ECOSYSTEM-BASED ADAPTATION
What can we learn from islands?

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Rio Conventions Pavilion, UNFCCC COP 17

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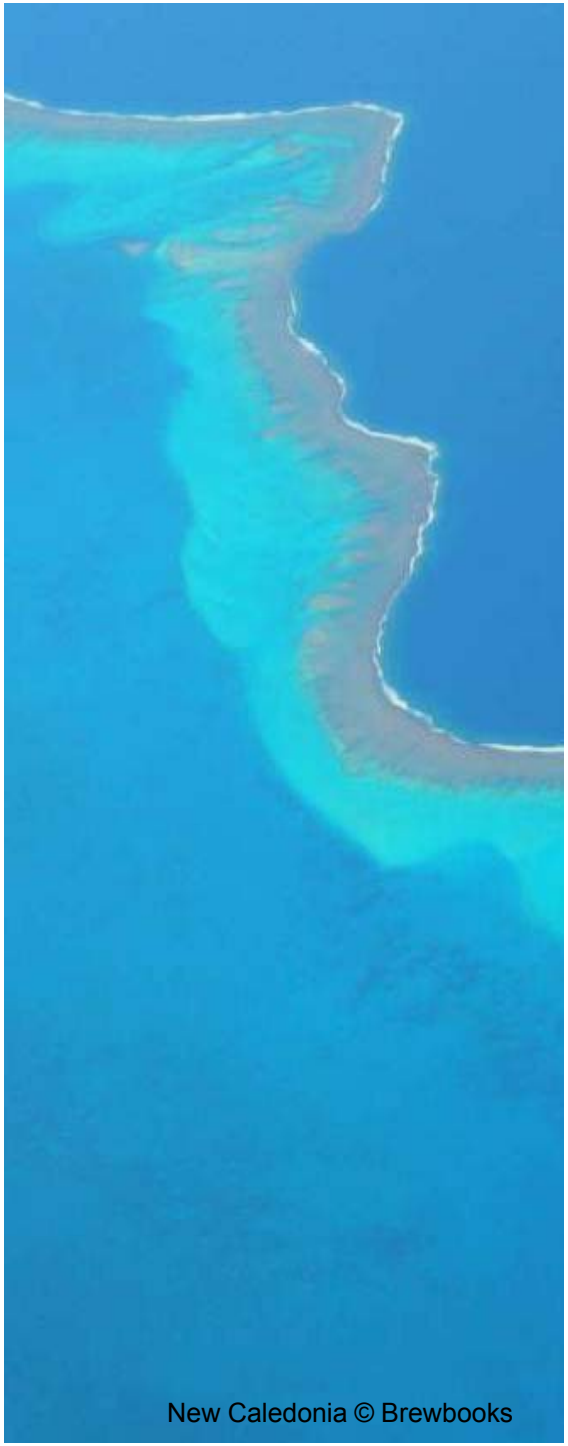
- IUCN AT A GLANCE
- EBA CONCEPTS
- EBA AND ISLANDS
- OVERVIEW OF CASE STUDIES
- KEY FINDINGS AND POLICY IMPLICATIONS



New Caledonia © Brewbooks

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International Union for Conservation of Nature

Members

- 1.067 Members worldwide from over 160 countries
- States, Government agencies, NGO
- Over 60 regional and national committees

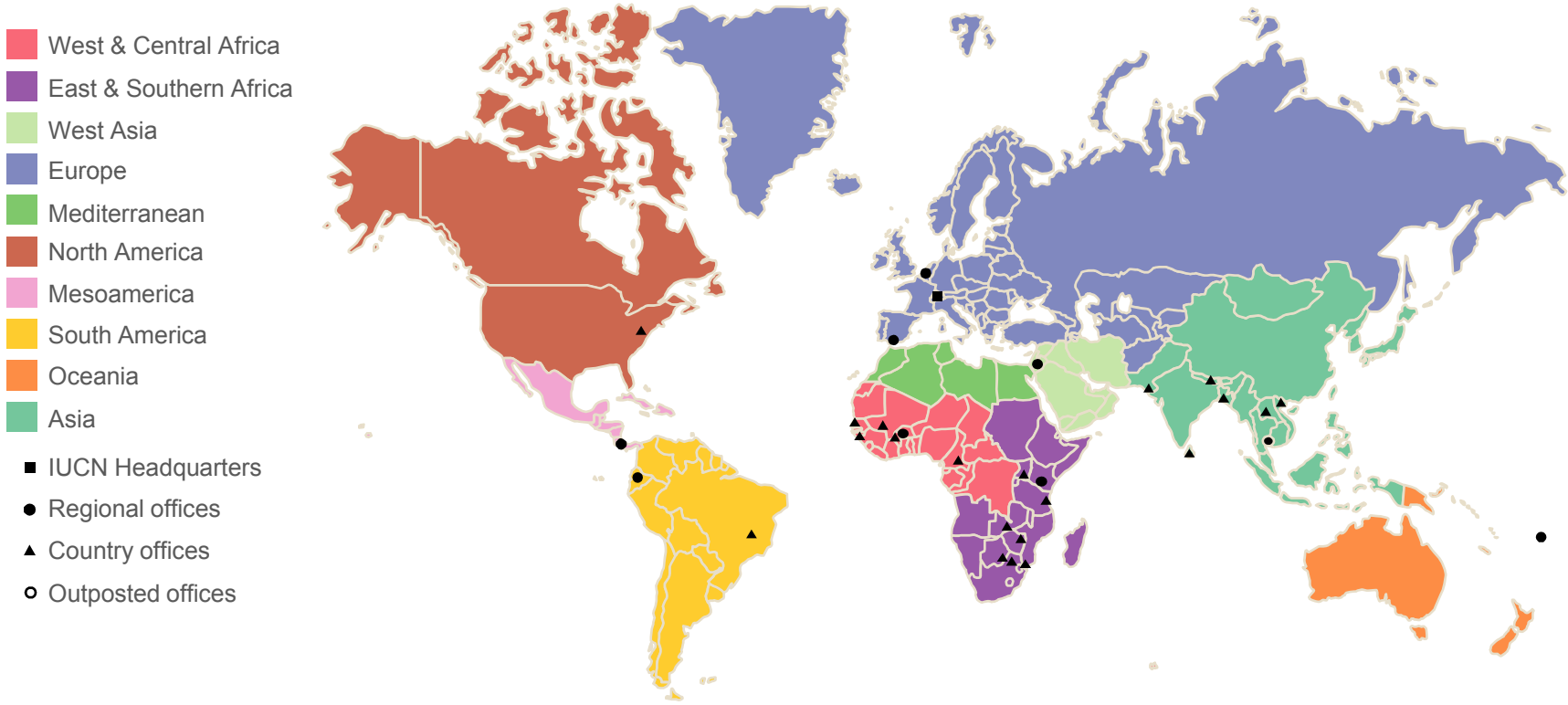
Commissions

- 10.000+ voluntary experts in 6 thematic groups:

Secretariat

- 1.000 full time staff worldwide
- 350 temporary staff, consultants and interns
- HQ in Gland, Switzerland
- Over 60 offices around the world

IUCN PROGRAMME REGIONS AND OFFICES



British Virgin Islands © reefball.org

IUCN AND EbA

- Ecosystem-based approaches to adaptation and mitigation (e.g. REDD+) in national and international policies and funding priorities;
- Guidelines, tools and approaches developed and capacity built at local and national level for EbA;
- An increased understanding of the role of ecosystems in sequestring carbon


British Virgin Islands © reefball.org

EbA CONCEPTS

- Climate change adds to existing pressures on ecosystems and depended communities and economies;
- **Ecosystem-based Adaptation** integrates the use of biodiversity and ecosystem services into an overall climate change adaptation strategy;
- **Ecosystem-based Adaptation** uses sustainable management, conservation and restoration of ecosystems to provide services to increase resilience to climate change and variability and reduce climate-related risk and vulnerability.

Mayotte © M.Greard

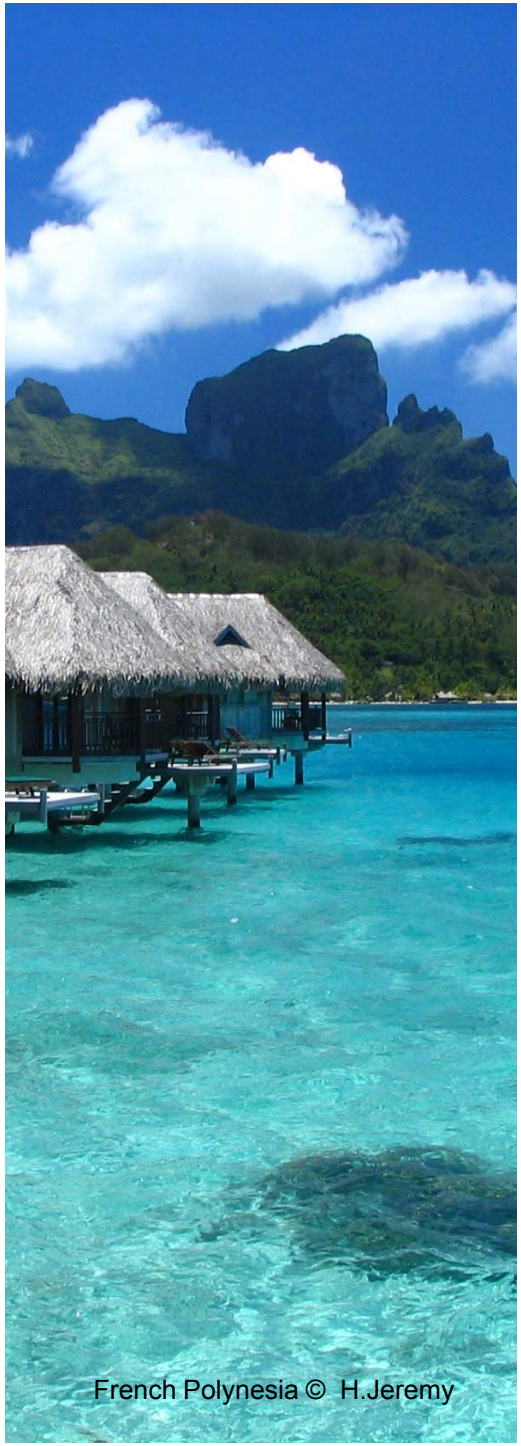
WHY EbA PRACTICE IN ISLANDS?

- **Vulnerability of islands**
  - Global Biodiversity hotspots (terrestrial and marine);
  - High exposure to climate risks
  - High dependancy of island communities and economies on ecosystem services and natural resources
  - Low adaptive capacity compared to the climate risks they face;
- **Demonstration of EbA practice?**
  - Different regions/ common challenges;
  - Local/national scale of implementation - integrated approaches more likely?
  - Effectiveness of adaptation measures?
  - Lessons learnt applicable across islands, regions, and to other environments?
- **Islands are highly visible group in climate change fora both on adaptation and mitigation**

Cayman Islands © S.Young

EbA CASE STUDIES: APPROACH

- **Objective**
  - Initial review of island experiences in EbA;
  - Lessons learnt to inform EbA policy and practice;
- **Scope**
  - Not prescriptive;
  - Policy framework for EbA;
  - Research (eg vulnerability assessment/resilience studies);
  - On-ground measures (restoration/ecosystem/resource management management);
  - Capacity development (awareness, capacity building/knowledge transfer);
- **Sources of information**
  - UNFCCC NAPA database of projects, EU climate project databases;
  - Web-based search;
  - IUCN database of projects;
  - Web-based island networks: e.g GLISPA-Discuss, Europe Overseas Forum & Mailing List, Coral list-serv



French Polynesia © H.Jeremy

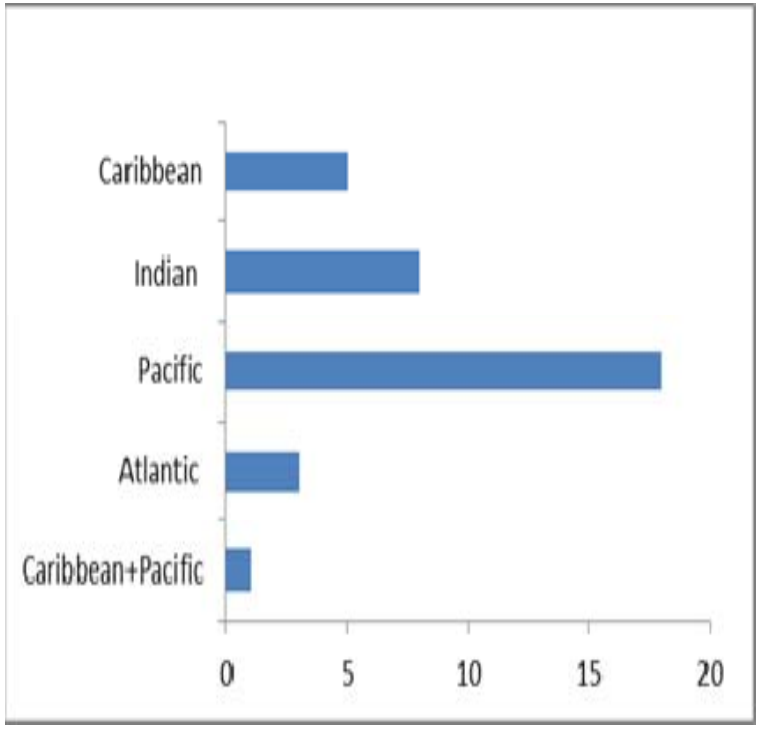
KEY RESULTS: NATIONAL PLANS AND STRATEGIES FOR ADAPTATION

- **13 (LDCs) out of 43 islands have a National Adaptation Plan of Action**
  - Haiti, Kiribati, Maldives, Samoa, São Tome and Principe, Solomon Islands, Timor-Leste, Cabo Verde, Comoros, Madagascar, Tuvalu and Vanatu;
  - No information on the status of national adaptation strategies in other independant islands;

- **Europe overseas islands**
  - part of or associated with EU and EU Member States;
  - **UK** Territories (Caribbean) : green papers for adapation plans (Anguilla, Montserrat, Turks and Caicos, British Virgin Islands);
  - **France** National Adaptation Strategy; local strategies for islands (e.g. Guadeloupe, Martinique, Reunion) yet to be developed;
  - French Polynesia-Pacific (V&A published and national strategy under way);
  - **EU adaptation strategy** in preparation (2013) no overseas islands.

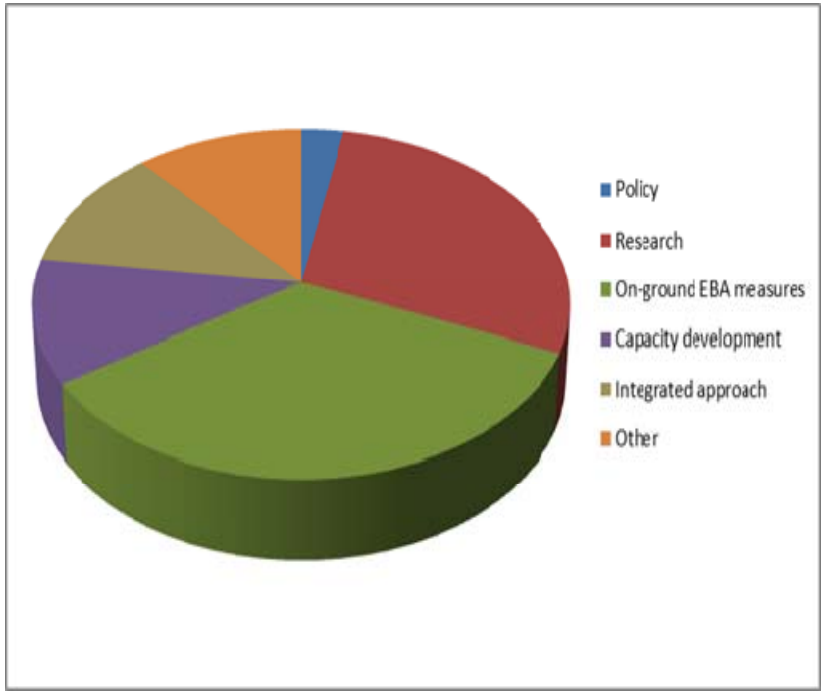
KEY RESULTS: OVERVIEW OF CASE STUDIES

- Total of 35 cases studies, across 4 regions;
- Mostly SIDS (all regions), some Europe overseas territories (Pacific and Atlantic);
- National projects, of which 14 implementing a NAPA
- Some islands more than 1 project
  (e.g. Samoa, Seychelles, Maldives);
- 6 regional projects (Pacific, Carribbean);
- Implemented by government (NAPA), some NGOs (global, regional or local);
- Mix of funding sources (UN, EU bilateral, other).



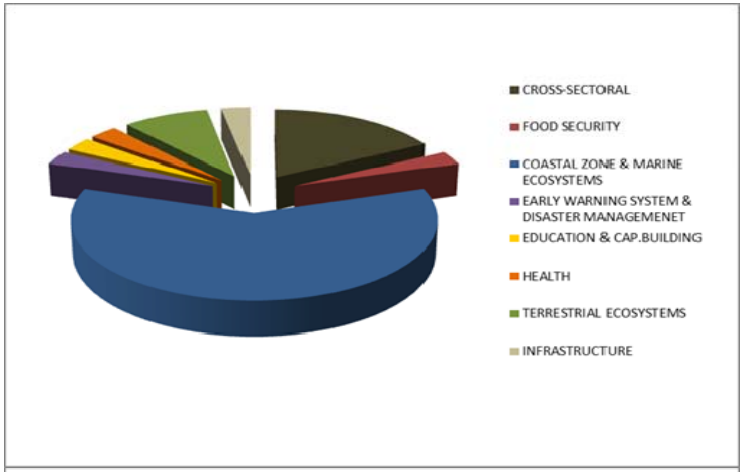
KEY RESULTS: EBA MEASURES

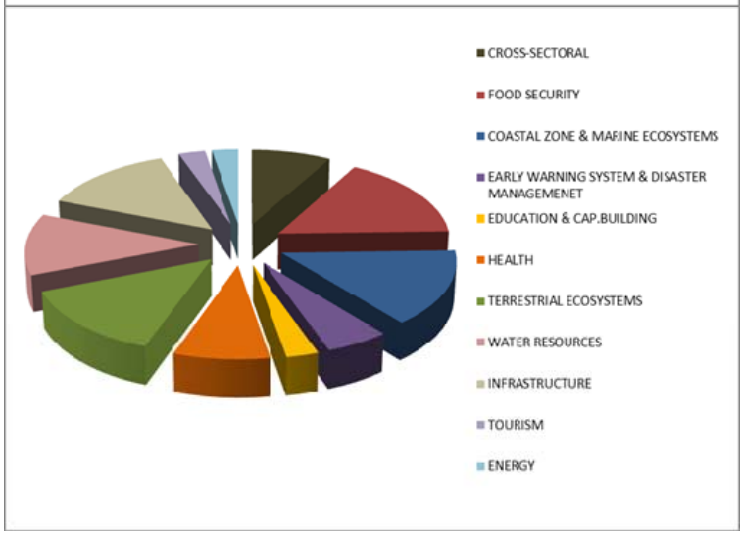
- **Projects include a combination of measures at regional, national or local levels;**
- **The majority of projects had a strong focus on-ground adaptation measures** (e.g. restoration, ecosystem/resource management);
- **Some exclusively focused on research** (baseline, resilience or impact studies);
- **Most on projects has community engagement and awareness raising components (on-ground level);**
- **Some projects specifically focuses capacity development (e.g. institutional, technical).**



KEY FINDINGS: ECOSYSTEMS/SECTORS TARGETTED

- **Coastal and marine ecosystems** main sector (*coastal planning, coral reef management, mangrove restoration, MPA networks, fisheries management*);
- Many cross-sectoral (several sectors) well represented;
- Some case studies involving **terrestrial ecosystems** (forestry management);
- Few case studies involving **early warning systems & disaster management, education, health or food security;**
- Tourism, energy and water resources sector not well represented.





CASE STUDY:
Developing an Adaptation Policy Framework, UK Overseas Territories

- **Enhancing Capacity for Adaptation to Climate Change (ECACC) in the UK Caribbean Overseas Territories**

  CARICOM COMMUNITY CLIMATE CHANGE CENTRE (CCCCC)

  - National capacity development planning;
  - Mainstreaming into national development planning processes;
  - Regional integration into regional climate change Adaptation programmes;
  - Progress: Green papers out for consultation.

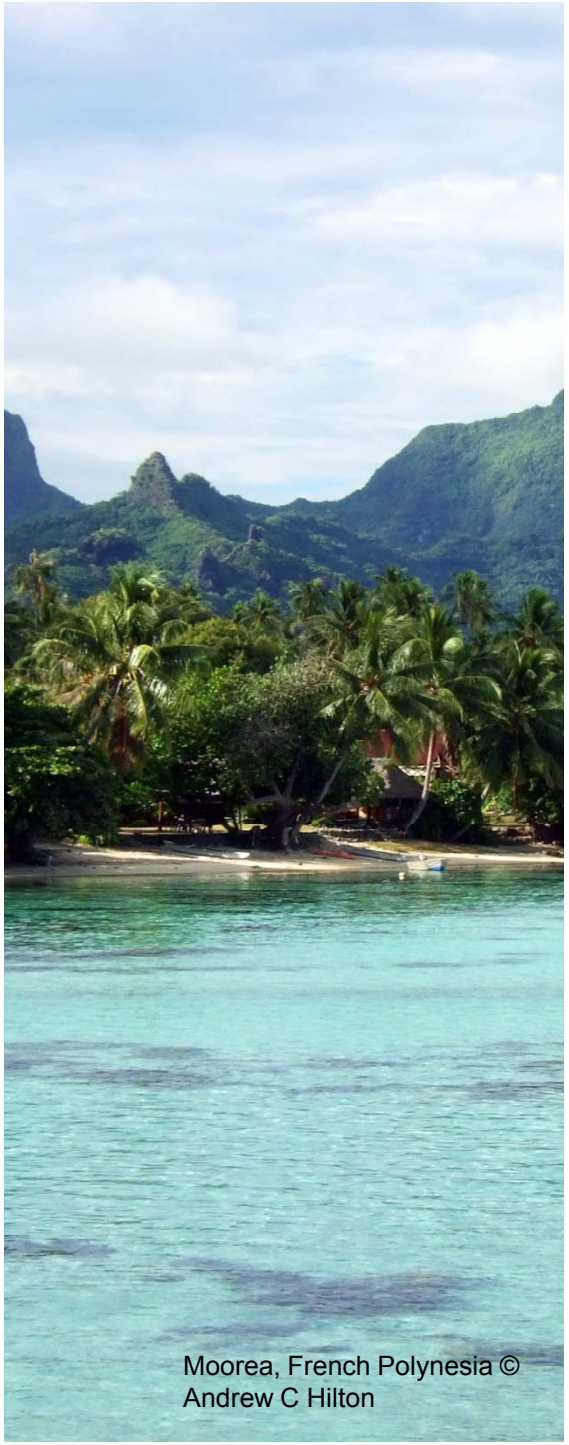
British Virgin Islands © Jost van Dyke, Matt phara

CASE STUDY:
Research and baseline studies

- **Etat Des Lieux Sur Les Enjeux du Changement Climatique en Polynésie Française**

  Ministère de l'environement

  - Basis for adaptation planning;
  - Address the magnitude of projected climate changes and the potential impacts of this changes on the environment, economy and society in French Polynesia;
  - Assess economic sectors exposure and identify possible strategies to prepare for climate change;
  - Research focused on inventories (Greenhouse gas emissions), vulnerability assessments and systematic observations.



Moorea, French Polynesia © Andrew C Hilton

CASE STUDY:
Research and baseline studies

- **Increase resilience of coral reefs to reduce the vulnerability of islands, communities and reef dependent economic activities to predicted climate change**

  Government of Maldives (UNFCCC, NAPA)

  - Maldives – Indian Ocean;
  - Sector: Coastal and marine ecosystems;
  - Maldives are reliant on healthy reef ecosystems (fisheries and tourism);
  - Address knowledge gaps and enhance national research capacity on coral reefs resilience.

CASE STUDY:
On-ground measures

- **Designing a resilient network of marine protected areas for Kimbe Bay, Papua New Guinea**

  The Nature Conservancy (TNC)

  - Papua New Guinea – Pacific;
  - Sector: Coastal and marine ecosystems;
  - Community based development of a resilient MPA network to protect significant coral reef habitats and sustain community based fisheries.

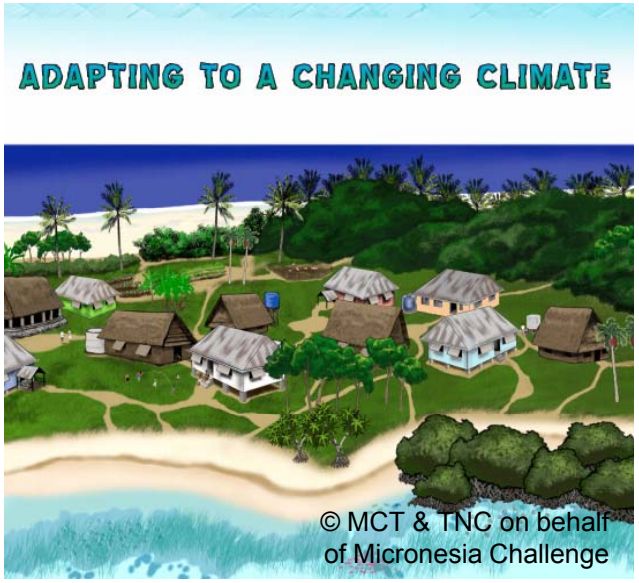
CASE STUDY:
On-ground measures

- **Improving the resilience of coral reefs in the face of climate change**

  Nature Seychelles ORG

  - Seychelles – Indian Ocean;
  - Coastal zone and marine ecosystems;
  - Restoring coral reef habitats to improve resilience;
  - Develop coral growing and relocation techniques and build local capacity
  - generate opportunities for coastal fisheries and eco-tourism.

CASE STUDY:
Capacity development – regional



- **Climate Change Adaptation Tools for Island Communities (Micronesia, Pacific)**
  Micronesia Conservation Trust (MCT)

- Micronesia Challenge
- Climate change adaptation tools and training for communities to build the capacity of local communities (knowledge, skills, and tools);
- An Adaptation to a Changing Climate: Outreach Toolkit (bridging the gap between science and local knowledge):
- Revised PIMPAC management planning guidance for V&A and EbA; .

CASE STUDY:
Capacity development

- **Island Biodiversity & Invasive Species Database (IBIS)**
  IUCN

  - Region: Pacific Islands;
  - Terrestrial ecosystems (Biodiversity conservation);
  - Information for improved resilience of management of the islands ecosystems;
  - A platform for the exchange of knowledge, lessons learned, innovation and experiences;
  - Awareness raising of the impacts of invasive alien species on native biodiversity and ecosystems.


Tahiti, French Polynesia © M.Fourdigniez

CASE STUDY:
Integrated approaches

- **The Coral Triangle Initiative for Coral, Fisheries and Food security, Region-wide early Action Plan (REAP) for climate change adaptation (CCA)**
  CTI - USAID funds

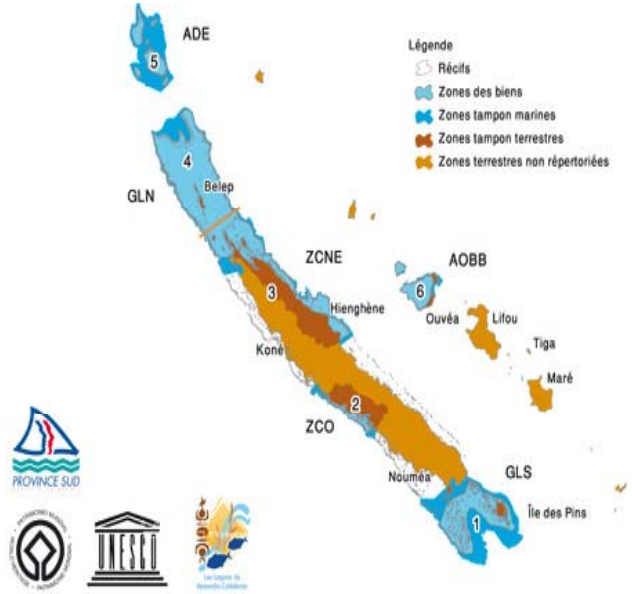
  - Regional project: Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor-Leste (Pacific);
  - Integrated approach to climate change adaptation that achieves the dual objectives of sustainable development and risk reduction;
  - Prioritizes immediate actions that governments and communities must implement to reduce the impacts of climate variability and increase the resiliency of the Coral Triangle's coastal and marine resources;
  - Maintain ecosystems functioning and services, contributing to strengthened food security of coastal communities as well as building coastal community resilience to climate change.

CASE STUDY:
Integrated approaches

- **Integrated coastal zone management plan. West section of the Barrier Reef of New Caledonia.**

  Comité de gestion de la Zone Côtière Ouest (ZCO) - CTI

  - New Caledonia (Pacific);
  - Coastal and marine ecosystems;
  - UNESCO World Heritage Site (integrity of the site);
  - Improving of knowledge, awareness, capacity building;
  - Local community engagement
  - local tourism or sustainable agroforestry development.



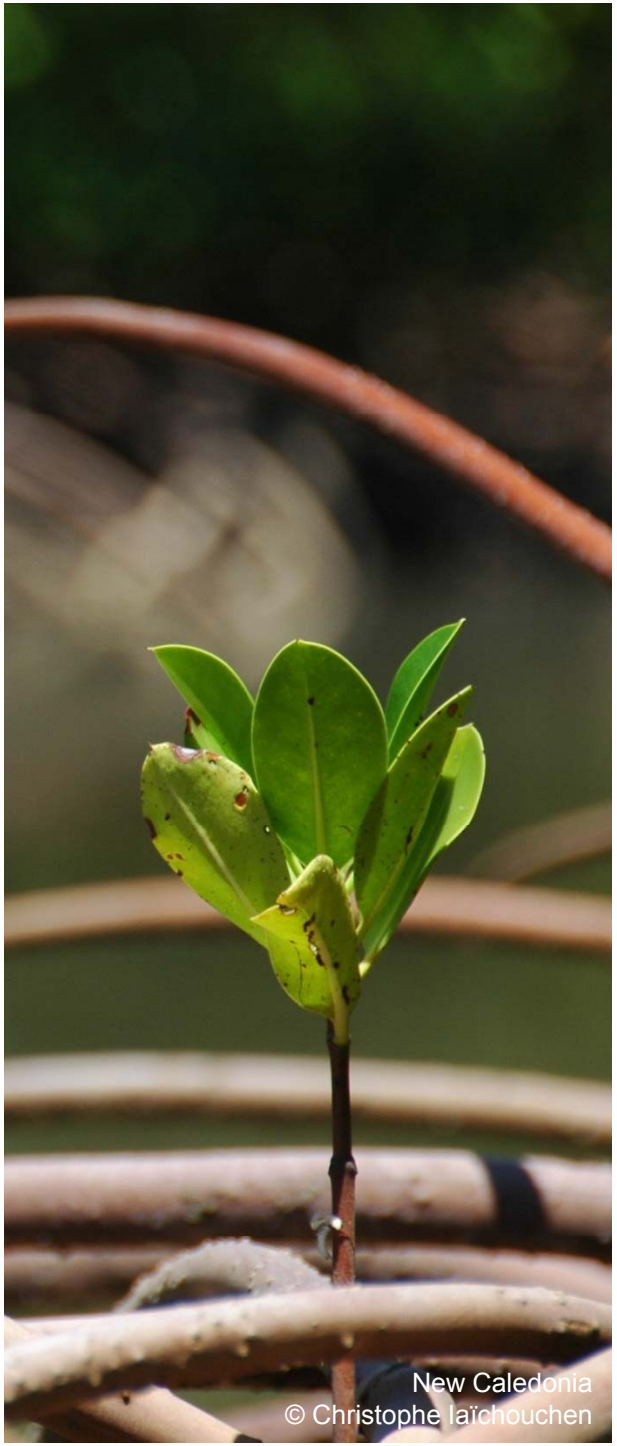
CASE STUDY:
Integrated approaches

- **Mangrove Ecsystem Climate Change Adaptation and Livelihood (MESCAL)**

  - Regional project (Samoa, Fiji, Solomon Islands, Vanatu and Tonga);
  - Coastal and marine ecosystems (mangrove management);
  - Management of mangrove ecosystems;
  - Baseline research (science and traditional knowledge);
  - Governance and institutional strengthening (stakeholder engagement);
  - Demonstration (development of an integrated framework);
  - Awareness and capacity development.

LESSONS LEARNT AND IMPLICATION FOR EBA POLICY AND IMPLEMENTATION

- Policy as a driver for EbA implementation;
- Moving from ecosystem management to ecosystem based adaptation;
- Awareness raising and capacity development;
- Gaps:
  - Demonstrated effectiveness of EbA;
  - EbA and mitigation;
- Status of islands and EbA.


New Caledonia
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NATIONAL POLICY FRAMEWORK TO DRIVE EBA

- **NBSAPs or equivalent** basis for ecosystem based adaptation;
- **NAPA** as a first step for long term national adaptation plans;
- NAPA process has generated EbA focused projects (UNFCCC info paper on EbA);
- Opportunity for better **integration of Rio Conventions** and **mainstreaming** in national development and sectoral policies.

FROM ECOSYSTEM MANAGEMENT TO EBA

- Most projects address today's impacts on ecosystems, but not necessarily predicted CC impacts;
- **Predicted CC impacts** at the island **scale of adaptation response** for effective EbA measures;
- **Vulnerability Assessment** (socio-economic, environmental) basis of any future national adaptation strategy.
- Build on existing knowledge tools and skills


Martinique © Sharkbeit

CAPACITY DEVELOPMENT AND AWARENESS RAISING


Mayotte © P.Gabriel

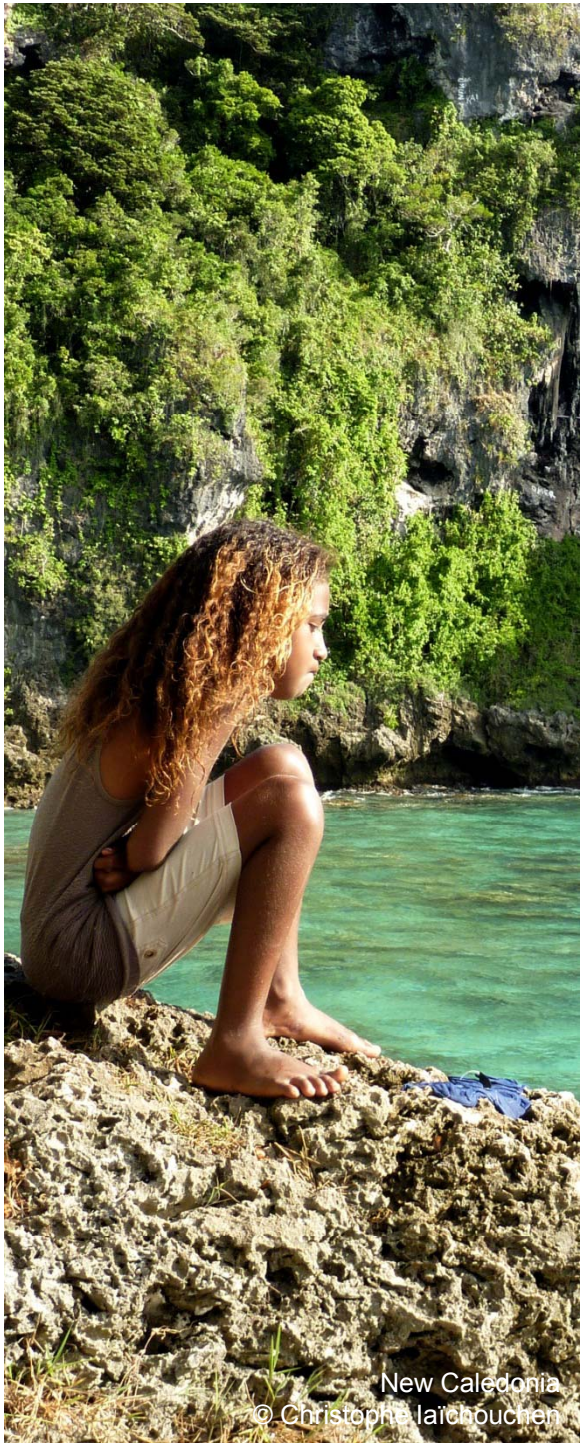
- **Communicating EbA concepts** and applications. Most projects have an awareness raising component but some uncertainty about the concepts. Need a common understanding and framework?

- **Capacity development** for EbA at local (on ground), national (policy development) and regional scales (capacity development, knowledge generation);

- Islands provide scope for regional capacity building activities and exchange of lessons learnt.

GAPS

- **Demonstrated effectiveness of EbA compared to other measures**
- EbA based on current practice (not reinventing the wheel);
- Most projects (i.e. on ground projects) have **multiple benefits** (environment, CC and socio-economic);
- Cost effectiveness: **economic evaluations** ecosystem services for biodiversity conservation (e.g. TEBB), no information on the costs and benefits of EbA or comparative cost effectiveness with other adaptation measures to inform national policy and implementation;
- **EbA and mitigation;**
- Explore the potential for EbA to address mitigation (eg coastal carbon).
- Ocean mitigation early days.



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STATUS OF ISLANDS AND EBA

- Common challenges (insularity, CC impacts);
- Policy responses and implementation modalities influenced by their status (eg SIDS, LDC, Europe overseas territories);
  - Impact on technical, institutional and financial capacity and access to resources;
  - Constraint to regional capacity building activities and exchange of lessons learnt;
  - Innovative solutions to overcome this are needed.
- Political advocacy (eg GLISPA Challenges) to build inclusive partnerships for EbA


Wallis and Futuna © N.Ferraton

EFFECTIVE MANAGEMENT OF VULNERABLE ISLAND ECOSYSTEMS PROTECTS ISLAND BIODIVERSITY, HELPS ADAPT TO IMPACTS OF CLIMATE CHANGE AND SUPPORTS ISLAND ECONOMIES AND WAY OF LIFE

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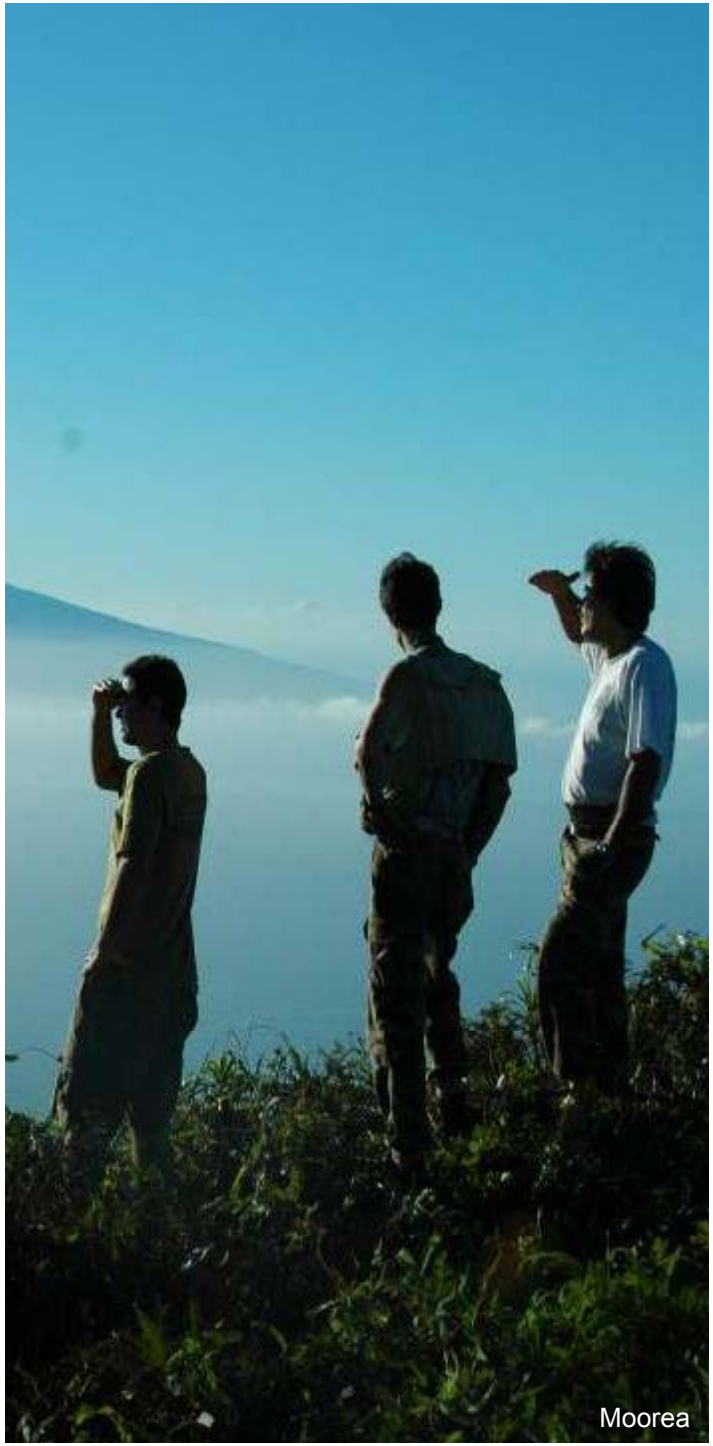
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