

Fiji benefits from disaster breakthrough

Written by Administrator

Friday, 12 August 2011 16:13 - Last Updated Thursday, 18 August 2011 13:13

Fiji is among countries that will be the first to benefit from state-of-the art techniques that allow them to assess risks from natural disasters such as earthquakes and tropical cyclones.

These techniques provided under the joint Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) will assist the Ministry of Finance and the National Disaster Management Office in risk modelling and risk profiling, which in turn will help government draw up risk reduction measures.

Under PCRAFI, our disaster management officials can access information on the disaster vulnerability of certain areas or regions, and how best to manage such risks in terms of the location and strength of buildings for example. This ground-breaking work has just been unveiled by its architects, the Applied Geoscience and Technology Division of the Secretariat of the Pacific Community (SOPAC) working jointly with experts at the World Bank and the Asian Development Bank.

Providing technical support were Air Worldwide, GNS Science of New Zealand and Geoscience Australia as well as the 15 participating countries of the Pacific which apart from Fiji were Cook Islands, Federated States of Micronesia, Kiribati, Palau, Papua New Guinea, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Timor Leste, Tonga, Tuvalu and Vanuatu.

Architects of this innovative risk modelling and profiling technique had to study a huge amount of GIS data for the Pacific in their work, analysing data and information on population, land use and land cover, topography, bathymetry, soils and their engineering properties, assets including infrastructure and buildings, satellite images as well as historical catalogues and information on cyclones, earthquakes and tsunamis.

The GIS database provides full coverage of the entire landmass of Fiji and the other 14 participating countries and involved intensive field visits to 11 countries to survey more than 80,000 buildings, digitising from satellite imagery the footprints of 450,000 buildings, as well as inferring from satellite imagery 2,900,000 buildings and other assets.

Dr Russell Howorth, the Director of the Applied Geoscience and Technology Division of the Secretariat of the Pacific Community (SPC/SOPAC) hailed the initiative as “the first quantitative assessment of risk for Pacific Islands countries in terms of money, potential loss of lives and injuries.”

He believes this will provide governments and other key stakeholders such as the private sector with critical data and information needed to inform future policies, strategies and decisions in respect of “all” risk reduction measures as well as for underpinning sustainable development.

Howorth added that there are now opportunities for Pacific islands countries to integrate disaster risk considerations more meaningfully into their respective planning and

Fiji benefits from disaster breakthrough

Written by Administrator

Friday, 12 August 2011 16:13 - Last Updated Thursday, 18 August 2011 13:13

decision-making frameworks at national and sub national levels.

The islands countries must try and capitalise on the availability of the data and information.

The first two phases of PCRAFI have been co-funded by the Government of Japan and the Global Facility for Disaster Reduction and Recovery (GFDRR), with the second phase coming to closure in August 2011.

Its results were presented to Pacific islands countries and partners at the Pacific Platform for Disaster Risk Management meeting in Auckland on the first week of August.

PCRAFI comprises two key complementary components; disaster risk assessment and disaster risk financing solutions.

Disaster risk assessment tools seek to assist countries to improve their understanding of their exposure to natural disasters through being able to assess and model disaster risks.

The second component identifies a range of financial options for countries that could improve their capacity to access incremental financial resources in the case of natural disasters, while at the same time maintaining their fiscal balance.

The regional exposure database and the country-specific catastrophe risk models can also support multiple potential applications, both for public and private stakeholders.

Some examples include applications for urban and development planning whereby planners can use the information to evaluate changes to land use and zoning based on natural hazard risk or to develop investment plans to retrofit buildings for earthquakes or to raise floor levels for flooding due to storm surge from tropical cyclones or storms.

The risk assessment can also be used to carry out cost benefit analyses of proposed disaster prevention or mitigation investments.

In addition, the database could be used on each of the country's building codes wherein seismic hazard maps that have been produced under PCRAFI could be used to update current building codes.

In so far as communities are concerned, the risk assessment results and related visual tools can help identify vulnerable areas and communities located in or adjacent to these areas.

This would assist in informing more targeted intervention in community-based disaster risk management and climate change adaptation actions.

In the actual event of a natural disaster, the database provides extremely useful baseline data and information, for conducting timely and effective post-disaster damage assessments.

Loti Yates, the Solomon Islands Government's Director of the National Disaster Management Office (NDMO), in commenting about the utility of the database said "its potential in providing a

Fiji benefits from disaster breakthrough

Written by Administrator

Friday, 12 August 2011 16:13 - Last Updated Thursday, 18 August 2011 13:13

rapid estimate of damage within hours of an extreme natural event occurring will provide Government with valuable, timely and necessary information to mount an effective response as well as recovery of the disaster.”

Aside from the suite of applications that can be generated using the risk assessment tools, PCRAFI also explores various risk financing solutions for governments and the private sector to consider.

For example, the catastrophe risk assessment tools developed under this initiative can be used by private insurers to design and price property catastrophe insurance coverage for private and public dwellings.

As well, sovereign disaster risk financing options could be investigated by Fiji and other Pacific Islands countries to see how they can increase their financial resilience against natural disasters while maintaining their fiscal balance and promoting budget planning for financing natural disasters.

“The risk financing tools developed under PCRAFI will enable countries to assess the economic and fiscal impact of natural disasters, to quantify possible budget gaps post disaster, and to design disaster risk financing strategies, including national reserves, contingent credit, as well as regional risk pooling solutions which could provide additional financial resources,” said Dr Olivier Mahul, the PCRAFI Team Leader from the World Bank.

“This in turn could serve as bridge financing while other post-disaster sources are being mobilised following a natural disaster.”

Planning for a third phase of PCRAFI is underway, with a key component being to strengthen the data-sharing platform at SPC/SOPAC in order to achieve expanded reach and allow access of PCRAFI data and information to the wider Pacific community and beyond.

The opening up of access to these data will spurn the development of other products, tools and services that would be useful for various end-users and applications.

To ensure that quality data is maintained and updated, specific capacity building support and training of national and regional personnel would be required.

It is also envisaged there will be further refinements made to the disaster risk assessment tools and its applications, including the development of a Pacific risk atlas and the implementation of country specific technical assistance projects on disaster risk assessment.

With respect to disaster risk financing and insurance solutions for the Pacific, there could among others be a disaster risk insurance pilot implemented under the third phase and this will be explored further with countries, donors and development partners.

Source: Samisoni Pareti - [Islands Business](#) - August 2011