

# Climate Resilient Islands Programme

## Case Study: Community Resilience Images, PNG

Each community participating in the Climate Resilient Islands programme was asked to discuss and agree on an image that symbolises the community's resilience. This symbol is closely linked within the Community Resilience Profiles to resilience visions (what future resilience will look like). This case study gives examples and explanations of resilience pictures from the eight participating communities in Papua New Guinea.

Levels of community resilience are related to their capacity to deal with threats. Capacity is related to local systems rather than just individual resources. Conceptualising systems is a way of thinking about the community holistically, and symbols are a helpful way of summarising these systems, in a way that is different to fact-based or scientific capacity analysis. A fishing net is an example given to communities of a resilience image that emphasises strong connections. Resilience images chosen by the communities will serve as reminders of goals of communities throughout the resilience planning process.

### Choices and meaning of symbols

The participating CRI communities in the New Ireland province of PNG tended to choose resilience pictures that were directly related to what gives them resilience, rather than what might symbolise resilience in a more conceptual way. Three of the communities emphasised their water sources in their resilience pictures. Three communities focussed on root crops as staple foods. Two communities chose images related to their dependence on marine environments, in mangroves and fish. All of these resilience symbols are of long-standing importance to the communities, and although they are not directly related to cultural artifacts or traditions, they symbolise how ancestors were able to be resilient also. In the case of marine and water source symbols, the assets they represent are valued because they provide income as well as contribute to food security and wellbeing.



Consistent, safe water is a priority asset for PNG communities. Some of the CRI communities have springs which provide clean water all year round. With a lack of water storage options such as water tanks, these sources are vital. Some communities have to travel to collect water. Strengthening water supplies will need to be a priority for future resilience planning, especially in the face of more unreliable seasons when water may be less available than normal during drier times. In the case of Himaul, the flow in the springs is reliable, but as it is only accessible at high tide, water storage may help with the community's resilience:



*The community's resilience picture is the beach water spring, or 'Pakat', in the local language, which is situated on the beach at Himaul village. The community depends heavily on this water source to support them for cooking, washing, and drinking every day and during the prolonged dry spells they experience.*

Water sources are vital for drinking and washing water, but they also contribute to local livelihoods, as watercress is a common crop grown in streams that is sold for income. The waterfalls in one community also have significance as a place of beauty and tourist attraction.

*Despite droughts and dry times, this river shows great resilience. It has never dried up. Other communities come here for drinking water or to do laundry when dry spells strike. The waterfalls provide watercress.*

Three communities chose root crops to symbolise resilience, as these root crops are generally available all year round, are staple foods and can be relied on when other foods are not available. Although there has been the introduction of rice in recent years, root crops remain significant for food security.

Two communities chose taro as resilience symbols. Climate resilient crops are indicators of resilience for most communities; they want consistent harvests of food crops for subsistence and (at times) income. Taro has the advantage of being able to be preserved for long periods. Often this has cultural significance as preservation methods are long-standing. There are traditional rituals linked to the planting of taro, while harvested and preserved taro is also used in custom feasts and celebrations and the payment of bride price.



*Taro has been their main food crop for generations and sustains them daily in all weather conditions. Taro is dried and wrapped in pandanus leaves and stored in the kitchen, above the fireplace, to preserve it for the rainy season. This preserved taro is called 'Labasavas'.*

In the face of climate change, saltwater intrusion linked to rising sea levels, increased cyclones, increased dry periods and wet periods, and more inconsistent seasons, the strengthening of food security options is important for the resilience of communities. PNG communities will be undertaking activities to strengthen resilient agriculture, including more resilient staple crops.

Mangroves symbolise resilience in the low-lying island community of Marai. The community obtains a variety of resources from the mangroves, including building and craft materials and seafoods. Mangroves also play a part in cleaning ecosystems and in mitigating tidal surges and storms that threaten the community with flooding.



*Most of their daily activities are centred around the mangroves. In times of drought or disaster, the mangrove forests provide nearly all their basic needs. In both good and bad times, the mangroves do not fail them.*

Mangroves are vulnerable to climate change and to human activities that disturb marine ecosystems, such as forestry and mining. Communities have already seen these effects, such as siltation of the mangroves driven by erosion from forest cutting, overharvesting by locals and outsiders, driven at times by population pressures. Previously, taboo systems were important for preserving mangrove health.

Replanting of mangroves and other means to strengthen mangrove forests are already being proposed as pathways under the CRI programme. Riparian and marine ecosystem restoration and preservation are important pathways in PNG communities for building resilience.

As part of the process of marine conservation for resilience of communities, the preservation of fish stocks is also important. One community chose fish as their resilience image:

*Marine resources, mainly fish, are a common feature for Nokon community. Nokon is known to other nearby communities as the community with abundance of fish. This is because the community has times when taboos are put on the reefs, restricting people from accessing marine resources.*



The choice of fish as their resilience image reinforces the importance of traditional and Indigenous knowledge for building the resilience of communities and their local ecosystems. In some of the communities, leaders have historically been responsible for staking out portions of marine environments where no or limited harvesting is permitted. This has traditionally allowed marine environments to recover adequately from fishing and seafood collection. Communities have also reinforced that there are traditional fishing methods that allow for both secure access to food and preservation of marine resources. The perpetuation of such methods and a focus on the complexity and vulnerability of fish stocks will be necessary parts of activities in the CRI programme.

## Resilience planning

Understanding how a community sees itself as resilient 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, and Tuvalu. The project is a New Zealand Ministry of Foreign Affairs and Trade initiative implemented by Live & Learn Environmental Education.

