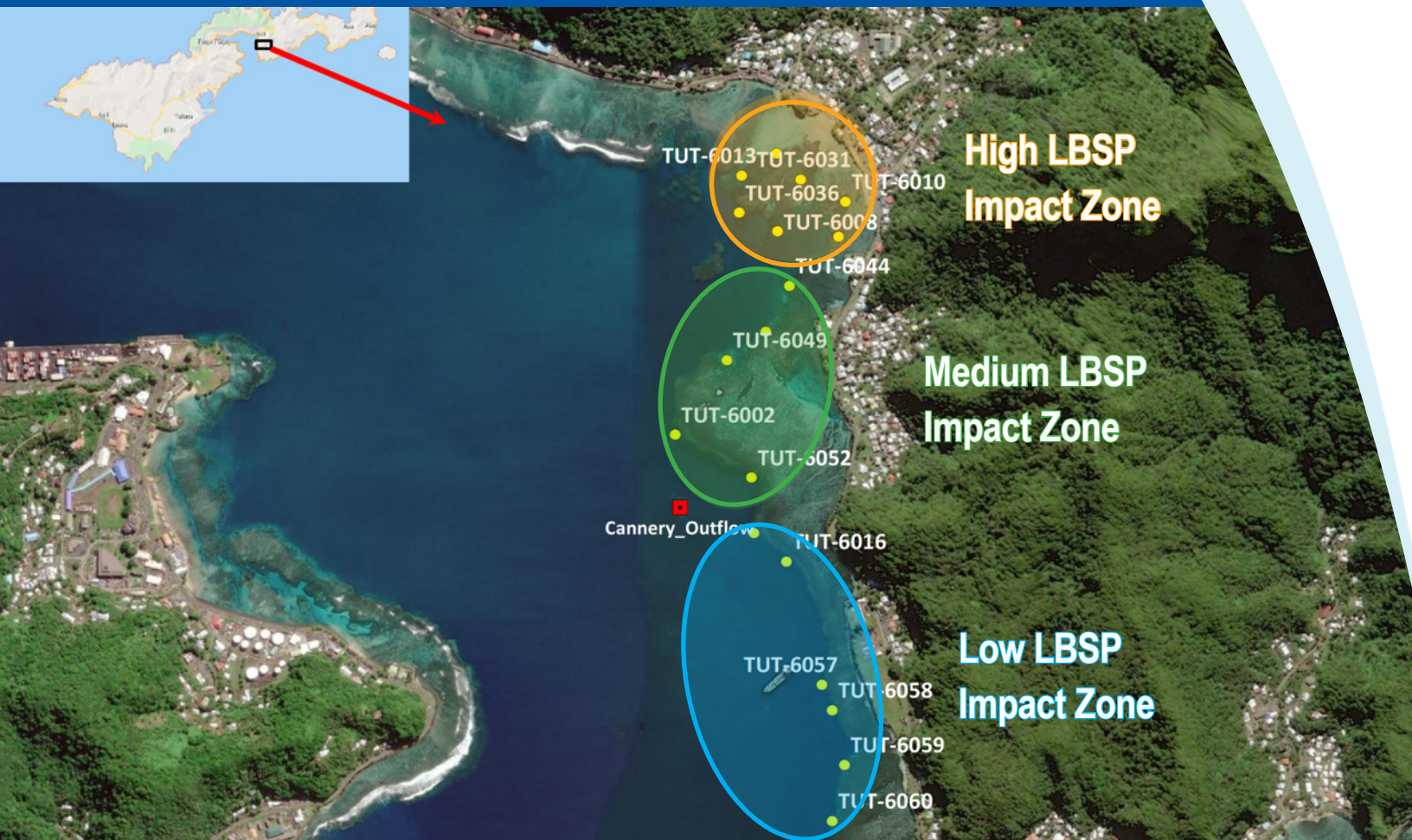


Sediment Pollution Changing Aua Reefs



NOAA
FISHERIES



AUA BAY

Aua village has a population of about 1,549 people (2020 Census), and is home to the world's longest running reef survey site established in 1917. The village has a long history of reef protection and conservation.

In September of 2022, staff from NOAA's Pacific Islands Fisheries Science Center's Ecosystems Science Division, conducted underwater surveys in Aua to determine coral cover and coral demographics at 18 sites along a range of water pollution. These surveys documented the water quality impacts on coral reef communities.

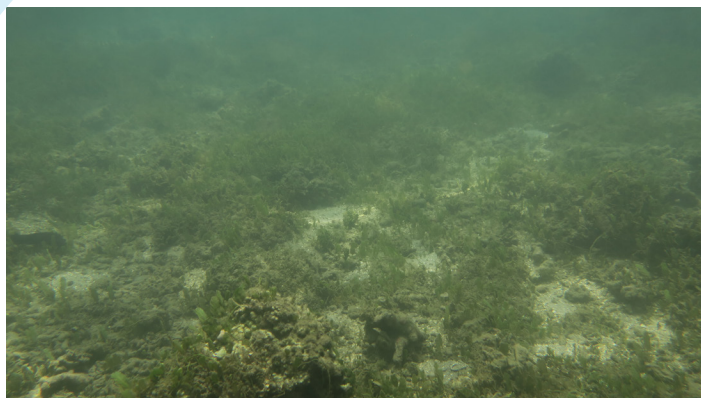
This information helps determine whether land-based pollution (runoff, sedimentation, and nutrient loading) affect adjacent coral reef communities. Sediment pollution was identified as a major problem, and was associated with a shift from corals to more turf and sediment. Our results showed that sediment reduction can increase coral cover, density, diversity, and juvenile recruitment.

Village leaders and coastal zone managers seeking to increase coral cover, density, diversity, and juvenile recruitment could target reduction of sediment into the ocean to help prevent regime shift.



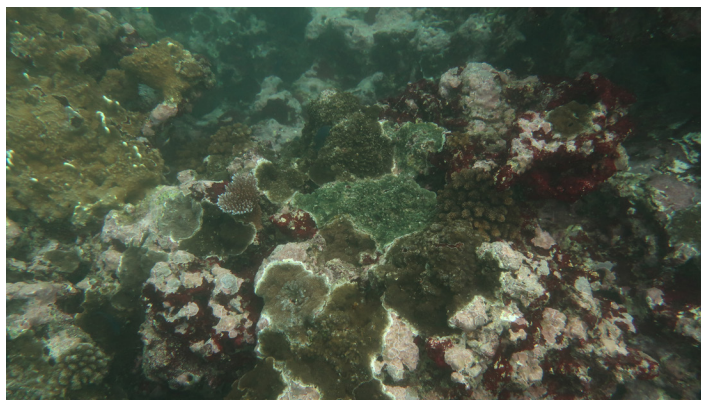
IMPACTED REEFS

The photographs below show the varying levels of impact of land-based pollution at Aua reefs as highlighted on the front map.



HIGH IMPACT ZONE

Community dominated by turf and sediment, with very low coral cover. Much of the turf grows on coral rubble, where coral once lived.



MEDIUM IMPACT ZONE

Benthic community is a mix of mostly encrusting corals and some algae. The smooth texture of the reef does not provide a lot of habitat for fish and marine organisms to live in.



LOW IMPACT ZONE

Healthy corals. Benthic communities are dominated by a diverse assemblage of corals with reduced levels of turf and sediment. Coral diversity and abundance is high for adult and juvenile corals. The complex structure of the reef, with lots of branching corals, provides a home for lots of fish and other marine organisms.

More Information:

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