



CLIMATE CHANGE AND FOOD SECURITY IN PACIFIC ISLAND COUNTRIES



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PREFACE

With increasing global temperatures, rising sea levels and more frequent and intense extreme weather events, Pacific islands countries, especially those in warmer latitudes, are the most vulnerable to the adverse effects of climate change. Their populations are expected to be among the first that will need to adapt to climate change or even abandon their traditional homeland and relocate. Unless we act now, climate change will constitute a major barrier to the achievement of sustainable development and viable food production goals for all Pacific island countries, while threatening the very existence of many of them.

Ocean warming and acidification, spatial changes in precipitation patterns and frequent cyclones are projected to have devastating effects on the food sector, ranging from loss of the coral reefs and mangrove forests on which fish depends, to reduced agricultural yields and loss of arable land and freshwater. Recognizing that subsistence and commercial agriculture are vital to local food security and earning export revenues, it becomes quite certain that implementation of adaptation measures to build resilience of food systems is critical to avoiding enormous economic losses in agriculture, forestry and fisheries. For example, in the absence of adaptation, the cost of damages in the food sector by 2050 could represent 2–3 percent of Fiji's and 17–18 percent of Kiribati's 2002 gross domestic product. Although regional organizations and national groups are involved in adaptation to climate change in the Pacific, there are synergies that remain unexploited, especially between the environmental conservation and agricultural development constituencies.

For this reason, it is imperative that environmental and agricultural institutions join forces and catalyze support to further increase resilience against climate change impacts in the Pacific. Systematic observation, adaptation programmes, improved institutional frameworks for disaster risk management and partnerships

at all levels are essential elements for any strategy to enhance livelihoods and local capacities to cope with climate change in the food sector.

This document is the first output of such an undertaking. It presents the results of a partnership between the Food and Agriculture Organization of the United Nations (FAO), the Secretariat of the Pacific Regional Environment Programme and the University of the South Pacific. Chapter 1 presents the issues and requirements that Pacific islands face regarding the impacts of climate change on food sources and water. Chapters 2, 3 and 4 offer national assessments in, respectively, Vanuatu, the Republic of Marshall Islands and the Cook Islands, including recommendations for national strategies to mitigate, adapt and respond to the challenges posed by climate variability on agriculture and food security. Chapter 5 presents the report of a regional expert group of concerned partners which was formed to consider and regionalize the commitments made by the Rome Declaration of the High-Level Conference on World Food Security: the Challenges of Climate change and Bioenergy, 3–5 June 2008. Chapter 6 presents the full text of the Rome Declaration.

The FAO Natural Resources Management and Environment Department and the FAO Sub-Regional Office for the Pacific Islands are committed to participating in the regional response to climate change and food security. This entails building on the body of knowledge gathered in this document in support of furthering the development and implementation of a plan to address the vulnerability of Pacific islands and focus on building the resilience of food systems in the context of climate change. This includes mainstreaming climate adaptation into national policies, strategies and programmes related to agriculture, forestry and fisheries.

Development partners at national, regional and international levels are encouraged to join forces in this search for practical responses, in support of the well-being of islanders.

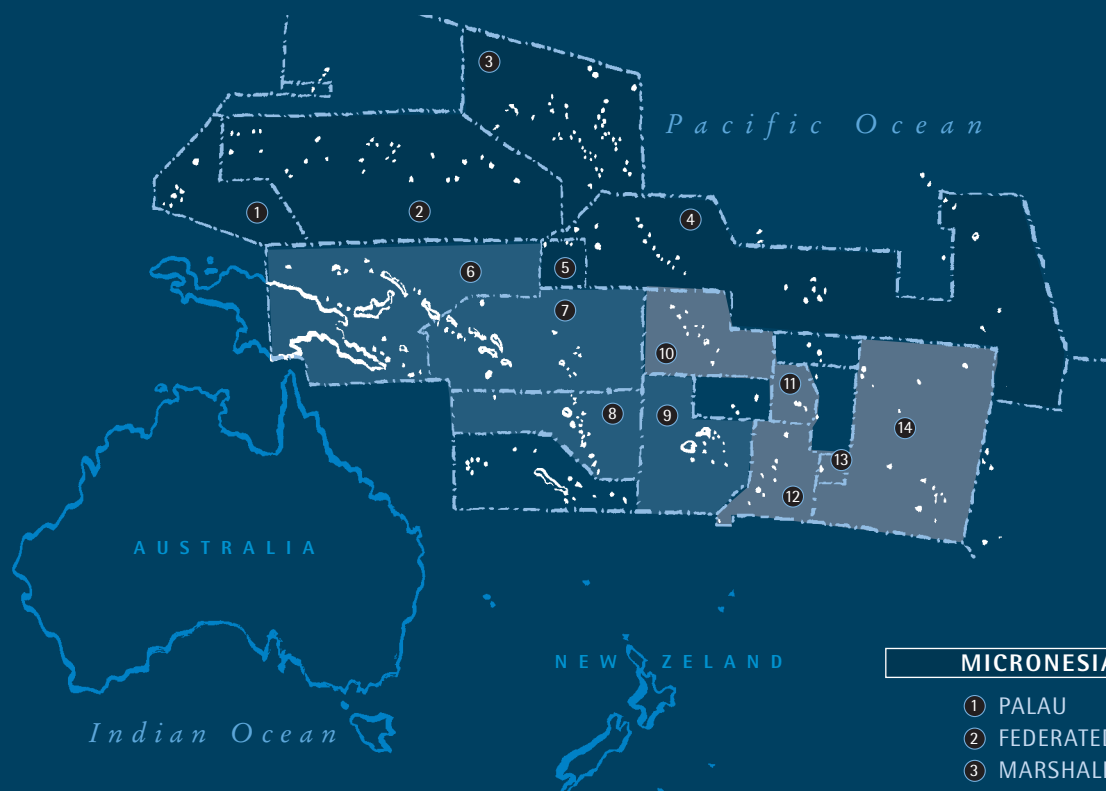


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MAP OF PACIFIC ISLAND COUNTRIES^(*)



MICRONESIA

- ① PALAU
- ② FEDERATED STATES OF MICRONESIA
- ③ MARSHALL ISLANDS
- ④ KIRIBATI
- ⑤ NAURU

MELANESIA

- ⑥ PAPUA NEW GUINEA
- ⑦ SOLOMON ISLANDS
- ⑧ VANUATU
- ⑨ FIJI

POLYNESIA

- ⑩ TUVALU
- ⑪ SAMOA
- ⑫ TONGA
- ⑬ NIUE
- ⑭ COOK ISLANDS

^(*) FAO MEMBER COUNTRIES

LIST OF ACRONYMS

ADB	Asian Development Bank
ADMIRE	Actions the Development of the Marshall Islands Renewable Energy
AusAID	Australian Agency for International Development
CBDAMPIC	Capacity Building for the Development of Adaptation Measures in Pacific Island Countries
CCAIRR	Climate Change Adaptation through Integrated Risk Reduction
CDI	Capacity Development Initiative
CFA	Compact of Free Association
CHARM	Comprehensive Hazard and Risk Management
CIANGO	Cook Islands Association of NGOs
CIDA	Canadian International Development Assistance
CIG	Cook Islands Government
CIRC	Cook Islands Red Cross
CLIMAP	Climate Change Adaptation Programme
CMi	College of the Marshall Islands
CROP	Council of Regional Organizations in the Pacific
CRP	Comprehensive Reform Programme
CSIRO	Commonwealth Scientific and Industrial Research Organization
DSAP	Development of Sustainable Agriculture in the Pacific
D-U-D	Darrit-Uliga-Delap
EEZ	Exclusive Economic Zone
ENSO	El Niño Southern Oscillation
EPPSO	Economic Planning, Policy and Statistics Office
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GCM	General Circulation Models
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green House Gases
GNP	Gross National Product
GoV	Government of Vanuatu
HDI	Human Development Index
HPI	Human Poverty Index
HRD	Human Resource Development
IADP	Integrated Atoll Development Project
IGCI	International Global Change Institute
INC	Initial National Communication (to UNFCCC)
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Country
MDG	Millennium Development Goals
MIMRA	Marshall Islands Marine Resources Authority
MLE	Ministry of Lands and Environment
MMR	Ministry of Marine Resources

MOA	Ministry of Agriculture
MRD	Ministry of Resource and Development
MWSC	Majuro Water and Sewer Company
NACCC	National Advisory Committee on Climate Change
NAPA	National Adaptation Programme for Action
NBSAP	National Biodiversity Strategy and Action Plan
NEMC	National Emergency and Management Coordination
NEMS	National Environment Management Strategy
NEPA	National Environment Protection Act
NES	National Environment Service
NESAF	National Environment Strategic Action Framework
NESS	National Economic Social Summit
NIP	National Implementation Plan
NIWA	National Institute of Water and Atmospheric Research
NOAA	National Oceanic and Atmospheric Administration
NSDP	National Sustainable Development Plan
NZAID	New Zealand Agency for International Development
ODM	Office of Disaster Management
OEPPC	Office of Environment Planning, Protection and Coordination
OPS	Office of Planning and Statistics
PACC	Pacific Adaptation to Climate Change
PICCAP	Pacific Islands Climate Change Assistance Programme
PICs	Pacific Island Countries
PIFACC	Pacific Islands Framework for Action on Climate Change
PIGCOS	Pacific Islands Climate Observing System
PIGGAREP	Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project
PIREP	Pacific Islands Renewable Energy Programme
POPs	Persistent Organic Pollutants
RE	Renewable Energy
RET	Renewable Energy Technology
RETA	Regional Technical Assistance (of ADB)
RMI	Republic of the Marshall Islands
RMIEPA	Republic of the Marshall Island Environment Protection Agency
ROC	Republic of China
RPFS	Regional Programme on Food Security
SDP	Sustainable Development Plan
SEAFRAME	Sea Level Fine Resolution Acoustic Measuring Equipment
SGP	Small Grants Programme (of GEF)
SLR	Sea-Level Rise
SNC	Second National Communication (to UNFCCC)
SOE	State of the Environment
SOPAC	South Pacific Applied Geoscience Commission
SPC	Secretariat of the Pacific Community
SPCZ	South Pacific Convergence Zone
SPREP	Secretariat of the Pacific Regional Environment Programme
SPSLCMP	South Pacific Sea Level and Climate Change Monitoring Project
TC	Tropical Cyclone
TTPI	Trust Territory of the Pacific Islands
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USP	University of the South Pacific
VANGO	Vanuatu Association of Non-Governmental Organizations

