Developing Climate Services at the National Level

Capacity Development

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Regional Consultation on Climate Services for the Third Pole and other High Mountain Regions

9-11 March 2016, Jaipur, India

World Meteorological Organization

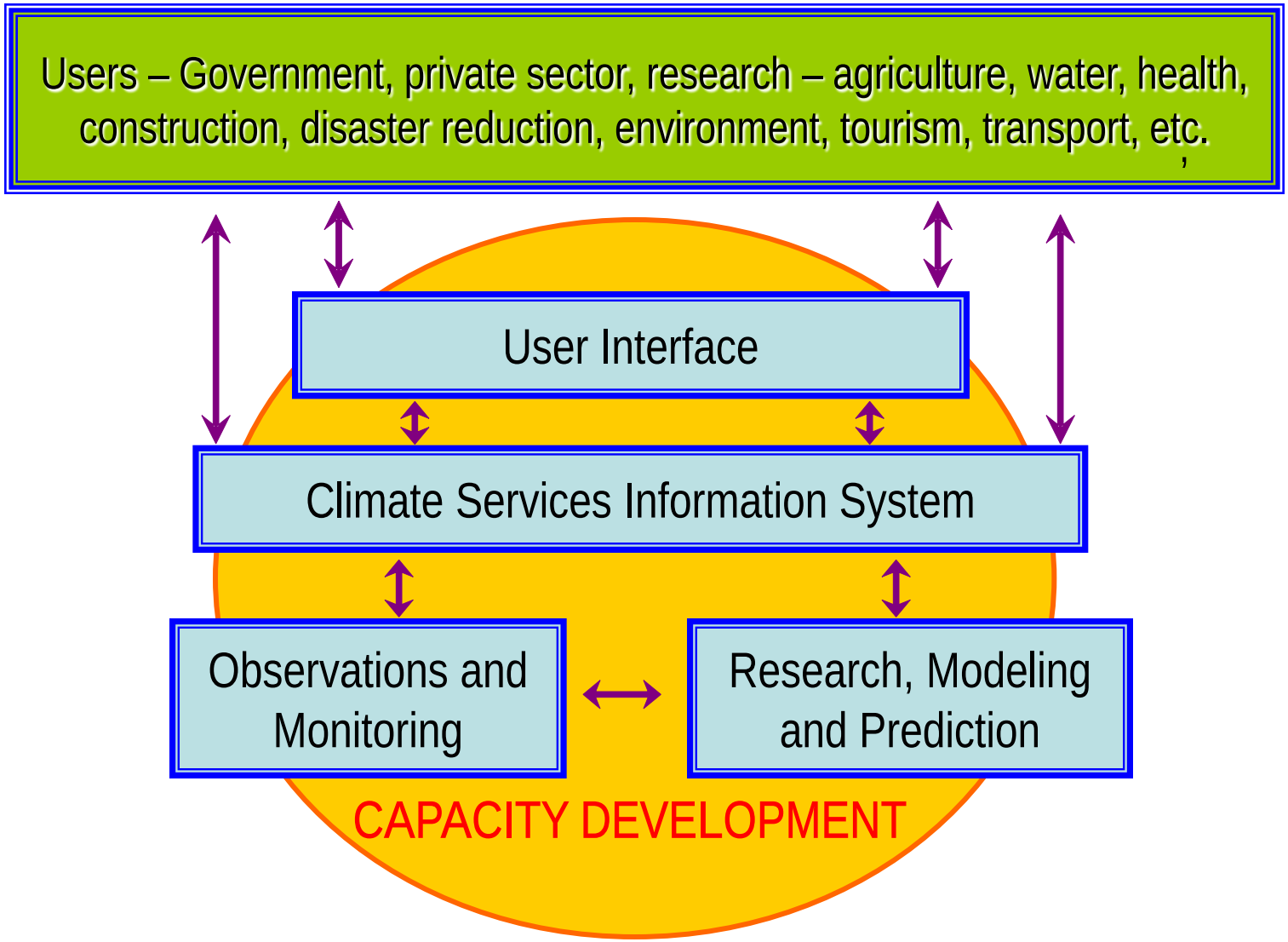
INDIA METEOROLOGICAL DEPARTMENT

GFCS GLOBAL FRAMEWORK FOR CLIMATE SERVICES

Canada

सत्यमेव जयते
Government of India

Components of Global Framework for Climate Services



Capacity Development

- Investment in people, practices and institutions to stimulate and develop capacities in order to assess and manage climate-related risks more effectively

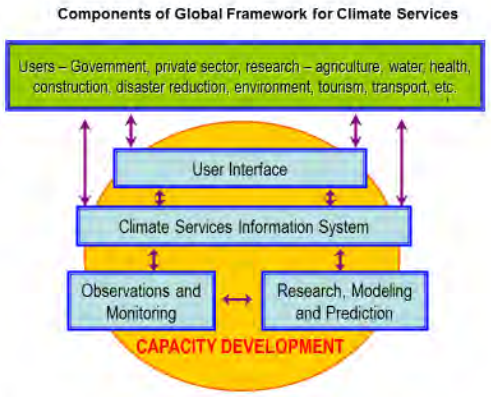
- Ensuring that expertise, infrastructure, institutional relationship and policies are in place to support climate services

“Building Climate Resilient systems in the Asia-Pacific Region – 2015”
Australian Award Fellowship
Department of Foreign Affairs and Trade

Climate service delivery at the national level is a collective responsibility of several institutions:

For effective climate service delivery the following competencies must exist or be developed: (WMO- ET-ETR)

- **Create and manage climate data sets.**
- **Derive products from climate data.**
- **Create and/or interpret climate forecasts and model output.**
- **Ensure the quality of climate information and services;**
- **Communicate climatological information with users.**



Performance criteria and learning outcomes

This competencies framework is conditioned by:

- **The organizational mission, priorities and stakeholder requirements;**
- **The way in which internal and external personnel are engaged in the provision of climate services;**
- **The available resources and capabilities (financial, human, and technical) ;**
- **National and institutional legislation, rules, organizational structures, policies and procedures.**
- **WMO guidelines, policies and procedures for climate data and products**

Capacity Development

Various dimensions of capacity development :

- **Human resource capacity**
- **Infrastructural Capacity**
- **Institutional Capacity**
- **Procedural Capacity**

Capacity Development

Human resource capacity

Equipping individuals with the understanding, skill, information, knowledge and training to enable them to generate, communicate and use climate information

•Development of highly skilled personnel across different disciplines
•Access to data, methods, models and tools
•Mainstreaming climate variability and climate change education into curricula of educational institutions
•Engagement with the user of information

Capacity Development

Institutional Capacity

•Mandate for proper functioning of climate services, legislation, policies and procedures
•Management structures, processes and procedures that enable effective climate services, not only within organization but also in managing relationships between different organizations and sectors (public, private, NGO, international)

Capacity Development

Procedural Capacity

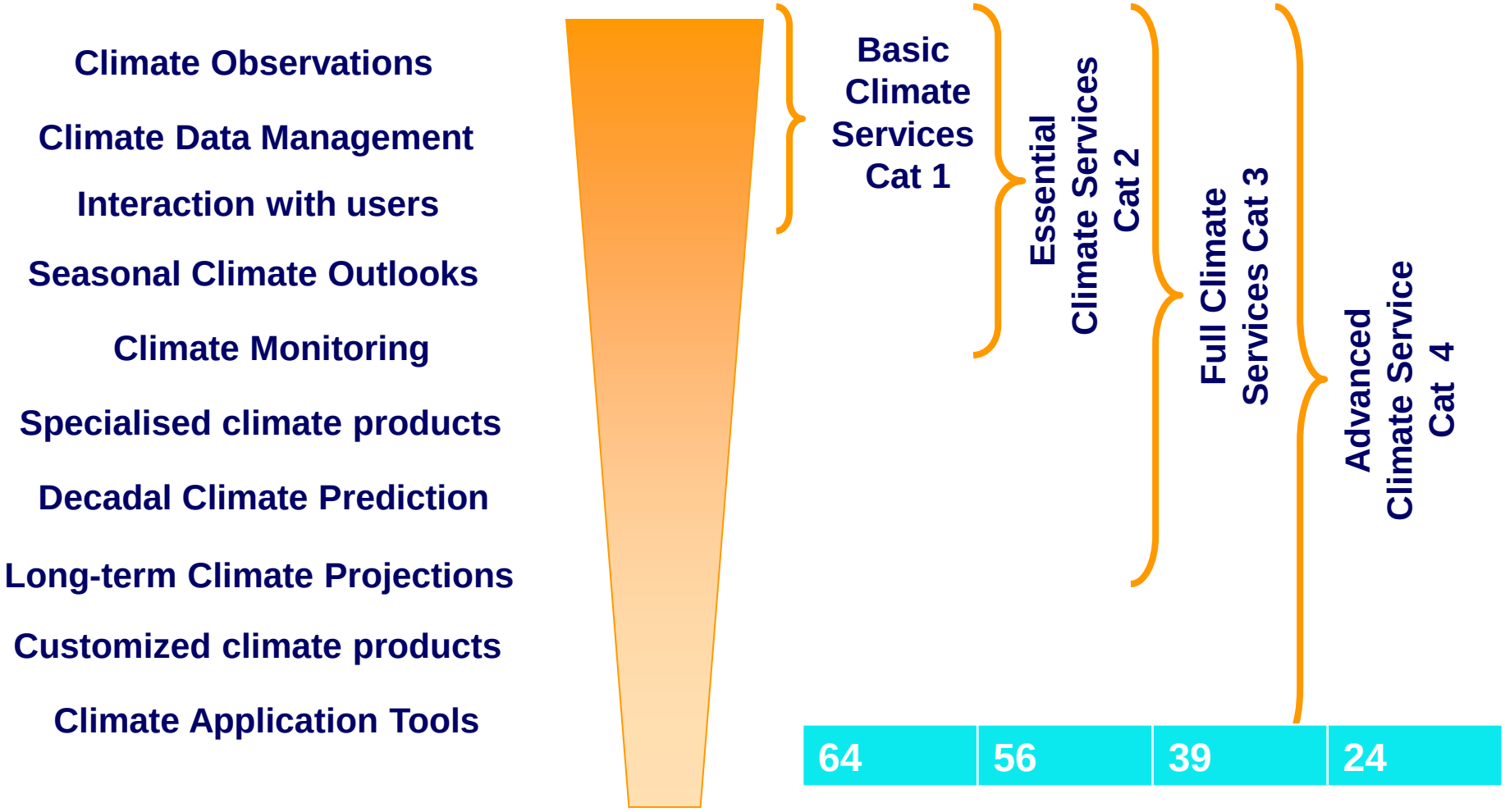
-Appropriate mechanism for technology transfer of climate forecasts to end-users
-Building partnerships across different sectors
-Building extension capability
-Implementation of Best Practices

Capacity Development

Infrastructural Capacity
Access to resources to generate, archive and use climate data and decision-relevant information

-Observation network
-Data management system
-Computer hardware, internet, manuals and scientific literature

Categories of Climate Services at National Level



Learning from Experience

Some reasons why climate information are not often used

•Value (net benefit) or climate forecasts have not been demonstrated – This demonstration must take place so that the focus is on the end user rather than those of climate scientists

•Users require objective, explicit and user friendly forecasts at temporal and spatial scale appropriate to their needs. They also require applicable information about forecasting errors and uncertainty

•Stakeholder need better education on climate issues and processes, forecasting techniques and probability

So we need to look at capacity building from a supply as well as demand side.

Pacific Islands – Climate Prediction Project

www.bom.gov.au/climate/pi-cpp/

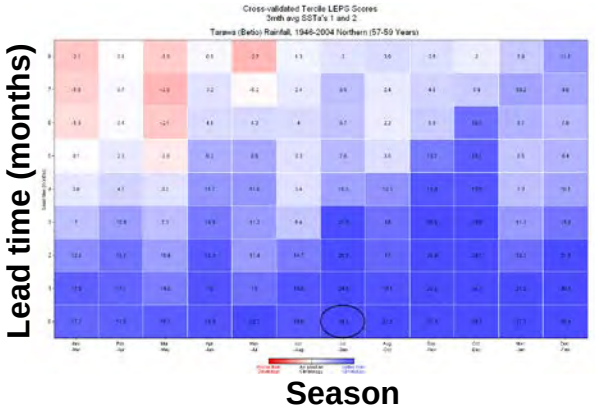
- **Develop a software called SCOPIC (Seasonal Climate Outlook for Pacific Island Countries) to provide local NMS with the ability to issue seasonal climate forecasts specific to their country**
- **Training in SCF and Risk Management**
- **Conduct pilot project on the impact of climate on vulnerable sectors in each participating country**

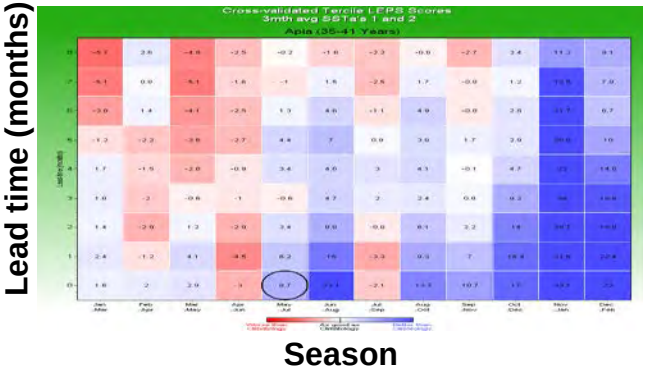
SCOPIC – Seasonal Climate Outlooks for Pacific Island Countries

- **To develop capacity in PIC NMS to provide SCO's for climate sensitive sectors and the general public**
- **Simple Operation**
  1. **Organize Data**
  2. **Explore Data**
  3. **Analyze Relationships**
  4. **Test Skill**
  5. **Generate Report**
  6. **Drought analysis**

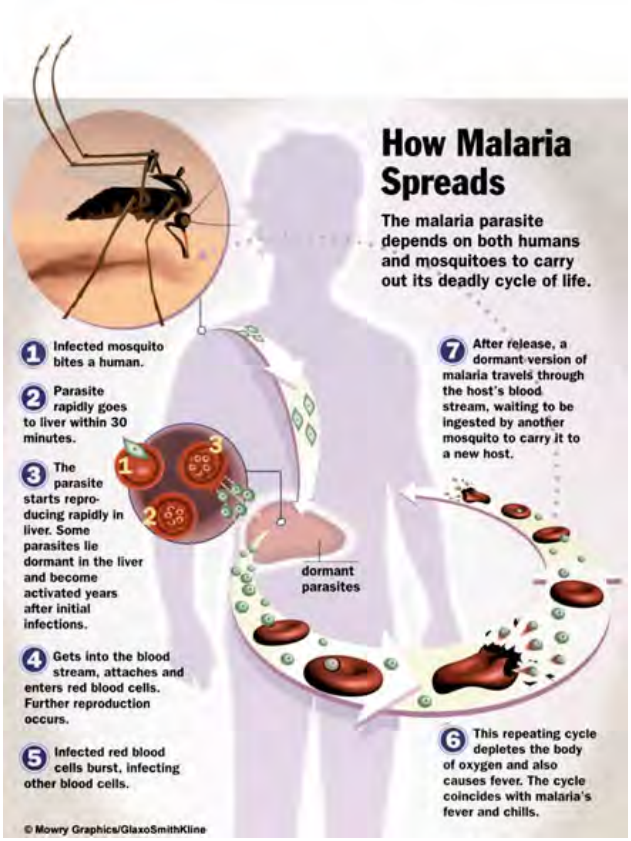
Tarawa (Kiribati)

Apia (Samoa)





Prediction of Vector-born diseases (Malaria)



Aims

- **Determine whether malaria epidemics in the Solomon Islands are related to the ENSO, rainfall and other hydro-climatic variables; and**
- **Determine if such relationship can be used as an early warning system for predicting heightened risk of a malarial epidemic and therefore in assisting targeted control strategies.**

Working with end-users


2 Solomon Star, Saturday 1 August, 2009

www.solomonstarnews.com

LOCAL NEWS

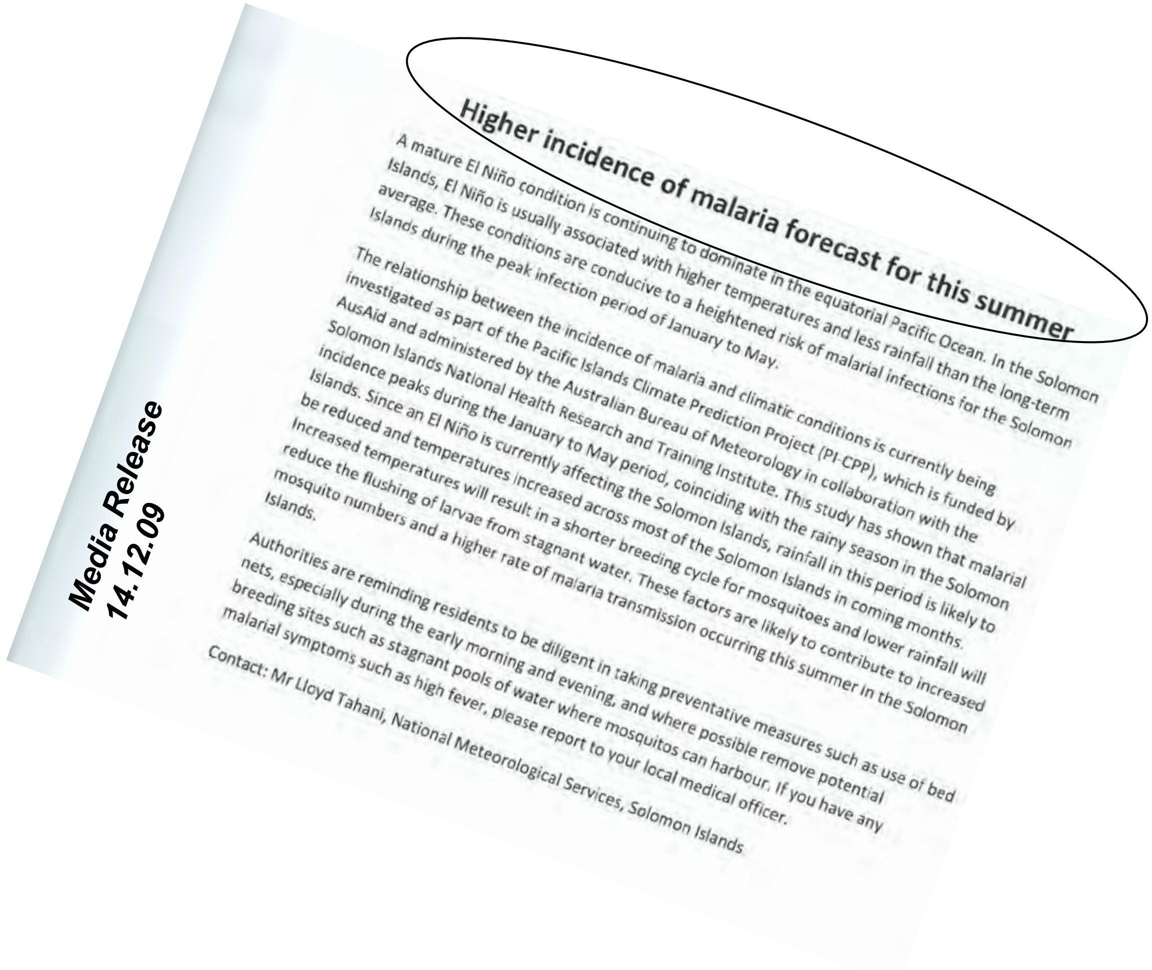
Local activist urges NZ, Aust to reduce emissions

PM to report to Forum on RAMSI partnership

Rarasu Motel assists local church

Today's weather

Climate forecasting can help predict malaria outbreaks


Media Release
14.12.09

Higher incidence of malaria forecast for this summer

A mature El Niño condition is continuing to dominate in the equatorial Pacific Ocean. In the Solomon Islands, El Niño is usually associated with higher temperatures and less rainfall than the long-term average. These conditions are conducive to a heightened risk of malarial infections for the Solomon Islands during the peak infection period of January to May.

The relationship between the incidence of malaria and climatic conditions is currently being investigated as part of the Pacific Islands Climate Prediction Project (PI-CPP), which is funded by AusAid and administered by the Australian Bureau of Meteorology in collaboration with the Solomon Islands National Health Research and Training Institute. This study has shown that malarial incidence peaks during the January to May period, coinciding with the rainy season in the Solomon Islands. Since an El Niño is currently affecting the Solomon Islands, rainfall in this period is likely to be reduced and temperatures increased across most of the Solomon Islands in coming months. Increased temperatures will result in a shorter breeding cycle for mosquitoes and lower rainfall will reduce the flushing of larvae from stagnant water. These factors are likely to contribute to increased mosquito numbers and a higher rate of malaria transmission occurring this summer in the Solomon Islands.

Authorities are reminding residents to be diligent in taking preventative measures such as use of bed nets, especially during the early morning and evening, and where possible remove potential breeding sites such as stagnant pools of water where mosquitos can harbour. If you have any malarial symptoms such as high fever, please report to your local medical officer.

Contact: Mr Lloyd Tahani, National Meteorological Services, Solomon Islands.

Water Management

(Kiribati, Fiji, Tonga, Tuvalu, Cook Islands, Vanuatu)

Agriculture

(PNG, Fiji, Tonga)

Renewable Energy

(Samoa ,Fiji)

Human Health

(Solomon Islands, PNG, Vanuatu)

Climate has a major impact on all sectors