

PREPARATORY STEPS FOR APPRAISAL AND PRIORITIZATION OF ADAPTATION OPTIONS

Session 3

Contents

- Which are the most important sectors affected by climate change in the Pacific region and why?
- How have sector plans in the Pacific region included climate change adaptation?
- Which aspects of these key sectors need to be addressed in adaptation planning? (see examples below)
- How have cross-sectoral linkages been addressed in NAPAs and JNAPs in the Pacific region?
- How have cross-sectoral linkages been addressed in completed NAPs?
- What guidance is provided by the NAP Technical Guidelines?

Important Sectors Affected by Climate Change

Sector	Climate Change Impacts
Water Supply	Drought, saline intrusion, water quality
Agriculture	Temperature impacts on crops and livestock, drought, salinity, soil degradation
Fisheries	Ocean temperature, storm surges, ocean acidification, sea level rise
Urban	Heat stress, drought, floods, sea level rise, saline intrusion
Forestry	Drought, wildfires, extreme storms
Transport	Floods, storm surges, overtopping, heat damage, sea level rise
Shipping	Extreme storms, sea level rise (ports), storm surges

Group Exercise: Sector plans in the Pacific region

- Which of your national sector plans has mainstreamed climate change adaptation?
- Which of these is most important for your economy, livelihoods, environment, and society?
- To what extent were climate change specialists involved in preparation of these plans?
- Spend 8-10 minutes discussing at each table.



Water sector needs to be addressed in adaptation planning

Disaster management for floods, droughts, and extreme storm events

Water conservation and recycling

Groundwater management and recharge

Rainwater harvesting

Urban and rural water supply

Water storage

Hydropower

Cooling for thermal power plants

Irrigation efficiency

Drainage

Water quality and pollution reduction

Wetland conservation

Hydrological monitoring and data management

Water allocation and water pricing

Inter-basin transfers

Technological improvements, like desalination

Rainmaking

Sanitation and water treatment

Lake management

Recreation

Water supply to outer islands in droughts

Agriculture sector needs to be addressed in adaptation planning

Risk management and early warning systems

Livestock production

Food and seed storage systems

Fertilisers and pesticides

Drought tolerant crops

Emergency food supplies

Soil management

Irrigation systems

Crop diversification

Agroforestry

Diseases and pests

Crop production and efficiency

Technological innovation

Urban agriculture

Farm to market transport systems

Crop information and data management

Market information

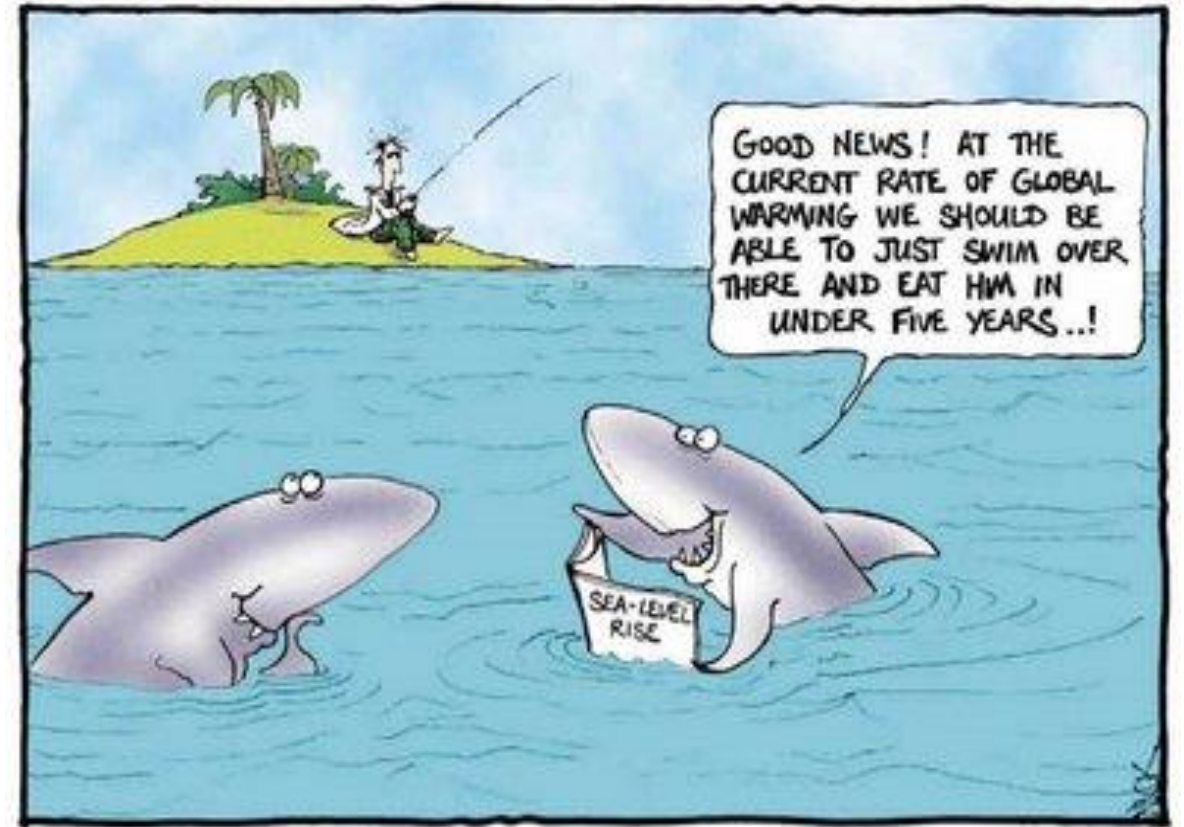
Farmer training

Soil and crop research

Mechanisation

Tourism sector needs to be addressed in adaptation planning

- Coastal zone buildings
- Beach loss due to sea level rise
- Flooding
- Water supply
- Sanitation
- Waste management
- Transportation
- Port facilities



Group Exercise: Other sectors?



- Spend 8-10 minutes discussing mainstreaming climate change adaptation into the following sectors:
- Health
- Urban
- Forestry
- Infrastructure
- What are the main aspects that need to be addressed in these sectors?

Cross-sectoral linkages in Pacific region

NAPAs and JNAPs

Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management

- Climate change risks are addressed in policies/strategies on population, water and sanitation, health and environment, and are being incorporated into policies/strategies on fisheries, agriculture, labour, youth and education.
- Few sectors have transferred strategic actions into Sector Operational Plans and Ministerial Plans of Operations and budgets.
- From 2011 to 2013 a total of AUD 83 million (15.7% of the national budget) was allocated to programs related to climate change.

Tuvalu National Strategic Action Plan for Climate Change and Disaster Risk Management (NSAP)

- NSAP will strengthen adaptation, mitigation and disaster risk reduction and management including mainstreaming climate change and disaster risk reduction into sector plans.
- An intended outcome is that climate change and disaster risks are incorporated in each sector/agency policies, plans and budgetary processes and in all new and ongoing development programmes

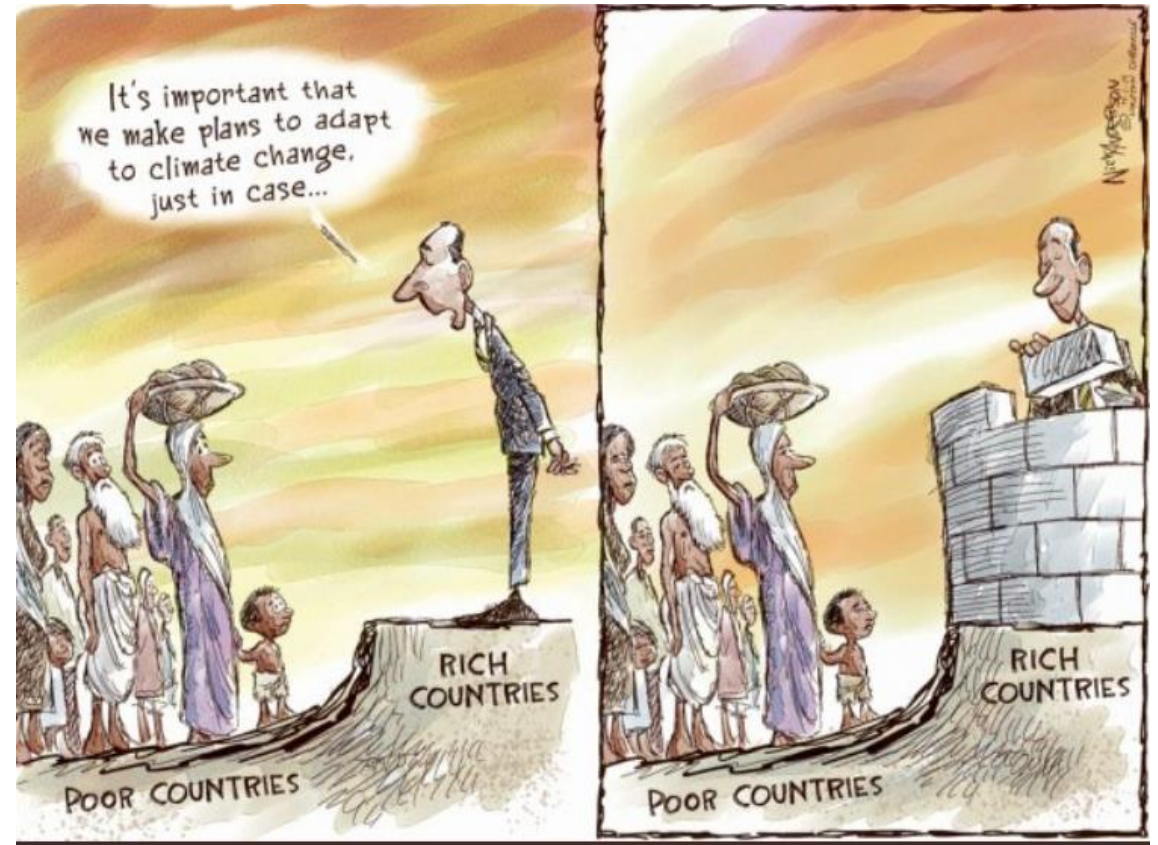
Cross-sectoral linkages in Pacific region NAPAs and JNAPs (cont.)

Tonga Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management

- Observed impacts of climate change, climate induced hazards and geological hazards on sectors in Tonga were discussed.
 - Heavy rainfall affects the agriculture sector and residential areas.
 - Drought affects the agriculture sector and water supplies.
 - Heat stress affects health, crops, and coral reefs
 - Sea level rise causes loss of land and damage to infrastructure.
- Severe droughts cause stunted growth in sweet potatoes and coconuts.
 - Most of the traditional root crops in Tonga such as taro, yams and cassava are disastrously affected due to their sensitivity to dry weather. This in turn adversely impacts food security, customary obligations, as well as the country's economy.
 - During the 1997–1998 El Nino, the Government spent over TOP\$200,000 on shipping water to the islands in the Ha'apai group thus diverting resources that could be used for other socio-economic development purposes.

Group Exercise: How can cross-sectoral linkages be improved in adaptation plans?

- Spend 10 minutes discussing the following questions:
- Have previous national adaptation plans in your countries adequately addressed sectoral and cross-sectoral impacts and adaptation options?
- If you had more time and resources what would you do differently?
- How prepared are sector agencies to implement priority adaptation measures?



Cross-sectoral linkages in completed NAPs

- Sudan's NAP seeks to broaden the response to climate change to encompass institutional, economic, planning, and analytical dimensions of climate risk management to facilitate integration of climate change adaptation into new and existing policies, programmes and activities, within all relevant sectors and at different levels.
- Sudan's Initial National Communication identified agriculture, water and health as the highest priority sectors where urgent and immediate adaptation action is needed.
- The 2007 NAPA) identified 32 urgent adaptation initiatives in these sectors to reduce the increasing vulnerability of the rural communities to current and future climatic risks.
- The NAP process has been shaped to promote the integration of climate risk management across all affected ministries to address the wider sustainable development challenges posed by climate change.
- Climatic and non-climatic factors were considered in assessing the vulnerability of key sectors (i.e., agriculture, water resources, public health, coastal zones) at the state level.

Cross-sectoral linkages in completed NAPs (cont.)

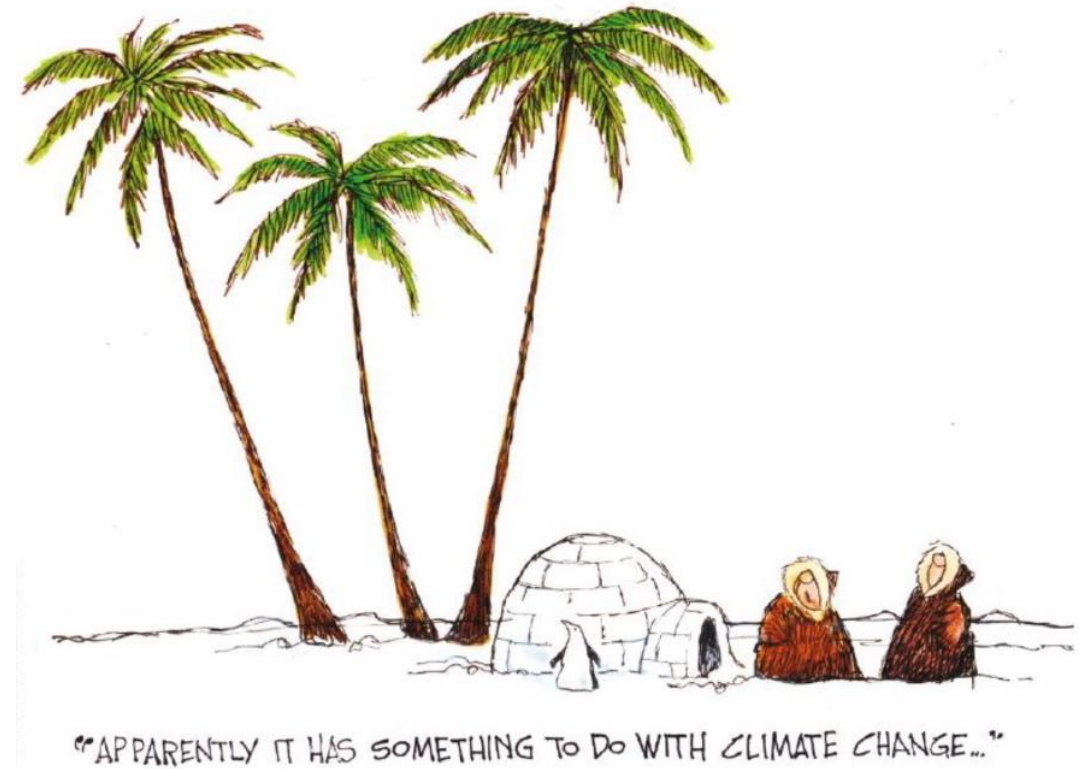
- Sri Lanka's NAP identified agriculture, fisheries, water, human health, coastal and marine, ecosystems and biodiversity, infrastructure and human settlements as the most vulnerable sectors to the adverse effects of climate change.
- Stakeholder consultation adopted in the preparation of the NAP has helped to identify adaptation needs of each vulnerable sector based on logical criteria involving projections, vulnerabilities, impacts and socio-economic outcomes.
- The NAP identifies adaptation options that can fulfil these needs and actions necessary to achieve these adaptation options with responsible agencies and key performance indicators.
- Together they constitute detailed sectoral action plans for each vulnerable sector.

Cross-sectoral linkages in completed NAPs (cont.)

- Brazil's NAP was drawn up in consonance with the National Plan for Climate Change and sectoral mitigation and adaptation plans.
- The **vision** underlying the NAP for the next four-year horizon, is that all government-policy sectors considered vulnerable to impacts of climate change must have climate-risk management strategies in place.
- Volume II of the NAP – Sectoral and Thematic Strategies – addresses the climatic resilience of 11 thematic sectors, namely: Agriculture, Biodiversity and Ecosystems, Cities, Disasters, Industry and Mining, Infrastructure (Electric Power, Transport and Urban Mobility), Vulnerable Populations, Water Resources, Health, Food and Nutritional Security, and Coastal Zones.
- The Sectoral Plans for Mitigation and Adaptation to Climate Change were formalized by Decree 7390 of 2010.

Homework

- Read at least one of the completed NAPs.
- They are all available at the following website:
- http://www4.unfccc.int/nap/News/Pages/national_adaptation_plans.aspx
- You will find useful information on how other countries have approached the prioritization of climate change adaptation options.



Technical Guidelines on NAPs

- The structure and form of NAPs will vary by country, and may include sectoral plans and sub-national plans.
 - The Guidelines outline how relevant sectors and management units can respond and report to national governments on their plans and programmes to address adaptation, including efforts to cooperate across sectors and within specific areas such as regions and cities.
 - **Element B2** - Assessing climate vulnerabilities and identifying adaptation options at the sector, subnational, national and other appropriate levels
- Key Questions:
 - Which systems, regions, or groups work towards key development goals such as food security, poverty alleviation, economic development, etc?
 - What are the main climate vulnerabilities of those systems/regions that are key to achieve the main development goals?
 - What are the expected impacts of climate change?
 - What are viable cost-effective adaptation options to reduce the impacts of climate change or to exploit opportunities?

Technical Guidelines on NAPs (cont.)

- **Element B5** - Integrating climate change adaptation into national and subnational development and sectoral planning.

- Key Questions:

- How can adaptation best be integrated into ongoing development planning processes?
- What kind of opportunities can be generated through the integration?
- How can the process of integration be facilitated?

- **Element C4** - Promoting coordination and synergy at the regional level and with other multilateral environmental agreements.

- Key Questions:

- How can the cross-sectoral and regional coordination of adaptation planning be promoted and enhanced?
- How can synergy with other multilateral environmental agreements in the planning and implementation process be identified and promoted?

Role Play

Form 4 groups of 8-10 stakeholders.

Who are the 8-10 most important stakeholders who should be involved in adaptation planning? **15 minutes discussion.**

Typical stakeholders might include the following: Government minister of environment; senior Finance official; fisherman; farmer; transport company executive; port official; opposition politician; energy company manager; oil and gas supplier; women's group member; youth representative; a disabled person; a real estate agent; church leader, etc. Keep a record of why you regarded these 8-10 stakeholders as the key participants in adaptation planning.

Allocate roles and make sure you include at least one likely "climate denier". Seek a volunteer or appoint a "recorder" and a "presenter" - **5 minutes.**

From the perspective of each person's "role" in the community, try to reach consensus on the 10 most important issues that need to be addressed in the national adaptation plan - **40 minutes.**

If no consensus could be reached, what were the barriers that prevented a common understanding of the adaptation priorities – 10 minutes discussion.

Report back to plenary – max. **10 minutes each group.**

Discussion – **10 minutes.**

Discussion Topics

- Is there a danger that sectoral plans will not consider cross-sectoral impacts sufficiently?
- What institutional arrangements might be helpful to ensure that all sectors are working together in an integrated manner?
- Do the Technical Guidelines provide sufficient advice on how to ensure cross-sectoral linkages?
- What additional information may be needed?

