW ZEALAND
GREETING
LOVE
HOPE/FAITH
PEACE
We are all one
BLESSING
to all our visitors... our guests...
to the work that we will get done through the conversation of sharing
"there is the world"
"...for the bird that eats of knowledge..."
Set the stage for years to come...
Learn from each other & Think collectively
WELCOMING
There is global recognition of the importance of the issue
Helping Islands Adapt
Islands are home to the rarest species... they are vulnerable... predicted climate change exacerbates this
Managing the impact of invasive species... is vital to the wellbeing of island nations & people...
Cost: US $14 Trillion globally - 5% of global economy


DR SPENCER THOMAS
WORKSHOP CHAIR
Invasives are a direct driver of biodiversity loss...
is continuing at unprecedented rates
Climate change will intensify this...
Islands are vulnerable
WE NEED:
policy / dialogue at all levels
regional initiatives for collaboration & cooperation
2010
International Year of BIODIVERSITY
OUR OPPORTUNITY
to make sure invasives is linked to major international processes
NICOLA HOLMES
GM, Dept of Conservation, NZ
VISION
conservation is essential to a nations survival- underpinning economic activity & quality of life
building healthy / resilient biodiversity & ecosystems
healthy society
Let's do it!
Commitments
ACTIONS
guiding the international community as it decides on next steps to safeguard the biodiversity of regions
OUR CHALLENGE:
economic Considerations
value of conservation
healthy biodiversity brings in the dollar & saves us unwanted cost
prosperity & preservation are interdependent
This is not a domestic issue... but global
importance of collaboration evolved to meet the needs of different regions
this is a Critical workshop!


DR MATT McGLONE
Landcare Research, NZ
OPINION
for conservation & biodiversity on small islands, climate change doesn't matter that much
the climate debate is over!
focus: What can we do to halt progress & mitigate the worst effects
Need to think clearly about the issues involved
Since the turn of the century we've had a degree rise in temperature
can't find any significant differences in biodiversity
eg: tree lines not changed & species not moved
Are 2 features of climate that is going to change
1 CO2 will continue to rise
– don't know if this will advantage invasive species
2 temperature will increase
TEMPERATURE
Temperature increase for S Pacific predicted
2040 1.8°
2070 2°
2099 3°
if on temperate island you move out of freezing zone you are more prone to invasive species
In tropics/ sub tropics the mere fact of warming is not relevant except in hilly interior
SEA LEVEL
on a global scale sea level will rise... locally nothing is sure
for "sinking islands" biodiversity along coastlines will be hit hard
RAINFALL
This does matter – in most cases more than temperature –
slips / droughts / etc make it harder to constrain invasive species
– if an area is getting drier should see that already, eg Perth
TROPICAL CYCLONES
cyclones that do occur should be more intense in wind velocity & rainfall
likely in most island areas to be a problem
CO2 LEVELS
increasing CO2 levels favours C4 invasives

TIMING

- over last 30 years temperatures have risen by .2° — biggest change has occurred over continents
- straight rising trend line seems improbable... got to factor in a step change

present day investment

pay off

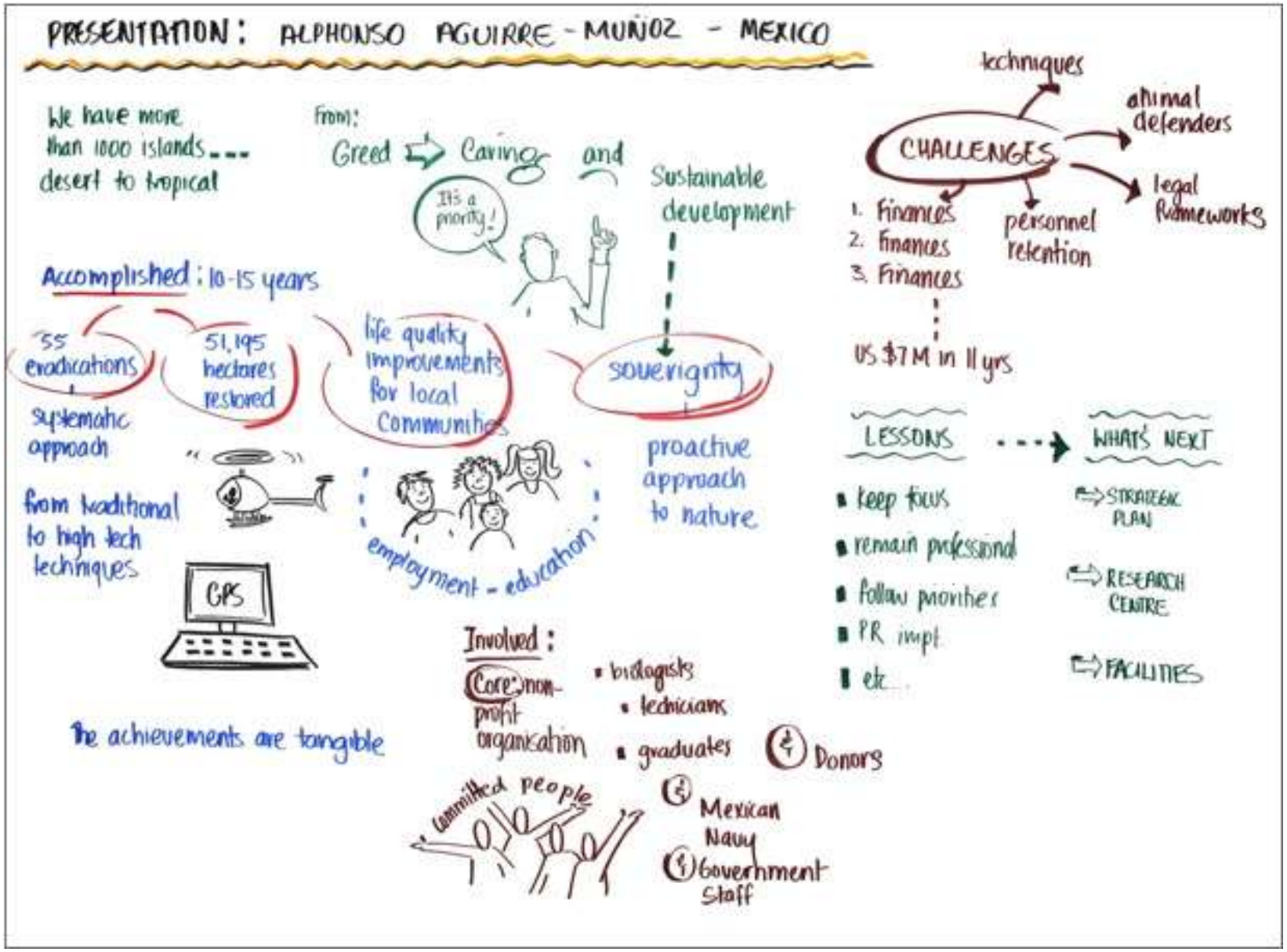
SUMMARY

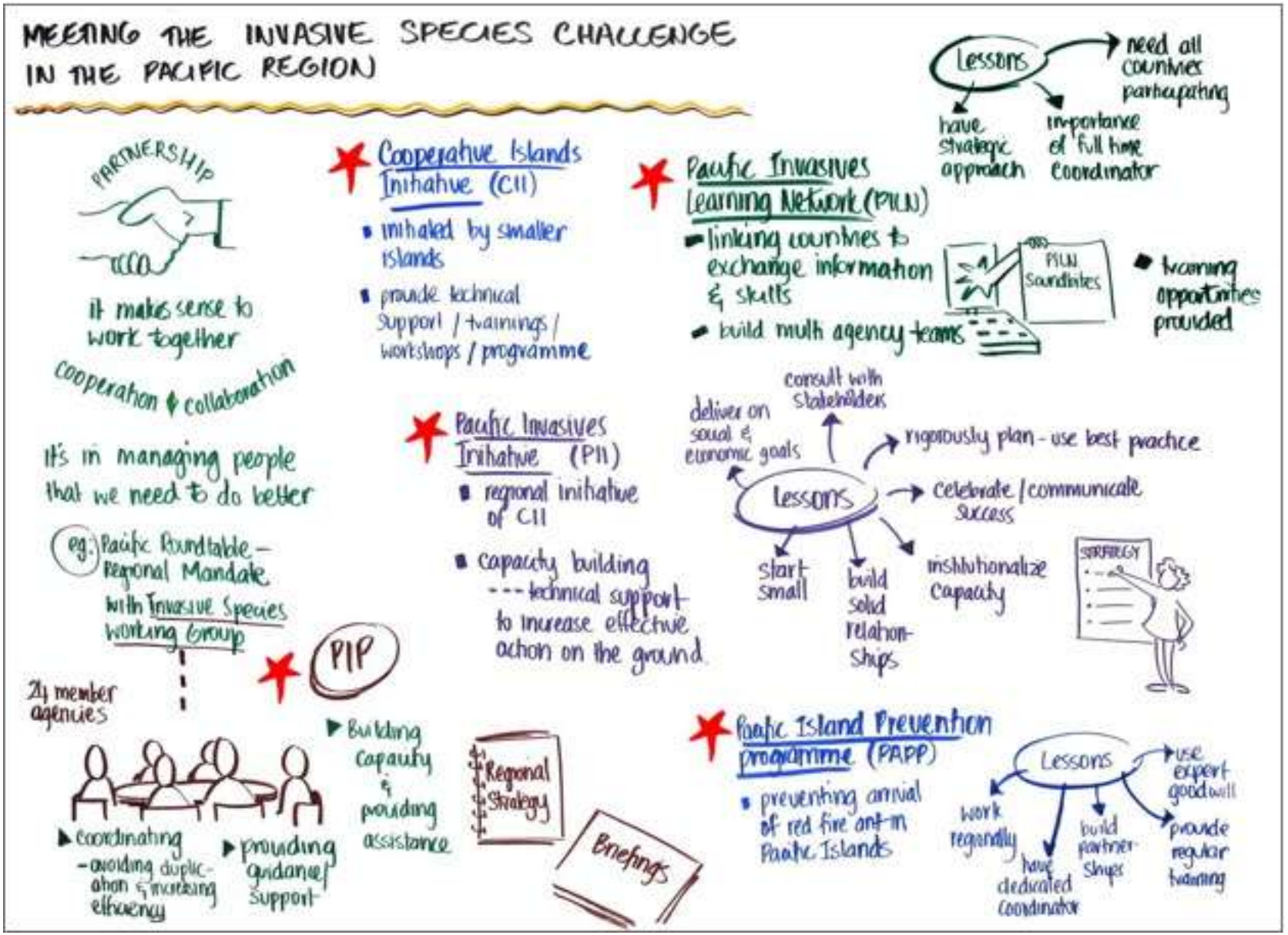
- Climate change issues have trumped biodiversity issues
- invasive species are a clear threat
- Climate change threats are nebulous & unpredictable (in regard to magnitude / timing)
- It's there but need to work through the issues
  - when?
  - how much?
  - whats practical?
- The real world is interactive — not all climate change will be bad

? Is the risk of climate change worth taking funding from other places?

see climate change for what it is!

- does anyone care enough about the problem to invest money or change behaviour? If so, by how much?
- How is money to be allocated? Does climate get a share of the fund?
- Climate may increase vulnerability ⋮ have to make a call on the unique features of climate change
- Got to expect some kick back from public


PRESENTATION: ALPHONSO AGUIRRE - MUÑOZ - MEXICO
We have more than 1000 islands... desert to tropical
From: Greed ⇨ Caring and Sustainable development
It's a priority!
Accomplished: 10-15 years
55 eradications
51,195 hectares restored
life quality improvements for local Communities
sovereignty
systematic approach
proactive approach to nature
from traditional to high tech techniques
employment - education
GPS
The achievements are tangible
Involved:
Core: non-profit organization
biologists
technicians
graduates
Donors
committed people
Mexican Navy
Government Staff
techniques
animal defenders
CHALLENGES
legal frameworks
1. Finances
2. Finances
3. Finances
personnel retention
US $7 M in 11 yrs
LESSONS
WHAT'S NEXT
keep focus
remain professional
follow priorities
PR impt
etc...
⇨ STRATEGIC PLAN
⇨ RESEARCH CENTRE
⇨ FACILITIES


MEETING THE INVASIVE SPECIES CHALLENGE IN THE PACIFIC REGION
PARTNERSHIP
it makes sense to work together
cooperation & collaboration
It's in managing people that we need to do better
eg. Pacific Roundtable - Regional Mandate with Invasive Species Working Group
21 member agencies
coordinating - avoiding duplication & increasing efficiency
providing guidance/ support
PIP
Building capacity & providing assistance
Regional Strategy
Briefings
Cooperative Islands Initiative (CII)
initiated by smaller islands
provide technical support / trainings / workshops / programme
Pacific Invasives Initiative (PII)
regional initiative of CII
capacity building --- technical support to increase effective action on the ground
Pacific Invasives Learning Network (PILN)
linking countries to exchange information & skills
build multi agency teams
PILN Soundbites
training opportunities provided
Lessons
need all countries participating
have strategic approach
importance of full time coordinator
Lessons
consult with stakeholders
deliver on social & economic goals
rigorously plan - use best practice
celebrate / communicate success
start small
build solid relationships
institutionalize capacity
STRATEGY
Pacific Island Prevention programme (PAPP)
preventing arrival of red fire ant in Pacific Islands
Lessons
use expert goodwill
work regionally
have dedicated coordinator
build partnerships
provide regular training

PACIFIC REGION, CONTINUED

Micronesia Regional Invasive Species Council (RISC)

- aim to increase coordination/ communication/etc
- directly consult / make recommendations to the Chief Executives of the Region

⇩

Chief Executives wrote to US Dept of Defence

⇩

DoFD funded biosecurity plan for entire micronesia

Kiribati --- importance of participating in partnerships

Conservation challenges
- low lying / remote / small islands

⇩

Phoenix Islands Protected Area ⇨ atoll restoration through pest removal

Birdlife International: Fiji

2006 - small operation to demonstrate pest eradication could be done - US $20,000

2007 - 2009 - surveyed 44 islands ... 16 of those treated US $25 million

2010 - surveying another 20-25 islands for further operations

Funding proposals in pipeline

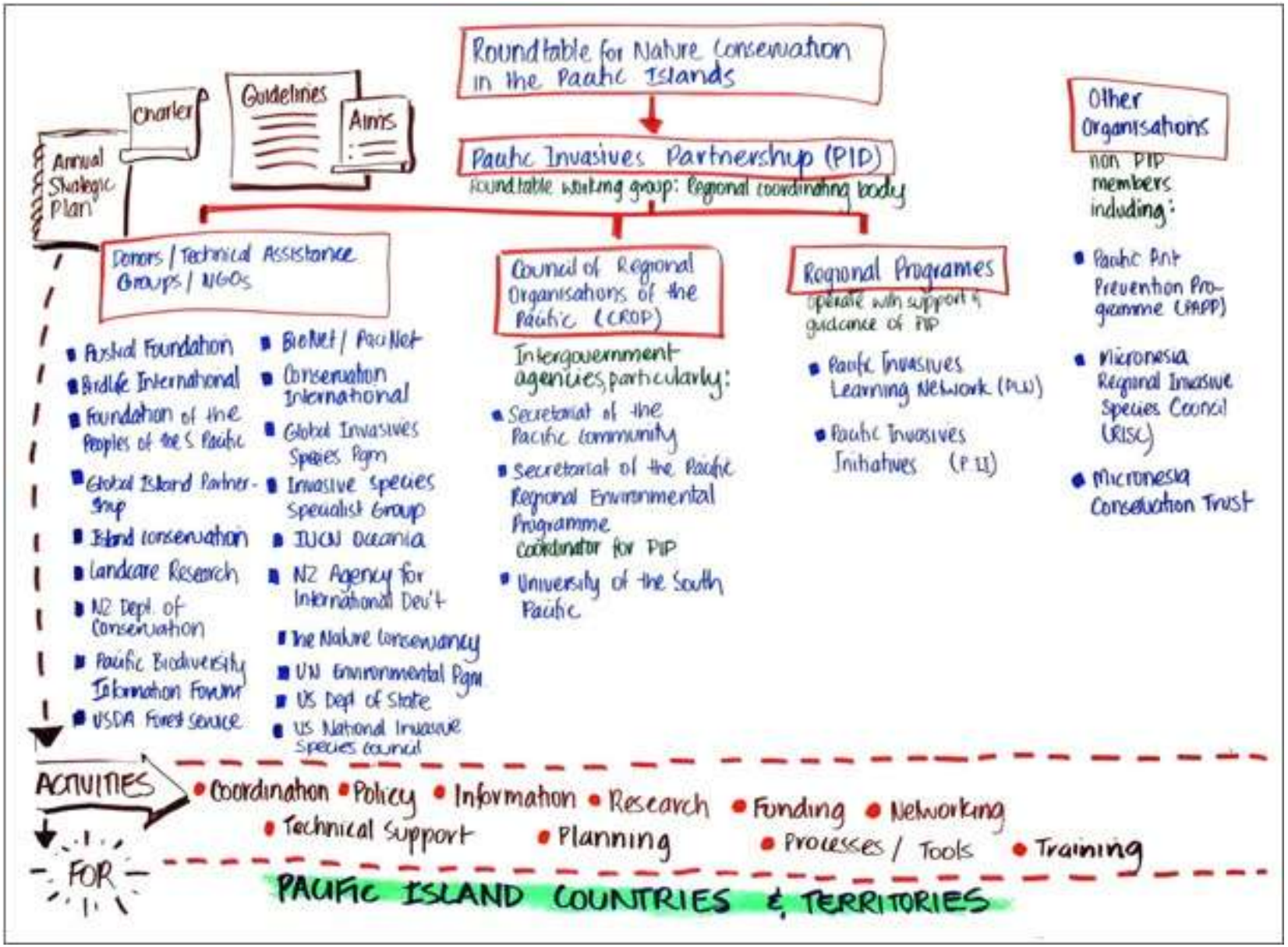
⇩

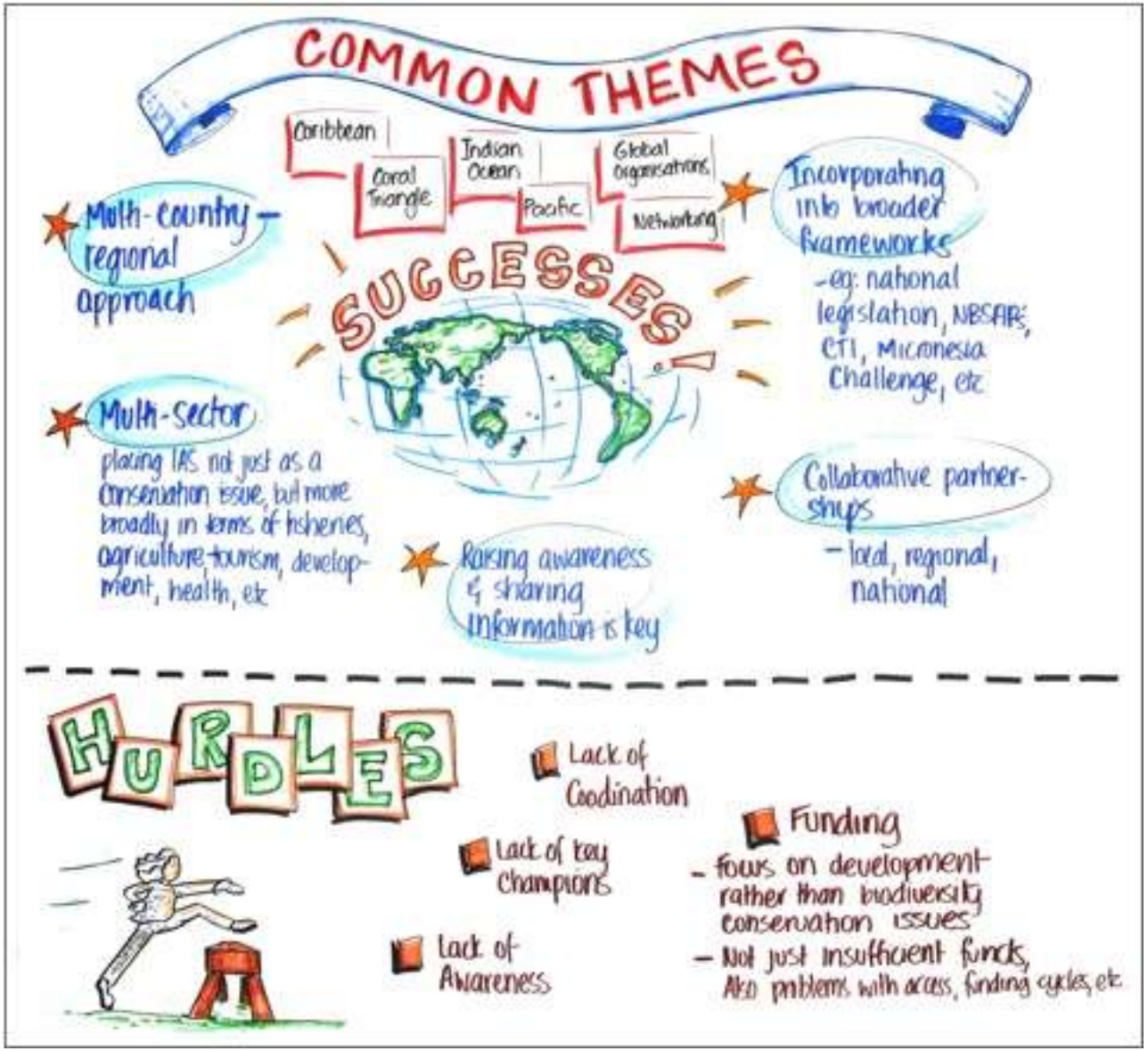
Importance of starting small

Critical Ecosystems Partnerships Fund

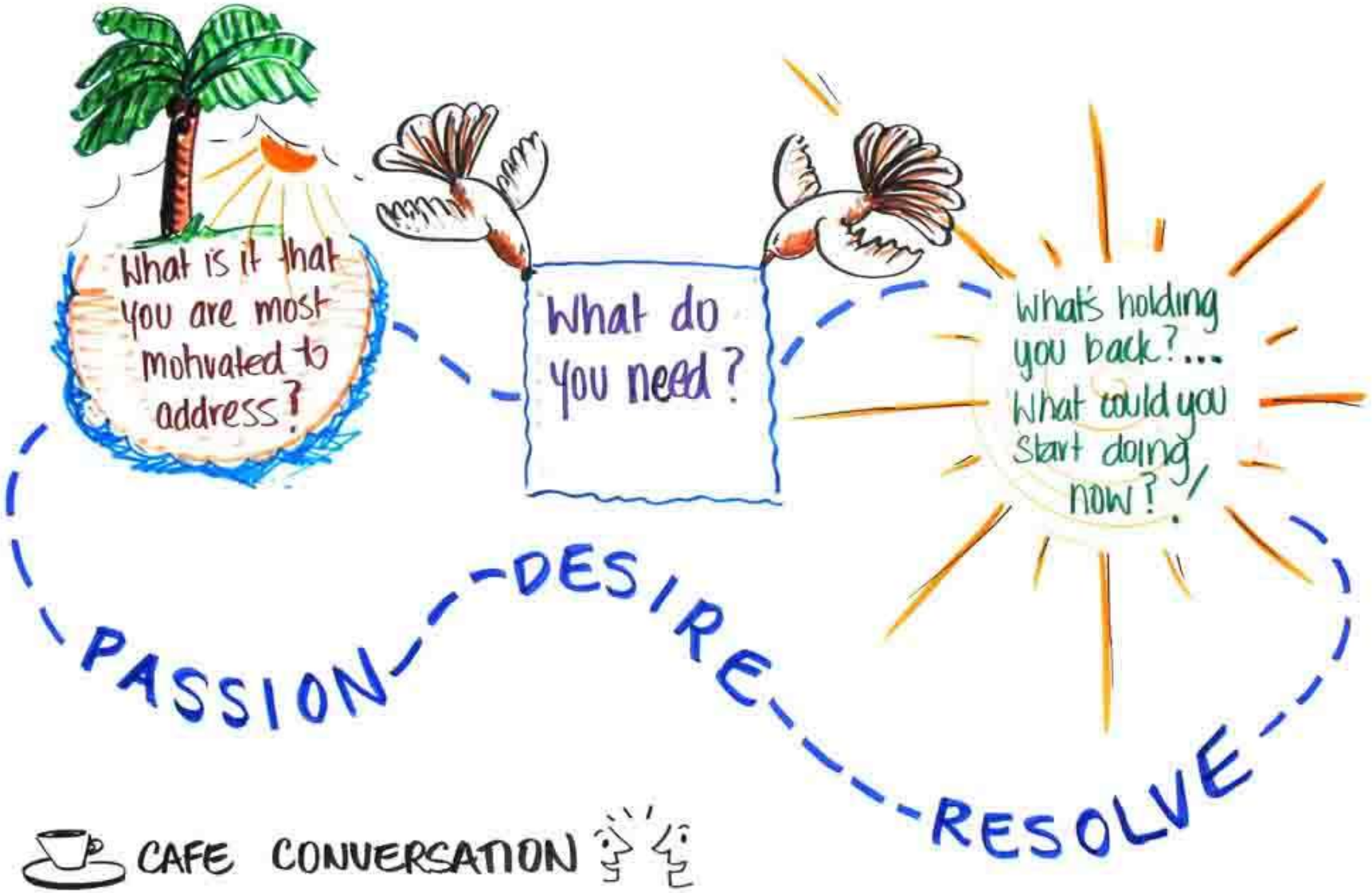
- website information

REGIONAL PARTNERSHIPS PRINCIPLES


Roundtable for Nature Conservation in the Pacific Islands
Charter
Guidelines
Aims
Annual Strategic Plan
Pacific Invasives Partnership (PIP)
Roundtable working group: Regional coordinating body
Other Organisations
non PIP members including:
Pacific Ant Prevention Programme (PAPP)
Micronesia Regional Invasive Species Council (MRISC)
Micronesia Conservation Trust
Donors / Technical Assistance Groups / NGOs
Axstral Foundation
Birdlife International
Foundation of the Peoples of the S. Pacific
Global Island Partnership
Island conservation
Landcare Research
NZ Dept. of Conservation
Pacific Biodiversity Information Forum
USDA Forest Service
BioNet / PacNet
Conservation International
Global Invasives Species Pgm
Invasive species Specialist Group
IUCN Oceania
NZ Agency for International Dev't
The Nature Conservancy
UN Environmental Pgm
US Dept of State
US National Invasive Species Council
Council of Regional Organisations of the Pacific (CROP)
Intergovernment agencies, particularly:
Secretariat of the Pacific Community
Secretariat of the Pacific Regional Environmental Programme
Coordinator for PIP
University of the South Pacific
Regional Programmes
Operate with support & guidance of PIP
Pacific Invasives Learning Network (PILN)
Pacific Invasives Initiatives (PII)
ACTIVITIES
Coordination
Policy
Information
Research
Funding
Networking
Technical Support
Planning
Processes / Tools
Training
FOR
PACIFIC ISLAND COUNTRIES & TERRITORIES

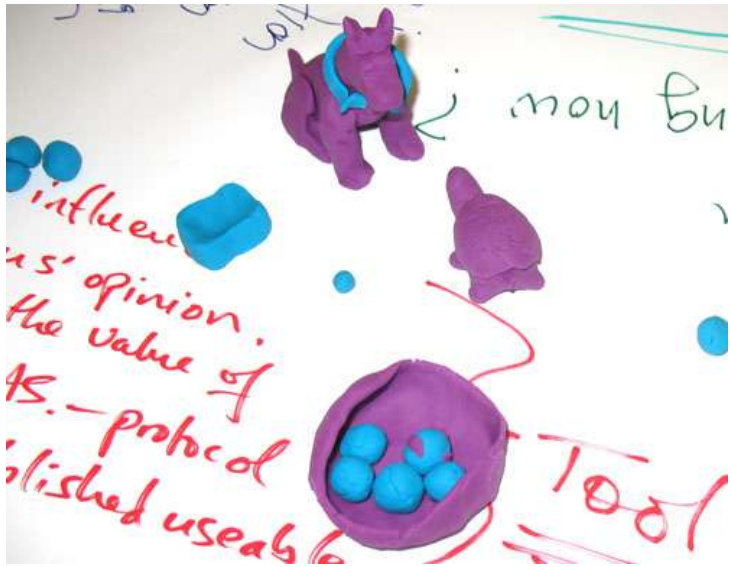

COMMON THEMES
Caribbean
Coral Triangle
Indian Ocean
Pacific
Global organisations
Networking
SUCCESSES
Multi-country – regional approach
Incorporating into broader frameworks
- eg: national legislation, NBSAPs, CTI, Micronesia Challenge, etc
Multi-Sector
placing IAS not just as a conservation issue, but more broadly in terms of fisheries, agriculture, tourism, development, health, etc
Raising awareness & sharing information is key
Collaborative partnerships
- local, regional, national
HURDLES
Lack of Coodination
Lack of key champions
Lack of Awareness
Funding
- focus on development rather than biodiversity conservation issues
- Not just insufficient funds, Also problems with access, funding cycles, etc

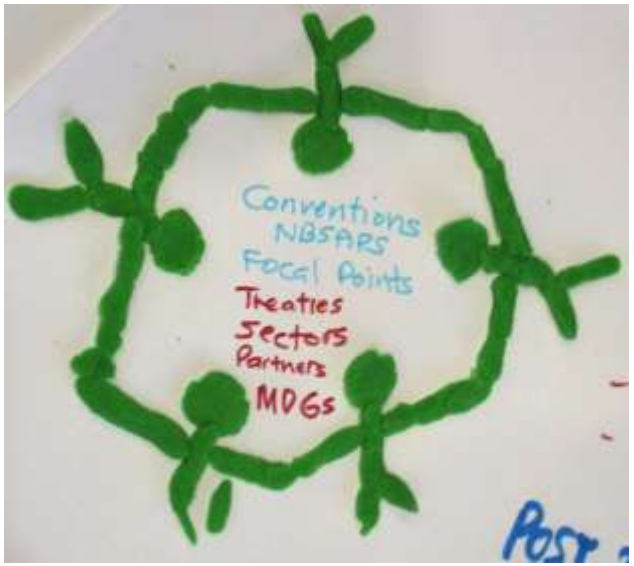

WRAP UP
a very successful day that has set the stage for the week
No Jet lag!
intensive workshops
need to focus on outcomes
DAY ONE
good presentations
• Mexico
• Pacific Region
maybe we shouldn't worry so much about climate change -- provocative presentation
reinforced importance of economics & bio diversity

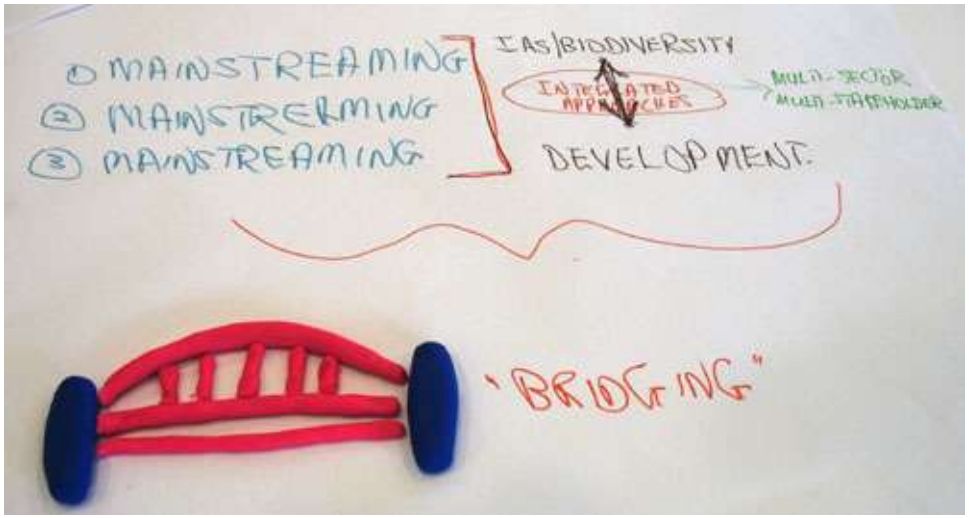


Graphic Recording: Mary Brake - www.reflectiongraphics.com - mbrake@reflectiongraphics.com


WORLD CAMPAIGN
TUI
POSSUM
STOAT
WIN THE BATTLE
WAR

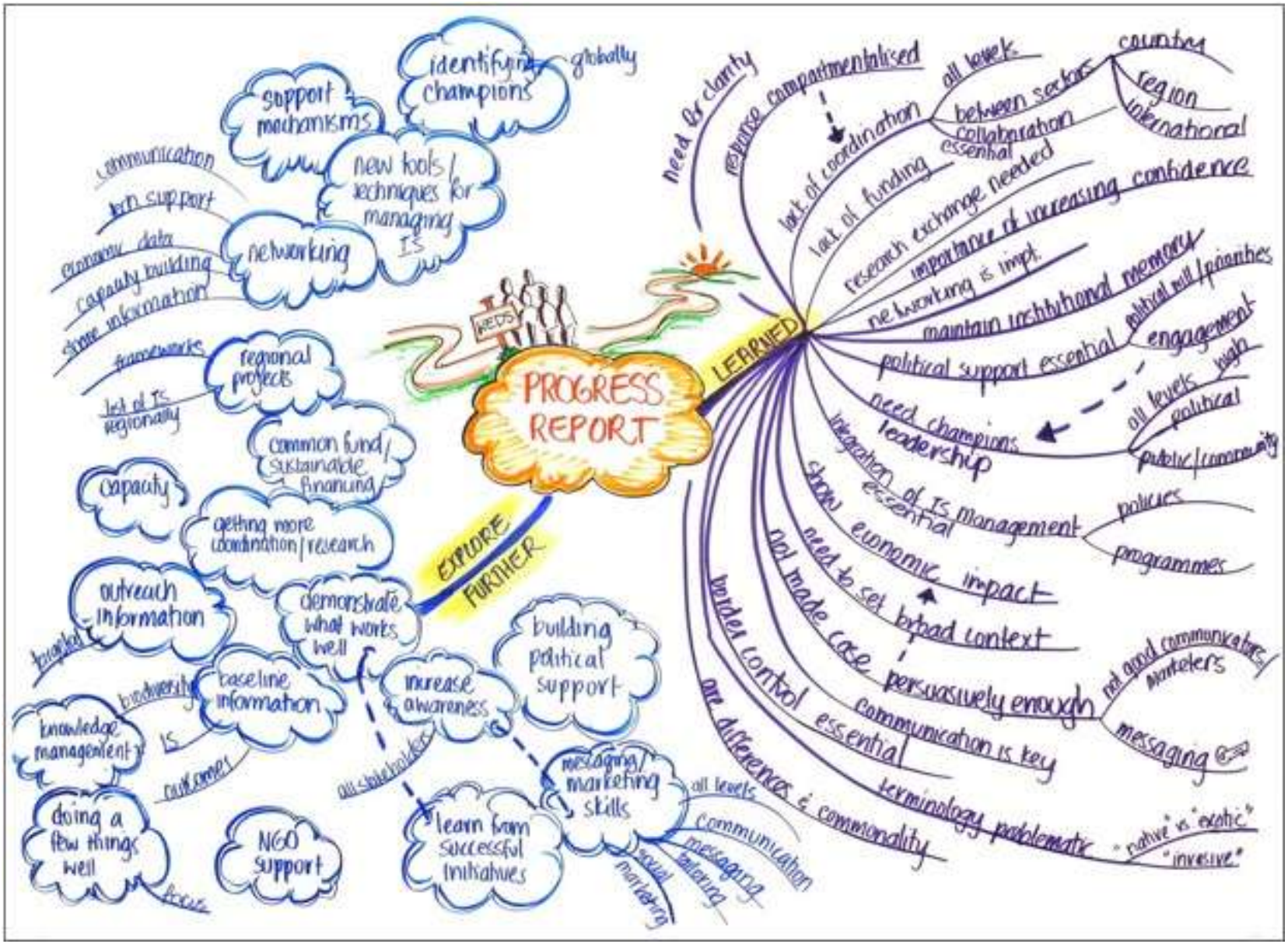

opinion.
the value of
Tool


Conventions
NBSAPS
Focal Points
Treaties
Sectors
Partners
MDGs


MAINSTREAMING
MAINSTREAMING
MAINSTREAMING
DEVELOPMENT
"BRIDGING"

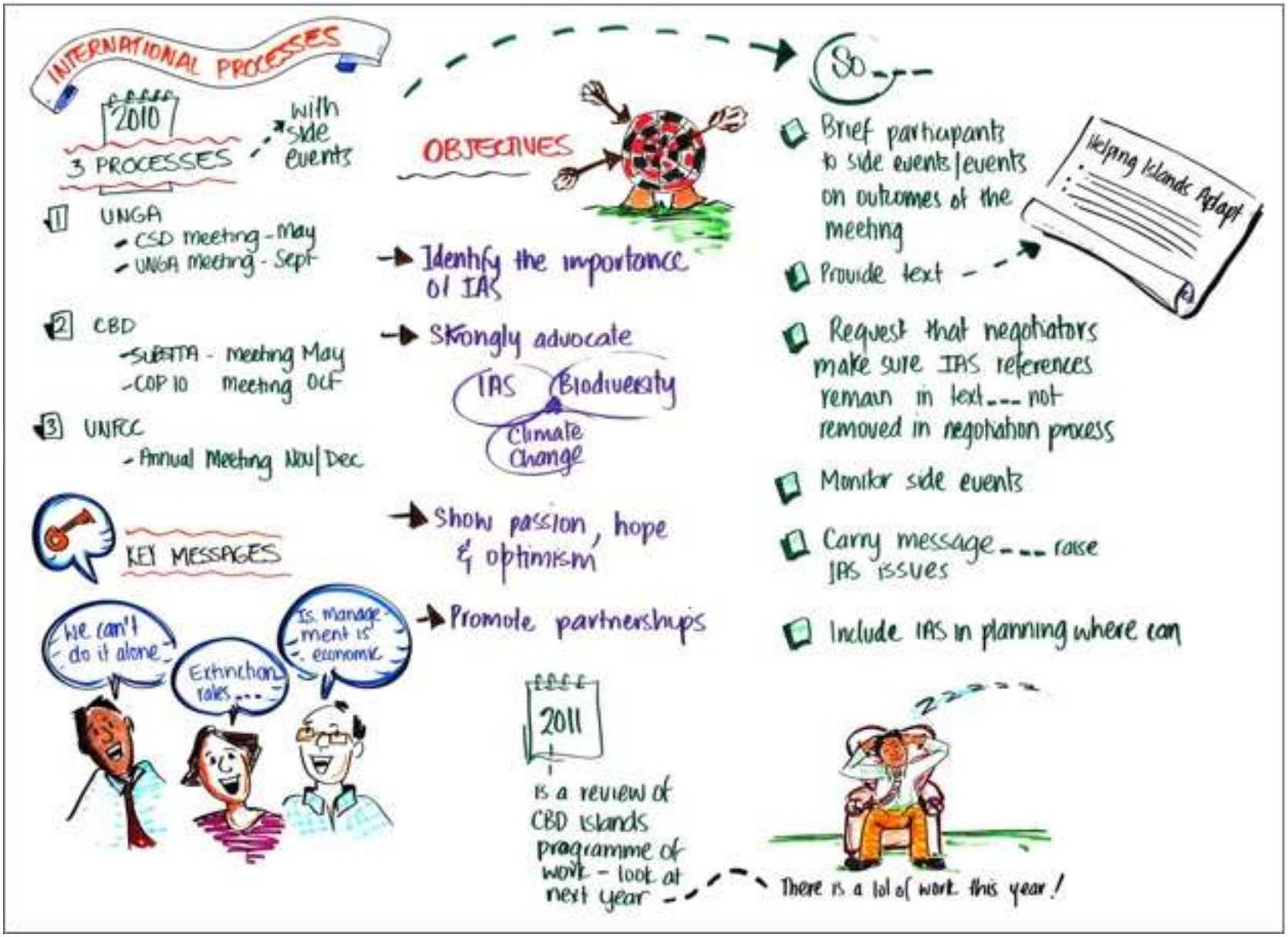

thanks for your deep discussion
WRAP UP
DAY 2
We don't want the same results over & over
we must do things differently
we must make the case for invasives
to achieve a different result
Graphic Recording: Mary Brake - www.reflectiongraphics.com - mbrake@reflectiongraphics.com

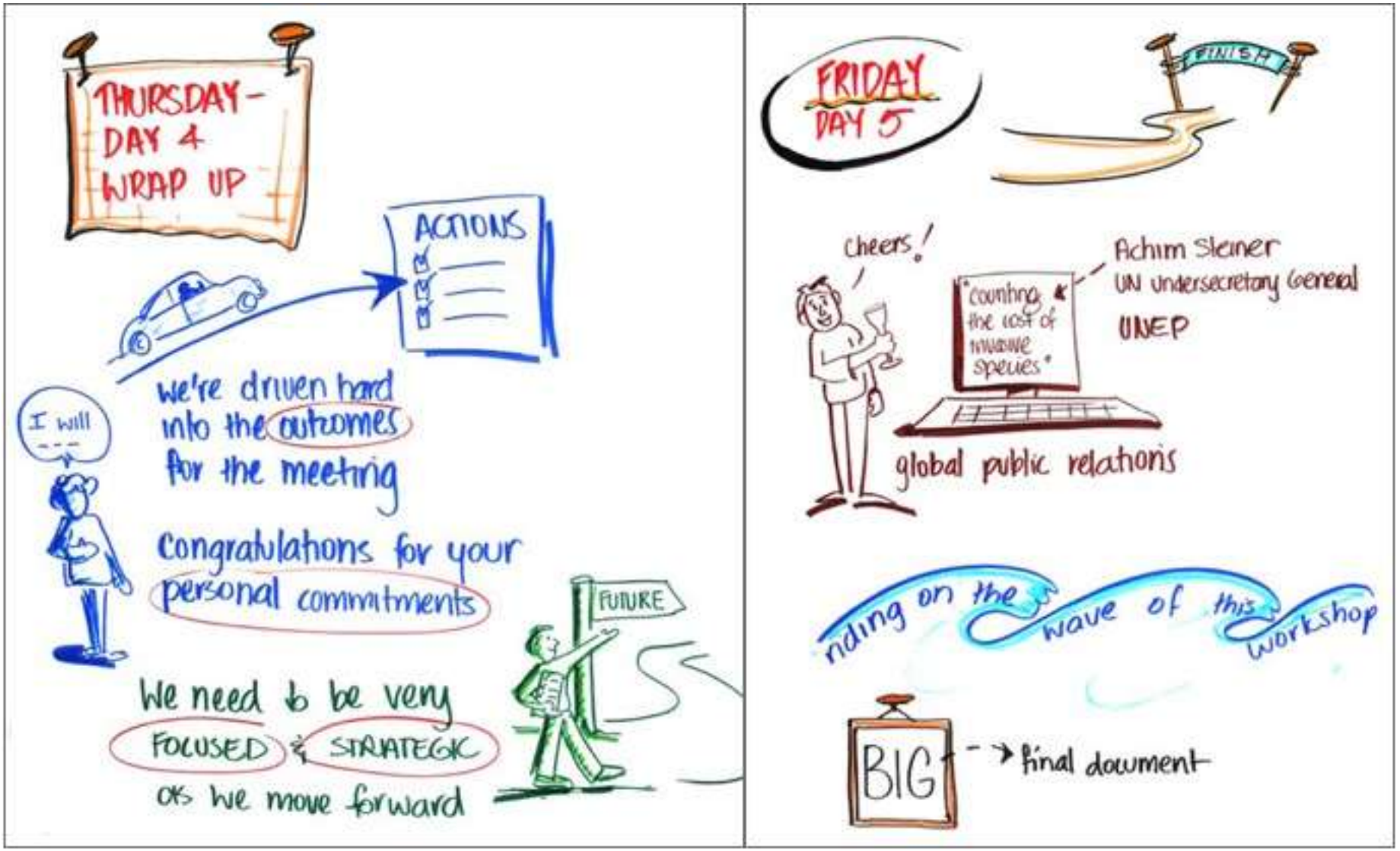

Why we are here!
to galvanize actions locally & regionally
to feed into international processes
LIST OF ACTIONS
regions
individuals
TEXT
to feed into international processes
Workshop Summary
WORKSHOP PROCEEDINGS
report
speakers notes
NETWORKS
CONNECTIONS
ACTIONS
DAY 3
INTRODUCTION
Our results will be feed into international processes:
biodiversity processes & UN General Assembly & climate change processes
the literature is clear
One key conclusions:
linked
Biodiversity
Climate Change
will exacerbate invasive species
AND
Healthy ecosystems are important in the mitigation & adaptation to climate change
Graphic Recording: Mary Brake - mbrake@reflectiongraphics.com


PROGRESS REPORT
LEARNED
EXPLORE FURTHER
identifying champions
globally
support mechanisms
new tools/techniques for managing IS
networking
communication
tech support
economic data
capacity building
share information
frameworks
lack of IS regionally
regional projects
common fund/sustainable financing
capacity
getting more coordination/research
outreach information
demonstrate what works well
baseline information
knowledge management
biodiversity
IS
customers
doing a few things well
focus
NGO support
increase awareness
building political support
all stakeholders
learn from successful initiatives
messaging/marketing skills
all levels
communication
messaging
tailoring
social marketing
need for clarity
response compartmentalised
lack of coordination
all levels
between sectors
collaboration essential
lack of funding
country
region
international
research exchange needed
importance of increasing confidence
networking is impt.
maintain institutional memory
political will/champions
political support essential
engagement
all levels
high
political
public/community
need champions
leadership
integration of IS management essential
policies
programmes
show economic impact
need to set broad context
not made case persuasively enough
communication is key
not good communicators
marketers
messaging
borders control essential
terminology problematic
native vs "exotic"
"invasive"
are differences & commonality


To:
Kingsgate Island, Auckland, NZ
Engaging the top will make a difference. Let's make the rock smaller & the hill less steep!
To:
Pohutakawa Forest
We can educate the public ---the community
To:
Biosecurity Dog "Jack"
To:
Is a deep value
It is a responsibility for our children
Oyster catchers and Fantail


THURSDAY
DAY FOUR
Lets commit to make one champion in each country----
OUTPUTS
Thanks to Dept. of Conservation for our excellent event yesterday
--Someone in your sphere of influence
Helping Islands Adapt
Graphic Recording: Mary Brake - www.reflectiongraphics.com - mbrake@reflectiongraphics.com


INTERNATIONAL PROCESSES
2010
3 PROCESSES
with side events
1 UNGA
- CSD Meeting - May
- UNGA Meeting - Sept
2 CBD
- SBSTTA - Meeting May
- COP 10 Meeting Oct
3 UNFCC
- Annual Meeting Nov/Dec
KEY MESSAGES
We can't do it alone
Extinction rates...
Is management is economic
OBJECTIVES
Identify the importance of IAS
Strongly advocate
IAS
Biodiversity
Climate Change
Show passion, hope & optimism
Promote partnerships
2011
is a review of CBD Islands programme of work - look at next year
So...
Brief participants to side events/events on outcomes of the meeting
Provide text
Helping Islands Adapt
Request that negotiators make sure IAS references remain in text... not removed in negotiation process
Monitor side events
Carry message... raise IAS issues
Include IAS in planning where can
There is a lot of work this year!


THURSDAY - DAY 4 WRAP UP
ACTIONS
we're driven hard into the outcomes for the meeting
I will ---
Congratulations for your personal commitments
FUTURE
We need to be very FOCUSED & STRATEGIC as we move forward
FRIDAY DAY 5
FINISH
Cheers!
"counting the cost of invasive species"
Achim Steiner UN Undersecretary General UNEP
global public relations
nding on the wave of this workshop
BIG
final document


CONFERENCE FEB 2010
ON ISLAND INVASIVES
cbb.org
Follow on from Turning the Tide" conference 2008
most discussion re: invasive mammals but also birds, fish, plants
Is flood of eradications happening now - people doing it with lot more confidence
Now increasing need for eradications on habited islands
Need to be able to show economic benefits & need to follow up to show we are actually getting benefits
Need to move to next stage
scale
bigger / bigger eradications
Developing best practice
Need to take advantage of "failures"
Learning
Surveillance is important - when can we say eradication is successful
success
People are important in all of this
the community

Dramatically improve invasive species management on islands

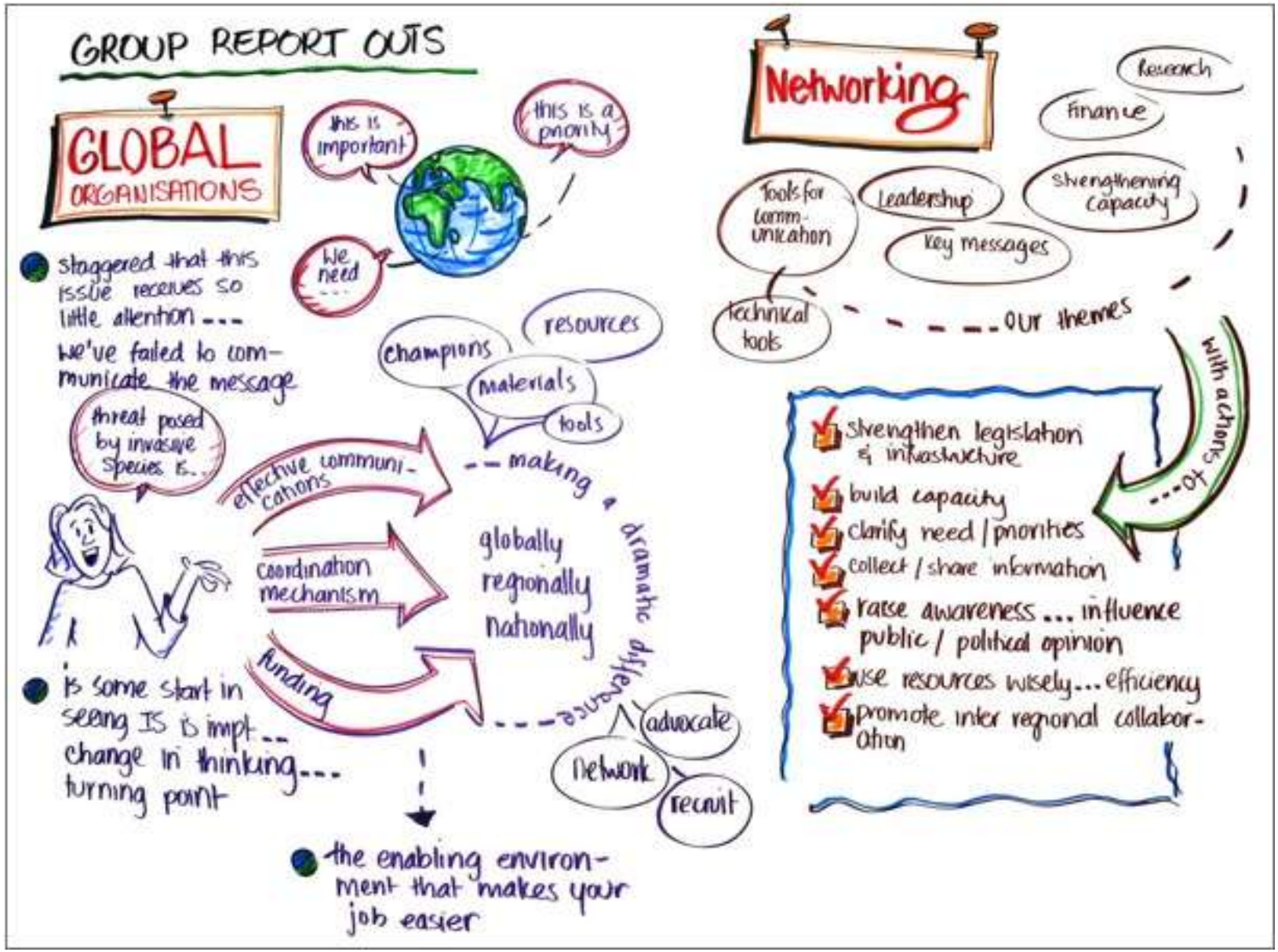


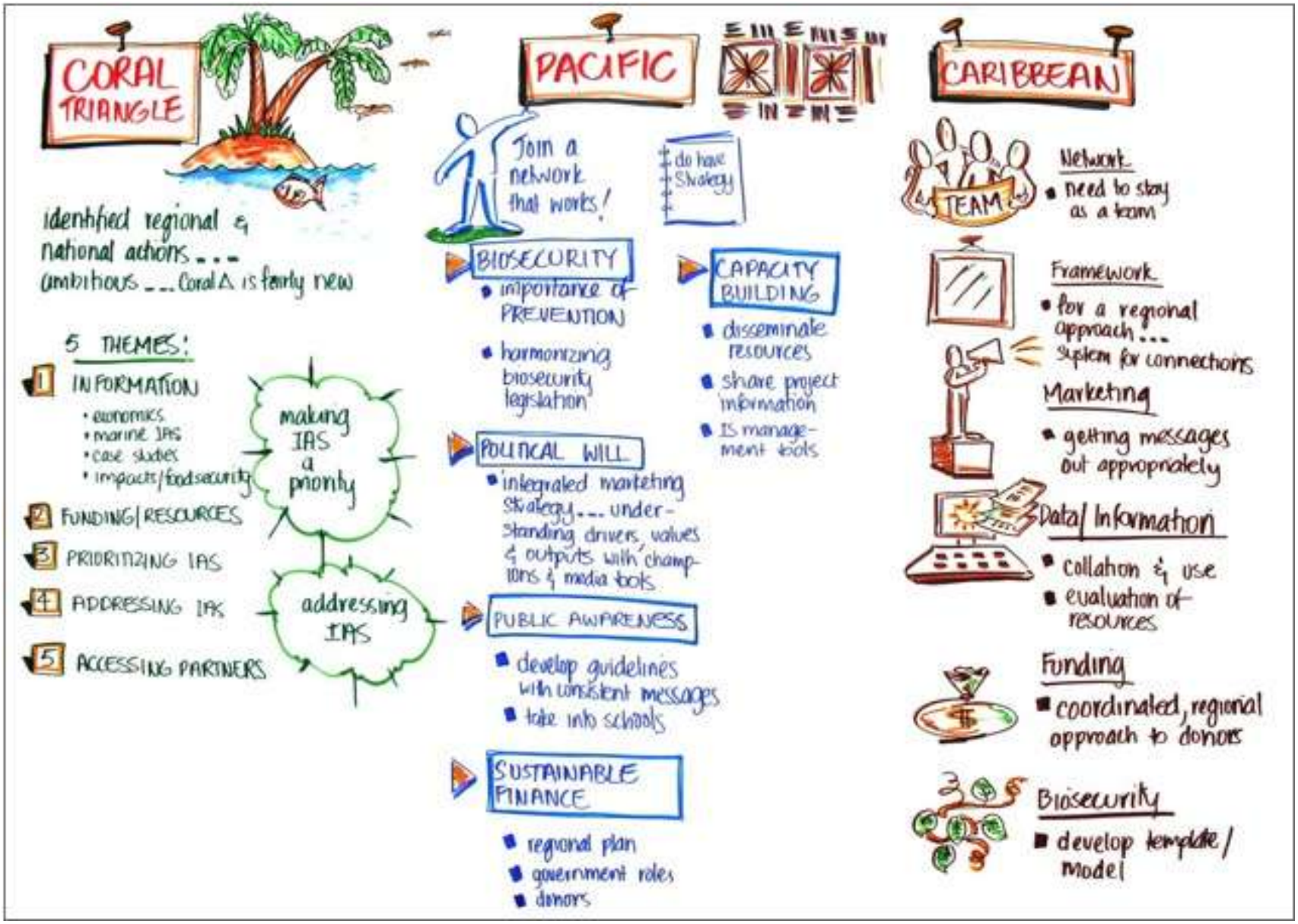


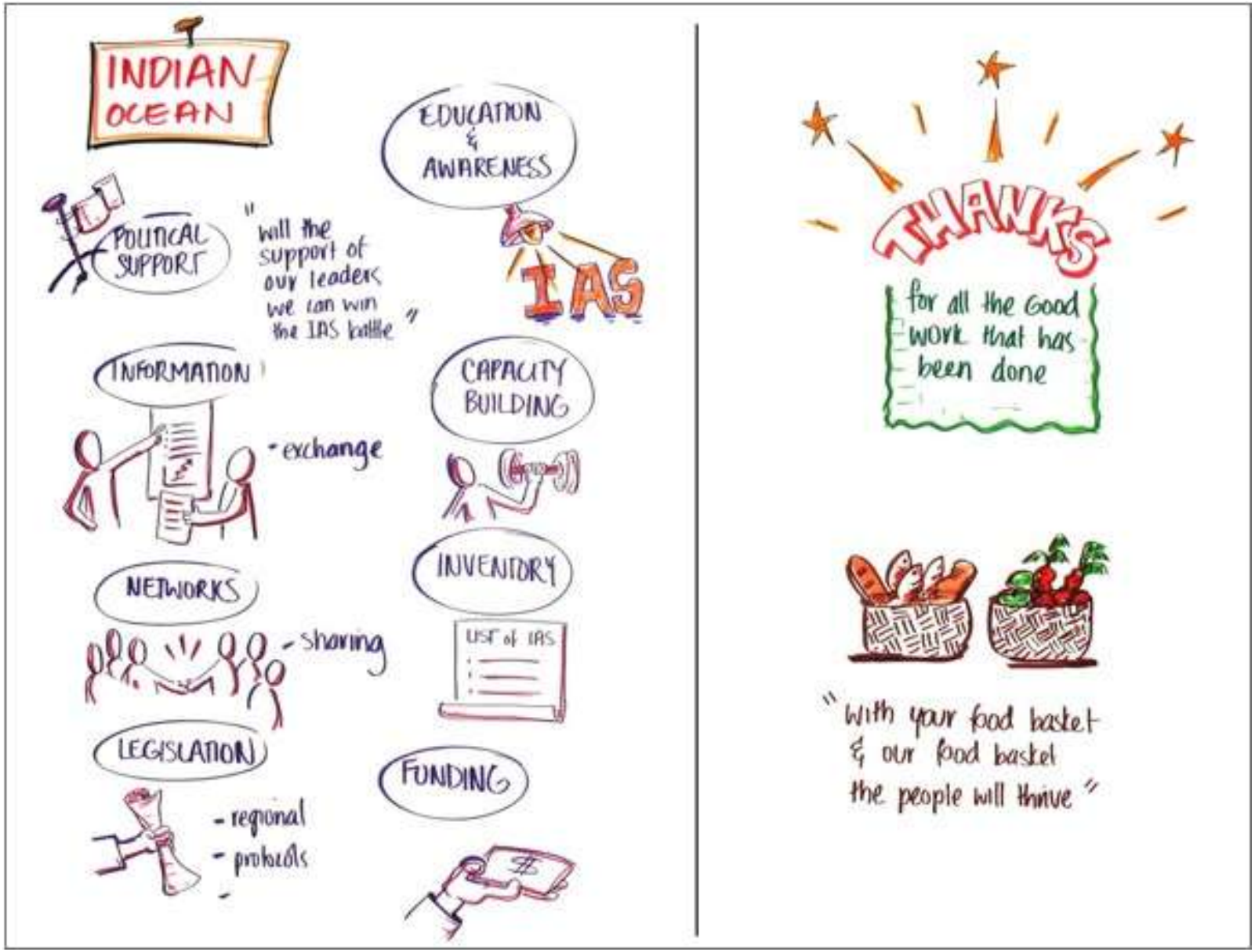


CARIBBEAN	CORAL TRIANGLE	INDIAN OCEAN	PACIFIC	GLOBAL ORGANISATIONS	NETWORKING
secure funding	secure funding & resources	seek funding	secure sustainable funding	increase funding for IAS on islands	create financial initiatives
conduct marketing		increase education & awareness	improve public awareness - build social will	develop effective communications	identify & disseminate messages
		▪ generate political support ▪ develop & harmonize legislation	build political will		
develop, collate & coordinate data, information & tools	generate & exchange information & research	develop inventories			▪ promote research ▪ create technical tools
create regional framework	increase & improve networks & partnerships	create networks & increase coordination & exchange	network regionally	Have coordinated mechanism to strengthen interconnected partnerships	
					support & improve leadership
		Build capacity	Build capacity		strengthen capacity
improve biosecurity	implement & monitor IAS		improve biosecurity		

Graphic Recording: Mary Brake - www.reflectiongraphics.com - mbrake@reflectiongraphics.com


GROUP REPORT OUTS
GLOBAL ORGANISATIONS
this is important
this is a priority
we need ...
staggered that this issue receives so little attention ... we've failed to communicate the message
threat posed by invasive species is...
champions
resources
materials
tools
effective communications
coordination mechanism
funding
making
globally
regionally
nationally
dramatic difference
advocate
network
recruit
is some start in seeing IS is impt... change in thinking... turning point
the enabling environment that makes your job easier
Networking
Research
Finance
Strengthening capacity
Leadership
Tools for communication
Key messages
technical tools
Our themes
with actions to...
strengthen legislation & infrastructure
build capacity
clarify need / priorities
collect / share information
raise awareness ... influence public / political opinion
use resources wisely... efficiency
promote inter regional collaboration


CORAL TRIANGLE
identified regional & national actions...
ambitious... Coral A is fairly new
5 THEMES:
1 INFORMATION
• economics
• marine IAS
• case studies
• impacts/food security
2 FUNDING/RESOURCES
3 PRIORITIZING IAS
4 ADDRESSING IAS
5 ACCESSING PARTNERS
making IAS a priority
addressing IAS
PACIFIC
Join a network that works!
do have Strategy
BIOSECURITY
• importance of PREVENTION
• harmonizing biosecurity legislation
CAPACITY BUILDING
• disseminate resources
• share project information
• IS management tools
POLITICAL WILL
• integrated marketing strategy... understanding drivers, values & outputs with champions & media tools
PUBLIC AWARENESS
• develop guidelines with consistent messages
• take into schools
SUSTAINABLE FINANCE
• regional plan
• government roles
• donors
CARIBBEAN
TEAM
Network
• need to stay as a team
Framework
• for a regional approach...
• system for connections
Marketing
• getting messages out appropriately
Data/Information
• collation & use
• evaluation of resources
Funding
• coordinated, regional approach to donors
Biosecurity
• develop template/model


INDIAN OCEAN
EDUCATION & AWARENESS
POLITICAL SUPPORT
" will the support of our leaders we can win the IAS battle "
IAS
INFORMATION
- exchange
CAPACITY BUILDING
NETWORKS
- sharing
INVENTORY
List of IAS
LEGISLATION
- regional
- protocols
FUNDING
THANKS
for all the Good work that has been done
" With your food basket & our food basket the people will thrive "

Appendix 5 - Participants' plenary report to the CBD SBSTTA 14

The following pages are the participants' plenary report from the Helping Islands Adapt workshop, as provided to the 14th Subsidiary Body on Scientific, Technical and Technological Advice to the Convention on Biological Diversity, as Information paper 29:

http://www.cbd.int/doc/meetings/sbstta/sbstta-14/information/sbstta-14-inf-29-en.doc

Please note that the list of participants provided in this appendix identifies the countries from which participants came. It does not imply that each was representing that country.

CBD

UNEP

Convention on Biological Diversity

Distr.
GENERAL

UNEP/CBD/SBSTTA/14/INF/29
29 April 2010

ORIGINAL: ENGLISH

SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE
Fourteenth meeting
Nairobi, 10-21 May 2010
Item 4.4 of the provisional agenda*

REPORT OF THE WORKSHOP "HELPING ISLANDS ADAPT – A WORKSHOP ON REGIONAL ACTION TO COMBAT INVASIVE ALIEN SPECIES ON ISLANDS TO PRESERVE BIODIVERSITY AND ADAPT TO CLIMATE CHANGE" (11-16 APRIL 2010, AUCKLAND, NEW ZEALAND)

Note by the Executive Secretary

1. At its ninth meeting, the Conference of the Parties (COP) to the Convention on Biological Diversity, in decision IX/4 B paragraph 6, welcomed the offer of New Zealand to host a technical workshop, in collaboration with the Executive Secretary, to address how experiences and lessons learned on regional coordination to combat invasive alien species in islands, particularly the Pacific Invasives Initiative, can inform, strengthen and build regional initiatives to support the implementation of the Convention, in particular the programme of work on island biodiversity, related to the prevention and management of invasive alien species.

2. Accordingly, the Executive Secretary is circulating herewith, for the information of participants in the fourteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, the report of the Workshop as submitted by the New Zealand Government and partner organisations.

3. The report is circulated in the form and language in which it was received by the Secretariat.

* UNEP/CBD/SBSTTA/14/1.

'Far too many governments have failed to grasp the scale of the threat from invasive species.'[i]
Achim Steiner, UN Environment Programme Executive Director

Helping Islands Adapt: A Workshop on Regional Action to Combat Invasive Alien Species on Islands to Preserve Biodiversity and Adapt to Climate Change highlighted successes, deepened connections within regions and facilitated the exchange of experiences across regions. While discussions outlined significant obstacles to invasive alien species management[ii] on islands, they also showcased how targeted successes have led to major gains for conservation and development. Collaboration across developmental and environmental sectors and sustained support are critical to success in this field. Exciting new initiatives are developing to demonstrate large-scale management of invasive alien species across island regions. Next steps to accelerate and expand national, regional, and international action and successful outcomes were agreed. The workshop outcomes will help drive effective management of invasive alien species threats to island livelihoods and biodiversity at local, national, regional and international levels.

Workshop background
The workshop was held from 11 to 16 April 2010, in Auckland, New Zealand. Hosted by the Government of New Zealand with support from a number of partner organisations and countries[iii], the meeting was "welcomed" in Decisions under the Convention on Biological Diversity (CBD) relating to invasive alien species and island biodiversity[iv], and builds on efforts under the Cooperative Islands Initiative, a partnership launched at the World Summit for Sustainable Development and the CBD's 6th Conference of the Parties in 2002[v]. Eighty-two participants from 24 countries and territories, and 29 national, regional and international organisations attended the workshop, which focussed on four major island regions—the Caribbean, the Coral Triangle[vi], the Indian Ocean and the Pacific—as well as on international support by organisations and networks.

The workshop aimed to identify and strengthen mechanisms that enable effective, adaptive and sustainable invasive alien species management for island nations. Outcomes included:
1) *Lessons* from regional collaboration and coordination.
2) *Actions* to strengthen invasive alien species management.
3) *Networks* and resources to facilitate learning and implementation.
4) *Key steps* within international processes to catalyse and support regional efforts.

Impacts on islands
Invasive alien species are recognised as one of the major drivers of biodiversity loss worldwide.[vii] They also have significant, direct impacts upon many other sectors, including economic development, health, agriculture, tourism and trade. Pimentel et al. (2001)

/...

estimated that the global cost of invasive alien species impacts (including plants, mammals, birds, reptiles, amphibians, fish, arthropods, molluscs, livestock diseases, and human diseases including HIV Aids and influenza) totals around US$1.4 trillion annually—representing 5% of the world economy at the time.[viii]

There are over 180,000 islands worldwide, which cover the full range of habitats. These span small island nations, archipelagic countries and countries with islands. Together, islands cover only 5% of the Earth's land surface, yet they are home to approximately 20% of all known terrestrial species and almost half of all endangered species. While highly diverse, island ecosystems are particularly fragile and vulnerable due to their small size, relative isolation and disproportionate susceptibility to the overharvesting of resources, natural disasters and other major drivers of biodiversity loss, such as climate change and invasive alien species. In fact, 70–95% of the world's terrestrial species extinctions have occurred on islands[ix], and most of these (55–67%) were directly caused or facilitated by invasive alien species[x,xi]. Assessments also show that only 16% of the world's marine ecoregions for which we have available data are invasive-free[xii]; the major pathways for invasive species introduction are ballast water, hull fouling and aquaculture introductions.

Island biodiversity is also under serious threat from another major driver of biodiversity loss—climate change—which will interact with biological invasions and other processes in complex ways.[xiii] Observed impacts such as sea level rise and rainfall changes threaten to damage ecosystem health and may accelerate species loss,[xiv] undermining conservation efforts worldwide. Biodiversity can also be an important asset in addressing climate change through ecosystem-based mitigation and adaptation.[xv, xvi] For example, there is strong evidence that healthy ecosystems are more resilient to the impacts of climate change, thereby helping to buffer resident communities from such impacts.[xvii] By fostering ecosystem health, invasive alien species management represents an effective form of Ecosystem-Based Adaptation (EBA) to climate change.

Lessons from island regions

Participants openly shared the successes and challenges experienced in the coordination and implementation of invasive alien species management in their respective regions. In spite of the geographic, cultural, political and economic differences across islands and island regions, many common themes emerged:

- **Regional and global collaboration and initiatives**—These play an important role in building capacity and supporting national implementation to address the threat of invasive alien species to island biodiversity. Cooperation and information sharing within and across regions can serve as a valuable mechanism for South–South cooperation.
- **Multi-sectoral concern**—Management of invasive alien species is an issue that needs to be framed across all majors sectors—biodiversity, agriculture, tourism, fisheries, forestry, trade and health. It affects environmental and development priorities, as well as cultural values. The interdependence of such sectors calls for greater mainstreaming of invasive alien species management on islands.
- **Integration of invasive alien species in biodiversity, climate change and development plans**—Prioritisation in regional frameworks and national legislation can create an enabling environment to support and empower existing management potential on islands.
- **Messaging and engagement of communications professionals**—Improved messaging and engagement of conservation professionals are needed to raise

awareness and generate support for the importance of invasive alien species management and social values around the resources they threaten.

- **Economic, environmental, social and cultural costs**—Analyses of the costs of invasive alien species on islands can help decision makers to identify management priorities.
- **Champions**—These are needed to advance management efforts on islands, and to catalyse further support at the regional and international levels.
- **Challenges**—Numerous challenges to regional collaboration and national action on invasive alien species and islands were identified, including human and financial resources; coordination across sectors; border security and enforcement; community engagement; and enabling policy and legal frameworks, especially for Small Island Developing States (SIDS), overseas territories, dependencies and other insular jurisdictions.
- **New initiatives**—Several initiatives with potential to demonstrate large-scale management of invasive alien species across island regions were identified, including the multi-agency Pacific Invasives Partnership; the new Caribbean GEF project on *Mitigating the Threats of Invasive Alien Species in the Insular Caribbean*; the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security; the comprehensive Micronesia Biosecurity Plan; and the Western Indian Ocean Challenge.
- **GISP and GLISPA**—Invasive alien species on islands are a top priority for the Global Invasive Species Programme (GISP) and the Global Island Partnership (GLISPA), which are working together to provide countries and regions with global support, guidance and assistance with implementation.

Actions

Overall, the regional and global working groups identified six major actions that are critical to helping islands combat invasive alien species and adapt to climate change, and that require immediate attention:

- Increase coordination and integrated action on invasive alien species across key sectors through national, regional and global networks and partnerships, including within climate change adaptation plans and sustainable development plans.
- Engage public and private sector leaders to champion invasive alien species management on islands.
- Build public support through effective communication of the impacts of invasive alien species on island economies, people and environments.
- Improve biosecurity systems to address the full range of invasive threats to islands.
- Accelerate the use of successful invasive alien species approaches through the exchange of experience, skills, information, taxonomy, data and tools between islands.
- Increase sustained funding and capacity to implement invasive alien species activities.

Working groups identified more specific actions to dramatically improve invasive alien species management in their respective regions. Additionally, each participant identified actions he or she would undertake to advance this work.

Implementation

Workshop participants identified mechanisms and supporting structures that would help implement the actions outlined above. These included:

- Briefing delegates attending relevant international fora on the workshop outcomes, and highlighting the importance of invasive alien species management in relation to both islands and climate change. Fora include the CBD, the Commission on Sustainable Development (CSD), the UN General Assembly (UNGA), the UN Framework Convention on Climate Change (UNFCCC), and the International Plant Protection Convention (IPPC).
- Taking advantage of upcoming regional and international meetings to follow up on actions identified at the workshop (e.g. CBD's inter-agency meeting with other international conventions and organisations, Pacific Invasives Partnership meeting).
- Identifying and engaging key champions in international and regional organisations and national governments to represent the issue of invasive alien species management.
- Establishing or strengthening mechanisms to share lessons learned within and across regions and government departments, including learning exchanges, inventories, reports and online portals.
- Engaging civil society organisations including national, regional and international NGOs to help carry messages and raise the profile of invasive alien species management.

Recommendations

The workshop identified priorities for consideration by international fora including the CBD, CSD, UNGA and the UNFCCC. Suggested actions called for were:

- Recognition of the inter-linkages between climate change and invasive alien species, and their combined impacts on island biodiversity, as well as the role of invasive alien species management in mitigating the effects of climate change by enhancing ecosystem resilience and adaptation.
- Enhanced political, financial and technical support for regional collaboration and initiatives addressing invasive alien species, to facilitate implementation of national obligations on protecting island biodiversity and ensuring sustainable livelihoods.
- A mechanism or process to facilitate the sharing of experiences and lessons learned on invasive alien species management within and across islands regions, particularly as a means to enhance South–South cooperation.
- Improved linkages to overseas territories, dependencies and other insular jurisdictions, with a view to strengthening management efforts and effective funding instruments.
- Analysis of progress and lessons learned on regional island cooperation to manage the threat of invasive alien species for consideration under the CBD's review of the Island Biodiversity Programme of Work scheduled for the 11th meeting of the Conference of Parties (COP11) and further work on the Mauritius Strategy for implementation of the Barbados Programme of Action (BPOA) for Small Island Developing States.
- Focus on invasive species as drivers of biodiversity loss in the CBD Strategic Plan and post-2010 targets, as well as on significant funding to address invasive alien species and other major direct drivers of biodiversity loss on islands.

For further information about the workshop, please refer to www.helpingislandsadapt.org.nz.

[i] BBC, 13 April 2010. Counting the costs of alien invasions (http://news.bbc.co.uk/2/hi/science/nature/86155398.stm).

[ii] Management includes prevention, control and eradication.

[iii] Financial and technical support for the workshop was provided by the Governments of New Zealand, Australia, France, Germany, Italy, Spain and the United Kingdom; the Secretariat of the Convention on Biological Diversity; the Nature Conservancy; the Pacific Invasives Initiative; the Global Island Partnership; the Global Invasive alien species Programme; IUCN; and CarbonZero (Landcare Research).

[iv] CBD Decisions IX/4 and IX/21.

[v] COP 6 Decision on CII (VI/23-19).

[vi] The Coral Triangle includes Indonesia, Malaysia, the Philippines, Timor-Leste, Papua New Guinea and the Solomon Islands.

[vii] Millennium Ecosystem Assessment 2005: Ecosystems and Human Well-being: Synthesis. Island Press.

[viii] Pimentel, D.; McNair, S.; Janecka, J.; Wightman, C.; Simmonds, C.; O'Connell, C.; Wong, L.; Russel, J.; Zern, T.; Aquino, T.; Tsomondo, T. 2001: Economic and environmental threats of alien plant, animal, and microbe invasions. *Agriculture, Ecosystems and Environment 84*: 1−20.

[ix] Donlan, C.J.; Wilcox, C. 2008: Diversity, invasive species and extinctions in insular ecosystems. *Journal of Applied Ecology 45*: 1113–1123.

[x] Island Conservation/Conservacion de Islas (http://islandconservation.org/why/# and http://islandconservation.org/slideshow/).

[xi] IUCN 2009: IUCN Red List of Threatened Species (http://www.iucnredlist.org).

[xii] Molnar, J.L.; Gamboa, R.L.; Revenga, C.; Spalding, M.D. 2008: Assessing the global threat of invasive species to marine biodiversity. *Frontiers in Ecology and the Environment 6*: DOI: 10.1890/070064.

[xiii] Secretariat of the Convention on Biological Diversity 2009: Connecting Biodiversity and Climate Change Mitigation and Adaptation: Report of the 2nd Ad Hoc Technical Expert Group on Biodiversity and Climate Change. *Technical Series No. 41*.

[xiv] New Zealand Climate Change Centre 2010: Climate Change Adaptation in New Zealand: Future Scenarios and Some Sectoral Perspectives.

[xv] World Bank 2009: Convenient Solutions to an Inconvenient Truth: Ecosystem-based Approaches to Climate Change.

[xvi] N. Dudley, et al. (eds.), 2010. Natural Solutions: Protected areas helping people cope with climate change, IUCN-WCPA, TNC, UNDP, WCS, The World Bank and WWF.

Annex 1

List of Sponsors:

This workshop is the result of a partnership between governments and agencies around the world, convened under the umbrella of the **Convention on Biological Diversity**, and made possible by generous sponsorships and co-operation. In particular:

- **The New Zealand Government**:
  - Department of Conservation,
  - Ministry of Foreign Affairs and Trade;
  - Ministry for the Environment;
  - Biosecurity New Zealand; and
  - CarboNZero (Landcare Research)
- The **Global Island Partnership** (GLISPA) / **The Nature Conservancy** (TNC)
- The Government of **Italy**
- The Government of **Australia**
  - Department of Water, Heritage and the Arts (DEWHA)
- The Government of **France**
- The Government of **Spain**
- The Government of the **United Kingdom**
- The **International Union for Conservation of Nature** (IUCN)
- The Government of **Germany**
- The **Global Invasive Species Programme** (GISP)
- The **Pacific Invasives Initiative** (PII)

Annex 2

List of Participants:

Sponsored Participants

Last Name	First Name	Country
Ali	Senan	YEMEN
Barbe	Michel Lorrain Clency	MAURITIUS
DaCosta-Cottam	Mat	CAYMAN ISLANDS
English	Nelsa	JAMAICA
Isip	Emmanuel	PHILIPPINES
Knowles	David	BAHAMAS
Kraus	Fred	USA
Meyer	Jean-Yves	FRENCH POLYNESIA
Miles	Joel	PALAU
Millett	James	UNITED KINGDOM
Nor Aieni	Mokhtar	MALAYSIA
Orapa	Warea	FIJI ISLANDS
Prasmadji	Narmoko	INDONESIA
Ragen	Parmananda	MAURITIUS
Ramnanan	Naitram (Bob)	TRINIDAD AND TOBAGO
Renshaw	Olivia	ASCENSION ISLAND
Rova	Eleni Marana	FIJI ISLANDS

Rudianto	M. Eko	INDONESIA
Salabarria Fernandez	Dalia Maria	CUBA
Shimura	Junko	CANADA
Sisiolo	Jointly	SOLOMON ISLANDS
Teariki-Ruatu	Nenenteiti	KIRIBATI
Wilmott	Barnabas	PAPUA NEW GUINEA
Ximenes	Mario	TIMOR-LESTE

Unsponsored Participants

Last Name	**First Name**	**Country**
Aguirre	Alfonso	MEXICO
Andon	Lisa	MICRONESIA
Andreozzi	Phil	USA
Attorre	Fabio	ITALY
Bignell	Andrew	NEW ZEALAND
Boudjelas	Souad	NEW ZEALAND
Broadbent	Elise	NEW ZEALAND
Broome	Keith	NEW ZEALAND
Brown	Kate	USA
Browne	Michael	NEW ZEALAND
Burgiel	Stas	USA
Caiyun	Zhao	CHINA
Choquenot	David	NEW ZEALAND
Christophers	Herb	NEW ZEALAND
Cowan	Phil	NEW ZEALAND
Cranwell	Steve	FIJI
Deavin	Dawn	NEW ZEALAND
Doherty	Natasha	NEW ZEALAND
Edwards	Katrina	NEW ZEALAND
Egan	Andrea	USA
Elphinstone	Jo	AUSTRALIA
Faulalo	Keneti	USA
Gamble	Lloyd	USA
Goarant	Anne Claire	NEW CALEDONIA
Harbridge	Joseph	NEW ZEALAND
Hedley	John	NEW ZEALAND
Hicks	Geoff	NEW ZEALAND
Howard	Geoffrey	KENYA
Julliot	Catherine	FRANCE
Kami	Taholo	FIJI
Keitt	Bradford	USA
Lin	Xin	CHINA
Lowenstein	Frank	USA
Makino	Yuka	JAPAN
McIsaac	Ed	NEW ZEALAND
Nagle	Bill	NEW ZEALAND
Newman	Audrey	USA
Nias	Raymond	AUSTRALIA

Pagad	Shyama	NEW ZEALAND
Pierce	Judy	USA
Radjassegarane	Soudjata	FRANCE
Reid	Alan	NEW ZEALAND
Scott	Nicola	NEW ZEALAND
Sheppard	Brian	NEW ZEALAND
Sherley	Greg	SAMOA
Simons	Sarah	KENYA
Singleton-Cambage	Krista	AUSTRALIA
Skelton	Posa	FIJI
Stewart	Donald	FIJI
Thomas	Spencer	GRENADA
Tomasetto	Federico	NEW ZEALAND
Tye	Alan	SAMOA
Ushiba	Masaki	JAPAN
Van Eyndhoven	Erik	NEW ZEALAND
Wheeler	Jennifer	USA
Wheeler	Annie	NEW ZEALAND
Whitford	Laura	AUSTRALIA