



Climate Resilient Islands Programme

Case Study: Community Priority Values and Assets, Tuvalu

Climate Resilient Islands communities were asked to describe their most important values and assets, and their vulnerabilities and risks, to contribute to their Community Resilience Profiles. These ranged from material to natural, as well as spiritual or community focused. This case study provides an overview of the assets, values and concerns across the programme's communities, to explore trends and commonalities between them.

Assets

Tuvalu is a nation made up of small atoll islands, and their values and assets reflect this, unsurprisingly centring on resources from land and sea.

Water supply is highly valued by all communities. With limited land, there is also limited groundwater. Some islands have more groundwater than others. Water is required for household use and also for home gardens. The dry season sees a shortage of water. Recent shifts in climate have seen longer dry periods, including severe droughts. Communities do have some water storage, but this is seen as mostly inadequate, and communities have to make decisions about prioritising between human and food garden use in the dry periods.

Food gardens are a high priority. In the main community of Funafuti, population and land use pressures mean that there are fewer gardens. On other islands, food gardens provide food for households as well as income.

Pulaka pits are a traditional source of constant food. There are pits across the islands, but many are being neglected for a variety of reasons, including the manual labour required for their upkeep, other land uses and contamination of pits by seawater. However, they are also seen as a traditionally resilient means of food security.

Land and soil are listed by all communities as valuable. As Tuvalu has a small land area, land use is a critical issue. Coconut woodlands are traditional environments that have

been used by communities for the collection of resources – not just coconuts, but also other food and building resources. The woodlands are also important habitats for animals.

The ocean is valued for the resources and income it provides, mainly through fishing. The central lagoon is especially valued as a place where fishing operates in relatively calm waters.

Vulnerabilities/threats

The most common threats to the assets listed by communities are associated with the limited land, low-lying nature of the atoll nation, and the effects of climate change.

Tuvalu is especially vulnerable to any sea level rise, and sea level rise, driven by climate change, manifests negatively in two specific areas. The communities are seeing the erosion of coastline and subsequent removal of coastline vegetation, reducing land area and causing flooding with regular surges and king tides. Sea level rise is also contaminating the fresh groundwater lens with saltwater. Saltwater intrusion into groundwater subsequently affects pulaka pits, rendering them unusable.

Pulaka pits are threatened by the allocation of land to other uses, and to the loss of traditional knowledge of how to care for the pits.

Cyclones are also a threat. As well as destruction and damage from strong winds, cyclones create surges of seawater inland, creating flooding and erosion.

Climate change also seems to be creating extended dry periods, which is threatening continuity of freshwater supplies. There have also been recent droughts which have extended beyond the usual expected dry season. Community water supply infrastructure is not enough to provide reserves of freshwater through these extended periods.

The limited amount of land on Tuvalu means that native woodland areas and food gardens are both threatened by population growth. Wild pigs are threats to gardens and woodland, and communities have noticed an increase in pests in woodlands, such as insects that damage coconuts, which they attribute to warmer temperatures.

Marine environments around Tuvalu are threatened by rising sea temperatures and overfishing. Communities are seeing shifts in the availability of fish species due to temperature rise. There are both traditional and modern laws related to fishing, but these are sometimes ignored or not enforced. Tuvaluans are vulnerable to the reduction of marine species, as many rely on fishing for income.



Focus on ecosystems for livelihoods

The listings of community priority assets across communities indicate that ecosystems are a focus, and that climate change is providing an existential threat to these. Tuvaluans rely on these ecosystems for food security and livelihoods.

Community Resilience Profiles for Tuvalu reflect the emphasis above:

Popular fish such as red snapper are diminishing. Tuna used to be available close to land; now they are caught 20 miles from land.

Traditional farming systems are less vulnerable to the impacts of natural disasters. A classic example is the pulaka pits. Although not used as much today, they are why Tuvaluans have survived these harsh atoll conditions.

Pulaka cultivation is now at risk of becoming lost because the younger generation is no longer taking much interest and using other foods such as rice.

The community is noticing the effects of climate change through the disappearance of small and low islets, due to sea level rise. They are also noticing coral bleaching.

Sizes of fish have declined since the island's settlement. There are longer hot periods and generally hotter temperatures, affecting fruits.

There has been some land clearing for housing, and this has affected local biodiversity, including bird numbers.

Sea level is rising, and the north-eastern beach side of the island is badly eroding as a result.

Resilience planning

Understanding priorities of community values and assets informs the next phase of the CRI programme – establishing community resilience plans, which involves noting assets most at risk, especially from the impacts of climate change, community capacity for making changes and strategies for increasing resilience.



Climate Resilient Islands aims to strengthen community resilience and adaptive capacity to the impacts of climate change through nature-based solutions working with rural communities in Vanuatu, Fiji, PNG, Tonga, Solomon Islands and Tuvalu. The project is a New Zealand Ministry of Foreign Affairs and Trade initiative implemented by Live & Learn Environmental Education.

