

Integrated flood risk
management through
appropriate knowledge sharing
and capacity building systems

Thematic Cluster 2: Risk identification,
assessment, monitoring and early
warning

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Adviser – Community Risk Programme

SOPAC SECRETARIAT, SUVA FIJI

Perspectives on Water Induced Disaster Risk Reduction

IMPORTANCE OF INTEGRATING METEOROLOGICAL AND HYDROLOGICAL DATA / INFORMATION

- *2nd World Conference On Disaster Reduction,
Hyogo Kobe 18-22 Jan 05*

Region of Big Ocean – Small Island Resource Systems

**RISK REDUCTION &
RESOURCE MANGAMENT
TO PROMOTE**

SUSTAINABLE DEVELOPMENT



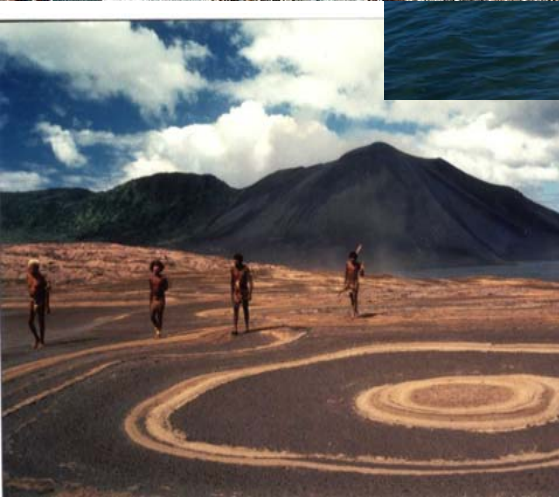
The Pacific Islands Region



NORTH
0 500 1000 km
Modified Cylindrical Projection
Map drawn by MAPgraphics, Brisbane, 1995



UNDERSTANDING MOOD & SPIRIT OF THE OCEAN-ATMOSPHERE – LAND SYSTEM



Pacific Island Countries Estimated Level Of Vulnerability To Specific
Natural Hazards
[“Final Report for International Decade For Natural Disaster Reduction” –
Dr.Jack Rynn]

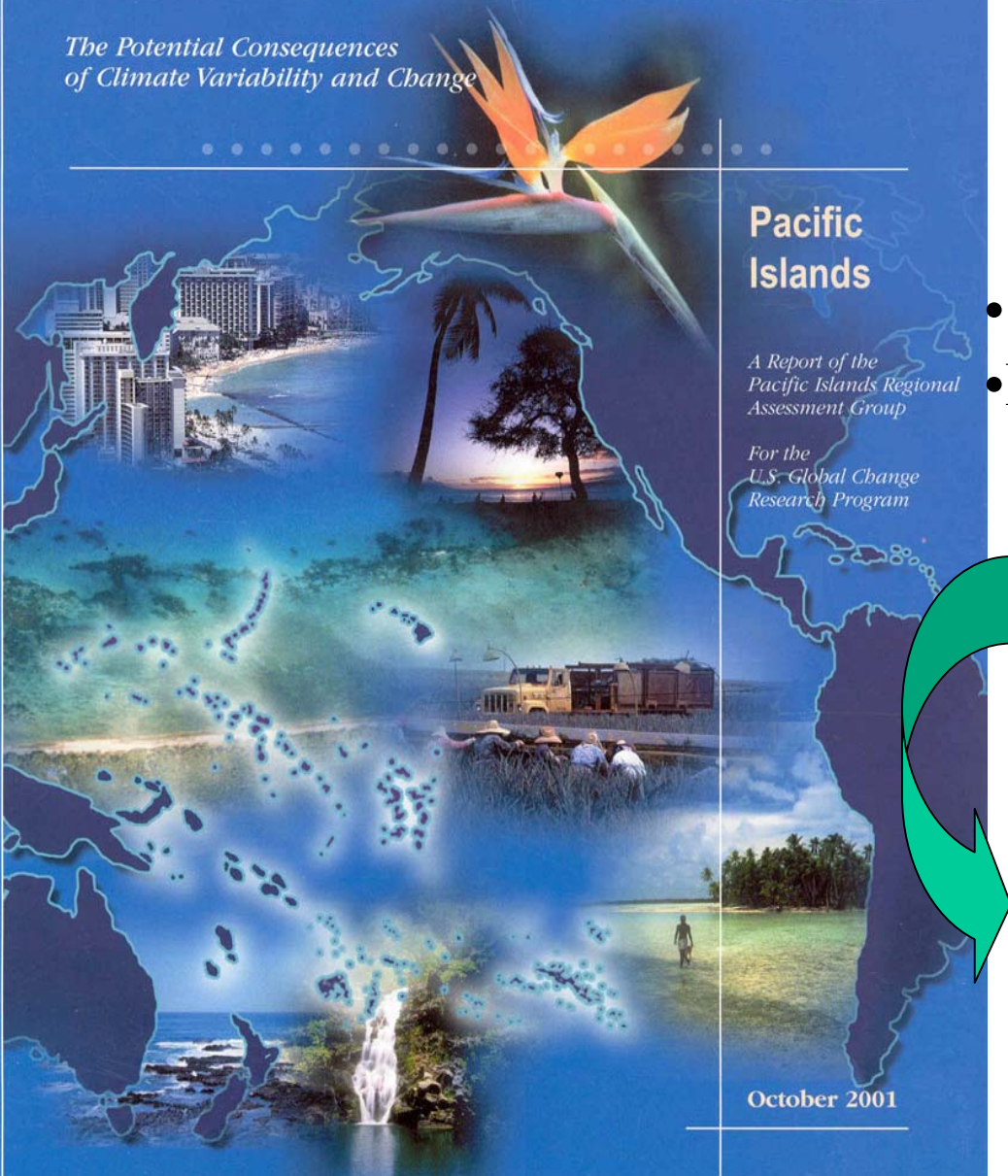
Country	Population	Land Area (km2)	Tropical Cyclone	Storm Surge	Coastal Flood	River Flood	Drought	Earthquake	Landslide	Tsunami	Volcanic Eruption
Cook Islands	19,500	240	H	H	M	M	H	L	L	M	-
Federated States of Micronesia	114,800	701	M	M	H		H	L	L	N	-
Fiji	752,700	18,272	H	H	H	H	H	H	H	H	L
Kiribati	76,000	725	L	M	H	-	H	L	L	H	-
Marshall Islands	50,000	181	H	H	H	-	H	L	L	H	-
Nauru			L	L	L	-	H	L	L	L	-
Niue	2,300	258	H	H	L	-	H	M	L	M	-
Palau	21,600	494	H	H	M	-	H	L	L	M	-
Papua New Guinea	4,056,000	462,243	H	H	H	H	H	H	H	H	H
Samoa	163,000	2,935	H	H	H	H	L	M	H	H	M
Solomon Islands	337,000	28,370	H	H	H	H	H	H	H	H	H
Tokelau	1,600	12	H	H	H	-	H	L	L	H	-
Tonga	97,400	720	H	H	H	M	H	H	L	H	H
Tuvalu	9,100	24	H	M	H	-	M	L	L	H	-
Vanuatu	156,500	12,200	H	H	H	H	H	H	H	H	H

RISK RANKING: L=Low; M=Medium; H =High

SOURCES: Carter et al (1991); SPREP/UNDHA-SPPO (1994); Chung (1996); UNDHA-SPPO/SPDRP (Hamnett, 1996); UNDHA-SPPO/SPDRP (Vrolijk, 1998); Burke (1999); Natural disasters experienced during the Decade 1990-2000 and potential for future per NDMOs

PREPARING FOR A CHANGING CLIMATE

*The Potential Consequences
of Climate Variability and Change*



Pacific Islands

*A Report of the
Pacific Islands Regional
Assessment Group*

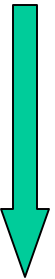
*For the
U.S. Global Change
Research Program*

October 2001

CLIMATE VARIABILITY AND SEA LEVEL RISE



- SIGNIFICANT THREATS
- PRIORITY OF THE REGION



Flood, drought, landslide,
coastal erosion, tropical
cyclone, intense rainfall

• Effective Response (on
residual risks) → EWS

• Mitigate (reducible risks)



Manage Risk & Resources



TC HETA
“115/160 knots;
damaging heavy
swells” ~ total
destruction on
NIUE – 5-7th



RANET (Radio and Internet)

Dissemination and Communication of Environmental Information for Rural and Remote Community Development

IMPROVE CURRENT SYSTEMS

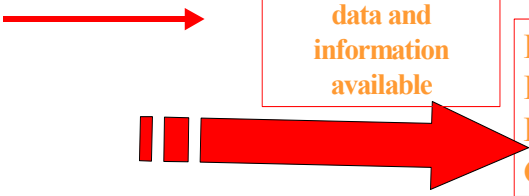
:EMWIN, PEACESAT, PFNet Community Radio Network



Stakeholder Interaction

Sufficient, relevant data and information available

Better Preparedness, Response and Coordination



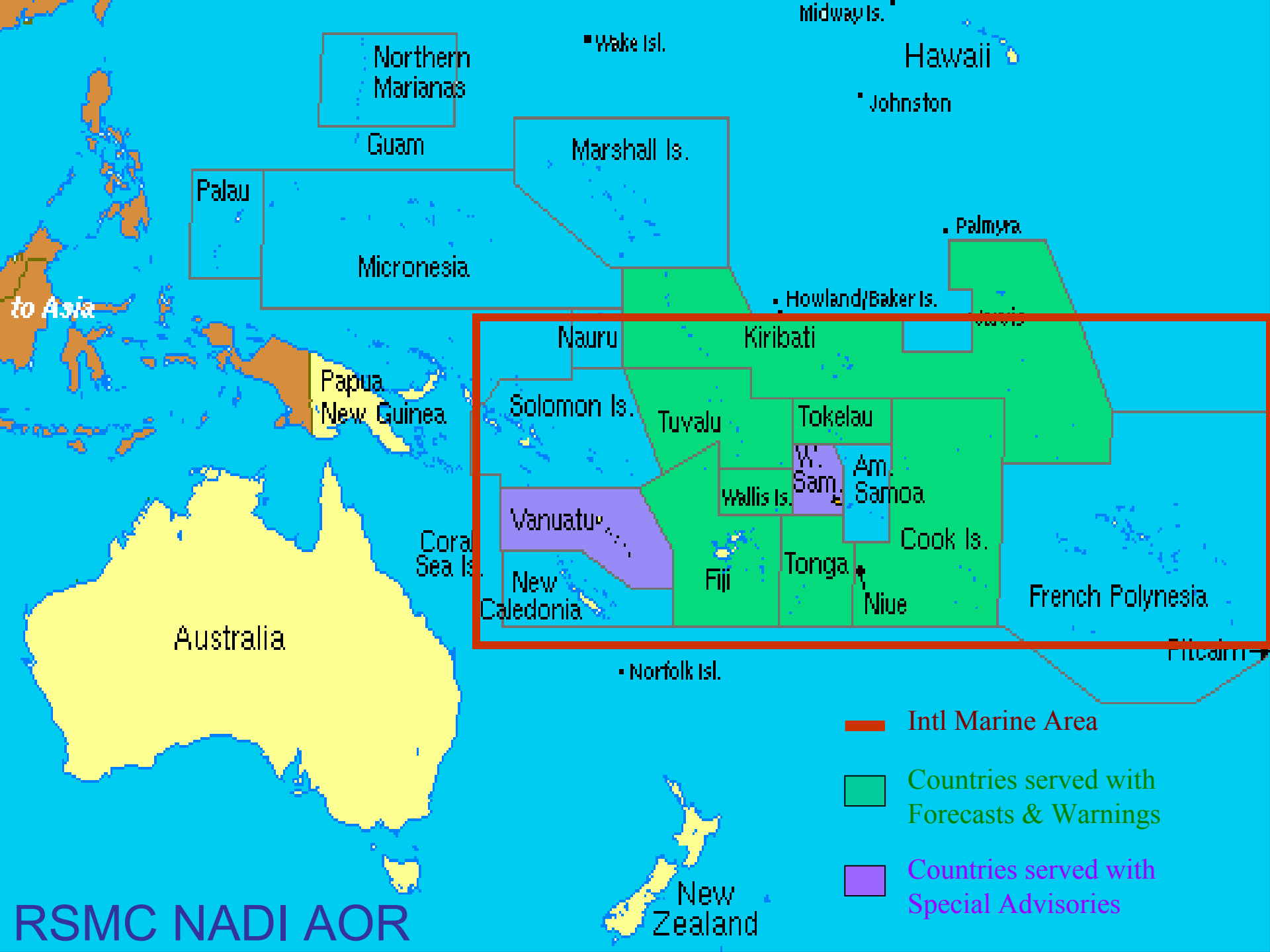
WHY THE INTEGRATION OF METEOROLOGICAL & HYDROLOGICAL INFORMATION IS IMPORTANT



- BIG OCEAN → VERY LIMITED WATER RESOURCES
- NARROW BASED ISLAND RESOURCES → WATER CRITICAL TO DEVELOPMENT
- WATER RESOURCES VERY VULNERABLE TO DISASTERS



MET DATA TO IMPROVE EFFECTIVE RESPONSE & PREPAREDNESS as well as supply BASIC DATA FOR MITIGATION PLANNING and the MANAGEMENT OF WATER RESOURCES



**PACIFIC
REGIONAL ACTION
PLAN ON
SUSTAINABLE
WATER
MANAGEMENT**

In preparation
for the 3rd World Water Forum
Kyoto, Japan, 2003

3rd August 2002
Sigatoka, Fiji Islands

www.sopac.org



Water Resources
Management

Island Vulnerability

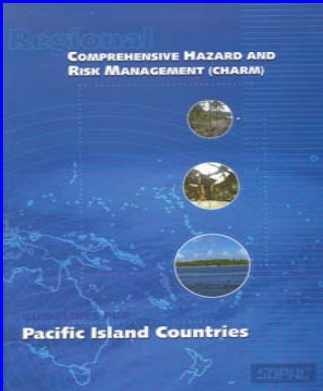
Awareness

Technology

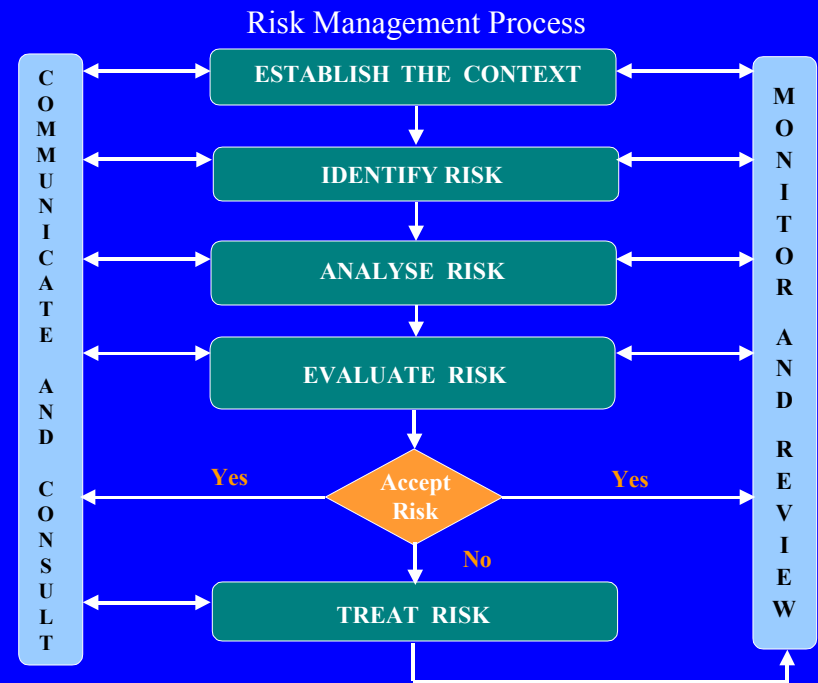
Institutional Arrangement

Finance

CHARM



A comprehensive hazard and risk management tool to mainstream risk management practices in the Pacific.



CHARM & Climate CHANGE

Inputs

Support of EXISTING Initiatives

- Legislation -
- Policies
- Plans
- Supporting Legislation
- Management Framework
- Synergies with Global / Regional Programmes

Process

Filling in the THE GAPS

- Advocacy
Engage Middle & Community Level Leaders
Target Social Organisations - Identify & Analyse the Risks
- ACCEPT THE RISKS? (Y/N)**
- Treat the Risks

Outputs

NATIONAL RISK REDUCTION STRATEGIES

- Recommendations prepared for:
- Government
 - Donors

Outcomes

Sustainable Development
and
Resilient Communities



PACIFIC STRONGLY EMBRACES
KNOWLEDGE SHARING AMONGST
STAKEHOLDERS



UNDERPINS
STRENGTH & RESILIENCE OF
PACIFIC COMMUNITY



WHERE TO
FROM HERE?

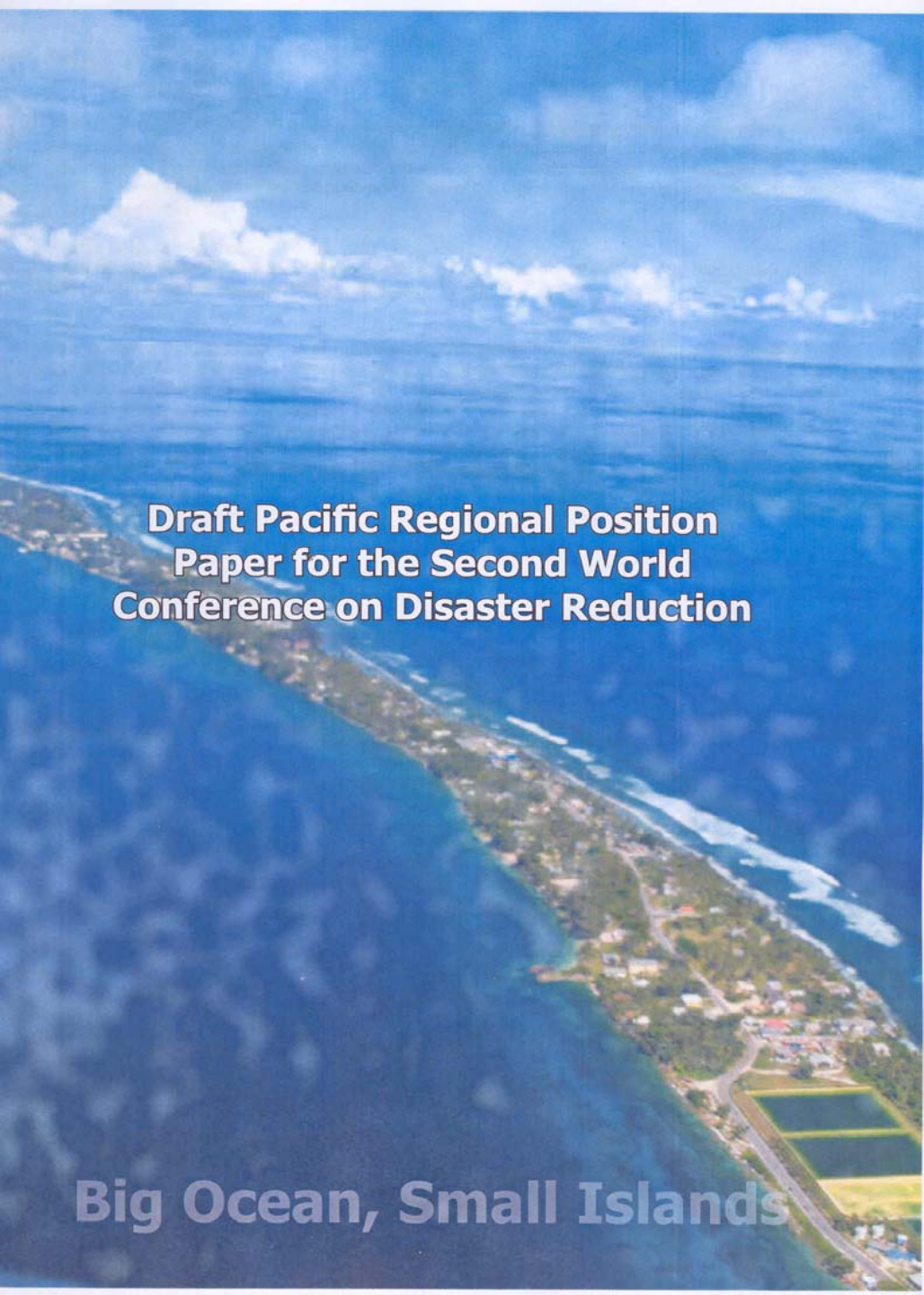
- **Develop Simple Tools to Incorporate User Indicators**
- **Promote Application of Met Information At the Operational Level**
- **Include integrated coastal-flood management plans**
- **Make routine the consultation between providers and users**
- **Credibility**



OUR VULNERABILITY MAYBE IN COMMON WITH OTHERS
BUT OUR APPROACHES TO RISK REDUCTION ARE UNIQUE TO
THE PACIFIC

PACIFIC SHOULD NOT BE LEFT TO WORK IN ISOLATION
WIT NEEDS PARTNERSHIP IN EFFECTIVE IMPLEMENTATION

THANK YOU

An aerial photograph of a small island, likely in the Pacific region, showing a narrow strip of land with a small town and a large body of water. The ocean is a deep blue, and the sky is a lighter blue with some white clouds. The island is surrounded by a shallow lagoon with a sandy beach and some greenery.

**Draft Pacific Regional Position
Paper for the Second World
Conference on Disaster Reduction**

www.sopac.org

Big Ocean, Small Islands