

National Marine Fisheries Service

Pacific Islands Regional Office



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Vatia Climate Resiliency Perspective

Village community on climate change
threats and adaptation measures

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Vatia Climate Story

Past: Climate change–related issues—in particular Hurricane Ofa in 1990, Hurricane Val in 1991, tropical storms, coastal erosion, heavy rainfall, and flooding—have directly and indirectly impacted the natural resources of the village of Vatia. The village community is most concerned with potential future damages from hurricanes, tropical storms, and coastal erosion.



Group activity in Vatia.

Present: The village is experiencing many changes to seasonal weather events and climate, and the community is aware of the changes and the effects of climate change to its resources. As a priority site for coral reef management in American Samoa, Vatia has built its resiliency towards these climate-related impacts through government environmental programs, such as the Community-Based Wetlands Management Program, the National Park Service conservation program, and other watershed conservation initiatives.



Youth clean-up in stream.

Future: Vatia village recognizes the projected impacts of climate change. The uncertainties of climate change leave the village in a vulnerable state, but collaboration with government resource agencies and community outreach groups will better provide the village with the knowledge and tools necessary to adapt and be more resilient towards climate change impacts.



Youth clean-up in coastal area.

Village Profile

Vatia village is located on the north shore of Tutuila Island in American Samoa. It has an estimated population of 640 people (Census 2010). The village is concerned about the impending climate change impacts on their community and resources. Sea-level rise, coastal erosion, increased sea surface temperatures, and changes in weather patterns can lead to degradation of wetlands, coastline, and coral reefs. These issues can impact the livelihoods, health, and economic and social well-being of the village community.



Vatia village mayor.

Strong Community Engagement

The task of building resiliency and adaptation measures towards climate change impacts is difficult without strong community engagement. Vatia has a well-organized village council of chiefs that makes decisions on how the village manages its resources. With technical assistance from their government partners, the chiefs also determine village regulations and enforcement, as well as what a management plan should look like.



High Chief Tuiasosopo Guest House.



Resource map activity for Vatia.

Resource Mapping

The village participants in the community outreach used resource mapping to understand community members' perceptions about their current and past usage of resources and their concerns and issues related to these resources. The activity posed two questions: 1) What are the key resources within Vatia? 2) What climate impacts have affected these resources?

This map illustrates the community perceptions on the key resources and where they are mostly utilized.

-  Cultivated areas
-  Coconut crabs
-  Spring water sources
-  Mangroves
-  Waterfall
-  Fishing area

Natural and Social Resource Targets

1. Drinking water
2. Fisheries
3. Mangroves and wetlands
4. Taro plantation



Mangrove wetland area.

Threats The Community Is Experiencing

- Regular inundation from tidal surges and increasing coastal erosion
- Flooding that creates health problems from mosquitoes and other water-borne diseases
- Fisheries declining (following Hurricane Ofa in 1990)
- Poor water quality in spring water sources
- Saltwater intrusion into taro plantation

Predicted Climate Impacts

- Sea level rise
- More frequent storms and unpredictable weather
- Rising temperatures on land and in the ocean



Vatia Bay area.



NOAA Fisheries field staff conducting youth outreach in American Samoa.

Adaption Strategies

1. Replant native coastal vegetation (mangroves, pandanus, trees, shrubs) to help stabilize coastlines and slow erosion rates.
2. Use soft approaches for coastal protection, such as plants and sandbags, to build barriers that slow erosion rates.
3. Establish village regulations to prevent the destruction of mangroves and coastal vegetation.
4. Protect reservoirs and freshwater lenses, ensuring areas that provide drinking water are free from pollution and managed to avoid evaporation.
5. Ensure spring water wells are designed and managed to allow sustainable use.
6. Ensure people know about and have access to emergency routes and services for extreme events (floods and typhoons, for example) and use high areas for evacuation zones.
7. Engage in alternative livelihood programs to diversify income sources.
8. Apply traditional and local knowledge about natural resource management, which most often includes practices that minimize damage to natural resources while allowing for sustained use.
9. Encourage and reward people for supporting and complying with adaptation strategies for natural resources and ecosystems.
10. Establish a marine conservation area to improve coral reef fisheries.



Church youth groups working on Resource Mapping activity.

Increase Adaptive Capacity

- Facilitate outreach and awareness programs to enhance the community understanding of climate change impacts and help prepare for climate impacts
- Improve strong partnerships and communication with relevant government agencies and stakeholders
- Strengthen livelihood diversification and enable institutional support
- Build village capacity and work with other village communities
- Develop and implement a management and adaptation plan

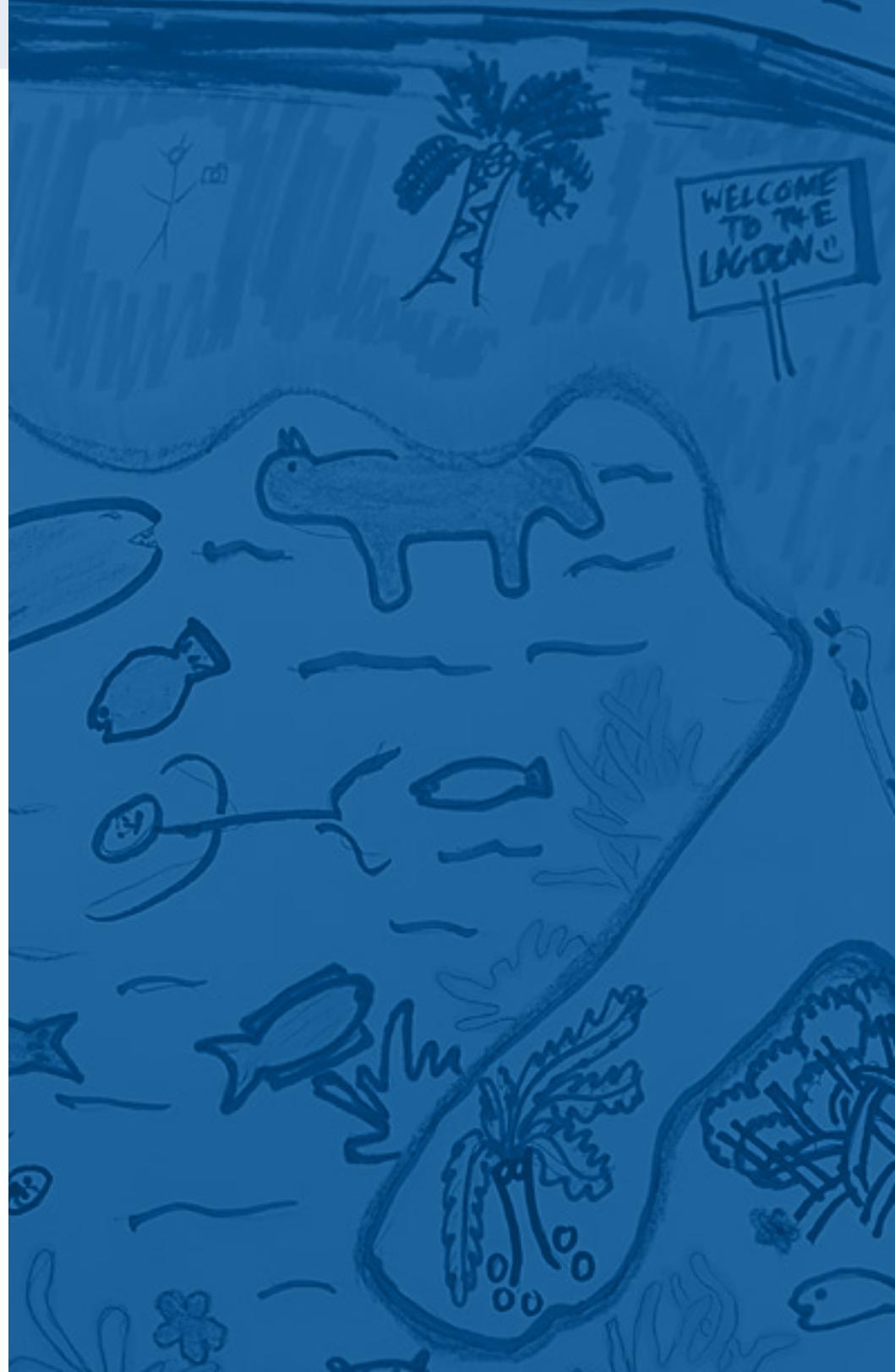
*Photo opposite page:
Future leaders discussing ways to protect the village reef.*

What Can A Village Do?

- Take part in village clean-ups, including coastal and stream clean-ups
- Prevent sediment from flowing out to the bay and onto reefs
- Hold community meetings to discuss a village preparedness plan
- Network and share climate event information with other communities to build local capacity and resiliency
- Participate in government outreach initiatives on building resiliency towards climate change
- Develop a community resiliency plan



Various youth outreach group activities helping to identify ways to protect the environment and resources.





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