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COMPILATION OF CASE-STUDIES ON THE MAINSTREAMING OF BIODIVERSITY AND INTEGRATION OF CLIMATE CHANGE IN THE PACIFIC REGION

Introduction

- 1. The Pacific region has benefited from a number of regional and national programmes to both assess the impacts of climate change on biodiversity and develop programmes to adapt to climate change. Such programmes are critical considering that the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) 1/ states that the Pacific region has already experienced temperature increases of as much as 1°C since 1910. Furthermore, studies found more than a doubling in the number of category 4 and 5 storms in the South-West Pacific from the period 1975-1989 to the period 1990-2004. Future predicted impacts of climate change in the Pacific call for increased beach erosion, a loss of sea-turtle nesting sites, more frequent coral-bleaching events, increased exposure to invasive alien species and increased cyclone-induced tree mortality and flooding.
- 2. Thus, there is a wealth of existing knowledge and lessons learned that can be brought to bear when integrating climate change into national biodiversity strategy and action plans, and implementation of the Convention on Biological Diversity. This note is a compilation of case-studies providing examples of programmes and projects within the Pacific region that consider the links between biodiversity and climate change. The following are only some example and therefore not an exhaustive list.

A. Regional projects

Capacity-Building for the Development of Adaptation Measures in Pacific island countries (CBDAMPIC) project 2/

3. The three-year Capacity-Building for the Development of Adaptation Measures in Pacific Island Countries (CBDAMPIC) project was undertaken from 2002 to 2005 by the Secretariat of the Pacific

^{1/} IPCC, 2007: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 976pp.

^{2/} South Pacific Regional Environment Programme (SPREP) (2003). Climate Change Portal. Capacity Building for the Development of Adaptation Measures in Pacific Island Countries (CBDAMPIC) http://www.sprep.org/climate_change/cdbmpic.htm

Regional Environment Programme (SPREP) and the Canadian International Development Agency (CIDA). The project, which took place in the Cook Islands, Fiji, Samoa, and Vanuatu, was designed to help local people adapt to climate change.

4. More specifically, the goal of the CBDAMPIC project was to build the capacity of Pacific island countries to adapt to climate change by increasing policy-makers' awareness and understanding of climate change. Another goal was to mainstream climate change into national planning and budgeting processes of government departments. Additional work has been done to test pilot projects in small communities to assess their climate-related vulnerabilities and find strategies to reduce these vulnerabilities.

Climate Change and Biodiversity in Melanesia Project 3/

- 5. The Bishop Museum/SPREP "Climate Change and Biodiversity in Melanesia project" was started in mid-2007 and was recently completed. The impacts of climate change on Melanesia, being largely a region dependent on agriculture, fisheries and other natural resources, are potentially grave.
- 6. The project involved a review of current knowledge regarding potential climate change impacts for Melanesia in order to develop a picture of the vulnerability of important biodiversity hotspots with the view to develop adaptation and mitigation strategies suited to local circumstances, based on local information, good governance and strengthening of conservation practices. The project also assessed information gaps and capacity needs for implementing adaptation and mitigation efforts. The project was divided into three components:
- (a) Assessing the current scientific understanding of the impacts of climate change on island and marine ecosystems in Melanesia;
- (b) Assessing the institutional and socio-economic adaptive capacity of Melanesian countries to effectively respond to climate change impacts including legislation, policies and capacity assessment;
- (c) Developing an integrated assessment of the vulnerability of Melanesia's biodiversity to climate change, based on the above.

B. GEF small grants projects

7. A number of community-based projects for adaptation to climate change were undertaken in the Pacific under the GEF Small Grants Programme. Samoa and Fiji provide examples of projects that were geared towards protecting biodiversity for increasing resilience to climate change impacts.

Replanting of the Degraded Vaiusu Bay to Improve the Mangrove Ecosystem Biodiversity for Food Security and also to Protect the Community from Storm Surges (Samoa) 4/

- 8. The Vaiusu village mangrove is the most highly degraded mangrove area in Samoa. The degradation of the mangrove has led to increased erosion of coastal lands, fish decline and contamination of food derived from mangroves such as crabs and edible sea shells.
- 9. The purpose of this project, scheduled to take place between 2006 and the end of 2008, is to rehabilitate and restore the mangrove ecosystem and to protect the mangrove biodiversity to act as a barrier from storm surges, and increase the number of species of fish and molluscs. This project also aims

^{3/} Information on the project can be found at <u>www.bishopmuseum.org</u> and <u>www.sprep.org</u>

^{4/}http://sgp.undp.org/web/projects/11284/replanting of the degraded vaiusu bay to improve the mangrove ecosyst em biodiversity for food securi.html

to build capacity and awareness in the community to understand and help protect the mangrove ecosystem and associated good and services.

Community Natural Resource Management and Enhancement in Ono-i-Lau for Biodiversity Conservation and Sustainable Livelihoods (Fiji) 5/

10. The island of Ono-i-Lau, Fiji, is known for its rich biodiversity, more specifically for being a seeding area for Tridacna derasa (Giant Clam species) and a foraging site for three turtle species. The goal of the project, to be completed by the end of 2009, is to develop a participatory community management programme for the implementation and management of the community's marine reserves. The management plan will support the reduction of negative impacts on biodiversity and build resilience of ecosystems to climate change.

C. National Adaptation Programmes of Action (NAPAs) Projects

11. National Adaptation Programmes of Action (NAPAs) allow Least Developed Countries (LDCs) to identify priority activities or projects to adapt to climate change. A number of countries in the Pacific mention biodiversity-related adaptation activities in their NAPAs. Below are some examples.

Kiribati <u>6</u>/

- 12. *Coastal Zone Management for Adaptation*: This project involves protecting coastal ecosystems such as mangroves to enhance resilience.
- 13. *Coral Monitoring, Restoration and Stock Enhancement*: The objectives of the project are to monitor coral health, to develop a coral restoration scheme, and to establish marine protected areas.

Samoa 7/

14. Establishing Conservation Programmes in Highly Vulnerable Marine and Terrestrial Areas of Communities Project: The goal of this project is to establish or strengthen community-based conservation programmes for the protection of highly vulnerable terrestrial and marine biodiversity through sustainable biodiversity management and educational and capacity-building programmes.

Tuvalu 8/

- 15. Strengthening of Community based Conservation Programmes on Highly Vulnerable Near-Shore Marine Ecosystems: This project involves the protection of coastal marine biodiversity and the development of community sustainable biodiversity conservation programme.
- 16. Adaptation to Coastal Shellfish Fisheries Resources Productivity: The objectives of the project are to protect the shellfish population and coral reef ecosystem, and to increase public awareness and livelihood.

^{5/} http://sgp.undp.org/web/projects/11785/community natural resource management and enhancement in ono i lau for biodiversity conservation and.html

^{6/} http://unfccc.int/files/adaptation/napas/application/pdf/18_kir_pp.pdf

^{7/} http://unfccc.int/files/adaptation/napas/application/pdf/29_samoa_pp.pdf

^{8/} http://unfccc.int/files/adaptation/napas/application/pdf/35 tuv pp.pdf

Vanuatu <u>9</u>/

17. *Community Based Marine Resource Management Programmes*: The goal of the project is to enhance the adaptive capacity and resilience of vulnerable communities to the impacts of climate change through community based programmes for the conservation of marine resources.
