

## **THEME 2: ISLAND VULNERABILITY and DIALOGUE ON WATER & CLIMATE**

The vulnerability of Small Island Countries has received increasing attention since 1994 when the Barbados Conference on the Sustainable Development of Small Island Developing States called for recognition of their ecological fragility and economic vulnerability. The particular vulnerability of islands is often described in terms of their remoteness, small size and exposure to climatic instability. The significance of this climatic component of vulnerability has drawn particular attention to the impacts of climate variability and change and the Association of Small Island States has been successful in gaining international recognition for those concerns.

The World Water Council has acknowledged the vulnerability and particular needs of Small Island Countries by including the “Water in Small Island Countries” theme in the 3<sup>rd</sup> World Water Forum. A Pacific Regional Consultation planning meeting held in Port Vila identified “Island Vulnerability” as a major theme that should receive particular attention and noted that this should encompass disaster preparedness and hazard management as well as the vulnerabilities associated with climate change and climate variability.

The Netherlands based International Secretariat of the Dialogue on Water and Climate has also recognised the significance of water and climate to Small Island Countries by providing support to collaborative projects from the Pacific and Caribbean Regions which will provide further input to the 3<sup>rd</sup> World Water Forum. The Dialogue on Water and Climate aims to improve the capacity in water resources management to cope with the impacts of increasing variability of the world’s climate, by establishing a platform through which policymakers and water resource managers have better access to and make better use of information generated by climatologists and meteorologists. In support of that goal a special one-day side meeting on Water and Climate is being organised in conjunction with the Island Vulnerability theme as part of the Pacific Regional Consultation.

### **SCOPE**

Vulnerability refers to the risk of being harmed by unforeseen, or unusual, events. There is a wide range of hazards with the potential to impact upon Water in Small Island Countries. For the consideration of the Island Vulnerability theme the following classification of hazards is proposed:

<b>Natural hazards</b>	<b>Climate</b>	<b>Drought</b>
		<b>Flood</b>
		<b>Cyclone</b>
		<b>Storm surge</b>
	<b>Non-climate</b>	<b>Volcanic</b>
		<b>Seismic</b>
<b>Human hazards</b>	<b>Civil unrest</b>	
	<b>Land tenure</b>	
	<b>Land use</b>	
	<b>Human resources</b>	

The characteristics of these different hazards differ greatly in terms of their potential impacts, predictability and manageability. The climate hazards tend to occur frequently enough in human terms to allow the development of traditional coping strategies. The improved scientific capability to observe and describe the interaction of the ocean and atmosphere is now providing for useful forecasts of some of these hazards; for example, the drought conditions associated with the 1997-98 El Niño were reliably forecast throughout much of the Pacific Region. In contrast, the non-climate natural hazards are relatively infrequent and unpredictable even though they may, in a sense, be foreseeable; e.g. an active volcano can be expected to erupt at some time in the future. Human hazards are, unfortunately, also capable of causing considerable harm to water resources yet they can be unpredictable and are often not foreseen.

The terms coping and adaptation are often used to describe alternative types of response to hazards. Coping tends to be used in the sense of “coping with” and may imply a reactive approach whereas adaptation tends to be expressed as “adapting to” implying a more proactive approach. These distinctions are, to some extent, rather arbitrary and there is considerable overlap between the two terms. An alternative classification can be based on consideration of whether or not the response is based on a forecast. That approach will be taken when discussing hazard management methods in the Island Vulnerability theme and in the associated one-day side meeting on Water and Climate.

## **SESSION**

A wide range of hazard responses relevant to Water in Small Islands has been developed. These have sometimes been the initiatives of individual Country or promoted through bi-lateral, Regional and International programmes. The Island Vulnerability theme session will review the implementation of these various responses within the Pacific Region with the objective of highlighting the successful approaches, noting any gaps and identifying priority actions.

The National Consultations carried out prior to the Regional Consultation meeting are expected to have provided relevant input into this review. Where possible, contact points within National Disaster Management Offices, National Meteorological Services and Water Resources Management/Water Utilities have been advised of the consultation process and invited to provide input relevant to the Island Vulnerability theme.

Presentation of an Island Vulnerability theme paper will provide the meeting with an overview of the following range of hazard responses:

- Application of seasonal and inter-annual climate forecasts,
- Application of cyclone warning systems,
- Vulnerability and adaptation assessments in relation to climate variability and change,
- Disaster preparedness guidelines for utilities,
- Capacity building for water resource assessment and management.

It is expected that Country delegations will be in a position to comment on national experiences with the implementation of these and other response mechanisms.

Discussion of the issues relating to these responses is expected to identify gaps where existing hazards and not being adequately responded to, opportunities where successful responses can be implemented and constraints where the capacity or capability to respond is not available. Those factors will assist in developing the action plan and recommendations of the Regional Consultation meeting.

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## CASE STUDIES

A series of case studies will be presented to illustrate some of the approaches and are expected to include:

- Vulnerability of freshwater lenses on Tarawa – the role of hydrological monitoring in determining sustainable yield (Kiribati),
- Precipitation forecasting and its applications in the water sector (Fiji),
- Development of a drought index for Rarotonga (Cook Islands),
- Comprehensive Hazard and Risk Management.

## IDENTIFICATION OF PRIORITY ACTIONS

The identification of priority actions will be a result of deliberations of the various theme sessions and subsequent discussions. However, there are existing proposals for capacity development in relation to water resources assessment which will be presented to the meeting during the day of the Island Vulnerability theme. A working group will be formed to develop the proposals for endorsement by the Regional Consultation meeting.

Related initiatives related to the development of a Pacific Island Climate Information System may also be of interest. It is expected that this possibility will be discussed in the one-day side meeting on Water and Climate.

Country delegations are particularly encouraged to use the outcome of their National Consultations to identify their own priorities for actions and to advocate these within the Island Vulnerability theme session.

## FURTHER INFORMATION

For further information, please contact the Theme 2 Resource Person, **Mr. David Scott**

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