

Alternative futures for the Pacific food system

The food system of the Pacific region is undergoing profound changes that will be felt for generations. The main pillars of food security – availability, access, and consumption of nutritious food – are being challenged by rapid population growth and urbanisation, shortages of arable land, and cheap, nutritionally poor food imports from burgeoning global trade. As a result, many Pacific Island countries and territories are now dependent on imported food, and the incidence of non-communicable diseases (NCDs) is among the highest in the world.

Climate change brings further threats as well as opportunities. Critical changes, such as sea level rise and more acidic oceans, are already ‘locked in’, as are population increases to 2030, but societal responses to those changes are uncertain and unpredictable. Although sectoral approaches to improved food security are necessary, they are not sufficient in their own right, because of the many linkages and feedback loops within the food system. Trade policy, for example, will impact on public health and the environment.

The Secretariat of the Pacific Community (SPC) is collaborating with partners to create narratives about how the Pacific food system may evolve and be influenced by a changing climate. In the face of great uncertainty and complexity, narratives can help catalyse policy responses in ways that more technical analyses cannot.

The purpose of this document is to introduce four plausible scenarios for the future of the Pacific food system as it evolves and is affected by climate change. To generate these scenarios, SPC gathered a diverse group of people from the Pacific region at a workshop in Nadi in August 2015. Individuals were chosen for their experience and did not represent member countries. The group was tasked with imagining the food system in 2030, and the policy implications of events and trends in the interim period.



Image: CGIAR.

The scenario process

Scenarios are ‘what if’ stories about the future – rather than attempting to forecast a single future in the face of many uncertainties, scenarios represent multiple plausible directions that future drivers of change may take. A set of contrasting scenarios can be used to develop and test policies, plans and strategies. In a time when we are faced with an over-abundance of sometimes conflicting information, scenarios offer meaningful and diverse stories about the future.

The group followed a process used by the Consultative Group for International Agricultural Research (CGIAR), in its Research Program on Climate Change, Agriculture and Food Security (CCAFS), to first identify drivers of change that were both important and uncertain and then use them to develop scenarios that paint plausible

but very different futures. This process resulted in two ‘axes of uncertainty’ that, together, summarised what the group felt were the most important and uncertain drivers of change.

The first axis was ‘governance of natural resources’. This included the governance of both water and land resources, and was concerned with regulations and policies at all levels, as well as the capacity to implement them. Central to this axis was the extent to which tenure and rights are defined, and the strength of institutions that guide development and limit impacts. The second axis was identified as ‘economic connectedness to the rest of the world’. Trade, remittances, migration, tourism and tuna fisheries may all become more or less important, depending on a multitude of choices in the coming years and decades.

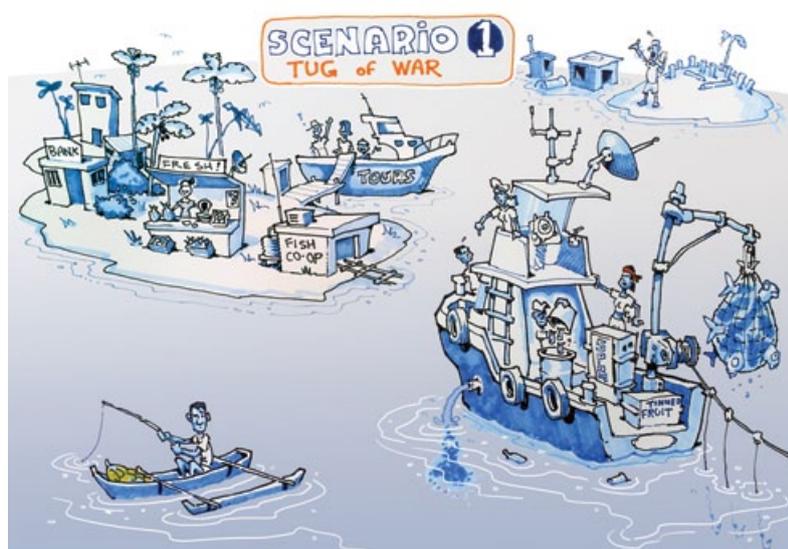
The combination of these two axes of uncertainty led to four scenarios, one in each quadrant. To develop the four scenarios, groups of participants explored what the combination of the two extremes of the axes underlying their scenario could mean; in 2030 and in the shorter term. Participants considered what would happen to all of the drivers of change identified in the first exercises, and described in detail the consequences of each scenario

for various dimensions of food and nutrition security, food system activities and climate change adaptation. Each scenario was named, and a narrative was created to describe it. These scenarios will be further developed in the coming months. Here we provide an abstracted version of the scenarios to illustrate the approach and outcomes of the workshop.

Tales from the future

SCENARIO 1 – TUG OF WAR: High connectedness coupled with well-governed natural resources.

By 2030 exports, imports and tourism have increased in the Pacific region. Many people have been able to take advantage of the economic development that has resulted, but not everyone; although many people are more prosperous, there is also increased inequity. The diets of the poor are getting steadily worse. There is effective governance of natural resources at local, national and regional levels, and more fish and trees are being sustainably produced. National and regional initiatives to adapt to climate change have worked, and agriculture is now more productive. Tuna helps to fill the food security gap that still exists, despite better management of coastal fisheries. But little attention has been paid to marginalised and vulnerable people, and bottom-up approaches to community development are hampered by lack of capacity and resources. Regulation of natural resources is strong, but there are gaps, such as the lack of food standard regulations. The better-off are doing well, but the poor and vulnerable are not, and as a result, society has more choices but also more gaps.



SCENARIO 2 – LIVING ON THE EDGE: Low connectedness coupled with good governance of natural resources.

By 2030 regionalism has grown and the Pacific is less dependent on the outside world, and, collectively, countries produce enough food for their people. Although environmental degradation related to climate change and extreme events is widespread in the region, governance of natural resource has improved, agriculture and fisheries are strong, and the food system is resilient to shocks. In some places root crops and other traditional foods have replaced rice as part of a renaissance of traditional ways of life. Nevertheless, local economies in the lead-up to 2030 remain fragile, and there are still challenges related to food and nutrition security. Food crises in the next decade precipitate deep changes in societies, and set countries on contrasting development pathways. Many Pacific islands are under-populated, with waves of migration of young people; the population is ageing; and leaders are calling to the diaspora to come back and contribute. Serious questions are being asked as to whether the Pacific development pathway is viable in the long term, particularly on atolls with few resources and high vulnerability to climate change.



NEWS FROM IN AND AROUND THE REGION

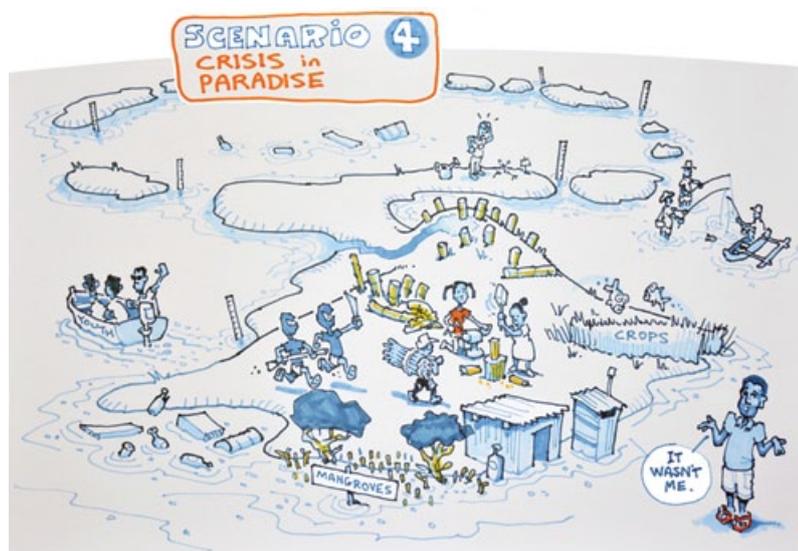
SCENARIO 3 – CASH NOW, PAY LATER: High connectedness coupled with poor governance of natural resources.

In 2030 the region is deeply embedded in global markets, and business, at least for some, is booming. Countries are using their new-found wealth to invest in infrastructure, schools and hospitals. The tourism industry is expanding rapidly. Governments have not prioritised better governance of their natural resources, which has allowed extractive industries, such as fishing, and forestry and agriculture, to expand unsustainably. Many local communities have been displaced to marginal land and towns to make space for primary industry, which has affected lifestyles and increased the dependence on cheap, unhealthy imported foods. The epidemic of NCDs has had a crushing impact on lives and national economies. Many negative environmental impacts are emerging, which are now starting to affect local food production and tourism. Inequitable distribution of wealth, elite control of land and resources, and large populations of unemployed youth, are fomenting civil unrest and political instability.



SCENARIO 4 – CRISIS IN PARADISE: Low connectedness coupled with poor governance of natural resources.

In 2030 growing populations are placing huge pressure on food systems, especially for poor and vulnerable people. Coastal fisheries continue to decline, and rural people see little benefit from tuna fisheries. Communities cope as best they can with climate change, but, because their natural resources are degraded, they have fewer options to reimagine their future. There is widespread criticism of governments for failing to address the declining state of the environment. Agricultural production continues to decline, and half of all Pacific Islanders are food insecure or malnourished, with devastating impacts on public health and economies. The decline in dietary diversity is deepening the problem of malnutrition. Trade in fish and timber has shrunk, because there is little left to sell, and tourism has declined because the region has become unattractive to visitors. Government investment in infrastructure, especially health facilities and transportation, is low because of limited economic activity. Urbanisation and migration continue apace, with most young people leaving rural areas in search of economic opportunities in towns and outside their countries. Prolonged political instability has resulted in chaotic policy environments. Community capacity has gradually eroded due to a lack of action, results and trust. The weakened social fabric and simmering discontent is heightening fears of serious social unrest.



Next steps

Over the coming months SPC and its collaborators will further develop these scenarios as a contribution to regional and policy development. The scenarios will be underpinned by quantitative analyses of the different

dimensions of the food system, including fisheries and forests, trade, affordability and consumption, and public health. The regional scenarios will be down-scaled and used in national discussions about food system futures.

Once fully developed, these scenarios may catalyse new conversations and promote more integrated policies that connect different parts of the Pacific's regional and national food systems as they respond to the challenges of climate change. Clearly, a 'business as usual' approach to local, national and regional policy development and implementation will not best serve the people of region.

Further reading

- CGIAR CCAFS Program and methods: <https://ccafs.cgiar.org/scenarios> and <https://cgspace.cgiar.org/rest/bitstreams/51647/retrieve>
- SPC's website on climate change: <http://www.spc.int/en/our-work/climate-change.html>

Acknowledgements

The workshop was organized by SPC, in partnership with WorldFish, The Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA), the CGIAR

Research Programs on Climate Change, Agriculture and Food Security (CCAFS) and Aquatic Agricultural Systems (AAS), and the University of Oxford's Environmental Change Institute, to initiate a research and development programme to build resilience and strengthen adaptation to climate change and variability amongst fishers and farmers in the Pacific region.

Original illustrations by Roger Harvey.

For more information:

Moses Amos
Director, FAME, SPC
MosesA@spc.int

Neil Andrew
Principal Scientist and Regional Director, Pacific
WorldFish
N.Andrew@cgiar.org



Image: Celine Barré.