Priority Sites for Conservation in Samoa:
Key Biodiversity Areas

Vaega Fa’atauaina mo le Fa’asao i Samoa:
Vaega Oā Fa’apitoa i le Ola Fa’a-natura
Preface and Acknowledgements

This booklet was written for the general public to raise awareness about the key areas for conservation in Samoa and the species most threatened with extinction. The work was developed as a partnership between the Conservation International Pacific Islands Program (CI Pacific), the Secretariat of the Pacific Regional Environment Programme (SPREP) and the Division of Environment and Conservation (DEC) of the Samoan Ministry of Natural Resources and Environment (MNRE). O le Siosiomaga Society and Birdlife International kindly provided their data on the Important Bird Areas (IBAs) of Samoa. Dr Steve Brown, ACEO of GEF Services, MNRE and Tu’u’u Dr Ieti Taulealo, former CEO of the MNRE, secured funds for this project from the Global Environment Facility through the Protected Areas Programme of Work (POWPA). We are very grateful for the technical support of Maxim Vergeichik, UNDP Program Associate for Environment, who provided invaluable guidance on the overall structure and content of the Samoa POWPA program. We thank the Coral Reef InitiativeS for the Pacific (CRISP) for providing financial support for the marine analysis component.

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Front cover photo: O le Pupu Pue NP lava coast, Samoa. © Stuart Chape, SPREP.
Inside back cover photo: Central Savaii Rainforest. © Stuart Chape, SPREP.

Faatomuaga

O lenei lomiga sa tusia mo le fa’atupulaia o le malamalamaga lautele i vaega fa’apitoa o le siosiomaga o Samoa e tatou ona ave iai le fa’amauamua mo le fa’asaoaina i Samoa aemaise o ituiga o meaola ua lamatia ma taaua ina mou atu. O se galuuga fa’apa’aga sa galulue so’oso’o taaua ai le Fa’alapotopota o Fa’asao Fa’ava-o-malo (CI Pacific), le Fa’alapotopota faava o malo o le Siosiomaga o le Pasefika (SPREP) ma le vaega o Siosiomaga ma Fa’asao o le Matagaluega o Punaoo Fa’anatara ma le Siosiomaga (MNRE). Sa fesoasoani iai le Sosaiete o le Siosiomaga (OLSSI) ma le Fa’alapotopota o Manuulele Fa’ava-o-atunu (Birdlife International) e ala i le tuuina mai o fa’amaumauga ma fa’amatalaga o susesuega i laufanua taua mo le fa’asaoaina o manuulele o Samoa. O Dr. Steve Brown, Pule Sili Lagolago mo Auaunanga i Polokalame Fa’a’alesiosiomaga o le Lalolagi (GEF) ma Tu’u’u Dr. Ietitia Taiulealo, o le sa Pule Sili i le Maragaluega o Punaoo Fa’anatara ma le Siosiomaga, sa fa’amautuina maia ni fesoasoani tau tupe mo leenu fuafuaga i lalo o le Polokalame o Galuuga mo Elele Fa’asaoaina. Na fesoasoani foi Maxim Vergeichik o le Ofisa o le Polokolamme Malo-Aufaatasi (UNDP) e ala i le fa’atulagaina o le Polokalame mo Elele Fa’asaoaina i Samoa ma le Polokalame mo Atinae o Amu ma Aau o le Pasefika e ala ile fa’atupeina o le tu’ufa’atasiga o fa’amaumauga tau le gatafaihe.

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E fa’afetaia i latou uma ua taua i luga ona o la latou lagologo ma le fesoasoani i lenei galuuga. Fa’afetai tele lava.
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1. Introduction

Biological diversity, or biodiversity, is the variability of life on earth from genes to species to the entire biosphere. Biodiversity provides immeasurable benefit to human societies through medicine, food, fiber, ecosystem services, and cultural values. Yet, this diversity of life is under siege: species are being lost at a rate far beyond the natural extinction rate.

To effectively conserve biodiversity as a whole, conservation action must focus on its key components: individual species in need of conservation, on specific sites and landscapes that are most important for their persistence. Using a transparent, data-driven process to identify these conservation targets allows for the efficient allocation of scarce conservation resources. These targets also provide a baseline against which the success of biodiversity conservation interventions can be measured.

 Samoa is part of the Polynesia-Micronesia Biodiversity Hotspot, one of 34 regions of the world where extraordinary levels of biodiversity and endemism are coupled with extremely high levels of threat (Mittermeier et al. 2004). Although 11 terrestrial and 65 marine species found in Samoa are listed as globally threatened on the 2009 IUCN Red List of Threatened Species, the true number of threatened species in Samoa is significantly higher than this, perhaps in the hundreds. The primary threats to our biodiversity are habitat alteration caused by agriculture and unplanned or poorly planned development, over harvesting of resources (e.g. logging of timber trees, hunting of pigeons and bats and over-fishing) and the spread of invasive species.

Site based conservation is one of the most important and successful tactics for reducing global biodiversity loss. Governmental commitments to site conservation include Samoa’s Biodiversity Strategy and Action Plan (SBSAP), which commits Samoa to “enhance the management of existing protected areas (PAs) and establish new ones to increase the coverage of PAs to 15% and achieve a full representation of Samoa’s ecosystems” (Government of Samoa 2001) and the Convention on Biological Diversity (CBD), which enjoins Parties to establish “a system of protected areas or areas where special measures need to be taken to conserve biological diversity”. Safeguarding these key areas requires a variety of governance approaches, including national parks, community conservation areas (CAs), and co-managed sites — the best approach will vary from place to place. A network of such sites, coupled with species-specific actions and anchored within a matrix of compatible land uses, provides the best way to ensure the conservation of globally important biodiversity.

The Key Biodiversity Areas (KBA) approach presents an appropriate framework for pinpointing site-level conservation targets and priorities in Samoa. The KBA approach builds on and complements the conservation priority setting approaches completed for Samoa for terrestrial ecosystems (Pearsall and Whistler 1991), for lowland ecosystems (Park et al. 1992) and for upland ecosystems (Schuster et al. 1999), while marine priorities in Samoa are presented for the very first time. All terrestrial KBAs identified here were also identified in some or all of these earlier approaches. However, KBAs target the subset of all identified sites that contain species most at risk of extinction, and thus are priority sites for conservation at a global as well as a national level.

KBAs as sites of global significance for biodiversity conservation are identified using transparent, globally standard criteria (Langhammer et al. 2007). The KBA concept extends to all taxonomic groups the data-driven methodology employed by BirdLife International and Plantlife International to identify Important Bird Areas (IBAs) and Important Plant Areas (IPAs) respectively. KBAs can be used as a tool by governments, intergovernmental organizations, NGOs, the private sector, and other stakeholders to expand the protected area network in Samoa, and, more generally, for targeting conservation action. Additionally, KBAs provide the building blocks for landscape-level conservation planning and for maintaining effective ecological networks aimed at preventing biodiversity loss.

Key Biodiversity Areas: Approach and Criteria

The goal of the KBA approach is to identify, document, and safeguard networks of sites that are critical for the conservation of globally important biodiversity. Here, a “site” means an area of any size identified based on biological criteria that can be delimited and actually or potentially managed for conservation.

KBAs are identified using standard criteria based on the widely-accepted conservation planning principles of vulnerability and irreplaceability. The vulnerability criterion captures sites important for species that are at risk of extinction, while sites meet the irreplaceability criterion if they hold geographically concentrated species, or those with few spatial options for their conservation.

We used only the vulnerability criterion in the present analysis due to data limitations and potential complications with applying the irreplaceability criteria in a small island context.
Vulnerability Criterion: Globally threatened species.

KBAs identified under this criterion support the regular occurrence of one or more globally threatened species — those assessed as Critically Endangered (CR), Endangered (EN), or Vulnerable (VU) according to the IUCN Red List.

Identifying and Delineating KBAs in Samoa

In 2003, the Conservation International–Pacific Islands Program initiated a process to identify data-driven conservation targets for the Polynesia-Micronesia region including Samoa. This analysis was carried out in collaboration with the Secretariat for the Pacific Regional Environment Program (SPREP), the Bishop Museum, The Nature Conservancy, Société d’Ornithologie de la Polynésie, the Wildlife Conservation Society. Numerous other institutions and experts also provided data and reviewed the results of this analysis. A total of 162 KBAs were identified during this analysis, including 6 KBAs in Samoa.

In 2008, CI began a collaboration with the Division of Environment and Conservation (DEC) in the Samoan Ministry of Natural Resources and Environment (MNRE) and SPREP, under Samoa’s Programme of Work for Protected Areas (POWPA) and with funds provided by the Global Environment Facility (GEF) through the United Nations Development Program, to conduct an ecological gap analysis in Samoa. The main purpose of the gap analysis was to analyse how effective our current PA network is at achieving our SBSAP conservation targets, and in particular to identify priority areas for the expansion of the PA network and priority actions for improved management of existing PAs. Another objective was to identify the key gaps in our knowledge of terrestrial and marine biodiversity.

A total of 8 terrestrial and 7 marine KBAs were identified during the gap analysis process and conservation targets were established for all native ecosystems. KBA revision for terrestrial ecosystems were based on new survey data on freshwater fauna, butterflies, flying foxes and rare plants, along with the Important Bird Areas (IBAs) identified for the country by O le Siosiomaga Society, MNRE, BirdLife International and Conservation International. KBA identification for marine ecosystems was based on analysis of existing survey data and species sightings of fish and marine turtles.

The main challenge in identifying KBAs was to refine the results of previous surveys, specifically, to identify and map threatened species of corals, fish, landsnails, birds, plants and flying foxes so as to document the presence of these species in existing sites and to identify new KBAs where needed. The 2009 IUCN Red List provided the list of 76 threatened terrestrial and marine species for the country, as well as basic data on conservation status, distribution, threats, key contacts, and references. In addition to the 11 terrestrial species in Samoa listed as threatened on the 2009 IUCN Redlist, an additional three species known to be threatened in Samoa were added as “trigger” species (species that trigger a KBA). These are *fitele* (Mollucan ironwood) and *taio* (Polynesian Storm Petrel) which are both classified as vulnerable, but are not recorded for Samoa on the IUCN Redlist, and *pet vato* (Samoan flying fox), recorded as near threatened on the Redlist, but actually highly threatened in Samoa.

Three ecological surveys in Samoa were conducted in association with this gap analysis project, including surveys of: freshwater biodiversity (Jenkins et al. 2008) Samoan butterflies (Patrick and Edwards 2009) and flying foxes (Shilton 2009). An assessment of threatened plants in Samoa is underway in 2010.

Point locality data for each species, were obtained from the new surveys and from published and unpublished literature and experts. The data environment for marine resources is particularly limited for point locality data; therefore habitat was used as a proxy for species presence when considering a network of Marine Protected Areas (MPAs) or Marine Managed Areas (MMAs). MPA design was confined to the near shore, defined here as one mile extending seaward from the reef crest.

Did you know?

- On land Independent Samoa has more than 2,500 species of insect, 770 species of native plants, 64 native land snails, 31 breeding birds, 14 reptiles and 3 native mammals. Marine diversity is also high with 890 coral reef fish, over 200 corals and several turtles, whales and dolphins.
- Samoa has more native species of ferns and butterflies than New Zealand, a country 85 times bigger than Samoa!
- New species are being discovered in Samoa all the time. In 2008 three new species of freshwater fish were discovered (some new to science) and in 2009 two new butterflies were discovered.
- Samoa has the smallest spider in the world. *Patu marplesi* found in the montane forests of Upolu. Fully grown this spider is only 0.43mm in size.
- Samoa’s national bird, the Manumea, or Tooth-billed Pigeon (*Dendinclus strigirostris*) is a scientific curiosity. Unusually for a pigeon, it has a toothed bill, leading scientists at one time to think it was related to the now extinct dodo, also a toothed-billed pigeon. It is now very rare and restricted to mature native forest.
- The 76 species from Samoa that are classified on the 2009 IUCN Redlist as threatened species include 52 corals, 11 marine fish, 7 birds, 2 turtles, 2 plants, a land snail and a mammal. Many more species are believed threatened but have not yet made it onto the IUCN Redlist, or are on the Redlist but not classified as threatened (see page 10).
While this first cut marine KBA analysis focused on the near shore area, the offshore areas in Samoa’s EEZ require analysis and conservation management as well. Datasets for the offshore environments, including deep sea and open ocean habitat, are limited. The National Oceanic and Atmospheric Administration (NOAA) is working through the Two Samoas Initiative to conduct a biogeographical assessment of the Exclusive Economic Zone (EEZ) of the Samoan archipelago to fill this gap in knowledge. As this analysis becomes available it is crucial to identify KBAs for these areas.

KBA boundaries were delineated using the following spatial data layers: protected areas and other land management units, IBAs, data on habitat type and extent, topography and bathymetry, watersheds, reef cover and settlement patterns. IBA boundaries were modified as needed to incorporate habitat important for non-bird trigger species, and to incorporate management data.

Experts and interested members of the public reviewed the preliminary KBAs during several informal meetings, and during formal workshops held with key stakeholders in March and May 2009. Modifications to the boundaries were made based on recommendations at these meetings. Since KBA identification and delineation is an iterative process, the boundaries will be modified and new KBAs added as new data become available.

KBAs have been identified for globally threatened species or colonial species were identified, or for restricted range species due to difficulties in applying this criterion in the Pacific island context. Identifying such KBAs is a priority for further work.

The 8 terrestrial KBAs cover a total of 940 km² or approximately 33% of the total land area of Samoa, more than double Samoa’s SBSAP commitment of 15% of land coverage and including representation of 12 of the 13 native terrestrial vegetation communities in the country. The 7 marine KBAs cover approximately 173 km² or 23% of the inshore reef area of Samoa.

Currently, 6 of the 8 terrestrial KBAs and 3 of the 7 marine KBAs have been completely or partially established as conservation areas by the government of Samoa or by local village communities and 2 additional KBAs have small community based fisheries sites within their boundaries. However, the effectiveness of management of these sites is highly variable and many need improved management to adequately safeguard their component biodiversity. The remaining KBAs lack, or no longer have, formal protection. These sites are targets for the expansion of the PA network.

Given that funding for conservation investment is limited and that some KBAs require safeguarding more urgently than others, prioritization amongst the 15 KBAs identified to date is important. KBAs can be prioritized according to their irreplaceability and vulnerability, the same principles involved in their identification. A detailed prioritization requires additional biological and socioeconomic data that were not available for this analysis and is therefore a task for the future.

One KBA does however emerge as the highest single priority for terrestrial conservation investment in Samoa. This is the Central Savaii Rainforest KBA, the largest contiguous area of rainforest in tropical Polynesia and a site identified by the Alliance for Zero Extinction (AZE), a consortium of over 60 conservation organizations worldwide, as one of the last remaining strongholds for one or more Critically Endangered or Endangered species. The loss of the Central Savaii KBA would result in the extinction of many species, making it an extremely urgent priority for conservation. Currently only portions of the lower parts of this KBA benefit from official safeguard status, and thus the upland area should be considered the highest priority terrestrial area for immediate investment.

Monitoring of KBAs

It is not enough to identify KBAs and to implement conservation activities within them. The success of activities to safeguard KBAs and their trigger species must also be measured and monitored. Conservation International, MNRE and partners are employing a set of practical indicators, or measurement tools, to determine progress toward meeting the conservation objective of safeguarding all KBAs in Samoa. These are recognized as the most robust measures for monitoring the status of Samoa’s biodiversity and the conservation measures that safeguard this biodiversity. These measures include:

- Change in the percentage of KBAs with official protection status.
- Change in forest cover extent within terrestrial KBAs.
- Change in percentage of KBAs with governance structures in place.
- Change in percentage of KBAs with management plans in place.
- Change in percentage of KBAs with required infrastructure in place as identified in management plan.

Through monitoring trends in these key indicators, the ability to communicate conservation successes and failures to government agencies, investment bodies, industry, and society as a whole is strengthened, thereby informing future decisions regarding strategic planning and investment within KBAs, and also influencing conservation policy more broadly.
The islands of Nu’ulua (foreground) and Nu’utele (background) in the Aleipata MPA are located at the far eastern end of Upolu. This KBA consists of four forested volcanic islands and adjacent reef and lagoon. This is a key site for laumei (Hawksbill and Green Turtles), tuaimeo (Ground Doves), manumea (Tooth Billed Pigeon) and rare coastal forest. A recent partnership project has attempted to eradicate rats from Nu’utele and Nu’ulua with huge potential benefits for native biodiversity.

Photo by © James Atherton, CI Pacific.
O le Tamaoaga Fa’a-le-natura pōo le Ola Fa’a-natura, e fa’atauai ile anaoanoaʻi ma le felanulanuʻi o ituaiga eseese meaola ma nofoaga e muaa ai, i le lalolagi ma le afuaʻu ola o loo siomia ai. E anaoanoa tamaoaga aoga mo tagata siofuʻa e muaa ai e pei e vaiʻai mo togaatiga, taumafua, oloa gaosi fa iʻisai aoga eseese, o apitaga fa’anatura faapea ma faʻosio o ʻotauga aoga ma tu ma aganuʻu faʻa-Samoa. Ae peitaʻi, o lelei tamaoaga o loo oʻoi pea me laumatia, e faʻailoa pea lea i le tele o ituaiga eseese e meaola ua faʻasolo ina moup atu ona o se fuataga e televave e muaa atu nai lo le tulaga masano o lo latou faʻuptupulai faʻanatura.

Ina ia puipuia lelei o le ola faʻa-natura i lona atoatoo, e tatau i galuenga faʻatino mo le faʻasaoina ona taulaʻi i vaega tonu to faʻapitoa lo latou taua e iai vaega nei: muamua, o lona o nofoaga e muaa ia e matua tatau ona faʻatamaiaina pua puipuia malu. E mafai o anua ausia lea tulaga i ala i le faʻaaogaina o aua ma taiatala taʻafagafagai ma faʻamaumauaga maumauututu e faʻailoa manino mai ai manulauti mo le faʻaso a fiaʻausia, ina ia taʻaitialaimaina ai le faʻasaoisea a meaola o loo aoga, ina taulavai o le faʻaopopotopoto o faʻatamaiaina o loo faʻaaogaina e meaola o loo faʻasao, o faʻapitoa e manaomia ai ni faʻaopopotopoto o Lealotai i le Faʻatamaiaina o Lealotai (Plantlife International) e aofia uma ai lava ituaiga o vaevaega eseese ua faʻavasega iai le ola faʻa-natura ma sa faʻaoga iai metoria to loʻo faʻaogaena e Le faʻalaputoputopota o Manulele Faʻavaʻo-malo ma Le Faʻalaputoputopota o Laʻau i ile Laloʻalagi (Plantlife International) lea ua tulaʻi i ma fiaʻailoa manino mai ai vaega o o ʻaaʻa pua puipuia o le ola fa’anatura sa faʻamasina i nisūʻi i iaʻiga o le lalo faʻanatura o Samoa.

Leʻe leʻe leʻe faʻatauaina mo le Faʻaso o lau i Samoa: Vaega Oā Faʻapitoa i le Ola Faʻa-natura

1. Uputomua
O Vaega Oā Fa'apitoa (VOF) mo le Ola Fa'a-natura e mafai ona fa'aaogaina o ni taiala e aoga mo fa'alaopotopoga fa'ale-malo, fa'alaopotopoga tu-maoti, tagata taitoaasi ma i latou uma o loo galuluega mo le fa'alauteleina atu o le fa'saoaina o le siosiomaga ma le ola fa'a-natura o Samoa. O le a fesoasoani foi lenei taiala e fa'afua tatauina ai atinae ma fa'atumaunina ai le lelei o le oa fa'a-natura ma fa'a'aititiia ai lo latou fa'ataamaia.

Vaega Oā Fa'apitoa (VOF) o le Ola Fa'a-natura: Fa'aga Fa'avae mo Ta'iala
O le fa'amoe moe mauuluaga o le taiala mo Vaega Oā Fa'apitoa (VOF) mo le Ola Fa'a-natura, o le fa'ailoa atu, tu'ufa'atasia i ona ole utiuti o fa'amaumauga ma le fa'afaigata o fa'amaumai fa'a O Vaega Oā Fa'apitoa (VOF) o le Ola Fa'a-natura uma, ua fa'amalieina fa'amaumai mo le Vaega Oā Fa'apitoa (VOF) mo le Ola Fa'a-natura uma, ua fa'amalieina fa'amaumai na fa'amatieina fa'a-asa o fa'asao.

O le fa'amoemoe maualuga o le taiala mo Vaega Oā Fa'apitoa (VOF) mo le Ola Fa'a-natura uma, ua fa'amalieina fa'amaumai na fa'amatieina fa'a-asa o fa'asao. O le fa'a'asao. O le fa'a-asa o le fa'a-fa'asao. O le fa'asaoina. O le fa'asaoina. O le fa'asaoina.
Eleele Fa’atauaina mo le Fa’asao i Samoa: Vaega Ola Fa’apitoa i le Ola Fa’a-natura

O fa’amaumaua i vaega tonu o Samoa e maua i ai nei meaola o le natura sa fa’amaumaua mai i suesuega e lea leva atu ona maea, ma fa’amaumaua mai lomiga, fa’aapea ma manatu mai ia i latuo i eai te tomai fa’apitoa. O fa’amaumaua mo le gataifale tele ni vaega e le o atoatoa ai, e fa’aamaumaua mo le vasa le fa’aopopo mo le vaega tonu e ola fa’amaua. Peitai se fa’asao i suesuega suesuega o apitaga fa’anatura e fa’aamaumaua mo le 3 futeua mo fa’ataotoga o Vaega o laueleele ua fa’ataoiga na fa’aopopoina. Ma le Vaega o loo fa’aosofia le faia o se VOF fa’aosofia.

2009). O le sailiiliga fa’atatau i laau lamatia o Samoa o loo 2008), pepe (Patrick ma Edwards, 2009), ma pe’a (Shilton, 2009), o le 3 lea o le laau o le falelele i le laueleele. O le 3 fa’aopopo mo le ola fa’a-natura o le gataifale, sa fa’atulagaina fa’atatau i o laueleele.

OE VOF mo le Ola Fa’a-Natura ua fa’atulagaina mo meaola lamatia uma i le laloani le loo i Samoa, e fa’amaumaua ai ma le fa’aiso ma fa’ataotoga o apitaga le fa’ataotoga ona fa’atatau.

Ma le VOF mo le ola fa’a-natura o le gataifale, sa fa’atautuina mo VOF mo le ola fa’a-natura fa’amauina i ni fa’atatau i laau lamatia o Samoa.

E leai nei fa’amaumaua o loo fa’aosofia i turumele.

FO VOF mo le ola fa’a-natura o le gataifale, sa fa’atautuina mo le ola fa’a-natura.

E leai nei maeoa lave i le gataifale, sa fa’atautuina mo le ola fa’a-natura i fa’aopopoina.

E teitei ai fa’aapitoa na fa’apano fa’a-‘asao, fa’a-participation i le Pasifika. O le VOF mo le ola fa’a-natura fa’atautuina mo le ola fa’a-natura i fa’a-‘asao, tainane o fi fa’a-‘asao, fa’a-participation i le Pasifika.

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E teitei ai fa’aapitoa na fa’apano na fa’apaifo i le Pasifika.

E teitei ai fa’aapitoa na fa’apano na fa’apaifo i le Pasifika.

E leai nei ma le fa’atulagana e fa’atatau o apofoa i fa’aapitoa na fa’apano na fa’apaifo i le Pasifika. O le fa’atauina mo le ola fa’a-natura fa’amauina mo le ola fa’a-natura.

E leai nei ma le fa’atulagana e fa’atatau o apofoa i fa’aapitoa na fa’apano na fa’apaifo i le Pasifika.

E leai nei ma le fa’atulagana e fa’atatau o apofoa i fa’aapitoa na fa’apano na fa’apaifo i le Pasifika.

E leai nei ma le fa’atulagana e fa’atatau o apofoa i fa’aapitoa na fa’apano na fa’apaifo i le Pasifika.
ua ausia - o taiala foi ia na fa’aavae ai lo tatou filifilia o ni VOF. E m’oemia foi fa’amaumaua auxili fa’a-natura ma fa’amatalaga o ni a’afiaga o ni tagata soifua o nonofo taulalata iai. Peitai ona o ia fa’amatalaga auxili i le i tapenaina i le taimi nei o tasi leieni o galumea mo le humanai.

E tasi se VOF mo le ola fa’a-natura e tulaga maao’e lona taua ma e tatau ona ave i ai le fa’amuamua mo le fa’asaoina pe a fa’atsutatua i VOF uma lava o Samoa. O le VOF lea e aofia ai Vaomatua Tu-Ogatotonu o Atumuga o Savaii. O leieni vaomatua e aupito telē ma maopoopo lona malu puipui i le atu Polenisia atoa. O se tasi foi o nofoaga o loo i ai le talitonuga maumaututū o loo ofaga ma ola ai nisi meaola ua ‘ogaoga le lamatiaaina. Afaia fa’ataamaia lenei vaomatua i atumuga o Savaii o le a matuā afaina le tele o le ola-fa’anatura o meaola o loo au mau ma ola saogalemu ai. Ona o lea mafuaga, e alagā tatau ai ona fa’amuamua ma fa’anatiningi le fa’atinoi o polokalame mo lona fa’asaoina. I le taimi nei, e na o le vaega pito i lalo o leieni VOF o loo i ai se fa’amalumaluga aloaia. O le vaega maualuga o leieni VOF o iina tonu e ao ona ave iai le fa’atua muumua

Mata’ituina o Vaega Oā Fa’apitoa (VOF) mo le Ola Fa’a-natura
E le tau ina fa’ailoa o VOF mo le ola fa’a-natura ma fa’atino galumea fa’a-fa’asao i ia nofoaga ona gata ai lea. O le manuia auiluma o taumafaiga e puipui VOF mo le ola fa’a-natura ma meaola taua o loo aumau ai, e fa’alagolago lea i le mataituina ma le va’avaaia lelei. Ua fa’aagaina e le Fa’alapotopotoga o Fa’asao Fa’a-va-o-malo ma le Matagaumuga o Punaoa Faanatura ma Siosiomaga ma a latou paiga ni auala e fuatia ma fa’aiilo goinge ai la’asaga o le gazologa o atinae fa’a-fa’asao o le a fa’atinoina ina ia austria le manaului o le puipui o VOF uma i Samoa. O la’asaga teisese o le ola fa’a-natura o Samoa aemaise le gazologa o atinae fa’a-fa’asao mo lo latou puipuiu. O auala nei e aofia ai:

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Suiga i pasene o VOF mo le ola fa’a-natura ma puipuiu aloaia.

Suiga i le fa’ateleina o vaomatua i totonu o VOF mo le ola fa’a-natura.

Suiga i pasene o VOF mo le ola fa’a-natura ma le fa’atulagaina o pulega.

Suiga i pasene o VOF mo le ola faa-natura fa’atasi ma taiala ia fausia

Suiga i pasene o VOF mo le ola fa’a-natura ma atinae mo’omia e pei ona fa’ailoa i totonu o taiala.

Mai le mataituina o ni suiga fa’aauau o le a tula’i mai i le ola fa’anatua o VOF esese, o le a mafai ai ona iloa le agai manuia poo le le manuia foi o ia taumafaiga fa’a-fa’asao. O le a fa’afaigofie ai foi ona tu’uina atu ni lipoti manino mo le silafia a fa’alapotopotoga fa’a-ле-malo, fa’alapotopotoga o loo fa’atupena galumea fa’asao, kamupani ma le lautele o le atunu’u. O ia lipoti o le a ta’ita’ilimaina ai ni fa’aiuga e le humanai e aofia ai ni fauauaga tu’utu’u mamao mo galumea fa’atino i totonu o VOF, ae maise fauauaga mo galumea fa’a- fa’asao i lona aoteleaga.

Aleipata Marine Protected Area includes the waters of the Aleipata district extending to a half a mile off the reef crest. This key site contains four islands, rare soft corals, sea grass beds and turtle nesting beaches. Photo by © Stuart Chape, SPREP.

O le Nofoaga Faasao o le Gataifale o Aleipata e aofia ai ogaasami o le itumalo o Aleipata mai le matafaga agai atu pe tua ma le afa maila i tua atu o le aau. O leieni Nofoaga o loo puipuiu ai foi ma motu laiti tu tai o Aleipata faapea ‘amu galemulemu, vaovao o le sami ma matafaga o loo tauuutufa ai laumei. Ala na pueina e © Stuart Chape, SPREP.
### Table 1: Terrestrial KBA Trigger Species in Samoa (2009 IUCN Redlist)

<table>
<thead>
<tr>
<th>#</th>
<th>Scientific Name</th>
<th>English Name</th>
<th>Samoan Name</th>
<th>IUCN 2009 Threat Category</th>
<th>Threats</th>
<th>Population Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gallinula pacifica</td>
<td>Moorhen</td>
<td>Punae</td>
<td>Critically Endangered</td>
<td>Hunting, invasive species</td>
<td>Not known</td>
</tr>
<tr>
<td>2</td>
<td>Drymophleus samoensis</td>
<td>None Known</td>
<td>Maniuniu</td>
<td>Critically Endangered</td>
<td>Habitat loss</td>
<td>Not known</td>
</tr>
<tr>
<td>3</td>
<td>Emballonura semicaudata</td>
<td>Pacific Sheath Tail</td>
<td>Tagitt</td>
<td>Endangered</td>
<td>Habitat loss, invasive species, poisoning?</td>
<td>Decreasing</td>
</tr>
<tr>
<td>4</td>
<td>Clinostigma samoense</td>
<td>Samoan Bush Palm</td>
<td>Niu vao</td>
<td>Endangered</td>
<td>Habitat loss</td>
<td>Not known</td>
</tr>
<tr>
<td>5</td>
<td>Didunculus striigrostris</td>
<td>Tooth-Billed Pigeon</td>
<td>Manumea</td>
<td>Endangered</td>
<td>Hunting, habitat loss, invasive species</td>
<td>Decreasing</td>
</tr>
<tr>
<td>6</td>
<td>Gymnomyza samoensis</td>
<td>Mao</td>
<td>Moamoa</td>
<td>Endangered</td>
<td>Hunting, habitat loss, invasive species</td>
<td>Decreasing</td>
</tr>
<tr>
<td>7</td>
<td>Thaumatodon hystrixcellaides</td>
<td>None Known</td>
<td>Sisi</td>
<td>Endangered</td>
<td>Habitat loss, invasive species</td>
<td>Not known</td>
</tr>
<tr>
<td>8</td>
<td>Gallicolumba staini</td>
<td>Shy Ground Dove</td>
<td>Tuameo</td>
<td>Vulnerable</td>
<td>Hunting, habitat loss, invasive species</td>
<td>Decreasing</td>
</tr>
<tr>
<td>9</td>
<td>Intsia bijuga</td>
<td>Mollucan Ironwood</td>
<td>Illele</td>
<td>Vulnerable</td>
<td>Logging for handicrafts and timber (in Samoa)</td>
<td>Decreasing</td>
</tr>
<tr>
<td>10</td>
<td>Myiagra albiventris</td>
<td>Samoan Broadbill</td>
<td>Tokoafatu</td>
<td>Vulnerable</td>
<td>Habitat loss</td>
<td>Decreasing</td>
</tr>
<tr>
<td>11</td>
<td>Nesofregatta fuliginosa1</td>
<td>Polynesian Storm Petrel</td>
<td>Taio</td>
<td>Vulnerable</td>
<td>Habitat loss, invasive species</td>
<td>Decreasing</td>
</tr>
<tr>
<td>12</td>
<td>Numenius tahitiensis</td>
<td>Bristle Thighed Curlew</td>
<td>Tuluiokovalu</td>
<td>Vulnerable</td>
<td>Invasive species, hunting</td>
<td>Decreasing</td>
</tr>
<tr>
<td>13</td>
<td>Zosterops samoensis</td>
<td>Samoan White Eye</td>
<td>Mata popae</td>
<td>Vulnerable</td>
<td>Habitat loss, invasive species</td>
<td>Not known</td>
</tr>
<tr>
<td>14</td>
<td>Pteropus samoensis</td>
<td>Samoan Flying Fox</td>
<td>Pea vao</td>
<td>Near Threatened (Endangered in Samoa)</td>
<td>Hunting, habitat loss, invasive species</td>
<td>Decreasing</td>
</tr>
</tbody>
</table>

1. This list does not include marine turtles, which nest on land, since turtles are included in the marine list (Table 3)
2. These two species are not recorded from Samoa on the 2009 IUCN Redlist, but are known to occur in Samoa so are included here
3. This species is highly threatened in Samoa, but not classified as globally threatened on the 2009 IUCN Redlist
Map 1: Protected Areas and Key Biodiversity Areas of Samoa
Fa’afanua 1: Vaega Puipuia ma Vaega Oā Fa’apitoa o le Ola Fa’a-natura i Samoa
Table 2: Profile of Terrestrial Key Biodiversity Areas  
Ata-fa’ataoto o Vaega Oā Faapitoa i le Ola Fa’a-natura

<table>
<thead>
<tr>
<th>Site #</th>
<th>Site Name</th>
<th>Island</th>
<th>Faipule District</th>
<th>Approximate Area (Ha)</th>
<th>Current Protection Status</th>
<th>IBA (Y/N)</th>
<th>Terrestrial Trigger Species in Site</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aleipata Marine Protected Area</td>
<td>Upolu</td>
<td>Aleipata</td>
<td>4,842 (marine); 156 (land)</td>
<td>Active Ata Marine Protected Area</td>
<td>Y</td>
<td>Hawksbill and Green Turtles (Laumei), Tooth-Billed Pigeon (Manumea), Ground Dove (Tuaimo), Bristle Thighed curlew (Tulasia)</td>
<td>Invasive species, fishing, development</td>
</tr>
<tr>
<td>2</td>
<td>Eastern Upolu Craters</td>
<td>Upolu</td>
<td>Aleipata and Lega</td>
<td>4,759</td>
<td>None</td>
<td>Y</td>
<td>Tooth-Billed Pigeon (Manumea); Mao (Maoma), Samoan Broadbill (Tulafoata)</td>
<td>Invasive species, development</td>
</tr>
<tr>
<td>3</td>
<td>Uafato-Tiavea Coastal Forest</td>
<td>Upolu</td>
<td>Vao o Fonati</td>
<td>2,316</td>
<td>Inactive Community Conservation Area</td>
<td>Y</td>
<td>Mollucan Ironwood (Ililé), Tooth-Billed Pigeon (Manumea), Mao (Maoma), Samoan Broadbill (Tulafoata), Samoan Flying Fox (Pea vao)</td>
<td>Decline of the keystone species ililé by unsustainable harvesting by wood carvers, management conflicts.</td>
</tr>
<tr>
<td>4</td>
<td>O le Pupu Pue National Park</td>
<td>Upolu</td>
<td>Safata and Falealili</td>
<td>4,228</td>
<td>Active National Park</td>
<td>Y</td>
<td>Samoan Bush Palm (Niu vao), Tooth-Billed Pigeon (Manumea), Ground Dove (Tuaimo), Mao (Maoma), Samoan Broadbill (Tulafoata), Samoan Flying Fox (Pea vao)</td>
<td>Invasive species, hunting</td>
</tr>
<tr>
<td>5</td>
<td>Apia catchments</td>
<td>Upolu</td>
<td>Vaimauga West, Faleata and Siumu</td>
<td>8,336</td>
<td>Partly protected in Lake Lamalot’s National Park and Mt. Vaea Scenic Reserve. Some conservation effort by MNRE’s watershed management section</td>
<td>Y</td>
<td>Samoan Bush Palm (Niu vao), Tooth-Billed Pigeon (Manumea), Ground Dove (Tuaimo), Mao (Maoma), Samoan Broadbill (Tulafoata), Samoan Flying Fox (Pea vao), Thaumatodon hystrixelloides (Sisi)</td>
<td>Invasive species, hunting, development</td>
</tr>
<tr>
<td>6</td>
<td>Safata Marine Protected Area</td>
<td>Upolu</td>
<td>Safata</td>
<td>5,870 (marine); 101 (land)</td>
<td>Community Conservation Area</td>
<td>N</td>
<td>Hawksbill and Green Turtles (Laumei), Samoan Broadbill (Tulafoata)</td>
<td>Management conflicts, land clearance for new house sites, dumping of rubbish, pollution</td>
</tr>
<tr>
<td>7</td>
<td>Central Savaii Rainforest</td>
<td>Savaii</td>
<td>Inland parts of all districts on Savaii</td>
<td>72,699</td>
<td>Partly protected in Moaga Safai, Lata and Atafo-Faaleilima National Parks</td>
<td>Y</td>
<td>Samoan Bush Palm (Niu vao), Drymaphleous samoensis, (Manuia), Tooth-Billed Pigeon (Manumea), Mao (Maoma), Samoan Broadbill (Tulafoata), Samoan Flying Fox (Pea vao), Samoan Moorhen (Puna), Savaii White-Eye (Alta papae)</td>
<td>Invasive species, hunting</td>
</tr>
<tr>
<td>8</td>
<td>Faleadupu peninsula</td>
<td>Savaii</td>
<td>Vaisigano West, Faleadupu and Atafofo West</td>
<td>1,537</td>
<td>Partly protected in a Community Conservation Area</td>
<td>N</td>
<td>Tooth-Billed Pigeon (Manumea); Samoan Broadbill (Tulafoata), Samoan Flying Fox (Pea vao)</td>
<td>Invasive species, fire, hunting</td>
</tr>
</tbody>
</table>

Mt Fito is a volcanic crater at the northern end of the O le Pupu Pue National Park, in the centre of Upolu (1,100m). This national park was the first in the South Pacific and contains a number of threatened animals and plants. Photo by © Stuart Chape, SPREP.

O le mauga o Fito e tusa lea ma le 1100 mita lona maualuga e tu lea i le itu l matu o le Nofaga Faaso o O le Pupu Pue. O lenei Nofaga Faaso o se Nofaga na maupuia l totonu o le Paselika i Saute ma o loo maupuia ai le Siosiomaga ma le olaga faanimala o le tele o manau ma laau taua o Samoa. Ata na pueina e © Stuart Chape, SPREP.
Priority Areas for Conservation in Samoa: Key Biodiversity Areas

Map 2: Terrestrial Key Biodiversity Areas and Native Vegetation

Fa’afanua 2: Vaega Oā Faapitoa o Eleele Faa-natura ma ituaiga Laa

- Central Savaii rainforest
- Falealupo peninsula
- Uafato-Tiavea coastal forest
- Eastern Upolu craters
- Safata MPA
- Apia catchments
- O le Pupu Pue NP
- Aleipata MPA

Legend:
- cloud forest
- coastal rainforest
- ridge rainforest
- montane rainforest
- lowland rainforest
- littoral forest
- mangrove
- fernland
- grassland
- herbaceous marsh
- volcanic succession
- disturbed forest
- non-native/disturbed non-forest

Source: Pearsall and Whistler, 1991
Did you know?

- Approximately 30% of Samoa’s native biodiversity is endemic to Samoa (i.e., only found in Samoa and nowhere else in the world).

- The biggest threats to Samoa’s biodiversity are habitat destruction for agriculture, housing and other development, the over-harvest of resources and the impact of invasive species of pests and weeds. In future climate change may become the biggest threat.

- Recent species extinctions in Samoa possibly include the endemic Swallowtail Butterfly (Pepe ae, still found in American Samoa) and the Sheath-Tailed Bat (Tagrit). The Samoan Woodhen (Puna’e) hasn’t been seen since 1908 and is also probably extinct. How many more species will go extinct before we act to conserve them?

- The rarest vegetation community in Samoa is the upland swamp forest with only one occurrence remaining: the Vaipu swamp on Upolu, covering approximately 150ha. This swamp is included in the Eastern Upolu Craters KBA. Photo © James Atherton, CI Pacific.

The Central Savaii Rainforest is the largest continuous patch of rainforest in tropical Polynesia, approximately 730km², and contains more than 100 volcanic craters, and areas of recent lava flow such as to the left of this image. This huge block of rainforest contains most of Samoa’s endemic species, including many that are highly threatened, such as the Mata Papae (Savaii White-Eye), the Manumea and the Maomao. There is hope that the Punae (Samoa Moorhen), last seen in 1908, may still be found in unexplored parts of this forest. Photo by © James Atherton, CI Pacific.

O vaomatua tele o loo i atu mauga o Savaii e tele sona taua i le atu Polenisia ona o se vaomatua e le gata i lona tele e tusa ma le 730 kilomita ae faapea foi le maua ai ni to poo ni lua o mauga mu e silia ma le selau. O ia mauga mu sa tate ai le lava e pei ona faaalia atu i le itu agavale o tenei ata. O tenei vaomatua o loo maua ai le tele o meaola e le gata ua noa Samoa e maua ai, ae ua faapea foi meaola ua aoka lo latsa faita aofai i se tulaga ua taua ina le toe maua. O nisi o nei meaola e aoka ai manulele o le Mata Papae (Savaii White-Eye), Manumea ma le Maomao. O loo iai pea le faamoemoega o loo maua pea le manulele o le Punae (Samoa Moorhen) lea na mulimuli ona vaia i le tausaga 1908, i vaega o le vaomatua e lei asaina. Ato na pueina e © James Atherton.
Lake Lanotoʻo National Park is within the Apia Catchments KBA, near the centre of Upolu. This important site contains the largest natural lake in Samoa and healthy populations of a number of threatened species including the Niu Vao (native bush palm) the Manumea (Tooth-Billed Pigeon) and Maomao (Mao).

Photo by © James Atherton, CI Pacific.

**E te silafia?**

- E tusa ma le 30% o le Ola Faʻana-natura o Samoa e na o Samoa lava e maua ai (e te lē maua lava i se isi mea o le Lalolagi).
- O lamatiaga ogaoga i le ola faʻana-natura o Samoa e mafua mai i le faʻatamaia o nofoaga faʻana-natura mo faʻatoaga, apiaga ma isi atinaʻe, soʻona faʻaoga lē fudua lelei ma aʻataga i meaola ma iniseti faʻalafu. O suiga o le tau e ono avea ma aʻataga tuga i le lumana.
- O le Pepe ae (Swallowtail Butterfly) ma le Tagiti (Sheath-Tailed Bat) o meaola ia e talu ai nei ona faʻaaloa mai i suesuega le mou ese atu ma Samoa. O le Punaʻe (Woodhen) na gata lona faʻamaunu i le 1908 ma e talitonu foi va lē o toe maua. Pe fa nisi mea ola e moa atu ona faʻatoa tatou gaioi lea e faia se galuega mo le puipiu o lo tatou ola faʻana-natura?
- O le ituaiga o vaomataua e silisili ona lē aumaua i Samoa o vaomataua vailaloa. Toe tasi lava le vaomataua lea iituaiga o toe o le vaomataua vailaloa lea i Vaipu. E tusa lona tele ma le 150 hekitea. O lenei vaomataua vailaloa e i totonu o le VOF o le Itu i Sasae o Upolu. Ata Pueina e James Atherton, CI Pacific.

O le vaituloto o Lanotoʻo e totonu lea o le nofoaga e tapue ai le suavai i Apia lea o loo faasiloaina foi o se nofoaga e taua mo le sotuaga faa-natura o le Siosiomaga. O lenei nofoaga o toato ai lenei vaituloto lea e taua te le mo le faasaauauina peo o le maua o le suavai mo tagata faapea le Siosiomaga. O se tasi o loau taua o loo maua i lenei nofoaga e iai le Niu Vao (native bush palm). O loo maua ai foi manulele taua o le atunu e pei o le Manumea (Tooth-Billed Pigeon) ma le Maomao (Mao). Ata na pueina e © James Atherton.
### Table 3: Marine KBA Trigger Species in Samoa (2009 IUCN Redlist)

<table>
<thead>
<tr>
<th>Species #</th>
<th>Scientific Name</th>
<th>English Name</th>
<th>Samoan Name</th>
<th>Threat Category</th>
<th>Population Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eretmochelys imbricata</td>
<td>Hawksbill Turtle</td>
<td>Laumei</td>
<td>Critically Endangered</td>
<td>Not Known</td>
</tr>
<tr>
<td>2</td>
<td>Chelonia mydas</td>
<td>Green Turtle</td>
<td>Laumei</td>
<td>Endangered</td>
<td>Not Known</td>
</tr>
<tr>
<td>3</td>
<td>Cheilinus undulatus</td>
<td>Humphead Wrasse</td>
<td>Malatea</td>
<td>Endangered</td>
<td>Decreasing</td>
</tr>
<tr>
<td>4</td>
<td>Epinephelus lanceolatus</td>
<td>Giant Grouper</td>
<td>Ata’atu’uli</td>
<td>Vulnerable</td>
<td>Decreasing</td>
</tr>
<tr>
<td>5</td>
<td>Hippocampus kuda</td>
<td>Seahorse</td>
<td>Pua’a sami</td>
<td>Vulnerable</td>
<td>Not Known</td>
</tr>
<tr>
<td>6</td>
<td>Nebrius ferrugineus</td>
<td>Nurse Shark</td>
<td>Malie</td>
<td>Vulnerable</td>
<td>Decreasing</td>
</tr>
<tr>
<td>7</td>
<td>Negaprion acutidens</td>
<td>Lemon Shark</td>
<td>Naiu’i</td>
<td>Vulnerable</td>
<td>Decreasing</td>
</tr>
<tr>
<td>8</td>
<td>Rhincodon typus</td>
<td>Whale Shark</td>
<td>Faa’eme</td>
<td>Vulnerable</td>
<td>Not Known</td>
</tr>
<tr>
<td>9</td>
<td>Rhincodon acutidens</td>
<td>Guitarfish</td>
<td>No Samoan Name</td>
<td>Vulnerable</td>
<td>Not Known</td>
</tr>
<tr>
<td>10</td>
<td>Sphoeroides pachygaster</td>
<td>Puffer Fish</td>
<td>Sue</td>
<td>Vulnerable</td>
<td>Not Known</td>
</tr>
<tr>
<td>11</td>
<td>Thunnus obesus</td>
<td>Big Eye Tuna</td>
<td>Aasai matalapa’a</td>
<td>Vulnerable</td>
<td>Not Known</td>
</tr>
<tr>
<td>12</td>
<td>Stegostoma fasciatum</td>
<td>Zebra Shark</td>
<td>Malie</td>
<td>Vulnerable</td>
<td>Not Known</td>
</tr>
<tr>
<td>13</td>
<td>Bolbometopon muricatum</td>
<td>Bumphead Parrot Fish</td>
<td>Galo</td>
<td>Vulnerable</td>
<td>Decreasing</td>
</tr>
<tr>
<td>14</td>
<td>Carcharhinus longimanus</td>
<td>White Tip Shark</td>
<td>Malie Aloalo</td>
<td>Vulnerable</td>
<td>Decreasing</td>
</tr>
<tr>
<td>15</td>
<td>Carcharhinus limbatus</td>
<td>Black Tip Shark</td>
<td>Malie Aloalo</td>
<td>Vulnerable</td>
<td>Not Known</td>
</tr>
<tr>
<td>16</td>
<td>Plectropomus areolatus</td>
<td>Polkadot Cod</td>
<td>Ata’atu’atu</td>
<td>Vulnerable</td>
<td>Decreasing</td>
</tr>
<tr>
<td>17</td>
<td>Plectropomus laevis</td>
<td>Blackspotted Coral Grouper</td>
<td>Ata’atu’atu</td>
<td>Vulnerable</td>
<td>Decreasing</td>
</tr>
</tbody>
</table>

Note: A large number of marine species occurring in Samoa have not been reviewed by the IUCN or are data deficient, e.g. the Palolo Worm, and therefore may be locally or globally threatened but do not appear on this list. Also not featured here are threatened cetaceans, which would not benefit from the near shore conservation which is the focus of the KBAs developed here. In many of the surveys conducted in Samoa, corals are not identified to species. For this analysis, globally threatened corals did not independently trigger a KBA due to data limitations. The full list of IUCN red listed marine species including vulnerable corals, is shown in Appendix 1.
Map 3: Marine Key Biodiversity Areas and Marine Habitat
Fa’aфануа 3: Vaega Oā Fa’apitoa o le Ola Fa’a-natura o Nofoaga i le Gataifale

Priority Areas for Conservation in Samoa: Key Biodiversity Areas
Did you know?

- Did you know that in Samoa over 90% of the protein consumed from local sources comes from the sea?
- Did you know that coral reefs are the largest living structure on the planet?
- Coral reefs form natural barriers that protect nearby shorelines from the eroding forces of the sea, thereby protecting coastal dwellings, agricultural land and beaches. So if you are worried about climate change reefs are your first line of defense.
- Less than 1% of the near-shore area in Samoa is fully protected from extractive uses.
- Resources like coral reefs and mangroves protect the land by breaking up big waves and reducing wave energy such as that from tsunamis and storm surges.
- Although coral reefs cover less than 1% of the Earth’s surface, they are home to 25% of all marine fish species. Photo © Paul Anderson, SPREP.

Table 4: Profile of Marine Key Biodiversity Areas

<table>
<thead>
<tr>
<th>Site #</th>
<th>Site Name</th>
<th>Faipule District</th>
<th>Approximate Area (Ha)</th>
<th>Current Protection Status</th>
<th>Marine Trigger Species in Site</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aleipata</td>
<td>Aleipata</td>
<td>4,842 (marine), 156 (land)</td>
<td>Active Marine Protected Area</td>
<td>Hawksbill (Eretmochelys imbricata) and Green Turtles (Chelonia mydas), Bumphead Parrot Fish (Bolbometopon muricatum), Humphrey Wrasse (Cheilinus undulatus), Coconut Crab (Birgus latro)</td>
<td>Development, marine vessel pollution, poaching, reclamation, tourism</td>
</tr>
<tr>
<td>2</td>
<td>Apolima</td>
<td>Aiga i le tai</td>
<td>2129</td>
<td>None</td>
<td>Bumphead Parrot Fish (Bolbometopon muricatum), Humphrey Wrasse (Cheilinus undulatus)</td>
<td>Fishing pressure</td>
</tr>
<tr>
<td>3</td>
<td>Vaisigano</td>
<td>Vaisigano</td>
<td>2270</td>
<td>None</td>
<td>Hawksbill Turtle (Eretmochelys imbricata), Giant Grouper (Epinephelus lanceolatus), Blacktip Shark (Carcharhinus limbatus)</td>
<td>Turtle egg harvesting, fishing pressure</td>
</tr>
<tr>
<td>4</td>
<td>Safata</td>
<td>Safata</td>
<td>5,870 (marine), 101 (land)</td>
<td>Active Marine Protected Area</td>
<td>Bumphead Parrot Fish (Bolbometopon muricatum), Humphrey Wrasse (Cheilinus undulatus)</td>
<td>Development, mangrove cutting, poaching, reclamation, sand mining</td>
</tr>
<tr>
<td>5</td>
<td>Five Mile Reef</td>
<td>None</td>
<td>1,303</td>
<td>None</td>
<td>Bumphead Parrot Fish (Bolbometopon muricatum), Humphrey Wrasse (Cheilinus undulatus), Acropora denticula, Acropora palmata, Acropora millepora, Alveopora verrilliana, Montipora australiensis</td>
<td>Fishing pressure</td>
</tr>
<tr>
<td>6</td>
<td>Vaotupua</td>
<td>Falealupu</td>
<td>893</td>
<td>None</td>
<td>Hawksbill Turtle (Eretmochelys imbricata)</td>
<td>Turtle egg harvesting, fishing pressure</td>
</tr>
<tr>
<td>7</td>
<td>Palolo Deep</td>
<td>Waimauga west</td>
<td>33</td>
<td>Active Marine Reserve</td>
<td>Giant Grouper (Epinephelus lanceolatus), Acropora aspera, Acropora paniculata, Pavona divussata, Pocillopora nigrescens</td>
<td>Mechanical damage (high tourism traffic)</td>
</tr>
</tbody>
</table>
Priority Areas for Conservation in Samoa: Key Biodiversity Areas

The Safata Marine Protected Area and the Saanapu-Sataoa mangrove system within it are located on the central south coast of Upolu. This KBA consists of 58 square kilometres of marine and mangrove habitat and is an important site for educational tours and ecotourism. This is a key site for endangered giant clams, mangrove crabs and reef fish.

Photo by © Stuart Chape, SPREP.

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Photo by © Stuart Chape, SPREP.

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Photo by © Stuart Chape, SPREP.

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Photo by © Stuart Chape, SPREP.

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Photo by © Stuart Chape, SPREP.
In late 2009 the south coast of Upolu was struck by a major tsunami which caused great loss both to the human communities and the natural environment. Coral communities were most heavily impacted in the Aleipata MPA but damage extends down the south coast, including the only other district-wide MPA of Safata. Savaii and the north coast of Upolu were generally spared the effects of the tsunami. This event illustrates the necessity of replicating habitats in a MPA network. Replicates increase resilience to disturbance by providing both a refuge for species and source of biota for the damaged area. The resilience of the Samoa MPA network will be enhanced by increased protection of reef communities throughout Samoa.

Photo by © Stuart Chape, SPREP.

O le faaiuga o le 2009 na aata ai le itu i Saute o le motu o Upolu i se Sunami malosi, lea na faaleagaina ai nuu ma akoaga faapea le siosiomaga faanatura. Na tele se vaega o amu ma aau i le itu i saute o le motu na faaleagaina e le gata i totonu o le Faasao o le Gataifale o Aleipata ae faapea foa Safata. O le motu o Savaii faapea le itu i matu o Upolu sa latiti se aataga mai lefene faaalavelave faanatura. Mai lefene faaatataiga ua iloa ai le aoga o le faateleina o Nofoaga Faasao o le gataifale, aua le maua ai oni Nofoaga e sulufai ma nonofo ai meaola o le sami i taimi o faaalavelave faanatura e pei ona molimauina pe a faaleagaina afaga sa iaia maua. Ata na pueina e © Stuart Chape, SPREP.
Vaotupua occupies the far western tip of Savaii. The remoteness of the location and fine sandy beaches make this site an important Hawksbill Turtle nesting site. Photo by © Stuart Chape, SPREP.

O Vaotupua e lotolotai lea i le taususiuga i Sisifo o Savaii. O le mamo o le tausigata ona oo o nisi i le nei Nofoaga ua faapea ona Faasaina ai le natura o matafaga onoone lea o loo avea ma ni Nofoaga taua e tautuufua ai laumei fai uga (hawksbill turtles). Afa na pueira e © Stuart Chape, SPREP.
4. Main Findings and Recommendations

Terrestrial Findings and Recommendations

Eight terrestrial KBAs have been identified in Samoa. Five KBAs are actively managed, or parts of which are managed, as protected areas or community conservation areas. Two sites were formerly managed as community conservation areas, while one (the Eastern Upolu Craters) has never had any protection. Six of the eight sites have recently been identified as Important Bird Areas (IBAs) by O le Siosiomaga Society, MNRE, BirdLife International and Conservation International.

The assessment of gaps in our knowledge of terrestrial biodiversity has identified a number of taxonomic, thematic and geographic knowledge gaps. The taxonomic knowledge gaps include land snails, insects, seabirds, threatened plants and current population estimates of flying foxes as well as freshwater biodiversity in general. The main thematic knowledge gap is our knowledge of the biology and ecology of native species. We have a poor understanding of the current population, distribution, habitat, threats and feeding and breeding biology of most native species. This poor knowledge makes it difficult to adequately define effective conservation areas and other strategies that will allow threatened species to survive into the future. The spatial knowledge gaps include two main areas in particular—the central and eastern parts of both upland Savaii and upland Upolu.

Terrestrial Key Findings

- The total area of terrestrial KBAs in Samoa is about 940 km² (33% of the land area of Samoa).
- The area of terrestrial KBAs with some form of existing protection is approximately 173 km², or 18% of the area of all KBAs.
- If all terrestrial KBAs are fully conserved the area of protection in Samoa will increase from 10% to 33% of the land area, more than double our SBSAP commitment of 15% of the land area of the country.
- The proposed KBAs capture key habitat for 8 of the 11 terrestrial species currently classified as threatened on the IUCN Redlist (with the exception of the sheath-tailed bat which is probably extinct and the bristle thigthed curlew and storm petrel which are migratory).
- KBAs include within them examples of 12 of 13 native terrestrial vegetation communities in Samoa (the only vegetation community missing is fernland) and capture approximately 65% of the native forests of Samoa and most of the endemic terrestrial species in Samoa.
- The IUCN Redlist is highly under-representative of the true number of threatened species in Samoa.
- The key gaps in our knowledge of terrestrial biodiversity include our ecological knowledge of native species in general but especially of threatened plants, invertebrates and freshwater biota.

Terrestrial Recommendations

- We can take action to protect native terrestrial biodiversity now, as key sites for terrestrial conservation and many species at risk of extinction are known.
- We must raise awareness at all levels of society about Samoa’s threatened species, the sites where they are found and what must be done to conserve them.
- Some threatened species need special protection in the entire country, not just in key sites (e.g. native pigeons, doves, flying foxes and ifilele).
- Existing laws such as the Protection of Wildlife Regulations need to be promoted and followed.
- Priorities for further species research include plants, invertebrates (especially land snails), seabirds and freshwater fish.
- Research should focus on increasing our understanding of the biology of native species and how to conserve them, including sustainable levels of harvest for harvested species.
- The biggest single priority for expansion of the PA network in Samoa is the Central Savaii Rainforest—which at 730 km² is the largest intact block of rainforest in tropical Polynesia and captures most of the threatened terrestrial species in the country. Large sites such as this are important refugia for whole communities of native species and species with wide ranges.
Terrestrial Recommendations, continued

- The priorities for improved site management include the Uafato-Tiavea KBA and the Apia Catchments KBA, both on Upolu.

- Future refinements of Samoa’s KBAs should include the addition of criteria such as congregatory and restricted range species as well as a prioritisation of all KBAs based on biological and sociological criteria.

- Since most terrestrial KBAs are on customary land, conservation of these sites depends on close and effective collaboration between government, donors, NGOs and community groups.

Marine Findings and Recommendations

Seven marine KBAs have been identified in Samoa, three of which are currently managed as MPAs and include over 20 no take zones as well as much larger marine managed areas. Four additional KBAs have been identified, two of which currently host community based fisheries sites that could provide a foundation to work toward a heightened level of conservation. The other two sites have no ongoing active management. Building on the success of MNRE’s marine protected areas and the Fisheries Division’s community based fisheries sites, we can act rapidly to conserve the additional 4 KBAs.

The assessment of gaps in our knowledge of marine biodiversity has identified a number of taxonomic, thematic and geographic knowledge gaps. The taxonomic knowledge gaps include all corals and the current population of threatened fish and cetaceans. The thematic knowledge gap for marine species is quite similar to the terrestrial gap except that even less is known about the ecology of native marine species. We have a poor understanding of the current population, distribution, habitat, and breeding biology of most native species. In the marine environment the spatial knowledge gap encompasses much of the near shore area, from the west of Upolu to most of Savaii and the entire reef slope.

Each KBA has its own particular challenges and opportunities. In Apolima, there is a single community to engage. The community has been proactive in managing their resources in the past and represents a unique political and geographic situation in Samoa. Five Mile Reef has no specific village with which to engage and would pose an enforcement challenge. There would be a different mix of stakeholders to address including commercial fishermen for this site and a national approach may work well in this situation. Vaotupua is an important site for Samoa, occupying the mort westerly point in the country and housing a potentially important Hawksbill Turtle nesting site in Savaii. Quick action could be taken on education and outreach, data collection as well as engaging in the normal village consultation process while building on the community fisheries site currently there. Vaisigano may be best approached from a district, perspective perhaps using the examples of Aleipata and Safata, while also building off the community fisheries successes in the area. This would be the largest MPA in Savaii and there is potential collaboration with local businesses and tourism operators.

Giant Clam. Photo © Paul Anderson, SPREP.
Marine Key Findings

- The total area of marine KBAs in Samoa is about 173 km² (23% of the inshore reef area of Samoa).
- The area of marine KBAs with some form of protection is approximately 108 km², or 14% of the inshore reef area of Samoa.
- If all marine KBAs are managed for conservation the area of protection in Samoan waters will increase from 14% to 23% of the near shore area, more than ten percent greater than our SBSAP commitment of 15% of the near shore area in Samoa.
- KBAs capture key habitat for 6 of the 17 vertebrates currently classified as threatened on the IUCN Redlist and at least 6 of the 48 coral species listed. The other 53 species may occur in the KBA network but the datasets are insufficient to verify their presence or absence currently.
- Marine KBAs include within them all 17 near shore habitat types in Samoa.
- Suitable models of successfully managed marine areas exist in the Aleipata and Safata MPAs and village fish reserves.
- The IUCN Redlist is highly under-representative of the true number of threatened marine species in Samoa.
- The key gaps in our knowledge of marine biodiversity include our ecological knowledge of native species in general but especially of threatened corals, and fish.

Marine Recommendations

- We can act now to protect native marine biodiversity, as key areas for marine conservation are known.
- Integrated marine surveys are needed, including targeting threatened taxa, to provide an improved basis to monitor the effectiveness of existing managed sites and to improve the knowledge base for targeting new sites.
- Some species need special protection in the entire country (turtles, long lived fish, clams).
- Existing fisheries regulations should be strengthened, promoted and enforced.
- Additional surveys need to be undertaken in the KBAs that have been identified, more rare species are likely to exist in these areas.
- Priority should be given to locations that have no current protection and represent special habitat like 5 Mile Reef and Apolima.
- Resource use and conservation are not mutually exclusive and can both be enhanced through good management of resources.
- The reef crest, slope, and off shore reefs are generally under-protected in Samoa, it is important to consider extending the boundary of MPAs no take zones to the extent of the reef slope.
- Western Upolu and Savaii are in need of conservation investment as there are no MPAs presently.

Collaboration with the community based fisheries site developed in partnership with the Department of Fisheries provides opportunities to build on successful management efforts.

Since most marine KBAs are under customary tenure, conservation of these sites depends on close and effective collaboration between government, donors, NGOs and community groups.

Coconut crab. Photo © Rebecca Dominguez.
In the protected areas of Samoa, three key biodiversity areas have been identified as important for conservation. These areas include:

1. Taunu’uga o Sailiga ma Fautuaga Laueleele: Taunuuga ma Fautuaga

- E 4.940 km² (33% of the land area of Samoa) is protected in the Vaega Oā Faapitoa (VOF) and the natural land area of the land area of Samoa.
- E 940 km² (33% of the land area of Samoa) is protected in the Vaega Oā Faapitoa (VOF).
- E 173 km², or 18% of the land area of VOF, is protected in the land area of Samoa.
- Pe afaʻi and pui puiuia in the VOF, 12-13% of the land area of Samoa is protected, with 65% of the land area of Samoa protected for these uses.

2. Taunu’uga o Sailiga ma Fautuaga

- E 940 km² (33% of the land area of Samoa) is protected in the Vaega Oā Faapitoa (VOF) and the natural land area of the land area of Samoa.
- E 940 km² (33% of the land area of Samoa) is protected in the Vaega Oā Faapitoa (VOF) in the land area of Samoa.
- E 940 km² (33% of the land area of Samoa) is protected in the Vaega Oā Faapitoa (VOF).
- E 940 km² (33% of the land area of Samoa) is protected in the Vaega Oā Faapitoa (VOF) in the land area of Samoa.

3. Taunu’uga o Sailiga ma Fautuaga

- O VOF mo le ola fa’a-natura no le laulalele no Samoa au aofa i totonu o Vaega Oā Faapitoa (VOF) mo le ola fa’a-natura no le laulalele no Samoa.
- O VOF mo le ola fa’a-natura no le laulalele no Samoa au aofa i totonu o Vaega Oā Faapitoa (VOF) mo le ola fa’a-natura no le laulalele no Samoa.

Fautuaga

- O VOF mo le ola fa’a-natura no le laulalele no Samoa au aofa i totonu o Vaega Oā Faapitoa (VOF) mo le ola fa’a-natura no le laulalele no Samoa.
- O VOF mo le ola fa’a-natura no le laulalele no Samoa au aofa i totonu o Vaega Oā Faapitoa (VOF) mo le ola fa’a-natura no le laulalele no Samoa.
- O VOF mo le ola fa’a-natura no le laulalele no Samoa au aofa i totonu o Vaega Oā Faapitoa (VOF) mo le ola fa’a-natura no le laulalele no Samoa.
Mo nisi galuega suesue, e ao ona fa‘amumua suesuega i laau, ma meaola e i ai sisi, manulele ole sami ma ia o vaimagalo.

E tatau ona taula‘i suesuega e fa‘alaula te lo tatou iloa i le ola o meaola totino a Samoa, pe fa‘apefa ona fa‘asaoiona, ae pe o le a le fua e fa‘aaoa gafatia taulimaia ai.

O le fa’amua muana laauluga mo le fa‘alaul'eina o nofoaga puipiu i Samoa e fa‘asino tonu lea e i la Vamatu Tu-Ogatotou o Atumauga o Savaii lea e 730 km² lona fua taga ma no se nofoaga sili ona ititi lona fa‘aleagaina i le atu Polenisia. O leoni foi VOF o loo fai ma ofaga saogalemu mo le tele o ituaga i meaola totino ma meaola ta‘atele.

O nisi nofoaga e tatau ona ave i ai le fa‘amua mu ana mo le toe fa‘alelele o pulega a faofia ai le VOF mo le ola fa‘a-naturana i Uafato-Tiavea ma nofoaga e pueina ai le suvalu i Apia, ia le motou o Upolu.

O nisi fa‘aopoopoga mo le fa‘alelele atili o VOF mo le ola fa‘a-naturana o Samoa i le lumana ma i ai taiala mo meaola ta‘a mamao ma meaola ola pu mo‘omo‘o. Ia fa‘apefa ona fa‘atulaganaina manino VOF uma mo le ola fa‘a-naturana e fa‘avave i luga o taiala aloa‘ia fa‘a-saenisi o ola o meaola ma le tulaga o ni a‘a‘aiga o le soifuga laaula‘e o tagata soifua e faaofia aofiu.

Talu ai ona e le tele o VOF mo le ola fa‘a-naturana i le laualele e i totonu o clelele fa‘a-le-aganu‘u, o lea e taual tele ai le galule o so‘o‘o tau‘au ao le malo, fa‘alapopotopoga fuseasoani, fa‘alapopotopoga tumaot ma nuu i le fa‘asaoiona o ia nofoaga.

Taunu‘uga o Sailiga ma Fautuaga mo le Gataifale

E fitu ni VOF mo le ola fa‘a-naturana o le gataifale ua fa‘atulagaina mo Samoa. O le tolu o ia nofoaga o loo pulea o ni nofoaga fa‘asao o le gataifale a faofia ai le sili atu e le 20 o sone e tapu ona fagotaina ma se vaega tele e le gataifale o loo aea e ni nofoaga puipiu. Mai lea aofia, e 4 nisi o VOF mo le ola-fa‘a-naturana o le gataifale ua fa‘aopoopoisia, e lua ni nofoaga ua avea o ni vaega e atia‘ia a fa‘atugafa gafatia taulima ma nuu. E ia le talitonu o e se amataga lelei lea e ao ina tapu’e ko le fa‘asao, ae o le isisi lea o nei nofoaga e le o maoi lelei lo latou pulecashina. Ia taunauaga lelei na ausia a fa‘alaula fa‘asa o le gataifale o le Matagaluega o Punaoa Faanatura ma Siosiomaga ma fa‘asao o le gataifale i nuu a le Vaega o Paifagaiva, o se fai‘avave lelei lea mo ni ti aiala talae‘ageai mo le fa‘aagioaia vave loa o le fa‘asaoina o VOF e fa (4) ua fa‘atautaina.

I le ilologa o itu o loo lape ai le iloa i le ola-fa‘a-naturana o le gataifale, ua fa‘ailoa mai ai vaega nei o loo oge e sailiga ma fa‘amaumauga: tasonomi (taxonomy), o vaega au tu esee e le o fa‘a-naturana, ma fa‘amatalaga ia vaega tonu ma mauai ai. O le sila‘a fa‘a-tasonomi o loo mo‘omia ma anu ma fa‘aao fa‘atauina na ia lele ma o le a o le sila‘a ma fa‘a-saepua ma fa‘a-fau‘ataua fa‘a-saepua. I le laititi o le tele o loo fa‘a-naturana fa‘atulagaina mo Samoa. O le tolu o ia nofoaga o loo fia fa‘a-saepua fa‘alaua‘i tele. O Vaotupua o se tasi o nofoaga taua i Samoa o loo i le itu i Sisifo o Savaii, ua fa‘ataua ina va e fa a o fana ma tau tufuaia ai laumei fa‘afe. E faoa mo le fia fa‘a-saepua mo fa‘amasaga fa‘a-le-aganu‘u o loo i ai nei. O Vaisigano e fa‘aono fetau ia i e fa‘a-tui‘isoa e pei ona iaia Safata ma Aleipata, ma fa‘aaoa ia ia ni taunauuga lelei ma se tomai au maau i nui tu taisati mai a latou fa‘asao fa‘a-foa‘iga faiva. O se tasi lea o nofoaga fa‘asao o le gataifale aupito tele i Savaii pe a tatou. E tele foi avanoa mo ni atina‘e fa‘apisinisi ma fa‘aturisi e fa‘aono maua ai.

O le o lava le loo fa‘a-naturana i la‘a‘a i la‘a‘a e Tuvalu ia le VOF mo le ola fa‘a-naturana. O le tolu o ia nofoaga o loo fia fa‘a-saepua fa‘alaua‘i tele. O Vaotupua o se tasi o nofoaga taua i Samoa o loo i le itu i Sisifo o Savaii, ua fa‘ataua ina va e fa a o fana ma tau tufuaia ai laumei fa‘afe. E faoa mo le fia fa‘a-saepua mo fa‘amasaga fa‘a-le-aganu‘u o loo i ai nei. O Vaisigano e fa‘aono fetau ia i e fa‘a-tui‘isoa e pei ona iaia Safata ma Aleipata, ma fa‘aaoa ia ia ni taunauuga lelei ma se tomai au maau i nui tu taisati mai a latou fa‘asao fa‘a-foa‘iga faiva. O se tasi lea o nofoaga fa‘asao o le gataifale aupito tele i Savaii pe a tatou. E tele foi avanoa mo ni atina‘e fa‘apisinisi ma fa‘aturisi e fa‘aono maua ai.

Apolima island and its surrounding reef sits halfway between Upolu and Savaii. Apolima’s small population, remote location and difficult to navigate reef passage have helped it maintain populations of rare species including Bump Head Parrot Fish and Hump Head Wrasse.
Photo © Stuart Chape, SPREP.
O loo va lisiina i lalo nisi o taunuuga o susuega mo le gataifale i lalo o lenei Poloketi:

➢ O le tu’u fa’atasiga o Vaega Oā Faapitoa (VOF) mo le gataifale i Samoa e tusa ma le 173 km² (23% o ogasami o Samoa).

➢ O le aofaiga o VOF mo le ola fa’a-natura o le gataifale o loo puipuia e 108km², poo le 14% o le aofaiga uma o VOF mo le ola fa’a-natura o le gataifale.

➢ Pe afai e puipuia uma Vaega Oā Fa’apitoa (VOF) mo le ola fa’a-natura o le gataifale, o le a siitia ai loa mai le 14% i le 23% ogasami puipiu o Samoa ma e sili atu ma le 10% ua mualuga ai nai lo le manulauti o loo fa’atulaga mai le Taiala o le Olafaanatura e 15%.

➢ O le a aofa’ai ma puipui ma totonu o VOF o le gataifale le 6 o le 17 o meaola e i ai ivitu ua lamatia i le fa’avasegana a le IUCN, ma le 6 mai le 52 o ituiga o amu ua lisiina. O le isi 53 o ituiga o loo aofai totonu o le tu’u-faatasiga o VOF mo le ola fa’a-natura, peitai, e le o lava fa’amaumaua e fa’amaonia ai lea tulaga.

➢ O loo aofia i totonu o VOF mo le ola fa’a-natura o le gataifale le 17 o ituiga o apitaga tu lata i matafa i totonu o Samoa.

➢ O loo ua iai fa’ataitaiga talafeagai o nofoaga fa’asoa o le gataifale e avea ma taiala,e pei le fa’asao o le gataifale i itumalo o Aleipata ma Safata, ma nisi o fa’asoa fa’afai faiva a nisi o afioaga.

➢ I le lisi o meaola lamatia a le IUCN e le o atoatoa ona aofia ai le fuainumera tonu o meaola o le gataifale o Samoa ua lamatia.

➢ O itu taua o loo lape ai lo tatou iloa i le ola fa’a-natura o le gataifale e aofia ai fesooiga o meola ma le natura i lona aotelega ae faapitoa lava i ituiga o amu ma i’a ua lamatia.

➢ Of Samoa’s 200 or so species of coral, about 25% are currently threatened by pollution, sedimentation and disease. Heat stress and changes to water chemistry induced by global warming are likely to have a huge impact on all our corals in future. 

➢ Talu ai o VOF mo le ola fa’a-natura o le gataifale o loo i totonu o puipuiga fa’a-le-aganu, o le fa’asaoina o nei nofoaga e fa’alagolago malosi i le galulue faatasai ai o le malo, fa’alapotopotoga fesoasoani, fa’alapotopotoga tuma’oti ma nu’u.

➢ E ui ina sili atu i le 200 ituiga o ‘amu i Samoa, pe tusa o le 25% o lea aofaiga ua atiana mai le faaoninaia, nuti lili pino pi faaonina’i tao. O le vevela ma le manafo tu o lesuaiga o le tau, o le a avea o se fa’atauna te le mo ‘amu ma aau i le lumanai. Aita na pueina e © Richard Howes.
5. Conclusion

Funding for conservation is limited, as are human resources and time. Given that all KBAs in Samoa have special value to the people and biodiversity of Samoa, it is imperative that all efforts are as efficient as possible and have the buy-in from all relevant sectors of society, especially the village communities with traditional tenure over the KBAs. By fully involving all stakeholders and related economic sectors including forestry, fisheries, agriculture and tourism, we can find the most appropriate way to conserve our natural heritage while providing for our current and future needs.

Effectively managing KBAs for their conservation values is important not only for the ecological integrity of Samoa, but also for the cultural, spiritual and economic vitality of the country. In this, the International Year of Biodiversity, we encourage all partners and stakeholders to work together to conserve Samoa’s KBAs and natural wealth while we still can.

References


Five Key Recommendations

1. We should act now to protect native terrestrial and marine biodiversity, as key sites for conservation and many of the species at risk of extinction are known.

2. Since most KBAs are under customary tenure, conservation of these sites depends on close and effective collaboration between government, donors, NGOs and community groups.

3. Existing laws such as the Protection of Wildlife Regulations and fisheries regulations need to be promoted and followed.

4. Future ecological research should focus on increasing our understanding of the biology of native species and how to conserve them, including establishing sustainable levels of harvest for harvested species.

5. We must raise awareness at all levels of society about Samoa’s threatened and ecologically important species, the sites where they are found and what must be done to conserve them.
Manatu Fa’aiu

**E** utiiti seleni mo le fa’atupeina o galuega fa’a-faasao. E faapena foi tagata e fa’atainoa galuega ma le taimi. Ona o le taua tele o Vaega Oā Faapitoa (VOF) mo Samoa ma lona ola-fa’a-natura, ma matua alaga tatau aia ona fa’atainoa gaiioioiga uma i se faiga e silisiti ona lelei, e lagolagoina e tagata uma ae maise afioaga e ona eleole o loo tao o a VOF. O le galulue fa’atasi e fa’alapopotopota ma tagata uma, a aofia ai vaega o va le vatamua, faigafai, fa’atoaga ma turisi, o le a mafi ai ona maua ni auala talafagai e fa’asao ai lo taou tofi fa’a-natura i ni auala e gafa taulaimaina mo tupulugai nei ma a taeao.

E tāua le puleaina lelei o Vaega Oā Faapitoa (VOF) o le Ola Fa’a-natura ona o lo latou tāua fa’a-sao, faapea ma le fa’ataumauna o Samoa i ona foliga fa’a-natura moni, ae maise ai le so’otaga vavalalata ma ana aganu, tapuaua ma le atinaecina o lona tamaogaiga. I leini tausaga fa’apitoa e le Ola Fa’a-natura i le Lalolagi, e faatuaia pa’aga ma tagata uma ina ia galulue fa’atasi e fa’asao Vaega Oā Fa’apitoa e le Ola Fa’a-natura o le Samoa ao maua le avanoa.

**Fau’uatauga**


5. **Manatu Fa’aiu**

**Fau’uatauga Taua se Lima**

1. Ua tatau nei ona fa’atino loa galuega e puipuia ai lona sao’a-fa’a-natura o le taelelele ma le sami, aua o lea va manino mai Vaega O Fa’apitoa (VOF) ma le tele o meaola ua ogaaiga le tulega lamatia o loo iai.

2. Talu ai o le tele o VOF o loo i totonu o fanua umia fa’a-le-aganu’u, o aofia ai ona galulue so’oso’o tau’anau le malo, fa’alapopotopota e aia ai le vaematua, faigafai, fa’atoaga ma turisi, o le aofia au faiga e noo’iia a meaola e fa’asaoina ia ina iau.

3. O tulafono e pei o tulafono fa’atonutono o meaola fa’a-aloa ma tulafono o le Ola Fa’a-natura ona o lo latou taua fa’a-sao, faapea ma le fa’amailoa. Ia fa’apea foi ma gaioiga e ai faiva mo lo latou fa’asaoina.

4. E tatau ona taula’i siutagai le iloa ma malamalamaaga i le ola-fa’anatura o meaola ma auala e puipuia ai e fa’a-gafa gafatia taulima ai nei meaola.

5. Ua tatau ona siitia ise tulafono maualuga le sila’afua e le taelelele ma fa’atatau i meaola patino ma vaega taua o apitaga o loo maua ai ua lamatia. Ia fa’apea foi ma gaiioioi e ao ia faiva mo lo latou fa’asaoina.
## Threatened marine species of Samoa (2009 IUCN Redlist) / Meaola lamatia o le Gataifale o Samoa (2009 IUCN Redlist)

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<tr>
<th>Genus</th>
<th>Species</th>
<th>English Name</th>
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IUCN Red List Status abbreviations: (CR) Critically Endangered; (EN) Endangered; (VU) Vulnerable
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