

Pacific Australia Climate Change Science and Adaptation Planning Program *Adaptation planning and decision making*

Future scenario planning to examine projected climate change and relevant social, demographic and economic factors in the context of a number of national development plans

Background

Scenario planning enables us to imagine a range of different futures and to test our particular circumstances against these. In this context of long-term planning, scenarios have three main roles within the risk assessment process: in scoping risk; risk analysis and evaluation; and risk management.¹

The majority of countries in the Pacific region have prepared development strategies that inform sectoral policy as well as plans for climate change adaptation. Some countries, such as Papua New Guinea (PNG), have developed national plans with an outlook of several decades. For example, PNG's current strategy is the *Papua New Guinea Vision 2050*. These strategic documents are the result of extensive in-country research and consultation and often feature climate change as a priority area, although it is not necessarily integrated across all planning priorities.

This PACCSAP activity proposes to provide support to better understand climate change implications across the breadth of priority planning areas identified in countries that have developed or are developing medium to long-term plans (20 years or more). The future climate will impact on where people live, services on which they rely, drivers of economic sustainability, and in some cases, the viability of communities in highly vulnerable locations. In the context of planning for major developments, such as infrastructure to support future growth, climate change is part of a risk management process that needs to start now. There may also be scope to apply a scenario planning approach at the regional level.

The availability of national climate change projections, produced through the Pacific Climate Change Science Program (PCCSP), provides the opportunity to examine national planning strategies in the context of long-term climate change. The PCCSP has produced projections for temperature, rainfall, wind speed, extreme events, (including tropical cyclones, extreme hot days and heavy rainfall days), sea-surface temperature, ocean acidification, and sea-level rise for three future 20-year periods centred on 2030, 2055 and 2090, and for three different scenarios of greenhouse gas and aerosol emissions: B1 (low), A1B (medium) and A2 (high).

Proposed Approach

The PACCSAP scenario planning work will bring climate change information to discussions about the types of development 'futures' that could happen in a country or area. The scenario planning can explore futures in two ways:

- how different climate futures could impact on social and economic goals, assuming continuation of current development patterns; and
- how consideration of different options for a planned major development could enhance country or area resilience to future climate change.

¹ Jones, R., (2010) *The use of scenarios in adaptation planning: managing risks in simple to complex settings*, VCCCAR Scenarios for Climate Adaptation Working Paper.

Scenario planning can therefore inform development decisions in countries and assist in ensuring that key decisions reflect the risks of climate change and enhance sustainability in the long term. Many countries for example will be making decisions on where to house growing populations in the years and decades to come, and ensuring that people will not be put in harm's way will reduce social costs that decision makers may otherwise face in the future.

Results of scenario analysis can directly inform investment plans or decisions on where major infrastructure is located, particularly relating to the services that support these future population centres. Opportunities for development can also be identified, such as prime locations for growing crops or establishing rainwater catchments to meet future food and water demands. Scenario analysis can also reveal matters that need further consideration – such as whether parts of the urban centres of today will remain viable in a particular future climate.

Some of the proposed major steps for this PACCSAP activity are:

1. Develop a small working group to consider an appropriate methodology for scenario planning in a Pacific Island country context.
2. Based on feedback from partner countries, review existing national long-term strategic plans to identify how scenario planning could support the consideration of climate change implications.
3. Plan the scenario planning exercise, including identifying supporting partners to lead or assist delivery of the activity, such as academic institutions and community leaders.
4. Undertake up to three in-country scenario planning exercises with a range of national representatives, including from environment, central and planning agencies, departments involved in social welfare and those providing critical services, including in areas of health and water and sanitation, and other major sectors including those areas with a stake in economic development (agriculture, energy, resources etc).
5. Identify the best means to publish and disseminate the results of the planning exercise, and address any tasks to support the continuity of climate change planning.

Discussion questions

1. Has climate change being factored into sectoral planning through a strategic national planning process, and do you think this is effectively informing risk management?
2. Does your country have a national development plan? If so, what is the timeframe covered by this? [For regional or other organisations, please identify any long-term strategic guidance that informs your work].
3. What kinds of activities would you like to see in scenario planning process?
Example: inclusion of a certain sector – e.g. urban planning or coastal settlements? A focus on certain regions? Dissemination of outputs via the web or CD, not in a paper?

Note: scenario planning requires good information on a country's planned national (or area-specific) growth and development trajectories, as well as agreed climate change scenarios.