

AMERICAN SAMOA: ENVIRONMENTAL TRENDS IN 2004

How healthy is our environment these days? We can get a sense of this by taking a look at some of the parts that make up our island ecosystems. In the boxes below, an upward arrow indicates an environmental improvement. A downward arrow indicates a resource in decline or a worsening environmental problem. NOTE! Hurricane Heta hit American Samoa on January 4-5, 2004, causing damage to houses, roads, rainforests and coral reefs. Its overall impact seemed moderate -- time will tell. It is likely that some of the sections below will require updating as damage assessments are made.

THE MARINE ENVIRONMENT



Coral Reefs. A preliminary assessment of damage caused by Hurricane Heta is that some coral breakage occurred everywhere and major damage occurred on 10% of the reefs on the north sides of the islands. Prior to this, the reefs had been recovering nicely from a series of natural disturbances over the past two decades: a crown-of-thorns starfish invasion that ate most of the corals (1978) and three hurricanes (1987, 1990, 1991). In recent years, there have also been several improvements to local reefs: the removal of 9 shipwrecks in Pago Pago Harbor and one at Rose Atoll, a ban on the export of "live rock" (coral rubble) to allow reefs to fully recovery, a ban on scuba-assisted fishing due to overfished reefs, and a sanctuary for sea turtles and marine mammals was established in all territorial waters (0-3 miles offshore). However, we still have some serious problems (described below), perhaps foremost among them is global climate change which warms coastal waters causing the corals to bleach and/or die. Some warm-water bleaching may occur annually, but significant events occurred in 1994, 2002 and 2003. Additionally, some coastal pollution continues -- the dirt flowing from the streams and onto the reefs after heavy rainstorms is harmful to corals.



Pago Pago Harbor. For decades, our industrial-strength harbor was an environmental write-off due to its degraded condition (frequent fuel spills, toxic fish, contaminated substrates, extensive sedimentation, eutrophication, noise and air pollution). In recent years things have gotten a little 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 (155 ft depth) where there is better circulation, and the cannery's high strength wastes are hauled daily to a dumping zone 5 miles offshore. This has made a noticeable improvement in water quality and we are now seeing some corals growing again in the outer harbor. Another big improvement is that the 9 shipwrecks in the harbor were finally removed in 2000 after rusting on the reefs for 9 years. Bear in mind that harbor recovery has a long way to go. Conditions there still do not support a full recovery of coral reefs, nor safe swimming, nor fish that are safe to eat.



Reef Fish. Our reefs are overfished. There is heavy fishing pressure on giant clams (*faisua*), parrotfish (*fuga*) and surgeonfish (*alogo*), and we see fewer and/or smaller groupers (*gatala*), snappers (*mu*) and atule (*akule*). To help reduce fishing pressure, DMWR took a major step in 2001 by prohibiting the use of scuba gear while fishing. There's also a very different kind of problem with local reef fish resources inside Pago Pago Harbor -- those fish are toxic.



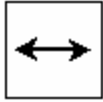
Sea Turtles. Turtle populations are in serious decline, both locally and throughout the South Pacific due to harvest, habitat loss of nesting beaches and incidental catches in fishing gear. A few turtles are still killed locally or have their eggs collected for food. Surprisingly, "our" turtles are also vulnerable to harvest in Fiji. Tagging data show that most green sea turtles that nest at Rose Atoll migrate all the way to Fiji. In the past, when there were far fewer humans on Pacific islands and far more turtles present, some turtles could be harvested on a sustainable basis. Those times are long gone. Sea turtles are now officially listed as "threatened or endangered species", and the hawksbill is "rapidly approaching extinction" in the South Pacific, according to a recent scientific review. In 2003, a sanctuary for sea turtles and marine mammal was established in all territorial waters (0-3 miles offshore).



Whales. Humpback whales migrate here to mate and give birth to their young, mostly in September and October. Local populations are endangered because 95% of their stock was killed by whalers in the 1800's and 1900's. Although commercial whaling for humpbacks was banned in 1966, the recovery of southern-hemisphere populations has been slow, probably due to continued whaling in the Antarctic by Soviet factory ships as late as 1972. Note creation of marine mammal sanctuary mentioned above.

THE TERRESTRIAL ENVIRONMENT

(over)



Rainforests. Our rainforests will need time to recover from Hurricane Heta. But it is fortuitous that the steepness of the islands probably protects the rainforests here from man's ever-expanding activities, but the same cannot be said for the lowland rainforests that formerly covered the Tafuna plains. Those rainforests have been replaced by plantations, houses and roads. Only a small remnant of native lowland rainforest remains. Another important concern for local forests now is that non-native weed species are choking-out native plants in some areas.



Wildlife. Hurricane Heta's impacts will need to be determined. During the previous hurricanes in 1990-01, birds and fruit bats (flying foxes) were decimated, but with the recovery of their rainforest habitats over the past decade, and with DMWR's ban on hunting that's been in effect since those hurricanes, most populations had been recovering prior to Hurricane Heta.



Species in Trouble. Some terrestrial species are not doing well. The sheath-tailed bat (*pe'ape'ava'i*) was wiped out by Hurricane Val in 1991, and few of these little brown bats have been seen since then. The many-colored fruit dove (*manuma*) is getting scarce along with its main food source, the banyan tree (*aoa*). Other rare birds include the friendly ground dove and spotless crane. The Pacific boa snake is rare in the territory. Native land snails are disappearing due to an introduced species, the pink predatory snail. These species are examples of something disappearing from the ecosystem, but we don't really know what we are losing. How many times can we afford to lose parts of our own environment?



Pest and Weed Species. Invasive pest and weed species are doing very well here, unfortunately. 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 noisy myna birds that populate our urbanized areas, the weedy vines that are beginning to carpet our landscape, the toads that are everywhere, 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. Wetlands are also important in moderating stormwater runoff and sedimentation that would otherwise be dumped on our coral reefs. The island's wetland areas are continually dwindling in size as people fill them in for other uses. The former mangrove area in Pago Pago Harbor is gone, and the other main wetlands, Pala Lagoon and Leone wetlands, are threatened by human activities.



Population growth. The growth rate of people in American Samoa is one of the most serious problems facing us today. Our current population of 63,000 in 2004 is growing rapidly at an annual rate of 2.1%, which equates to an increase of about 1,300 people per year (mostly infants). This growth rate is simply not sustainable on our small island. Environmental issues include: extensive coastal alterations, loss of wetlands, solid and hazardous waste disposal, pollution, soil erosion and coastal sedimentation, a limited supply of drinking water, and overfishing. Watch traffic get even more congested.

SUMMARY: Prior to Hurricane Heta's damage, our islands were well-along in a post-hurricane recovery period and we were seeing welcome improvements in local natural resources. But hurricanes are a regular feature of the environment in this part of the world, so it is likely that most organisms living here can cope with this aspect of the environment and recover, given enough time, and assuming that their recovery is not jeopardized by man's 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, invasive pest and weed species, overfishing, and land-based sedimentation onto our coral reefs.

