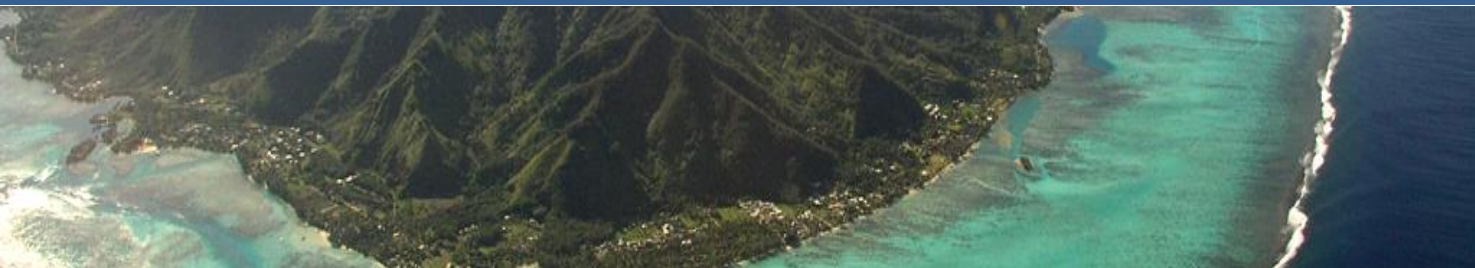




Pacific-Australia Climate Change Science and Adaptation Planning (PACCSAP) Programme

Food Security in the Solomon Islands



The Pacific-Australia Climate Change Science and Adaptation Planning (PACCSAP) Programme has supported a number of Pacific Island countries to manage climate risks through targeted application of cost-benefit analysis in key sectors.

Food security is a major concern in Sepa and Loimuni communities in Choiseul Province, Solomon Islands. To help address this issue PACCSAP commissioned a Cost Benefit Analysis (CBA) to objectively compare the merits of different options to improve food security.

Situation Analysis

The first stage involved a **Situation Analysis** where existing weather and climate driven hazards and socio-economic and biophysical conditions were assessed. Weather and climate driven hazards were identified by analysing current and historical climate data and future climate projections for the region. The assessment of socio-economic and biophysical conditions involved a qualitative analysis of socio-economic characteristics and food security status.

The Situation Analysis revealed that communities in Choiseul are regularly exposed to extreme weather conditions. During the rainy season, flooding is common in many low lying areas. It is projected that there will be increased frequency of extreme rainfall events, however drought and cyclones are expected to be less frequent. In all cases extreme events are likely to increase in intensity.



Location of Choiseul Province (Google Earth 2014)



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Problem Analysis

In the **Problem Analysis** stage a detailed risk assessment was undertaken. This highlighted that the key risks to food security are flooding in Sepa and drought in Loimuni. Population growth is a (non-climate) risk for both communities.

Solution Analysis

Possible adaptation solutions were developed during a **Solution Analysis** stage, to address the identified non-climatic and climatic risks in the agricultural sector. These solutions included improved agroforestry farming-based adaptation measures such as contour based farming and conservation agriculture methods.

Qualitative analysis of possible adaptation solutions indicated that the best option was conservation agriculture in Loimuni, and a combination of contour-based agroforestry and conservation agriculture practices in Sepa.



Choiseul Province communities and location of Sepa and Loimuni (from SPC/SPREP/USAID/GIZ 2013)

Decision Support

A quantitative CBA of these preferred options found that that for every dollar invested in improved farming techniques, the Loimuni community received 4 dollars in benefits, and the Sepa community received around 5 dollars in benefits¹, even in the face of climate change impacts.

This demonstrates that certain adaptation options can provide net benefits to the community and help them to be better prepared for projected climate change impacts, while also helping to address other non-climatic risks (e.g. population growth) to food security.



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¹Based on a discount rate of 5%.