



American Samoa: 2011 Environmental Trends

How healthy is our environment in American Samoa these days? We can get a sense of this by looking at some of the parts that make up our island environment. In the boxes below, an upward arrow indicates an environmental improvement. A downward arrow indicates a resource in decline or a worsening environmental problem.

Coral Reefs



The status of local reefs in American Samoa is mixed. On the positive side, the corals are in generally good condition, having recovered from cyclone damage in 1991. Slight damage to Manu'a reefs occurred during cyclones in 2004 and 2005, and in Tutuila during the 2009 tsunami, but given the observed resilience of corals in the territory and the generally low level of human stressors here, regrowth is expected. There have also been improvements to local reefs: the removal of a shipwreck at Rose Atoll, a ban on the export of "live rock" (coral rubble), a ban on scuba-assisted fishing due to overfishing, and the establishment of a sanctuary for sea turtles and marine mammals in all territorial waters (0–3 miles

offshore). At the same time however, local reefs show signs of fishing pressure (there are few large fish left). Another looming issue is global warming which warms nearshore waters causing the corals to bleach and/or die. Some warm-water bleaching now occurs annually and significant bleaching events occurred in 1994, 2002, and 2003. Recent episodes of coral disease are also of concern. Additionally, some coastal pollution continues—high counts of enterococci bacteria (mostly from streamside piggeries) often make swimming near streams unsafe, and the unsightly dirt and rubbish flowing from the streams and onto the reefs after heavy rainstorms is harmful to corals.

Pago Pago Harbor



For decades, our harbor has been an environmental write-off due to its degraded condition (frequent fuel spills, toxic fish, contaminated substrates, extensive sedimentation, eutrophication, noise, air pollution). In recent years things have gotten better. In 1991 the canneries were required to stop dumping their wastes into the inner harbor. Now their fish wastes are piped to the outer harbor and discharged in deep water (176 ft depth) where there is better circulation, and the cannery's high strength wastes are hauled daily to a dumping zone five miles offshore. This has made a noticeable improvement

in water quality and some corals are growing there again. Another improvement is that nine shipwrecks were removed in 2000 after rusting on harbor reefs for nine years, and fuel from an old sunken ship was successfully removed in 2010. Bear in mind that harbor recovery has a long way to go. Harbor sediments and some fish and invertebrates are still contaminated with heavy metals and excessive quantities of dirt and plastics flood into the harbor after heavy rainstorms. Neither swimming nor fishing in the inner harbor is recommended.

Reef Fish



Our reefs support a fair selection of small fish less than 12 inches in length (surgeonfish, parrotfish, damselfish, butterflyfish, etc.), but large fish and sharks are not often seen. To help reduce fishing pressure, the use of scuba-assisted fishing at night

was banned in 2001. Efforts are also being made to develop effective Marine Protected Areas to provide long-term protection to fish stocks.

Sea Turtles



Local sea turtles (green and hawksbills) are in serious decline, both locally and throughout the South Pacific due to harvest, habitat loss of nesting beaches and incidental catches in fishing gear. Conservation of "our" green sea turtles is complicated because they

are also vulnerable to harvest in Fiji, 800 miles away, where most migrate after nesting at Rose Atoll. Sea turtles are now officially listed as a "threatened or endangered species."

Whales



Humpback whales migrate here from Antarctica to mate and give birth to their young, mostly in September and October. Local populations are still few in number, probably because most of their stock

was killed by whalers in the 1800's. Commercial whaling was banned in 1966, but recovery of southern-hemisphere populations has been slow.

Rainforests



Thirty percent of our plants are endemic to the Samoan Archipelago. The island's steepness protects most of the rainforest from ever-expanding human activities, but lowland rainforests on the Tafuna plains have been replaced by urbanization. Tutuila's rainforests have recovered from severe cyclone damage in 1991, but a major concern now is that invasive,

non-native plant species are beginning to out-compete native species in some areas. In 2005 rainforests in Manu'a took a direct hit by Cyclone Olaf; there was massive damage to the landscape, but recovery is underway. Damage by Cyclone Wilma in 2011 was not extensive in most areas.

Wildlife



Most wildlife populations on Tutuila have recovered from previous cyclone damage in 1990 and 1991 when birds and fruit bats (flying foxes) were decimated. Their recovery was greatly aided by DMWR's ban on hunting that's been in effect since those cyclones. But some terrestrial species are not doing very well. The small sheath-tailed bat was wiped

out by the 1991 cyclone and has not been seen in recent years. Other rare birds include the many-colored fruit dove, friendly ground dove and spotless crane. The Pacific boa snake is also rare and now found only on Tau Island. Native land snails are disappearing due to an introduced species, the pink predatory snail.

Pest and weed species



Invasive pest and weed species are doing quite well. These are newly introduced species that out-compete the native species because the pests and weeds have no natural enemies on our islands. Some examples are the tamaligi

trees that overtop the native forests, the noisy myna birds that populate urbanized areas, weedy vines that drape over our landscape, toads that are everywhere, several aggressive ant species, feral pigs, African snails, rats, etc.

Wetland Loss



Wetlands are special habitats that occur in only a few places around the territory. They support mangroves, fish, shellfish, and other species not found elsewhere on the island, and wetlands are important in moderating stormwater runoff and sedimentation that

would otherwise flow onto our coral reefs. The islands wetland areas continue to dwindle in size as people fill them in for other uses. Former mangroves in Pago Pago Harbor are long gone, and remaining wetlands are threatened by human activities.

Population Growth



The growth rate of people in American Samoa is a significant issue. The current population of about 68,000 is growing rapidly, adding about 900 people every year. This growth rate is simply not sustainable on our small island. Population pressure issues include:

traffic congestion, solid and hazardous waste disposal, soil erosion and coastal sedimentation, loss of wetlands, fishing pressure, and a limited supply of drinking water.

Summary

Island environments in this part of the world are subjected to a continuing cycle of damage and recovery from cyclones (hurricanes). These storms occur irregularly here, hitting at intervals of one to 13 years over the past 25 years. The impact of each one is generally patchy, with small refugia remaining here and there, and not all islands in the archipelago are hit at any one time. Because cyclones are a predictable feature of the local environment, it is likely that most native species living here

can cope with this severe disturbance and recover, given enough time, and assuming that their recovery is not jeopardized by human activities. A full recovery cycle probably takes at least 10-20 years. But we also have other serious environmental issues to deal with over the next decade, such as overpopulation, climate change, coral reef bleaching, invasive pest and weed species, overfishing, and land-based sedimentation and nutrients that flow onto our coral reefs.