



PREEN newsletter

Pacific Resource and Environmental Economics Network

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It is with great pleasure that we present to you the December 2010 edition of the PREEN Newsletter. There has been much Resource and Environmental Economics (REE) activity in the Pacific in the past six months and we would like to share some of the highlights with you. We hope you will enjoy our selection of Pacific REE news (most notable concerning an upcoming PREEN Publication) and articles. We thank you for all contributions.

All the best for a happy and fruitful 2011!

Neehal Khatri & Federica Gerber.

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Assessing the economy-wide impacts of natural disasters: the economic impact of the 2009 Fiji Floods

The Pacific is recognized as one of the most disaster prone regions in the world. As such, it is important to accurately estimate the economic losses associated with these natural disasters. This research estimates the economy-wide damage done to Fiji as a result of the 2009 floods, using input-output modelling and the primary research data from SOPAC's Economic costs of January 2009 Nadi floods report, the Economic costs of January 2009 Ba floods report and the Government of Fiji's Consolidated Report on Flash Floods 8-16 January 2009 (Damages Sustained and Necessary Responses, Rehabilitation and Reconstruction.) The paper estimated, not only the direct and indirect economic impacts of the flood but also notes that the flood resulted in a structural change to sectoral mix of the economy. This structural change results in larger losses than would otherwise have occurred as linkages among domestic industries are weakened. Further, rebuilding and reconstruction after the flood will involve more resources as the multiplier effects are smaller due to the need for relatively more imports.

For more information, please contact Dr. Stephen Pratt at pratt_s@usp.ac.fj

Launch of the IUCN/SOPAC/SPREP/USP book Economics of Environmental Management in the Pacific by Padma Lal and Paula Holland

A new text book on the economics of environmental management in the Pacific was recently launched at the IUCN by Mr Peter Forau, the Deputy Secretary General of the Pacific Islands Forum Secretariat. The book builds on a course on environmental economics in the Pacific conducted in 2004 by the Australian National University, SPREP and USP with the support of UNDOALOS. The text is the first book of its kind in the Pacific.

According to book's promotional materials, the book provides new and specialised case studies to examine the economic dimensions of human actions that result in unsustainable use/ degradation/ destruction of natural resources. It also shows how to link those causes to targeted solutions and identifies where in the project cycle and how economic considerations can help project managers to explicitly consider economic dimensions of resource use and management for successful outcomes.

For further information, please contact Padma Lal at padma.lal@iucn.org



Desalination in Pacific Island Countries: a Preliminary Overview

The purpose of this paper is to provide an overview of current desalination technology and a preliminary assessment of the potential for desalination in developing Pacific Island Countries. Historical and current methods of desalination are discussed, with an overview of known desalination plants in the Pacific. Two case studies are described, based on two different desalination technologies with a baseline financial cost comparison of the two systems along with a preliminary assessment of the estimated cost of rehabilitating a typical community rainwater harvesting catchment, for comparison.

The paper identifies that desalination technologies capable of producing significant quantities of water generally have high capital and operational costs, the latter appearing to be a critical factor, directly resulting in sustainability problems arising from difficulty in maintaining a budget for maintenance and servicing. Indications are that a significant number of desalination plants fail in relatively short times after commissioning. Reasons for failure are likely to include:

- Little or no operational or maintenance planning;
- High running/maintenance costs (e.g. distillation and reverse osmosis plants);
- Lack of technical expertise; and,
- Lack of manufacturer support.

From data for the cases presented and from the experience of Pacific Island Countries to date, desalination plants in the Pacific appear excessively costly. It would be prudent to fully explore alternatives before committing to desalination technology. The limited potential for desalination use in Pacific countries at this time is mainly as a last resort where all other options have failed, or as an emergency measure kept in readiness against a natural disaster. Governments, utilities and donor agencies should be fully aware that for continued use over extended periods of time any water treatment plant, but particularly a high technology, high cost system such as desalination, requires a sound sustainability plan to be prepared and implemented as part of drinking water safety planning. A more in-depth study should be undertaken of known desalination units in the Pacific, to identify the factors which contribute to their success or failure. An economic analysis of each would also add important data to the information which can be made available to use in future decision making to ensure the viability and sustainability of future plans. It is also proposed that consideration be given to developing guidelines to assist donors, agencies, Pacific island countries, utilities and communities in evaluating and choosing appropriate technology to meet their specific drinking water needs.

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PREEN involvement at the Pacific Islands Roundtable for Nature Conservation

At the 13th Pacific Islands Roundtable for Nature Conservation meeting, held during July in Samoa, people interested in economics of nature conservation issues met to discuss the means and challenges of mainstreaming resource and environmental economics into the environment conservation decision-making process in the Pacific. A 'workshop' was organised by IUCN to identify:

- The level of interest in using resource and environmental economics to support nature conservation efforts in the Pacific
- The need to establish a separate "Economics Working Group" under the Pacific Islands Roundtable for Nature Conservation. The Roundtable essentially works through voluntary working groups on for example invasive species and biodiversity comprising key researchers, managers and other partners and sharing information and or collaborating on key research and other activities.

During the IUCN presentation and subsequent discussion, participants confirmed that a Resource and Environmental Economics (REE) working group could help encourage the use of economic information to underpin key natural resource use and management decisions as well as to explore the issue of sustainable financing in the Pacific. In particular such a working group could help, among other things:

1. To convince politicians and communities of the economic benefits of investing in nature.
2. Governments and communities to explicitly consider the economic value associated with natural ecosystems and the livelihoods of local communities reliant on these natural ecosystems, when making economic development decisions.
3. Governments and communities to generate sustainable financing through for example, payment of ecosystem goods and services.
4. It was ultimately agreed that, rather than establish a separate REE working group under the Nature Conservation Roundtable, the existing Pacific Resource and Environmental Economics Network (PREEN) could help play a similar role.

For further information, please contact Padma Lal at padma.lal@iucn.org

CRISP Meeting, November 2010: Investing in Coral Reefs: Is it worth it?

The French-funded and SPC-implemented program, Coral Reef Initiative of the South Pacific (CRISP) is a multi-year project which is scheduled to end March 2011. Among their activities are projects focussing on the economics of coral reef use and management, including an IUCN, USP and WCPA activity on the Economics of coastal zone management.

The CRISP meeting during 22-26th November in Noumea involved a number of resource economists from within the Pacific (including PREEN members) as well as from Asia and Europe. The workshop was co-organized by SPC, IUCN, SPREP and IRCP (Institut des Récifs Coralliens du Pacifique) and was attended by twenty participants, many of them economics experts working globally on coral reef valuation.

The workshop consisted of several valuable small workgroup sessions and participants discussed a variety of issues concerning the above objectives, including what aspects of coral or coastal resource goods and services should be valued, what methodologies to use and how to communicate those findings to effect change.

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Property Rights and Land Tenure Reform: Experiences from New Zealand's South Island

This lecture was presented at USP on the 15th of October 2010 by Dr. Ann Brower, Senior Lecturer of Public Policy from Lincoln University, New Zealand. Please find the lecture abstract detailed below.

Until 1992, land on the eastern slopes of New Zealand's South Island was owned by the Crown and leased for pastoral sheep grazing. This land in Crown pastoral leases comprised 20 per cent of the South Island, or 10 per cent of New Zealand's landmass. Since 1992, the pastoral leaseholders have been able to enter negotiations with the Crown to split the leased land. Land capable of economic use, usually below 1000 metres in elevation, is privatised. On the other hand, land with recognised conservation values, usually above 1000 metres, shifts into public conservation land.

From 1992 to 2008, 270,082 hectares of land were privatised, granting freehold ownership to the former leaseholders; and 196,728 hectares shifted into conservation land, creating many parks and reserves. After the exchange of land rights, each party pays the other. The leaseholder pays the Crown for the value of its residual freehold rights in the land being privatised; and the Crown pays the leaseholder for the value of his or her leased rights to graze sheep. In the exchanges to date, for grazing rights the Crown has paid the run-holders NZ\$27.5 million more than the run-holders have paid the Crown for freehold title to the most developable portion. Since privatisation, the 28 of the 77 new freehold landowners have sold some or all of their freehold land. These 28 paid NZ\$6.9 million in aggregate for freehold rights, and have sold about 47 per cent of that land for a total of NZ\$134.5 million. The paper I will present uses bargaining dynamics, administrative politics, and agency theory to examine financial outcomes from New Zealand land reform. Results are inconsistent with payments arising from a bargain in which both the Crown and lessee advocate to their full potential, and are instead consistent with the Crown backing down to lessees' desires for a generous deal. This back down stems either from "bureaucratic coping," or from the addition of a bureaucratic middleman between the Crown principal and its negotiator subagent, exacerbating the principal-agent problem.

For more information, please contact Dr. Ann Brower at ann.brower@lincoln.ac.nz

PREEN Meeting in Noumea

A sub meeting of the PREEN was held in November 2010 as a side event at the above mentioned CRISP workshop on Investing in Coral Reefs: Is it worth it? During the workshop, participants discussed how to improve the peer review service of the PREEN and the degree to which the PREEN might be used to manage the quality of economics research in the Pacific in the next few years.

New members were recruited to the PREEN during the workshop. It was also agreed that practitioners in environmental and resource economics from the French Territories should be targeted to increase our understanding of other works underway in the region and methodologies and lessons available.

Efforts will be made to host a PREEN workshop in 2011, taking advantage of other regional meetings. Any assistance by members in self-funding their attendance or in supporting the attendance of other members would be gratefully received; PREEN is a voluntary Network, and does not have any resources of its own (not yet!).

For more information, please contact padma.lal@iucn.org or paulah@sopac.org



Scientists at NIWA Investigate the Longer-Term Costs of Natural Disasters: Focusing on the 2009 Samoan Tsunami

Scientists at NIWA are investigating the psychological, physical, financial and emotional longer-term costs of natural disasters using the September 2009 Samoan tsunami as a case study. The potential costs associated with natural disasters drives decisions about investment in disaster risk-reduction initiatives, so the more accurately they can be estimated, the better those decisions will be.

Dr Shona Van Zijl de Jong, a NIWA socio-economic researcher, is looking at the costs that occur for between two and five years after a disaster. Her focus is on the costs associated with the recovery of individuals, communities and society. The direct costs of a disaster can be relatively easy to measure, but indirect and intangible costs are much harder to quantify.

“We know very little about the longer-term costs associated with the psychological, physical, financial, and emotional damage people suffer as a result of a disaster,” says Dr van Zijl de Jong.

Numerous works have been published by this team in the past six months and the PREEN network can keep up to date with the team’s ongoing work and report outputs at <http://www.niwa.co.nz/our-science/natural-hazards>

For a full list of publications, or for any further information, please contact Shona van Zijl de Jong at S.vanzijldejong@niwa.co.nz

Assessing investment in disaster risk management in the Pacific: Data-Compilation in Progress

Pacific countries recognise the importance of planning for and dealing with natural disasters and have developed several strategies to deal with the issue. At the regional level, the Pacific Disaster Risk Reduction (DRR) and Disaster Risk Management (DRM) Framework for Action 2005 – 2015 (Madang Framework) outlines the major policy imperatives needed in the region to support the management of disaster.

SOPAC has a new initiative to track the level of investment in DRM activities as a means to understand the focus of expenditures on DRM over time. SOPAC has collected data from Vanuatu, the Cook Islands, Papua New Guinea, Fiji and the Republic of the Marshall Islands. So far, the evidence suggests that Pacific Island Countries have tended to provide funds targeting Disaster Management (response focused). Little funding has been allocated to target DRR, for example investing in early warning systems. Three sources of funding exist for DRM investments; National Government funding, Provincial Council Expenditure and Donor funding. However, there is little information available from government records on the level of funding at the Provincial level, rendering this difficult to track. SOPAC is assessing investment in DRM in the Pacific predominantly focusing on National budget and Donor funding.

Once an indication of total investment in DRM over time is obtained, it can be used as a benchmark to identify whether investment in DRM increases or decreases over time. Furthermore, it enables the identification of areas where investment has been most effective. This creates an advocacy tool, which when coupled with cost benefit analysis can be used to accurately identify where future expenditure is needed and how it can be best managed.

For more information, please contact Samantha Cook at samantha@sopac.org



Research in Progress



Economics of coastal zone management

The French Program, Coral Reef Initiative of the South Pacific (CRISP) implemented by SPC and SPREP, is presently supporting an activity to develop resource material on the economics of coastal zone management in the Pacific for university teaching. This activity is implemented by IUCN in partnership with Dr Vina Ram of USP and Mr Nicholas Connor from the IUCN World Commission of Protected Areas. The activity involves the use of a Driver-Pressure-State-Impact-Response (DPSIR) analytical framework to assess key drivers and influences of change in the Pacific that have major impacts on values, norms and practices of the Pacific Islanders. Such socio-cultural changes are at the core of the recent changes in the use and management of coastal resources and determine the state of the environment. The resource material generated through the activity will also include a micro level economic assessment of many coastal resource and environment management examples from the region.

For more details, contact Padma Lal at padma.lal@iucn.org

Upcoming Events



Meetings

AARES, February 2011 (Australia)

Climate change economics March 2011 (Mauritius)

Poverty and Environment Partnership February 2011 (Vienna)

Workshops

Economic impact assessment of disasters March 2011 (Vanuatu)

For more information please contact paulah@sopac.org

We look forward to receiving feedback and articles from our readers

Please send these to federica@sopac.org

The Pacific Resource and Environmental Economics Network...

Aims to progress economic analysis for sustainable resource management in the Pacific by providing a forum for practitioners in Pacific resource and environmental economics to exchange information, ideas and experiences for mutual learning and professional development.