



REPORT OF A KNOWLEDGE CAFÉ ON SEABIRDS IN SAMOA



SPREP
Secretariat of the Pacific Regional
Environment Programme



**Pacific
BioScapes**



**SAMOA
CONSERVATION
SOCIETY**



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SPREP
Secretariat of the Pacific Regional
Environment Programme

PO Box 240, Apia, Samoa
T: +685 21929 E: sprep@sprep.org W: www.sprep.org

Our vision: A resilient Pacific environment sustaining our livelihoods and natural heritage in harmony with our cultures.

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1. Introduction

Seabirds are known to play an essential role within Samoa's biodiversity, not only through their ability to enrich soil through their guano (seabird excrement), but also through their natural ability to redistribute abiotic resources, such as marine nutrients, from one ecosystem to another as they frequently traverse between these ecosystem boundaries. Their influence over soil properties contributes to the overall health of Samoa's environment by assisting native plant biodiversity growth and supporting the natural restoration ability of forests and its associated ecosystem. Nutrients from seabird colonies have also been shown to flow into nearshore marine environments and contribute to coral restoration and increase resilience to climate change impacts.

The benefits of improved soil quality, made possible by seabirds, is not limited to biodiversity but also benefits the production ability of land. Agriculture plays a significant role in both the livelihoods of Samoans who rely on subsistence farming and the economy through the agriculture sectors trade – this further exemplifies the value of these birds.

Aside from the importance to Samoa's biodiversity and agricultural production, seabirds also hold significant importance to Samoa's culture and traditions. Illustrations of these birds in Samoan traditional tattoos, their frequent mention in legends and proverbs, and their importance in locating fish for fishermen and ocean navigation paints a distinct picture of their value to the Samoan way of life in the past as well as present day.

Seabirds remain essential to a healthy biodiversity and ecosystems, and have significant value to Samoa's culture and traditions which warrants substantial effort is made for their protection and conservation

Seabirds are continuing to decline as a result of invasive alien species such as rats, cats, dogs and pigs, habitat loss from logging and mining and exacerbated by climate change. Some communities especially those that were reliant on seabirds for food in the past may have knowledge of species distribution and possibly also population trends. Others may have lost their connections to seabirds especially nocturnal burrowing petrels that nest high up in rugged mountains. Or perhaps only a few members of some communities still have knowledge of these species. Much of this knowledge is still contained in language and various forms of cultural expression.

Documenting traditional knowledge, language and cultural expressions in collaboration with researchers and communities across Samoa could help identify critical locations for seabirds which can be protected from threats and revive community interest in protecting them.

SPREP has been working with MNRE and SCS to learn more about Samoa's seabirds. In addition to surveys of the Aleipata off-shore Islands, observations along the Apolima island summit and at sea surveys, recent evidence has revealed that at least two species of Procellariid petrels are breeding on the islands of Upolu and Savaii. The recent sightings of tropical shearwater at Malololelei and Tahiti petrel at Magiagi have provided a significant boost to seabird conservation efforts in Samoa. These sightings are crucial as petrels and shearwaters are considered indicators of healthy marine and coastal ecosystems. However, due to the ongoing threats to these nocturnal burrowing seabirds, it is becoming increasingly important to find their breeding locations and protect them.



2. The Knowledge Café Proposal

This activity was initiated after discussions between the SPREPs Knowledge Management team and the Threatened and Migratory Species Advisor about seabirds. The proposal was to hold an interactive session with community members about seabirds to elicit information about seabirds and provide a forum for discussion. This is to try and bridge the gap between traditional knowledge holders and scientists and to support SPREP's Information & Knowledge Management Strategy goal on knowledge sharing with the community through collaboration with partners and stakeholders.

This café style of knowledge sharing is the second workshop of this type where key stakeholders come together to discuss topics on the environment. The event provided an excellent platform for information dialogue between partners and the selected community representatives on the above topic. The community members that participated shared their knowledge and experiences on seabirds in Samoa.

3. Objectives

- 🕒 Exchange and bridge scientific and traditional knowledge on Seabirds in Samoa
- 🕒 Update community members about our scientific knowledge of seabirds including from surveys already completed.
- 🕒 Compile information and traditional knowledge on seabirds from local community representatives
- 🕒 Seek potential locations of forest dwelling nocturnal petrels and shearwaters.

4. Programme summary

The Knowledge Café on Seabirds of Samoa was opened by SPREP Deputy Director Easter Chu Shing with official remarks from MNRE CEO Ms Lealaisalanoa Frances Brown.

Leilua Faleafaga Togi Tipama'a (Samoa Conservation Society) acted as MC for the day.

Moeumu Uili (Samoa Conservation Society) presented on why seabirds are important and what we know about the species that we have in Samoa.

Some key highlights from the presentation as well as feedback from the participants include the recognition of the many beautiful seabird species that are and have been observed within Samoan shores either breeding on Samoan lands or visit during seasonal migration. There is often confusion around the difference between shorebirds and seabirds as both can be seen along coastal areas. During the Question & Answer session it was explained that shorebirds make their living along the coastal zone but do not actually feed out at sea. Their migrations are made entirely without ever landing on the ocean, while true seabirds make their living at sea and often rarely come to land except to breed. Coastal species include the commonly known Tuli (same Samoan name for most shorebirds) including the wandering tattler and golden plover. In addition, the name in Samoan language, Tuli, is the common call for most of the shorebirds. Similar to seabird, names such as Gogo, Ta'i'o or Fuaō these names are given to two or more birds of different species.

Participants also commented and acknowledged the use of bird calls in the presentation which not only stirred up memories of several encounters with wildlife where some mentioned how some strange noises heard at night time are often referred to as ghosts. It also is a vital way to remind communities that some seabirds nests in burrows in the ground while others are up on the trees.



Either way, they are all impacted by habitat alterations including human developments and cyclone but also natural enemies such as rats and cats. Overall, the number of seabird species found in Samoa may increase or decrease depending on climate change and how much we as Samoans care for the safety and significance of seabirds to Samoa's marine and terrestrial biodiversity.

Czarina Stowers from MNRE presented on the surveys that have been undertaken on the Aleipata Islands and during the 'At Sea' survey around Upolu.

Participants expressed their appreciation and thanks for the surveys and the team effort to collect scientific information as well as related TK to further understand the status of seabirds and their populations in Samoa. There was a question about the techniques and survey methods used to collect data on land and on sea. These methods were then further discussed including underground burrow search aided by using a burrowing scope, acoustic sound recorders, observations from the sea, and human search of the forest habitats for nesting on the ground and in the trees. Community observations and reporting to the MNRE, SPREP and SCS of critical sightings of seabird nesting, appearance and other species is highly recommended.

Following morning tea, the interactive session with Community groups sitting around tables began. Questions to encourage discussions were circulated to the tables and community members working with staff from MNRE and SCS made notes on butcher paper of their discussions. Questions used are included in Annex 2.



Figure 1. Knowledge Café on Seabirds of Samoa participants

4.1 First Community Session: Names and Language

In the first session, community members demonstrated a rich but generalized knowledge of seabirds. All seabirds are commonly referred to by their Samoan names, such as Tava'e for tropicbirds and Gogo for noddies and terns. Specific observations included:

- ☞ The Gogo (terns and noddies), often sighted over the ocean, signals the presence of Mahimahi fish to fishermen.

- ☼ Coastal birds like the Tuli, characterized by long legs, are perceived to indicate events, such as someone's passing when seen moving inland.
- ☼ Cultural significance was noted, such as the Gogo (terns and noddies) symbolizing the conclusion of discussions and the Tava'e (white-tailed tropic bird) representing chiefs traveling between villages.

4.2 Second Community Session: Discussion about Seabird Knowledge in Communities

During the second session, discussions focused on community knowledge, perceptions and beliefs related to seabirds:

- ☼ Seabirds are collectively identified as "ta'i'o (petrels and shearwaters) and fua'o (boobies)" by community members.
- ☼ Specific birds like the frigatebird (atafa) are considered indicators of natural events, such as cyclones.
- ☼ Traditional knowledge includes the use of seabird references in Samoan proverbs and music, highlighting their cultural integration.
- ☼ Community members did not indicate knowledge of petrels and shearwaters on their island.
- ☼ A member of the Samoan voyaging society in discussions with seabird experts indicated he had seen 'swallows' out at sea. Our interpretation of these observations suggests these were likely to have been storm petrels.
- ☼ Some community members, stated that they had never spotted the ta'i'o bird species before in their areas.

4.3 Third Community Session: Traditional Knowledge and Culture Associated with Seabirds

Discussions emphasized traditional knowledge and cultural practices linked to seabirds:

- ☼ Seabirds like the Gogo (terns and noddies) are recognized as indicators of fishing areas, influencing fishing practices ("kuliga aku"; "Samoan name for fishing – specifically for fishing for skip jack fish (*Katsuwonus pelamis*)").
- ☼ Cultural sayings and songs incorporate seabird imagery, such as "Sau funa sina" ("Sina is coming") associated with the Gogo.
- ☼ The Manusina holds cultural significance, images being used in crafts and referenced in Samoan sayings.

In summary, these sessions revealed a blend of ecological observations, cultural practices, and traditional knowledge associated with seabirds among the Samoan communities, reflecting a deep-seated connection between local culture and natural environment conservation. Knowledge of seabirds from these community members did not include knowledge of petrels and shearwaters on land, although they may be observed at sea.



5. Discussion

The traditional ecological knowledge held by local community members provides valuable insights into the interaction between seabirds and their environment, as well as the cultural significance of these birds in Samoan society. This knowledge, passed down through generations, offers a unique perspective that complements scientific understanding and highlights the intricate relationship between humans and seabirds in the region.

a. Species Identification and Cultural Significance

Community members identify seabirds primarily by their Samoan names, such as Tava'e (white-tailed tropic bird), Gogo (noddies and terns), and coastal birds such as Tuli (golden plover and wandering tattler), reflecting a deep cultural connection rather than taxonomic distinctions. This naming convention, although not scientifically precise, serves as a practical classification system linked to specific behaviours and ecological indicators. For instance, the presence of Gogo (terns and noddies) signals the presence of Mahimahi fish, illustrating the practical knowledge integrated into daily fishing practices. The presence of the Atafa comes with a warning of an approaching cyclone or an indication of strong winds.

During the group discussions, the origin of certain myths and legends which resulted in specific Samoan proverbs in use today are based on distinctive cultural or political districts. The naming of each seabird species especially those with a greater value to communities such as for food resources has a specific Samoan name, but one that is pertained to that specific community. For example, the Manu palapala (ground seabird) refers to the young boobies that eventually come down on the rocks from their nesting sites in the trees, but their wings are not yet ready to fly out to sea. Note that this may provide greater opportunities/space for them to exercise their wings by flapping before they can fly. The Manu papa (rock seabirds) or those boobies that are nesting on the rocks (likely to be the brown booby which nests on the ground).

The use of the same Samoan name for two or three different species of seabird was discussed amongst the tables. We noted that the gogo is the name given to five different species of noddies, fuao is the name given to three species of boobies, ta'i'o is one name given to two species of petrels and four species of shearwaters. See Annex 5 for list of species with their Samoan names. Hence there were some challenges when defining species by Samoan names alone. If a participant talked about gogo, it was not clear if they were talking about the suite of seabirds with that name or a specific one. The use of printed seabird photos assisted these discussions to some extent. Although, some participants had to spend some time confirming species because there are many species, and collectively were all called gogo or fuao. Further discussions and stakeholder seminars could help to address such issues and allow discussions on seabird health and seabird communities.

b. Ecological Indicators and Predictive Abilities

Seabirds play a crucial role as ecological indicators for local fishermen, signalling the presence of fish schools and weather patterns. The frigatebird (atafa) heading inland, for example, is observed to indicate impending storms, providing early warnings crucial for maritime safety. Similarly, the presence of certain seabirds like tuli moving inland is interpreted as a precursor to significant events, such as the passing of individuals, reflecting the community's belief in the birds' predictive abilities beyond their ecological roles.

c. Conservation and Environmental Management

The decline in seabird populations, for species like Fuao and Gogo, underscores the importance of conservation efforts. Community members' knowledge of petrels and shearwaters on Upolu is limited, also indicating strong declines in these species. Lack of knowledge of this group of seabirds is not surprising in that these birds are nocturnal on land and are likely now only found in scattered small



populations in more remote forested areas away from cultivation and villages. Traditional knowledge promotes preserving nesting habitats on islands like Aleipata and Fanuatapu, emphasizing the need to control invasive species that threaten nesting grounds. The use of rat poison mixed with coconut to mitigate the impact of invasive Myna birds highlights community-driven efforts to protect seabird habitats and restore populations affected by human activities.

d. Cultural Practices and Proverbs

Seabirds are deeply embedded in Samoan culture, reflected in proverbs, traditional songs, traditional tattoos and orator speeches which underscore their symbolic importance. For instance, references to Tava'e in sayings about delivering messages highlight their role as messengers or transporters in Samoan folklore and societal practices. Moreover, the inclusion of seabirds in Samoan music and local customs further illustrates their cultural significance beyond ecological roles.

e. Integrating Traditional Knowledge with Conservation Science

Integrating traditional ecological knowledge with modern conservation science presents opportunities for holistic approaches to seabird conservation. Understanding how local communities perceive and interact with seabirds can inform sustainable management strategies that benefit both biodiversity conservation and community livelihoods. Initiatives aimed at preserving seabird populations must consider indigenous perspectives and practices, ensuring that conservation efforts are culturally sensitive and inclusive.

Traditional ecological knowledge of the local community provides invaluable insights into the role of seabirds as ecological indicators and cultural symbols. This knowledge not only enhances scientific understanding but also advocates for collaborative conservation efforts that respect and incorporate indigenous wisdom for sustainable environmental stewardship.

It must be acknowledged that these discussions involved a small subset of communities in Samoa, with one from Savaii. It will be important to follow up with key communities in both islands to interview other community members and different communities who may have knowledge of seabirds and their locations.



Figure 2. Two community representatives presenting their responses to the workshop prompts



6. Next Steps and Recommendations

This was an inaugural talanoa session bringing together members of the local communities from across Samoa to share their traditional knowledge on seabirds and related activities as well as scientific background information from the technical stakeholders to facilitate improvement to seabird conservation measures and policies in the near future. Outline below are a few key priorities as recommended from the discussions:

- 🕒 Planning is underway for follow-up meetings in both Upolu and Savaii Islands. This is planned through SCS with funding from Birds New Zealand JS Watson Trust.
- 🕒 A request for meetings to be hosted at the communities to foster educational outreach, inclusivity and a sense of community ownership and belonging of such natural resource to the community.
- 🕒 Identify priority sites for seabird community and seabird habitats for conservation through this outreach.
- 🕒 Develop a seabird management plan for Samoa
- 🕒 A review of the Samoan names for seabirds could be undertaken. To complete a final validated list for use with the approval of all stakeholders including local communities would be wiser for reporting and conservation measures for seabirds in the future. A review of Samoan names for seabirds could include all birds, not just seabirds.
- 🕒 Collect traditional, indigenous, and cultural knowledge as part of a Traditional Knowledge project focused on preserving traditional practices used by local communities.

7. Conclusion

In conclusion, the traditional ecological knowledge held by local communities in Samoa offers an understanding of the intricate relationship between seabirds, humans, and the environment. Through their customary practices and cultural beliefs, community members have demonstrated a keen awareness of seabird behaviours as ecological indicators and predictive signals, crucial for guiding fishing activities and anticipating weather patterns.

The naming conventions and symbolic meanings attached to seabirds underscore their deep cultural significance, reflected in Samoan proverbs, music, and everyday practices.

Moreover, the observations of declining seabird populations, such as Fua'o (boobies) and Gogo (terns and noddies), and the lack of any knowledge of the existence of petrels and shearwaters on land, highlight the urgent need for conservation efforts. Community-driven initiatives to protect nesting habitats and mitigate the impact of invasive species are one such approach taken to safeguard local biodiversity and preserve traditional knowledge systems. By integrating indigenous perspectives with scientific research, there exists a promising pathway for sustainable environmental management that respects both cultural heritage and ecological integrity.

Note that this workshop really only touched on traditional and cultural knowledge within the café format. To record this cultural knowledge including art, song and ecological knowledge in more detail would require a more targeted approach with individual communities, if desirable and appropriate.

Moving forward, collaborative efforts between local communities, governmental agencies, and conservation organizations are essential to ensure the long-term conservation of seabird populations in Samoa. Efforts to find the locations of breeding colonies of petrels and shearwaters are needed to ensure that they can be protected before they disappear from Samoan Islands altogether. Preserving nesting locations and restoring habitats including through predator control will not only benefit seabirds but also contribute to the resilience of terrestrial and marine ecosystems and support the livelihoods of coastal communities reliant on sustainable fisheries. By valuing and incorporating traditional knowledge into conservation strategies, we can foster a harmonious relationship between humans and seabirds, securing a more resilient and bio diverse future for generations to come.



Annex 1: Program

Time	Activity	Responsible
8.50am	<i>All seated for the ceremony.</i> <i>Housekeeping</i>	<i>MC / Main Facilitator / Tautai – Leilua Faleafaga</i> <i>Togi Tipamaá, Samoa Conservation Society</i>
9.00-9.05am (5 minutes)	Welcoming Remarks <i>Saunoaga Faafeiloai</i>	Ms Easter Chu Shing, Deputy Director General, SPREP <i>Easter Chu Shing, Sui Faatonu Aoao,</i> <i>Faalapotopoto o le Siosiomaga a le Pasifika</i> <i>(SPREP)</i>
9.05-9.10am (5 minutes)	Opening Prayer <i>Tatalo Amata</i>	Community rep <i>Sui o nuu</i>
9:10-9.20am (10 minutes)	Official Remarks <i>Saunoaga Aloaia</i>	Ms Lealaisalanoa Frances Brown Reupena, Chief Executive Officer, Ministry of Natural Resources and Environment, Samoa <i>Afioga Lealaisalanoa Frances Brown Reupena,</i> <i>Pule Sili,</i> <i>Matagaluega Punaoa Faalenatura ma</i> <i>Siosiomaga, Samoa</i>
9.20-9.25 (5 minutes)	Group photo. <i>Puega ata</i>	SPREP Communications and Outreach <i>Vaega Fesootaiga, SPREP</i>
9.25-9.30 (5 minutes)	Introduction / Setting the scene <i>Folasaga amata</i>	Karen Baird (SPREP) Czarina Stowers (MNRE)
9.30-9.45 (15 minutes)	Presentation: What are seabirds, why are they important and what we have in Samoa (and had) <i>Faalauilooa:</i> <i>O a nei manulele o le sami, aisea e</i> <i>taua tele ai? O maua i Samoa pe sa</i> <i>maua fo'i?</i>	Moeumu Uili, Samoa Conservation Society (SCS), Chris Gaskin, NNZSBT



9.45-10.00am (15 minutes)	<p>Presentation: What we have found from recent surveys on Aleipata Islands and at sea surveys</p> <p><i>Faalauiloa:</i></p> <p><i>O ni faamaumauga sa maua mai i ni suesuega i motu o Aleipata ma le gataifale.</i></p>	<p>Czarina Stowers - MNRE</p> <p>Vatapuia Maiava - MNRE</p>
10.00-10.15am (15 minutes)	<p>Presentation: how to manage seabirds who land in your communities.</p> <p><i>Faalauiloa: E faafefea ona pulea manulele o le sami e tulaeleele i tou alalafaga / nuu</i></p>	Karen Baird, SPREP
10.15-10.45 (30 minutes)	<p>Morning Tea Break</p> <p>Malu taeao</p>	ALL
10.45 – 11.45 (1 hour)	<p>Exercise: Photos of seabirds on wall/ match with local names.</p> <p><i>Galuega:</i></p> <p><i>Faatutusa mai igoa faaleaganuu ma ata o manulele o loo tuu atu i luga o puipui o le potu.</i></p> <p>Discussion on language associated with seabirds. Feedback to Plenary from 11.45</p> <p><i>Fefaasooa'i e uiga i gagana e fesootai ai ma manu felelei o le sami.</i></p> <p><i>Faaali manatu i le fono tuu faatasi</i></p>	<p>ALL</p> <p>Facilitators for each group</p>
11.45-11.50 (5 minutes)	Comfort break!	



11.50-1.20PM (1hr & 30 minutes)	<p>Knowledge exchange and discussion in groups using question prompts where needed.</p> <p><i>Fetufaaiga o le tomai ma faatalanoaga i vaega e faaoga ai ni fesili faaoso manatu pe a manaomia</i></p>	ALL
1.20-1.50PM (30 minutes)	<p>Feedback to plenary from discussion groups</p> <p><i>Faali manatu ma talanoaga mai vaega taitasi i le fono tuu faatasi</i></p> <p>Wrap up & closing remarks!</p> <p><i>Faamatalaga mulimuli</i></p>	ALL SPREP
1.50- 2.00pm (10 minutes)	<p>Lunch (Eat in or takeaway)</p> <p>Farewell</p> <p><i>Aiga o le aoauli (Taumafa i le fono pe ave i le fale)</i></p> <p><i>Taape ma faatofa</i></p>	ALL



*Photos courtesy of MNRE and SPREP





Annex 3: Leading Questions for Group Discussions

SPREP/SCS or MNRE Samoan facilitator in each group to record notes and report back.

First Session: Names and Language = Lesona Muamua: Igoa ma le Gagana

Questions about the people in each group and seabird names

1. Who are you? Names and titles

O ai lou suafa?

2. Occupations and age? e.g. fisher, farmer? Other

Galuega- ma le matua o le soifua/tausaga? Eg. Fai faiva, Fai faatoaga, Isi?

3. Seabird names. What seabirds (pictures are provided on tables and on the walls) are you aware of any of these in your communities either at sea or on land? What names do you give these birds. Please place names on pictures on wall or on tables with sticky notes

Mai ata o manu o le sami o loo i luga o laulau ma faapipii i luga o le laupapa, e te silafia pe vaaia nisi o nei manulele i tou afioaga i le sami poo fanua?

O a igoa tou te faaogaina mo nei manulele?

Faamolemole, tusi igoa o manulele i pepa ua auina atu ma faapipii i le ata saó.

Second session: Discussion about seabird knowledge in communities = Lesona lua: Faafesoaá le tomaí e uiga i manulele o le sami i totonu o afioaga ma alalafaga.

1. Are you aware of which birds are breeding in your communities, what locations. Mark on maps provided.

E te silafia o a manu o le tautuufua i le tou alalafaga?

Maka i luga o le faafanua ua tuina atu.

2. Have you noticed any changes in numbers or types of seabirds in your communities e.g. are there any missing that used to be there and are not there now or changes in numbers of birds?

Ua tou maitauina ua iai ni suiga i fainumera poo ituaiga manulele o le sami i tou alalafaga.

Faataitaiga. Ua iai ni manulele sa iai ae ua le toe vaaia. Suiga i fainumera o manulele?

3. Are you aware of where seabirds used to breed in the past but aren't there anymore? Mark on maps if possible.

O e silafiaina ni nofoaga sa tuufua ai nei manulele o le sami i aso anamua ae ua le toe iai i le taimi nei? Maka i luga o le faafanua pe a fai e iai.

4. Are you aware of birds that breed in burrows in forested areas?

O e silafiaina ni manulele e tuufua i le vaomatua?

5. If so, where? Please mark on maps.

A iai, faamolemole maka i luga o faafanua.

6. Have you noticed any other changes such as breeding times presence of young and eggs) of seabirds?



Ua e molimauina ni suiga i taimi tuufua???

7. What else can you tell us about what you know about seabirds?

O a nisi mea o e silafia e te fia faasoa mai ai ia Matou e uiga i nei manulele o le sami?

TK and culture associated with seabirds.

1. Which seabirds are important in Samoan culture and why?

O a ni manulele o le sami e taua tele i le aganuu faa Samoa? Aisea?

2. Are there stories, songs, dance associated with any seabirds?

E iai ni tala, pese poo ni siva e faatatau i soo se manulele o le sami?

3. Do you have a special association with any seabirds in your community e.g. totems?

E iai sou sootaga faapitoa i soo se manulele o le sami i lou alalafaga?



Annex 4: Plenary Session Feedbacks

Table 1. Feedback and information from local community representatives

Group	Facilitators	Feedback Notes from Community Members
1 - Manono-Tai	Finia Male & Vatapuia Maiava	<ul style="list-style-type: none"> Community members do not know the names for different species of seabirds. Despite differences in species, all birds are classified by their Samoan name e.g. All tropicbirds are Tava'e, all noddy's are Gogo's etc. Gogo-sina is usually seen out in the ocean and indicates to the fishermen the presence of the Masimasi (Mahimahi) fish. Tuli are seen out in the ocean a lot and can be distinguished by long legs. This led to the members believing that all seabirds with long skinny legs are Tuli. Gogo is distinguished by their tail. A high population of Gogo's in one area indicates to fishermen that there is a large school of fish in the area – mostly the Agae (Mullet fish). According to the members, they have never spotted the Ta'i'o on their island. The Atafa (Frigatebird) indicates that a storm is near/approaching. Cultural importance of the Gogo: When mentioned in the community context, it is used to portray the conclusion of a fruitful discussion. Cultural importance of the Tavae: Tavae is mentioned when explaining how chiefs of the village travel to neighboring villages to deliver a feau (chore or message). "Ua lele le tava'e e momoli le feau" (The tava'e has flown to deliver the message/chore). This is why many boats are named after the boat as it is a form of transport to deliver a chore or message. Tuli is sometimes used in sentences to make proud statements "O a'u lava le tuli" (I am the best) Fishermen from Manono rely heavily on seabirds for their fishing activities.
2 - Uafato and Lalomanu	Faleafaga Tony Tipama'a & Evangel Esera	<ul style="list-style-type: none"> Community member identifies all the seabirds as "ta'i'o and fua'o" These seabirds indicates to fishermen the fish areas When a tuli is seen moving/flying inland/to the forest it indicates that something will happen-most likely someone will pass away. Tuli is used in some Samoan proverbs; "E lele le tuli ma vivi'i ona vae" ("Boasting about one's achievements") Community do not know much about seabird as majority of them are not fishermen. Atafa (frigate bird) indicates that a cyclone is coming. Seabirds are mention in some old Samoan music Manusina (white tern) is used in the Samoan saying, "Ua 'ae i Tuasivi, faiva o Manusina" ("An event has been successful") "E mamae le tavae i ona fulu", Samoan saying using the tava'e bird roughly translates to "If the feathers of the Tavae are removed, the bird loses its inability to fly".



3 - Aleipata District and Vailele-Tai	Francine Elisaia	<ul style="list-style-type: none"> • Frigate bird is an indicator of strong winds/storm • Gogo is an indicator of fishing area (kuliga aku). Is it also used in a Samoan saying, "Ua lele le gogo ma saga 'ia" ("After achieving an award, one is free to go – in terms of birds, the gogo has caught a fish and flies away with it"). • Gogo is referred to as "luamagu", an indicator of fishing area as well. It is associated with the Samoan saying, "Ua lupepe le kaumagu ula" ("When seabirds fly above the sea, it indicates that there is a school of fish in the area") and "Ua a'e I kuasivi le fagokaga a le Manusina" ("A song called, "Sau funa sina" ("Sina is coming") is also associated with this bird.
4 - Lalomanu	Czarina Stowers	<p><u>Activity 1</u></p> <ul style="list-style-type: none"> • Manusina (white tern) is used to make pa fagota ("fishing fence"). It is also used in Samoan saying; • "E manusina le soa lau saunioaga" ("When something is said but doesn't make sense or is unimportant") • "Ua ae I tuasivi faiva o manusina" (" • Gogo (terns and noddies) is a sign of the presences of the atule fish • When atafa (frigate bird) is seen in a flock it is a sign of cyclone. • Tava'e is used in Samoan saying, "E mamae le tavae i ona fulu" ("If the feathers of a Tavae are removed, they lose their ability to fly – the Tavae need its feathers to fly") • Lalomanu: Tapaga (a part of Lalomanu village) used to be the home for seabirds due to its pristine forest. The name of the village, "Lalomanu" is derived from the idea of humans living alone the coast while the birds live on the plants <p><u>Activity 2</u></p> <ul style="list-style-type: none"> • Villages – Lalomanu, Maninoa Siumu, Satitoa, Lotopu'e. • Names – Kamuta, Fai fa'atoaga, fai faiva, taulasea • Community rep seen the effect of myna bird on the nesting place of seabird. Mix rat poison with coconut (penu) and feed it to the myna to kill it. • Matu'u (reef egret) and frigatebird populations seem to have declined • Drop in fua'o (boobies) and gogo (terns and noddies) populations <p><u>Traditional Knowledge</u></p> <ul style="list-style-type: none"> • Fua'o nest on the Aleipata islands, potentially on rock while gogo-uli (bridled tern) is believed to nest along the coast • Advice to visit Fanuatapu offshore island where seabird were recorded years ago • Advice to eradicate invasive species in order to conserve seabirds



5 - Manono Tai and Apolima	Moeumu Uili	<p><u>Session 1</u></p> <ul style="list-style-type: none"> Responses to this activity were mostly verbal and a general discussion was made between members of the group and the facilitator about their own naming given to each seabird photo. Interestingly, most seabird photos have been given the same Samoan name. These names were all shared on the wall for viewing and comments by others. For example, the name Ta'io was given to 4-5 different species.
		<p><u>Session 2</u></p> <ul style="list-style-type: none"> Fua'o or Boobies have been observed breeding on the ground at Apolima Tai. Manupapa or ground nesting birds are known scientifically as those of sheawaters and petrels however, the locals in this group seemed to be slightly confused and mixed up. Although they also refer to these birds as the Fua'o or boobies. There was a fair amount of time allocated to discussing which species is actually the tree nesting and the ground nesting. In the end, Fua'o is the common species seen and known by the members in our group which is comprised of representatives from Manono Tai and Apolima Tai. The boobies are also reported with a slow decline in numbers in addition to a change in their nesting grounds from the flat rocks on the summit to the cliffs on the edges of the island. There are no reports of any burrow nesting birds in the forested areas of both communities. For boobies, the Apolima Tai communities harvest them around October when they have finished breeding and young birds are on the nest. According to these communities, the ground nesting and the boobies young birds are the most acquired during this time of the year because of their taste. While they are still young, their flesh is softer to the taste compared to adult birds who are more rough and not as juicy.
		<p><u>Traditional Knowledge and culturally associated nature of seabirds</u></p> <ul style="list-style-type: none"> The presence of Atafa or frigatebirds in the sky is an indication of strong gusty winds, and technically the only bird species you see flying freely before, during and after a cyclone. The proverb "Ua lupepe le taumanu'ula" which is also mentioned in Samoan melodies a sign that the fishes are present and close. This is an indication that an event is soon to happen or currently happening. Tava'esina or Manusina – White Tern, is the name given to the long racing canoe from Manono Tai.



Annex 5: Reported Seabirds of Samoa and their local names

	Local Name	English Name	Scientific Name
1	Laia	Blue Noddy	<i>Procelsterna cerulea</i>
2	Gogo	Brown Noddy	<i>Anous stolidus</i>
3	Gogo	Black Noddy	<i>Anous minutus</i>
4	Gogo	Crested Tern	<i>Sterna bergii</i>
5	Gogo	Black-naped Tern	<i>Sterna sumatrana</i>
6	Gogo	Sooty tern	<i>Sterna fuscata</i>
7	Gogo Uli	Bridled Tern	<i>Sterna anaethetus</i>
8	Manusina	White Tern	<i>Gygis alba</i>
9	Atafa	Great Frigatebird	<i>Fregata minor</i>
10	Atafa	Lesser Frigatebird	<i>Fregata ariel</i>
11	No Samoan name	Pomarine Skua	<i>Stercorarius pomarinus</i>
12	Tava'e	White-tailed Tropicbird	<i>Phaethon lepturus</i>
13	Tava'e'ula	Red-tailed Tropicbird	<i>Phaethon rubricauda</i>
14	Fua'o	Masked Booby	<i>Sula dactylatra</i>
15	Fua'o	Brown Booby	<i>Sula leucogaster</i>
17	Fua'o	Red-footed Booby	<i>Sula sula</i>
18	Ta'i'o	Wedge-tailed Shearwater	<i>Ardenna pacifica</i>
19	Ta'i'o	Sooty Shearwater	<i>Ardenna grisea</i>
20	Ta'i'o	Short-tailed Shearwater	<i>Ardenna tenuirostris</i>
21	Ta'i'o	Buller's Shearwater	<i>Ardenna bulleri</i>
22	Ta'i'o	Flesh-footed Shearwater	<i>Ardenna carneipes</i>
23	Ta'i'o	Tropical Shearwater	<i>Puffinus dichrous polynesiae</i>
24	Ta'i'o	Tahiti Petrel	<i>Pseudobulweria rostrata</i>
25	Ta'i'o	Mottled Petrel	<i>Pterodroma inexpectata</i>
26	Ta'i'o	Black-winged Petrel	<i>Pterodroma nigripennis</i>
27	Ta'i'o	Polynesian Storm-petrel	<i>Nesofregetta fuliginosa</i>
28	Ta'i'o	Samoa Storm-petrel	<i>Fregetta lineata</i>





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