



# MAINSTREAMING CLIMATE CHANGE INTO DEVELOPMENT IN THE PACIFIC



## KEY MESSAGES

- Mainstreaming climate change means that climate risks are carefully considered and incorporated into all development planning and practice. It is relevant to all government agencies, civil society and community groups, and across all sectors.
- Climate change mainstreaming contributes to more sustainable development and more resilient communities. If climate change is *not* mainstreamed into decision making, there is a real risk that development goals will not be achieved.
- The Pacific Adaptation to Climate Change (PACC) programme is promoting climate change mainstreaming in the Pacific islands as one of its main objectives. The programme is actively supporting mainstreaming at different levels, from raising awareness in the general population to supporting governments to incorporate climate change in their policies, planning and projects.
- The PACC regional team has developed a practical guide to assist governments and development partners to mainstream climate change at the strategic level as well as 'on the ground'. *Mainstreaming Climate Change into Development in the Pacific: A Practical Guide* can be downloaded [here](#), and hard copies are available from the Secretariat of the Pacific Regional Environment Programme (SPREP).

## Why mainstream climate change into development?

Climate change is already affecting development in the Pacific. Rising sea level and changing rainfall patterns are challenging infrastructure, water supply, agriculture, fisheries and natural ecosystems. Extreme weather events such as floods, droughts and cyclones are having significant impacts from the household level up to the level of

national economies. They are causing great hardship for individuals and communities on many islands, threatening livelihoods, traditional cultures and natural resources. These impacts could worsen in the coming decades as climate change accelerates.

Mainstreaming climate change is a way of reducing these potential impacts, by thinking ahead. Mainstreaming climate change means incorporating climate risks into all development decisions and development planning. It needs to be

addressed by all government agencies, at all levels of government, and across all sectors (e.g. finance, health, agriculture, and environment), as well as by civil society and the private sector.

When climate risk is explicitly considered and incorporated into policies, plans and practice, development efforts are more resilient to climate uncertainty, and more likely to reach their objectives. Climate change mainstreaming therefore contributes to more sustainable development and more resilient communities. Indeed, if climate change is *not* mainstreamed into decision making, there is a real risk that development goals will not be achieved.

The most effective route to mainstreaming is through an integrated 'whole-of-government' approach, preferably coordinated at the highest level of government. Good governance, reflected in vision, commitment, transparency and accountability, provides a vital foundation for climate change mainstreaming.

## Mainstreaming under the PACC programme

Promoting climate change mainstreaming is one of the main objectives of the Pacific Adaptation to Climate Change (PACC) programme. The programme takes a broad approach to this, supporting mainstreaming at different levels, from raising awareness in the general population to supporting governments to incorporate climate change in their policies, planning and projects.

Each of the 14 participating countries has national-level mainstreaming as a key project objective. The countries are approaching this in different ways, and some of their achievements are described here. Each country is also carrying out a pilot project that demonstrates climate change adaptation in one of three priority sectors: water, food security or coastal zone management. The projects themselves have a mainstreaming role, by raising awareness of climate change and ways to deal with it within the communities where they are working, and also more broadly across the country. Project results are also feeding into policy development, and further contributing to mainstreaming.

The regional PACC programme team has developed a practical guide to mainstreaming climate change into development in the Pacific, to assist governments and development partners to ensure that climate and the risk it poses is incorporated into their processes and decision-making. *Mainstreaming Climate Change into Development in the Pacific: A Practical Guide* can be downloaded [here](#), and hard copies are available from SPREP.

## Mainstreaming at different levels

Mainstreaming can be done in many different ways. It can be done informally, for example by raising awareness within different groups of society about climate change and the risks it poses. It can also be done more formally, for example as a mainstreaming exercise at government level to develop climate-inclusive national plans or policies, or to ensure that projects consider climate risks during their development and implementation. The PACC programme is actively promoting mainstreaming at all levels, with the ultimate aim that considering the climate risk becomes standard practice across the Pacific region.

### *Raising awareness of climate change*

Raising awareness of climate change, and adaptation options that are available, is an important first step towards mainstreaming within the general population. When people understand climate change and the risks it brings, they can incorporate these risks into their own decision making. For example, a farmer may decide to plant different crops, or a family may decide to build their home on a different site, if they are aware of what the climate might bring and what their options are.

All of the PACC country projects are raising awareness of climate change using a variety of approaches and activities. The projects have developed communications strategies to ensure that their communications efforts are well targeted and appropriate for the different audiences they are trying to reach. National campaigns, radio broadcasts, videos, stories in the national press and newsletters are some of the ways the projects are spreading the word on climate change.

## PACC CASE STUDY

## Mainstreaming climate change at the community level in Fiji

In Fiji, the PACC project is working to improve food security by demonstrating improved drainage systems and resilient crop varieties in lowland farming areas that are prone to flooding and saltwater intrusion. The project team has also been dedicating time and resources to raising awareness of climate change at the community level. The project has two pilot sites in Viti Levu, and awareness-raising activities are centred on the same areas, complementing the practical demonstrations. Key messages being conveyed to communities include how human activities can interact with climate impacts to increase community vulnerability; and conversely, how changes in behaviour and actions can increase resilience. For example, communities are learning that careful disposal of rubbish helps to keep drains clear and reduces the risk of flooding and crop damage.

Early in 2013, the PACC team and government partners began a focused awareness campaign. In just two months they made presentations in ten schools and eight communities, reaching more than 3,300 students, 150 teachers and 168 community members. Community development plans have since been developed in seven of the communities which incorporate climate change adaptation and disaster risk reduction activities.

The team used various materials to engage their audiences, such as the video *Vital Food*, which showcases the Fiji project. The team also used the iTaukei (indigenous Fijian) language climate change glossary, which was developed by the Fiji Government and partners to facilitate understanding of climate change by communities.

The project has also had great success working with community 'champions', who act as project facilitators, linking the project team with the communities. These are respected members of the community who are informally trained by the project team, then convey the 'messages' into their communities.

### Lessons learned

- Mainstreaming climate change results in changes in people's actions and behaviour. The first step is for individuals and communities to make the link between climate risk and their own activities. Then, risk-reducing actions and changes in behaviour can be formalised in adaptation or disaster risk reduction plans.
- Raising awareness can be done in many different ways. A proactive plan such as a communications strategy will help to identify target audiences and key messages, and clarify the most effective way to convey messages to audiences.



- Engaging and entertaining awareness materials, such as videos and games, will help convey messages to community audiences. Materials need to be appropriate in terms of language and technical level.
- Community champions can help to take the message to the heart of the community. They relay the messages and actions in the local language and in the community context. They also play a key role in ensuring that activities and funding reach the target groups.

For more information on the Fiji PACC project, please visit the project webpage: [www.sprep.org/pacc/fiji](http://www.sprep.org/pacc/fiji)

### *Mainstreaming climate at the strategic level*

Mainstreaming at the strategic level refers to incorporating climate risks into strategies, policies and plans usually at the national level, but also at other strategic levels.

Climate risk, both current and future, should be defined and considered during the normal development of such strategies, policies and plans. The PACC programme's *Mainstreaming Climate Change into Development in the Pacific: A Practical Guide* describes a step-by-step process for doing this, based on a standard policy development cycle.

If strategic documents or instruments have already been developed without consideration of the climate risk, it is possible to 'add-on' climate by applying a similar approach. Again, *Mainstreaming Climate Change into Development in the Pacific: A Practical Guide* provides help to do this.

Some sectors are more obviously sensitive to climate risk than others, such as those that depend on natural resources, for example agriculture and fisheries. For these sectors, climate will clearly

need to be a major consideration during strategic planning for the future. However, even areas that appear relatively unaffected by climate could prove to be vulnerable, for example health and finance. Mainstreaming means considering climate in all sectors and all areas of development.

An important part of climate change mainstreaming is climate risk analysis, which aims to define the extent of the current and future climate risk within the sector or area under consideration. Climate risk analysis should become an integral part of strategy or policy development in all sectors and areas.

When the climate risk is appropriately addressed at the national level within strategic plans and policies, this creates an enabling environment for government agencies to engage with climate risk reduction and risk management, and for the private sector and communities to take their own steps to reduce their risks and manage residual risks. Climate-responsive policies and strategies thus pave the way for practical on-the-ground activities that manage the climate risk.



## PACC CASE STUDY

## Mainstreaming climate change into state legislation in Kosrae, Federated States of Micronesia

The FSM PACC project guided a strategic mainstreaming exercise in Kosrae State in 2010. During the preparatory phase, the following problems and gaps were identified:

- The FSM Climate Change Policy, endorsed in 2009, had not been operationalised;
- An absence of climate change legislation;
- A lack of strategic and policy direction regarding climate change;
- A disconnect between climate change stakeholders (resource users, developers, policy makers, communities);
- A lack of information about climate change tailored to the needs of the people;
- A lack of coordination between climate change programmes.

It was decided that a statute was needed to give effect to the Policy, and that there was a need to look at existing sector plans and ensure that climate change risks were addressed. The Kosrae Island Resource Management Authority (KIRMA), with the help of the PACC Steering Committee, identified key areas of the Kosrae State Code that needed amending to reflect climate change issues of concern (identified as sea level rise, flooding due to intensive rainfall, storm surges, and gaps in governance systems).

As a result, in 2011 the FSM Government approved changes to the Kosrae State Code to “recognise and define climate change and climate change adaptation measures and to require development activities in Kosrae to take account of projected climate changes, and to require the design and implementation of public infrastructure such as roads and buildings incorporate climate change adaptation measures consistent with the requirements of the FSM National Climate Change Policy, 2009.”

The KIRMA and PACC team have also drafted amendments to the Regulations for Development Projects requiring consideration of climate change impacts in development projects, and have prepared an Environmental Impact Assessment Guideline that incorporates climate risk.

### Lessons learned

- An effective preparatory phase, which includes an analysis of the existing situation, is important to identify gaps and scope out what needs to be done.
- Incorporating climate change risks into law reinforces a national sense of responsibility towards climate-resilient development.

For more information on the FSM PACC project, please visit the project webpage: [www.sprep.org/pacc/fsm](http://www.sprep.org/pacc/fsm)



## PACC CASE STUDY

## Mainstreaming climate change into the water sector in Nauru

In selecting a focus sector for the PACC project, Nauru identified water security as its highest priority. The country's population was almost entirely dependent on rainwater for drinking water, with groundwater becoming increasingly saline and polluted. When periodic droughts occurred, freshwater supply became a major problem. The PACC project therefore sought to address this vulnerability. The project was seen as a 'no regrets' project, as improving Nauru's water supply will benefit the country whatever happens to the climate.

When the project began, Nauru had no national climate change policy or other strategic climate-responsive framework in place covering the water sector. The PACC project team therefore decided to drive mainstreaming simultaneously at both strategic and 'on the ground' levels. The PACC team was established within the Department of Commerce, Industry and Environment, and supported by a high-level steering committee that included heads of several government agencies and state-owned enterprises.



The PACC project team used the vulnerability and adaptation (V&A) assessment approach to identify adaptation options at the strategic and local levels. The V&A methodology is a community-centred tool for developing and managing a climate risk reduction project, using vulnerability and capacity of a community as its starting point. The V&A also includes scientific analysis and climate modelling to understand future climate risk, and combines these findings to facilitate the community to identify appropriate adaptation options.

Village-based stakeholder consultation groups were formed for two sites considered to be highly vulnerable and prone to drought conditions. The need for technical input from a water specialist was also identified at the outset. Next, household surveys, community workshops and meetings with community leaders were used to collect data, which were combined with existing data to give an overview of vulnerability and capacity, based on a set of indicators (which included availability and quality of water resources; storage and supply infrastructure; access to water; population density and water demand; water use and usages; and income).

A scientific analysis was then carried out to identify improved supply options. The analysis covered:

- Climatic conditions, such as temperature and rainfall, and their effects on rainwater availability;
- Interactions of weather conditions, hydrology and hydrogeology, and their impacts on groundwater recharge and quality;

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### Mainstreaming climate into development projects

Mainstreaming climate change at the project level means ensuring that current and future climate risks are considered during the entire project cycle, from planning and development stages to implementation and monitoring and evaluation. *Mainstreaming Climate Change into Development in the Pacific: A Practical Guide* describes a step-by-step process for doing this.

Some projects are designed to specifically address the climate risk, and the project goals include climate risk reduction, reflected in reduced vulnerability or increased resilience to climate impacts. The PACC country projects fall into this category. These projects are leading the way in best practice for mainstreaming of climate risk

into on-the-ground initiatives in the Pacific.

Other projects may address climate risks, directly or indirectly, without having explicit climate goals. These projects are reducing vulnerability in terms of, for example, improving natural resources management or expanding livelihood options, within the context of current climate variability and risk. Reducing vulnerability to current climate risk also means increased resilience to future climate risk. These projects could however be strengthened by systematic inclusion of climate risk analysis, as described in *Mainstreaming Climate Change into Development in the Pacific: A Practical Guide*.

A third category of projects is those that may appear unrelated to climate, and there may be a tendency to

- Threats to water security related to climate variability and climate change;
- Socio-economic features likely to increase risks to the water sector; and
- National-level water governance and adaptation capacity.

Following the information gathering, consultation and analysis phase, the PACC team and stakeholders decided on the following adaptation responses:

- Development of a national water sector policy and water sector plan;
- A pilot project to introduce and demonstrate a new technology for Nauru – solar-powered water purifier units which produce clean drinking water from contaminated groundwater, seawater or any other source of non-potable water.

Addressing the first, strategic level need, an inter-agency steering committee was set up to improve coordination and cooperation. This team took the lead in developing the Nauru National Water, Sanitation and Health Policy, which was endorsed in 2012.

For the on-the-ground initiative, units were installed on the roofs of 19 households and one community catchment roof in 2011. The units provide up to 15 litres of drinking water per day, which can supplement other sources of drinking water or in times of drought may be the only source of clean water.

The PACC team is monitoring and evaluating the project as it progresses. Feedback from the communities has been positive. The technology is currently spreading across the country with the help



of the Japanese government who are funding additional units, and the Republic of the Marshall Islands is also planning to install solar purifiers, having witnessed their success in Nauru.

### Lessons learned

- A community-centred approach is the best way to identify appropriate adaptation options, giving the highest likelihood of an effective climate-responsive project.
- On-the-ground initiatives can be used to leverage response and address gaps at the strategic level.
- High-level government support is essential for strategic mainstreaming at the national level. Inter-agency activities help coordination and cooperation.
- Existing data should be complemented by new context-specific data to provide the best basis for decision making.

For more information on the Nauru PACC project, please visit the project webpage: [www.sprep.org/pacc/nauru](http://www.sprep.org/pacc/nauru)

assume that climate can be safely ignored. However, as already discussed, climate has the potential to affect all development. Also, the project may not itself be affected by climate, but could through its activities inadvertently increase vulnerability of certain groups to climate risk. A climate risk analysis is the starting point for assessing how climate might interact with the project activities and outputs, and is recommended even when climate seems a remote risk. This has the potential to strengthen the project outcomes and reduce the risk of the project increasing vulnerability.

Ideally, projects are developed under strategies and policies that provide a climate-responsive framework, i.e. climate risk has already been

mainstreamed at the strategic level. In reality, strategic guidance may not yet be in place. Projects should nonetheless endeavour to integrate climate risk. In some cases, a climate initiative on the ground can be used to leverage climate mainstreaming at the strategic level, as the Nauru case study above illustrates.

Where an on-the-ground initiative has already been designed or implemented, climate risk considerations may be 'added on', for example infrastructure may be retrospectively climate proofed. This is also described in *Mainstreaming Climate Change into Development in the Pacific: A Practical Guide*, with several examples from the Pacific region.

## Conclusion

It will take time and effort to mainstream climate change into development across the Pacific, but it is essential to do so. The PACC programme is contributing by actively driving mainstreaming in the 14 participating countries, with some notable achievements so far. Sharing experiences of mainstreaming is an important part of the process, and the PACC website will share further case studies and lessons learned as they become

available, at [www.sprep.org/pacc/experiences](http://www.sprep.org/pacc/experiences).

*Mainstreaming Climate Change into Development in the Pacific: A Practical Guide* is a useful resource to guide mainstreaming at the strategic and project levels, and contains further regional examples and case studies. The Guide can be downloaded at [https://www.sprep.org/attachments/Publications/CC/PACC\\_Mainstreaming\\_2014.pdf](https://www.sprep.org/attachments/Publications/CC/PACC_Mainstreaming_2014.pdf), and hard copies are available from SPREP.

## The PACC programme

The PACC programme is the largest climate change adaptation initiative in the Pacific region, with activities in 14 countries and territories. PACC is building a coordinated and integrated approach to the climate change challenge through three main areas of activity: practical demonstrations of adaptation measures, driving the mainstreaming of climate risks into national development planning and activities, and building and sharing knowledge in order to build adaptive capacity. The goal of the programme is to reduce vulnerability and to increase adaptive capacity to the adverse effects of climate change in three key climate-sensitive development sectors: coastal zone management, food security and food production, and water resources management. PACC began in 2009 and is scheduled to end in December 2014.

### Building and sharing knowledge under the PACC programme

The PACC Experiences series covers topics where PACC is building experience and knowledge. Aimed at national and regional decision makers, climate change practitioners, and concerned communities and individuals, each one explains a key issue relevant to climate change adaptation in the Pacific, and draws on experiences within the PACC projects to describe the practical realities, lessons learned, and implications for both policy and practice. PACC Experiences includes webspace at [www.sprep.org/pacc/experiences](http://www.sprep.org/pacc/experiences) where more recent experiences, case studies and lessons learned are available on the different topics.

The PACC Experiences series is complemented by the PACC Technical Report series. This series is a collection of the technical knowledge generated by the various PACC activities at both national and regional level, and is aimed at climate change adaptation practitioners in the Pacific region and beyond.

[www.sprep.org/pacc](http://www.sprep.org/pacc)

