

# Marine Debris

PACIFIC

## *An Assessment of the Impact of Derelict Fishing Nets on the Coral Reef Habitats of Midway Atoll*

The Northwestern Hawaiian Islands (NWHI) Papahānaumokuākea Marine National Monument (PMNM) has the highest level of protection that a marine environment can receive. However, the reefs are still vulnerable to anthropogenic impacts originating outside the Monument boundaries and beyond the control of local managers, including marine debris. Entanglement of megafauna such as threatened green sea turtles and endangered Hawaiian monk seals are conspicuous manifestations of the marine debris problem. However, very little is known about the impacts of these nets to benthic NWHI reef communities. Derelict nets damage shallow coral reefs in multiple ways. Nets may snag and dislodge corals as they are pushed across reefs by swells, surge, and currents. The nets may also settle on living reef, smothering the organisms beneath them. Nets may facilitate introductions of invasive species by allowing them to raft into new areas from distant reefs. Finally, removal of the nets may cause further disturbance to the benthos, including damage to organisms that have settled on the nets.

This project will investigate the impacts from nets that become entangled on the reefs by tracking the changes in the benthic community over time, that occur either after their removal, or when they are left in place.



Derelict fishing net on coral in the NWHI. Photos courtesy Elizabeth Keenan, NOAA PMNM.

### WHAT IS MARINE DEBRIS?

*Marine debris is any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes.*

### MARINE DEBRIS SOURCES

*Sources of marine debris include land-based sources, such as littering, dumping, and industrial losses. Ocean-based debris can come from fishing vessels, cargo ships, stationary platforms, and other vessels.*

