AMERICAN SAMOA COUNTRY REPORT

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Introduction

In recognition of the unique and important attributes of wetlands in American Samoa, the American Samoa Government (ASG) has developed a comprehensive wetlands management plan to provide a policy framework to manage wetlands resources. The management plan is intended to assist ASG promulgate rules and regulations for the American Samoa Coastal Management (codified under 24 ASCA, Chapter 5). Of primary importance is to establish a mechanism for achieving a policy of "no net loss" of wetlands. These goals and objectives can only be achieved if:

- The people of American Samoa appreciate the economic and ecological values of wetlands and give consideration to these values in their actions.

- There is a broad understanding of the human activities that affect the land and water on which wetlands depend.

- The territory successfully integrates wetland protection and regulatory programs with other social goals and user participation process.

The American Samoa Coastal Management Program (ASCMP) is the lead agency for wetland policy, management, and enforcement and is a section within the Department of Commerce. ASCMP follows the United States federal definition of wetlands as stated in Section 404 of the Clean Water Act that defines wetlands as:

Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR Part 328.3 (b)).

This is the U.S. legal definition of wetlands and is applicable to American Samoa. It emphasizes that hydrology, vegetation, and saturated soils must be present in a wetland. Wetlands in American Samoa include mangrove swamps, freshwater and coastal marshes, springs, streams, and some cultivated areas such as taro fields.

Since mangrove wetlands occupy most of the acreage in American Samoa, our wetland management plan is directly applicable to mangrove management and is considered one in the same.

Characterization of Wetland Resources

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Wetland habitat can be salt water, freshwater, intermittent, riparian, wetlands forests and artificially created environments. Wetlands in American Samoa include marshes and swamps, as well as cultivated and ruderal areas, all of which can occur in fresh and salt water conditions. Wetlands support many plant species, some of which are only found in wetlands, while others occur at the fringe and maybe associated with upland habitats.

Swamps

Swamps are wetlands dominated by trees and are found in both salt and fresh water areas. Saltwater swamps are also called mangrove swamps after the dominant trees. The common plants of mangrove and freshwater swamps are the oriental mangrove *(Bruguiera gymnorrhiza),* red mangrove *(Rhizophora mangle),* beach hibiscus *(Hibiscus tiliaceus),* puzzlenut tree *(Xylocarpus moluccensis),* Tahitian chestnut *(Inocarpus fagifer)* and falaga tree *(Barringtonia samoensis).*

Marshes

Freshwater and saltwater marshes are characterized by herbaceous vegetation such as sedges, grasses and ferns, rather than woody shrubs and trees found in swamps. Saltwater marshes occur along the coastline and often become established in mangrove swamps that have been disturbed or cut off from the sea. Freshwater mashes occur naturally in shallow, slow moving, or standing waters where soils are saturated by a high water table. The dominant vegetation of marshes includes grasses and sedges such as *Paspalum spp.* and *Cyperus spp.,* water chestnut *(Eleocharis dulcis), Ludwigia spp.,* Job's tears (*Coix lacryma-jobi),* and the marsh fern *(Cyclosorus interuptus).*

Ruderal and Cultivated Wetlands

Ruderal wetlands are usually created in disturbed areas such as ditches, ponds, or disturbed mangrove swamps. Freshwater marshes have fertile soils and so have traditionally been converted to taro cultivation. The commonly cultivated taro plant in American Samoa is *Colocasia esculenta.* The fern, *Christella harvey,* and wild ginger *(Zingiber zerumbret)* can invade cultivated wetlands, ditches, and ponds.

TABLE 1. Type and total acreage of wetlands in each village in American Samoa

WETLAND SITE	ACREAGE	WETLAND TYPES
Tutuila Island	**350.93**	
Nuuuli	122.90	Mangrove Swamp, Marsh, Ruderal, Cultivated, Streams, Lagoon
Leone	20.74	Mangrove Swamp, Marsh, Ruderal, Cultivated, Streams, Lagoon
Malaeloa	72.06	Freshwater Swamp, Marsh, Streams
Atia	9.18	Mangrove Swamp, Streams
Masefau	43.06	Mangrove Swamp, Marsh, Streams
Vaitia	34.05	Marsh, Mangrove Swamp, Cultivated Streams
Alofau	2.03	Mangrove (ruderal), Streams
Aoa	23.45	Mangrove Swamp, Marsh, Ruderal
Aloa	15.47	Marsh, Cultivated, Streams Ruderal Marsh
Tula	7.99	
Aunu'u Island	**111.93**	
Pala Lake	44.76	Mangrove Swamp, Lake
Taro Fields	27.30	Cultivated
Crater Lake	36.84	Marsh, Open Water, Stream
School Swamp	3.03	Mangrove Swamp, Ruderal
Tau Island	**35.84**	
Luma	25.80	Freshwater Swam, Freshwater Marsh Cultivated Wetland
Fusi	1.45	Ruderal Welland
Lesi'u	8.59	Freshwater Swamp, Cultivated Wetland
Ofu Island	**5.87**	
Va'oto Marsh	5.87	Freshwater Marsh
Olosega Island	**7.37**	
Village Wetland	7.37	Cultivated Wetland, Freshwater Marsh

The Unique Character of American Samoa's Mangroves

The Samoan Island group is one of the only places in the world where both the oriental mangrove and the red mangrove grow together. The red mangrove *(Rhizophora mangle)* grows in tropical areas west of 0 degrees longitude. Found in West Africa, eastern Brazil, the Caribbean, Central America, and Florida, the distribution of the species then leaps across the Pacific Ocean to Samoa, Fiji, and New Zealand.

The oriental mangrove *(Bruguiera gymnorrhiza)* grows mostly east of the longitude mark. Typically, this mangrove is found in East Africa, the southern Indian coast, Malaysia, western and northern Australia, Micronesia, Fiji and continues to Samoa. The only other places where both species are found together are New Zealand, New Caledonia, Fiji, and some other Polynesian Islands.

While most of the marshes and swamps of American Samoa contain plants found commonly in other parts of the U.S., the mangrove wetlands, especially those that support mature forest, such as those in Nuuuli are uncommon. This is part of the reason American Samoa's mangrove wetlands receive so much attention from the U. S. federal government. They are unique and should be protected.

Inventory and Status of Wetlands in the Territory

Wetlands in the Territory are being lost or degraded by urban growth and development as a direct result of increasing population. American Samoa's population has increased at an annual rate of 3.7 percent, according to the most recent census data (1980-1990). The rate at which the Territory has lost wetlands is similar to the population growth rate. Between 1961 and 1990, 4.6 percent of American Samoa's wetlands have been lost each year.

The population of American Samoa is expected to double within the next twenty years and pressures on wetland areas will only increase accordingly. As the population increases, so does the desire for land for housing, stores, offices, roads, and utilities. These needs represent a demand for scarce flat areas, such as those occupied by wetlands. Given the island's topography, development is fairly confined within a narrow band of land between the lower slopes and the ocean.

While a variety of federal and Territorial laws and regulations relate to wetlands protection, enforcement is inadequate and there is little comprehensive legislation to protect these valuable resources. Many land-filling activities, especially within mangrove wetlands on Tutuila Island, result in piecemeal losses of wetlands that are either exempt from current regulation or occur without due process or permit review.

Compounding the problem associated with regulation and enforcement are cultural forces and a general shift in social attitudes by Samoans. Under the Samoan land tenure system, wetlands are perceived as land owned by the village. The perception of western public rights is not culturally appropriate in the Samoan culture and thus the concept of public good conflicts with village interests. Samoans see the use of land as subject to the decisions of their matai and village councils, not the federal or Territorial governments. While some residents may be familiar with resource protection they feel compelled to remain silent when higher-ranking residents make land use decisions that negatively impact wetlands but are traditionally within their decision-making authority. Samoan communal and subsistence land use practices are also eroding due to increasing western influences and the shift to a cash economy. Furthermore, the general public does not have

enough information about where wetlands are located, their biological and social functions, the regulatory requirements surrounding wetland areas, and the activities that damage the wetland's fragile ecosystems.

Gains and Losses in Tutuila and Aunu'u

Most of the wetland sites on Tutuila Island have experienced some loss over a thirty-year period between 1961 and 1991. The total wetland acreage for Tutuila Island has been reduced from 488.12 acres in 1961 to 350.93 acres in 1991, a loss of 137.19 acres in just this time period alone. We predict this value has doubled in 2001. Nuuuli mangrove wetland has suffered the greatest loss, approximately 61 acres, representing a 33% decline since 1961. Tula appears to have lost 8 acres, representing a 5.8% decline. Leone has lost over half of its wetlands since 1961. The freshwater marsh in Vaitia seems to have increased slightly (+ 0.45 acres). This is probably the result of the abandonment of taro cultivation which has allowed surface waters to flood a wider area.

The wetlands on Aunu'u Island appear to have increased slightly from 111.76 acres in 1961 to 111.93 acres in 1991, a difference of 0.17 acres. The wetland areas associated with the Pala Lake, the taro fields, and the Aunu'u Crater appear unchanged from 1961. The school swamp seems to have increased slightly (+ 0.17 acres). This reason is not known.

Causes of Decline

The main cause of the loss of wetlands is development. Clearing and filling to accommodate village homes, pigpens, and commercial buildings has encroached into wetland areas. Trash and other debris are dumped into the wetlands and in some instances, covered with volcanic ash soils. Wetlands in the United States mainland are often lost through clearing and draining for agricultural use. However, this has rarely been the case in American Samoa, most of the wetlands have been lost from clearing and filling for development.

Present Land Uses in and Around the Wetlands of Manua

The steep topography of the Manu'a Islands dictates development patterns on the islands. Communal land ownership and cultural life philosophy also influences land practices. The lifestyle of the people has traditionally been characterized by subsistence agriculture and fishing. The fact that wetlands have not been filled for development, unlike Tutuila, is a strong statement about the high value the villagers place on these areas for agriculture and their willingness to preserve their wetland characteristics.

The Manu’a wetlands are presently used to provide food for the villagers. Most of the wetlands are used, at least in part, for taro cultivation, although banana, breadfruit, papaya, and pineapple are also grown around the fringes of the wetland. Freshwater eels are caught in the Luma and Olosega wetlands. Other agricultural products include the use of pandanas trees for mats and some medicinal plants. As far as we are able to determine no pesticides or herbicides are used directly in the wetlands, but the watershed above the Luma wetland is an important agricultural area where some pesticides/herbicides may be used.

In Luma, Fusi, and Woto Marsh, agricultural pressures on the natural wetlands have been reduced by shifting taro production to upland sites such as the old airstrip on Tau Island

and above the village on Ofu Island. The shift was precipitated by the cyclones of 1990 and 1991. This appears to be a permanent shift, since the upland sites are perceived as more reliable and less subject to flooding and other adverse weather conditions. Now that the villagers have made the investment to establish taro plantations in the upland sites, they are probably not likely to abandon them.

Village homes have been built around the fringe of the wetlands, but very little development is actually encroaching into the wetlands. A few piggeries are located around the wetlands but fewer than has been observed on Tutuila. No public infrastructure (i.e., sewer, water, electrical, and telephone lines, roads etc.) has been built within the wetlands, except for a telephone line across the Luma wetland. Currently there is no pressure to build structures in any of the wetlands, nor are there any active plans for infrastructure development that would directly affect the wetlands. The village dumpsite at Fusi is an example of an infrastructure development that has altered a wetland. On Ofu, Woto Marsh may be threatened by a possible relocation for the airstrip and road.

Gains and Losses in Manu'a

Overall, there has been little gain or loss in the aerial extent of the wetlands in Manu'a. Slight losses appear to have occurred at Luma (1.24 acres, a 4.6% loss) and Olosega (1.39 acres a 15.9% loss). The greatest loss has been at Fusi, on Ta'u, (3.38 acres, a 70% loss). It has been assumed that there has been no change in the wetlands at Va'oto Marsh in Ofu or at Lesi'u in Ta'u.

Mangrove Policy and Legislation

United States Federal Agencies and Jurisdiction

A No Net Loss Policy has been established by President George Bush for wetlands and has directed the Domestic Policy Council to define and develop the necessary policies to achieve the goals of "no net loss". A memorandum of agreement between the Corps of Engineers (COE) and the Environmental Protection Agency (EPA) makes it a goal to achieve "no net loss" of wetlands, although it recognizes this is not possible in every case.

US. Army Corps of Engineers (COE)

Authority. The authority to regulate the discharge of dredged and fill material into wetlands is jointly shared by the COE and the EPA. The COE is authorized to issue Department of the Army permits for the discharge of dredged and fill material into wetlands under Section 404 of the Clean Water Act. The EPA can veto a permit issuance under Section 404 of the Clean Water Act.

The COE issues Department of the Army permits regulating construction in navigable waters of the United States under Section 10, River and Harbor Act of 1899. Both authorities apply to American Samoa wetlands.

Jurisdiction - The COE regulatory jurisdiction in American Samoa wetlands includes waters subject to the ebb and flow of the tide up to the mean high water mark, and all other waters that include lakes, ponds, rivers, streams, intermittent streams, mudflats, sandflats, grassbeds, wetlands and all other waters, including those separate from the ocean tributary system. Normal farming and silverculture practices are exempt from obtaining Section 404 permits from the COE.

In American Samoa wetlands on Tutuila, the COE regulates the discharge of dredged and fill material into the tidal wetlands, as well as those wetlands associated with tributary systems and wetlands isolated from the ocean and tributary systems. Important to the regulation of wetlands is the federal determination and jurisdictional definition of wetlands. Recently, the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands" was developed for use by the COE, EPA, SCS, and US17WS. This manual standardizes methods for determining and delineating federal jurisdictional wetland boundaries.

US.Environmental Protection Agency (EPA)

Authority. Ultimate Authority for the Clean Water Act lies with the EPA. Under Section 404, the EPA has permit review and veto power over any permit issued by the COE. The EPA reviews all individual permit applications and certain, nationwide permits for evaluation of environmental impacts, alternatives, and mitigation and can veto permits that do not meet the 404(b)(1) guidelines. Under Section 402 of the Clean Water Act, the EPA has authority for issuing National Pollution Discharge Elimination System permits.

Jurisdiction: The EPA's jurisdiction over all waters of the United States, including wetlands is the same as the COE under Section 404 of the Clean Water Act. Under Section 301 of the Clean Water Act, the EPA also has jurisdiction over the discharge of any pollutants into the nation's waters through the National Pollution Discharge Elimination program. Although the EPA does not have jurisdiction under Section 10 of the River and Harbor Act of 1899, it reviews and comments on all Honolulu district Section 10 public notices in accordance with the provisions of the National Environmental Policy Act and Section 309 of the Clean Air Act.

American Samoa Coastal Management Program Administrative Rules 1997

26.0201. Adoption authority. The American Samoa Coastal Management Program administrative code is adopted pursuant to authority granted by the Department of Commerce under Public Law 21-35, the American Samoa Coastal Management Act of 1990, ASCA $$24.0501 et. seq.

26.0202. Purpose. The provisions of this chapter govern the administration of the American Samoa Coastal Management Program. The Act mandates the establishment of a system of environmental review, along with economic and technical considerations, at the territorial level intended to ensure that environmental considerations are given appropriate consideration in the land use decision-making process. The provisions of this chapter establish a consolidated land use permitting process known as the Project Notification and Review System, including developmental standards, procedures for the designation, planning and management of Special Management Areas, and procedures for determination of federal consistency. The provisions of this chapter are not intended to negate or otherwise limit the authority of any agency of the Territory, provided that actions by agencies shall be consistent with the provisions contained herein. The provisions of this Chapter are consistent with the Coastal Zone Management Act of 1972, as amended 16 USC$$1451 et. seq.

Section 26.0222 of the Administrative Code is dedicated entirely to wetlands management in American Samoa, this section provides a working definition, delineation, policy, jurisdictional limits, buffer zones, permitted and prohibited activities, permissible uses and violations.

Under section 26.0221 Special Management Areas are managed as areas that possess unique and irreplaceable habitat to American Samoa. Currently, the two mangrove areas, Leone Pala Lagoon and the Nuuuli Pala Lagoon have been delineated and designated as Special Management Areas.

Special Management Areas

Two candidates for Special Management Areas stand out for their unique character: The Malaeloa freshwater swamp and Faimulivai Marsh, the Aunu'u Crater Lake Freshwater Marsh.

Faimulivai Marsh, on Aunu'u, is an important wetland site because it is the largest, least disturbed and true herbaceous freshwater marsh in the Territory. This pristine and beautiful marsh offers important wildlife habitat for the Australian gray duck and is one of the most scenic areas in American Samoa. With the exception of the outlet culvert, this area is completely undisturbed. In addition, the crater bowl offers excellent recreational and educational opportunities for leisurely day hikes or for learning about the volcanic origins of the islands. Efforts have been made to make this a potential site to be included on the list of Wetlands of International Importance or RAMSAR list.

The Malaeloa freshwater swamp is the second largest wetland in the Territory (72 acres) and is considered pristine. This swamp supports large mature trees, including the rare 1alapa and gatae (*Erythrina fuss*). This species was once thought to be restricted to Leone and has not been reported from American Samoa for over sixty years. The expansive area of deep water within the wetland supports eels and other fish. These wetlands help control flood flows and protect downstream developments.

ASCW is working towards designating these areas for Special Management because both are large and relatively pristine areas that provide important fish and wildlife habitat and offer the best examples of freshwater wetlands in American Samoa.

Approach to Preparing a Wetlands Management Plan

The wetland management plan for American Samoa is based on the functional values of wetlands and their economic and cultural significance and at the same time, striving to be accepted and enforced by the people themselves within their cultural system. It is our goal that, through the wetland management plan, these values can be translated to the Samoan population and carried into the future with the cultural norms of society and with recognition of Samoan rights of self-determination.

The American Samoa Coastal Management Program has identified the following areas for future funding and technical assistance that have aided in the development of a wetland management plan, these include:

- A technical characterization of the existing wetland resources
- An investigation of wetland status and trends within American Samoa
- Identification of site specific opportunities for wetland restoration, rehabilitation and creation actions

- An assessment of the economic importance of wetlands
- A survey of public agency involvement and village sentiment for wetlands management
- Development and discussion of an array of management options and tools, and
- Formulation of a recommended approach for wetlands management.

Educating for Wetlands Management

To effectively provide residents with the information needed to help them appreciate and protect their wetlands as a productive resource, ASCMP continues in the development of a Environmental Awareness Education Plan to include all water resources. This strategy is dynamic, as it is culturally sensitive and will have a unique approach to each audience. To be effective, the program will need significant input from primary residents, including village councils and residents.

The focus of the educational strategy is to provide information to those who are responsible for a) protecting or maintaining wetland areas, b) making decisions regarding the use of wetland areas, c) eradicating or degrading the wetlands, or d) establishing and maintaining local sanctions and rules. Target audiences include:

- Village Councils
- Pulenu'u for those villages
- Landowners adjacent to the wetlands
- Users (primarily farmers and those harvesting fish or plants from the wetlands)
- Elders of the villages concerned with preserving the traditional ways and cultural pride
- Residents, children, and the general public
- Church groups, youth groups and religious leaders

Monitoring Wetlands

Three types of monitoring are necessary to sustain the management plan and to measure its success. These include monitoring of wetland status and trend, wetland functions, and mitigation. Monitoring wetland status and trends involves tracking changes in the amount and type of existing wetlands. Monitoring surveys should be conducted every 2 to 5 years to maintain zoning measures and other planning tools in the wetlands management plan. These monitoring surveys will contribute to future decisions regarding changes in enforcement, zoning, permitting, or other planning measures.

Changes in the function of wetlands are just as important as the changes in the amount of wetlands. Wetland functions should be monitored to record changes and to increase the knowledge about wetland ecology and function in American Samoa. Wetland functions

involve plant and animal diversity, species composition and structure, productivity, water quality, and hydrology.

Although wetlands vegetation has been surveyed (Biosystems's current wetlands vegetation survey, Whistler 1976, Cole 1988), neither wetlands water quality or hydrology has been studied. The management plan recommends placing wells to monitor water table fluctuations, testing water quality, and surveying for species abundance and diversity. This information on functions or values not previously known may then be useful in planning.

The advantages of monitoring within the wetlands program will allow us to track the success and challenges within our program. How will we know if we don't monitor? Monitoring will also help enforce mitigation measures, assess the success of restoration and creation projects and indicates the need for changes in methods or even a change in mitigation policy. Information relating to the progress of the wetland management plan will be helpful to the scientific community and other agencies Disadvantages are that monitoring can be expensive.

Community Based Wetlands Management Process: American Samoa Coastal Management Experience

"Tautua or Service" is the American Samoa Coastal Management Program's guiding philosophy. In the program's initial development stage, the purpose was to answer the following question; *"How can our actions best serve the people and natural resources we have been mandated to protect? "* The strategy was then determined to construct a Territory wide resource management system that would be compatible with traditional land use practices.

Traditional Authority vs. Government Authority

One of the main concerns ASCMP had to deal with in developing the Wetlands Plan was the conflict between traditional authority and government authority. All wetland areas within American Samoa exist within villages and, traditionally, these villages have authority over the use and management of these areas. ASCMP was concerned that the government's attempt to establish a management plan could be misinterpreted by the village wetland communities as an attempt to undermine the traditional authority by moving resource management decisions from the village council to regulatory government agencies.

Community Partnership Approach: Steps for Plan Development

1. Building an Alliance within ASG agencies
   Meetings with ASG agencies responsible for setting land use policies to address the protection, regulations and management of wetlands in A.S. (i.e. ASEPA, D, DPR, etc.) were held.

2. Village Involvement - Plan Development
   a. Village meetings - held to identify/prioritize village concerns regarding wetlands.
   b. Incorporation of Village input into the Plan.
   c. Final Draft Plan Review and Endorsement
      - Public Meetings

- Village council Meetings

Procedures and Outcomes

Village meetings were held to solicit views on values and functions of wetlands, a community perspective and issues were gathered for plan development. Problems were outlined by the village participants. Wetland areas were mapped and a draft plan for management of wetlands was developed in consultation with wetland area village leaders.

The review and endorsement of the Draft Wetlands Plan consisted of two approaches, 1) Conventional public meetings for comment on the draft plan and 2) The contemporary approach of village partnering. The purpose of the public meetings was to invite comments from consulted villages and from the general public. The turnout was low and the views of those not living within wetland villages were gathered which made implementation and ownership of the wetlands plan difficult.

The contemporary approach consisted of a series of meetings with Village Councils to present the plan and invite comments. Building an Appreciation for Wetlands Management through public awareness was created through pulenu'u and village council workshops and meetings, the commitment to establish a Community Wetlands Task Force, and select Wetlands Village liaisons and facilitators. Outcomes from this approach were well received by the community. An educational workshop and pulenu'u and village council meetings were effective in that the Matais were instrumental in getting village councils to agree to assist ASCMP in their efforts to protect wetlands resources within their respective villages. These leaders generated greater support and public interest for protection and lectured at their respective villages on the importance of wetlands within the specific villages. Pulenu'u and Faifeau workshops were well attended by the clergy, pulenu'u, and talking chief. The workshops emphasized the importance of wetlands with an emphasis on the theological role of nature and human interaction as caretakers of the earth.

The purpose of the Community Wetlands Task Force was to have a group that would act as a liaison between the community and the government on ongoing issues concerning wetland management. Specifically, the task force would serve as an advisory board to ASCMP in designing and implementing individual village plans, consistent with the recommendations stipulated in the Wetland Management Plan (Biosystems 1992) for the islands of Tutuila, Aunu'u, and Manu'a. Village councils and the ASCW selected members of the task force.

The Wetlands Community Task Force recommended ASCMP hire village liaisons and facilitators for the two largest mangrove wetland villages, Leone and Nuuuli (both Special Management areas). The objectives of this program:

- Obtain wetland protection/preservation village resolutions
- Obtain wetland ordinances designed to uphold resolutions enforceable by village law
- Obtain village support to conduct wetland delineation, allowing village residents to indicate where they determine the boundary line should be in their village
- Determine one boundary line following negotiations with the village

- Monument one line for future reference and wetlands management

Conclusions of the Community Based Wetlands Management Plan

The outcome of the Village Partnership approach was effective overall in generating support for wetland protection but was not without challenges. Some advantages include a village ownership of the plan (not a government plan), the ability to convince fellow villagers, and the familiarity of neighbors generated comfort and willingness to participate in resource management. Disadvantages of the approach included that it required a lot of resources and supervision. Finding participants that were committed for the long term was difficult and consistency in implementing the wetlands management plan over time proved challenging.

In conclusion, ASCMP's Community Based Approach recognized the hierarchical structure of the Traditional Samoan System and utilized the decision-making powers of the village council. There is an ongoing process on informing the public on the biological functions and values of wetlands while appreciating that each island (and ecosystem) is different and each strategy would be different as well.

Public Participation

The on going mission of the Community Based Wetlands Management Plan is to involve residents, including the village councils or pulenu'u in wetlands management and protection efforts. The focus of the program remains to encourage active participation in wetland management. Meetings that involve permitting and enforcement are always open for public participation and comment on a bi-monthly basis. The CZM program is always available to hold environmental lectures and presentations on an appointment basis. Public participation in wetland management and protection is necessary for the following reasons:

- To remind residents that wetlands are a public resource belonging to all residents, not just those residents living adjacent to the wetlands.
- To help the public understand why wetlands must be protected.
- To involve those residents who do not live adjacent to wetlands but who depend on them for subsistence.
- To encourage the matai's stewardship of the land.
- To encourage consensus building for ASG wetlands policy and implementation.
- To enable residents to understand the technical and other reasons for individual permit and enforcement decisions.

Current Situation

Presently awareness of the importance of wetlands, their ecological functions and protection are not fully understood by the community. There is still much work to be done in this area. Decision making at the village level is crucial to wetland protection. Traditionally, land use and resource utilization decisions are made in villages or at the aiga level and confirmed by the village council. Also American Samoa's traditional communal ownership of land and natural resources is defined at the village level.

Encouraging participation to protect wetlands is an ongoing process within the ASCW program. While village level participation is crucial, interest and awareness in wetlands management and protection should not be limited to residents of affected villages. A broader perspective must be obtained from residents who recognize that wetlands are a resource for all Samoans, not just those living on the edges of a wetland.

Due to population pressures much activity has revolved around permitting through the Land Use Permit Process and enforcement activities and attempting to regulate and in some cases, prevent and discourage wetland filling activities. This filling usually occurs on the edge of mangrove wetlands with the intent to create more land for personal use. More work is needed in the area of mitigation to compensate for some wetland loss.

Current Public Awareness on Wetlands

ASCMP continues to promote the ecological and cultural importance of wetlands preservation to the public through a variety of mechanisms. May is wetlands month and each year ASCMP offers a variety of outreach activities, such as wetland walks and educational activities to create wetlands appreciation. Some of these activities involve creating songs, skits, dances, trivia contests, school lectures, TV spots and videos. Other mechanisms include Coastweeks, which is a two-week event filled with activities, field trips and presentations aimed towards promoting environmental awareness and conservation. A Religious Consciousness Project has been developed to target the religious leaders of the community on recognizing and preserving American Samoa's environment and understanding how land use practices and population will affect these resources in the future. ASCMP's yearly Art and Tide calendar has been a tremendous success with much participation from schools on submitting environmental artwork along with traditional Samoan proverbs. A village of the year award encourages villages to participate in environmental protection and awareness.