



Report: IHO Technical Assessment Visit to Samoa 8-12 August 2016

1. Adam Greenland, National Hydrographer, and Stuart Caie, Senior Hydrographic Surveyor, Land Information New Zealand (LINZ), the New Zealand Hydrographic Authority, undertook a technical assessment visit to Samoa from 8 to 12 August 2016 on behalf of the International Hydrographic Organization (IHO).

Introduction

2. The IHO is an intergovernmental technical organization, comprising 85 Member States. The IHO seeks to ensure that all States with coast lines and maritime interests provide adequate and timely hydrographic data, products and services, thereby advancing maritime safety and efficiency in support of the protection and sustainable use of the marine environment. The IHO is the recognized competent authority of the United Nations for hydrography and nautical charting.

Background

3. Samoa is located approximately halfway between Hawaii and New Zealand. The total land area is 2,842km² consisting of two large islands, Upolu and Savai'i, separated by the Apolima Strait and connected by a regular ferry service. The Samoan islands have volcanic origins, with Savai'i still volcanically active, with the last eruption in 1911.

4. Samoa has the smallest Exclusive Economic Zone in the Pacific at 98,500km².

5. Samoa is vulnerable to natural disaster, with approximately 70% of the population and transport infrastructure located in low lying coastal areas. In 2009 an 8.1 magnitude earthquake occurred south of Samoa creating a tsunami that caused widespread destruction along the coast, with waves exceeding 10m in height. Samoa has also been affected by cyclones, the most recent being Cyclone Amos in April 2016.

6. In 1997 Samoa signed the International Maritime Organization (IMO) International Convention for the Safety of Life at Sea (SOLAS).

7. New Zealand is Samoa's principal trading partner, typically providing between 35% and 40% of imports and purchasing 45% to 50% of exports. Australia, American Samoa, the United States, and Fiji are also important trading partners. Main imports are food and beverages, industrial supplies, and fuels; and principal exports are coconut products and fish.

8. In 2014 Samoa signed the Statutes of the South West Hydrographic Commission (SWPHC).



Relationship with New Zealand

9. The western Samoan islands were governed by the German Empire from 1900 to 1914. Following the First World War, Samoa was under the trusteeship of New Zealand from 1919 until it became independent in 1962 – the first Pacific island country to achieve independence. Samoa doesn't have its own military forces. New Zealand's air force is involved with maritime surveillance over Samoa's Exclusive Economic Zone (EEZ), often with Samoan officials on board. In addition New Zealand Air Force planes and Navy vessels make regular visits to Samoa.

10. The New Zealand area of charting coverage in the South West Pacific includes Samoa. Under this relationship, LINZ, the New Zealand Hydrographic Authority, has a longstanding informal arrangement to provide charting services to Samoa.

Existing Chart Coverage

11. New Zealand paper chart coverage of Samoa includes four small scale planning charts (two of scale 1:10,000,000 and two of 1:3,500,000); one medium scale chart (scale 1:500,000); and six large scale charts (two of scale 1:50,000, three of scale 1:10,000, and one sheet of plans of scales generally larger than 1:50,000 all in fathoms and on old or undetermined datums). Raster Navigational Charts (RNC) are available for all paper charts with the exception of those plans in fathoms. Full details of the paper chart coverage are shown in Annex A to this report.

12. Electronic Navigational Charts (ENC) coverage is now required to support recent amendments to SOLAS concerning the use of Electronic Chart Display and Information Systems (ECDIS) in ships. ENCs of Samoa have been created based on the existing New Zealand paper charts, with the exception of those in fathoms and on old or undetermined datums, and are available to the mariner worldwide through the established global chart distribution services. Details are shown in Annex A.

Current Developments

13. The Ministry of Works, Transport and Infrastructure (MWTI) is the competent authority responsible for SOLAS.

14. In 2015 the Ministry of Natural Resources and Environment (MNRE) commissioned a LiDAR survey as part of their Climate Change Resilience Project. Data was collected over the entire island and extended offshore to approximately the 50m water depth contour.

15. The Samoa Ports Authority (SPA), a State Owned Enterprise, has commenced a port development at port of Apia which is expected to be completed by June 2018. The new development will enable cruise ships of >300m in length to visit Samoa. There are also long term plans to develop a port at Vaiusu Bay, adjacent to Apia, for international trade. The redeveloped Apia port will focus on domestic traffic and cruise passengers; and cater for a forecast increase in throughput of containers as trade grows.

Visit

16. The New Zealand High Commission in Samoa ensured that all relevant Ministers and Department officials were aware of the visit and prepared to meet with the visiting team. Meetings were arranged with representatives from the organizations listed in Annex B to this report. Full contact details of those attending meetings are shown in Annex C to this report.

17. The purpose of the technical visit was explained with the aid of a presentation outlining Samoa's SOLAS obligations which led to discussions on the general status of hydrography and charting in Samoa. Capacity building opportunities were discussed. The presentation is attached.

Additional Information

18. Information about the current status and charting history of Samoa was obtained from LINZ, the New Zealand Hydrographic Authority.

Findings

19. Although aware of the States obligations under SOLAS V/9 and V/4, the Government and its Administration recognized the need to build capacity and capability to ensure these obligations are fully met.

20. There are a number of Government agencies and departments that have an interest in hydrography and could potentially be part of a National Hydrographic Committee (NHC), namely:

- Ministry of Works, Transport and Infrastructure (MWTI)
- Ministry of Natural Resources and Environment (MNRE)
- Ministry of Commerce, Industry and Labour (MCIL)
- Ministry of Agriculture and Fisheries (MAF)
- Ministry of Police (MoP)
- Ministry of Finance (MoF)
- Samoa Ports Authority (SPA)
- Samoa Shipping Corporation (SSC)
- Samoa Tourism Authority (STA)
- School of Maritime Training, National University of Samoa (NUS)

21. Records show that the last comprehensive and systematic hydrographic survey was conducted in 2008 by the Royal New Zealand Navy (RNZN) under contract to LINZ. This survey, of the Apolima Strait, resulted in new charts at scales of 1:50,000 and 1:10,000 covering the domestic ferry route and wharves at Mulifanua and Salelologa harbours.

22. In 2014 the RNZN undertook sketch surveys of a number of bays and harbours currently shown in fathoms and on old or undetermined datums.

23. There is no hydrographic capability in Samoa.

24. The majority of traffic passes along the north coast of Upolu, transiting between Apia and Pago Pago in American Samoa. Traffic to/from Fiji passes through the Apolima Strait, between Savai'i and Upolu.

25. A number of small boutique cruise ships visit Fagamalo, east of Matautu Bay on the north coast of Savai'i, currently charted at a scale of 1:50,000, on WGS84. Vessels stand-off and transfer passengers by tenders to a holiday resort at Fagamalo. Larger cruise ships do the same off Tafitoala, on the south coast of Upolu, which is charted at 1:500,000. Occasionally small cruise ships call in to Salelologa, Savai'i. Currently 17-20 cruise ship port calls are made to Apia each year.

26. The World Bank programme 'Pacific Possible' is focused on "transformative opportunities" for Pacific Island Countries and identifies seven focus areas, one of which is tourism. 'Home porting (basing)' will see the placement of a cruise service in Fiji to provide services to islands east of Fiji and beyond the usual 3-5 day cruises from Australia and New Zealand. The intention is to service the Cook Islands, Samoa and others (<http://www.worldbank.org/en/country/pacificislands/brief/pacific-possible>).

27. Nautical charts of Samoa are not readily available locally because there is no recognized chart agent in Samoa. All Samoa chart users' requirements must be sourced from agents in New Zealand or elsewhere in the world.

28. The table below lists Samoa's attendance at workshops and courses, funded through IHO and IMO capacity building programmes.

Year	Type	Event	Where	Who
2010	MSI Short Course	Maritime Safety Information Training Course	Australia	Kalolo Bartley
2012	Technical Workshop	Ports and Shallow Water Bathymetry	Australia	TafaigataToilolo
	Meeting	SWPHC 11th Meeting	Australia	TafaigataToilolo
2014	IMO Regional Course	Basic Hydrography and Hydrographic Governance	Fiji	NaumaAisiga
	MSI Short Course	Maritime Safety Information Training Course	New Zealand	TafaigataToilolo
2015	Technical Workshop	Tides & Water Levels	Australia	IosefaUlale
	Technical Workshop	Hydrography Governance	Cook Islands	TafaigataToilolo
	Meeting	SWPHC 12th Meeting	Cook Islands	TafaigataToilolo
2016	MSI Short Course	Maritime Safety Information Training Course	New Zealand	EtualeTolo

29. It was noted that although Samoa has attended capacity building activities over the years, knowledge transfer outside of the organisation attending is limited following the activity. Requests to consider holding in-country training for a wider audience were made by the MWTI, MNRE, SPA and SSC.

30. In 2015 the School of Maritime Training at the National University of Samoa (NUS), was opened.

Although not fully operational at the time of the visit, the buildings will provide an excellent facility for in-country training opportunities.

31. No National MSI Coordinator has been identified to collate and promulgate new and important navigation information through the relevant channels. There is limited liaison between maritime authorities in Samoa and LINZ as compilers and maintainers of the charts of Samoa.

32. GMDSS Status. NZ, through the NAVAREA XIV Coordinator and MNZ RCCNZ, provides navigation warnings via Safety NET (POR) and SAR assistance to Samoa, respectively. The table below represents Samoa's ability to deliver MSI without the assistance of NZ.

Master Plan	A1 Area	A2 Area	A3 Area	NAVTEX	SafetyNET
No	No	No	No	No	No

33. The Samoa Ports Authority is responsible for the Apia, Asau and Satitua harbours. Although Asau is not used at the moment, there are intentions to use it for fishing vessels and cruise ships. The Samoa Shipping Corporation is responsible for Salelologa and Mulifanua harbours as the main domestic ferry route operator.

34. The Samoa Shipping Corporation voiced concerns about the accuracy of the charts covering Mulifanua harbour, as their local knowledge has identified changes to the channel which means the existing leading line is incorrect. In addition, new AtoNs have been installed but are not charted, despite information being passed to the competent authority.

35. The Maritime Unit of the Samoa Police Force provides border and fishery protection and SAR services with one vessel. This vessel is due to be replaced in 2020 by one donated through the Australian Pacific Maritime Security Programme. Maritime New Zealand, through the Rescue Coordination Centre New Zealand (RCCNZ), provides SAR assistance and training.

36. Samoa has published a number of strategic documents that direct the countries development:

- a. *Strategy for the Development of Samoa, 2012-2016* published by the Ministry of Finance presents the key development strategies and priority sectors for the development of Samoa, with a focus on strengthening economic resilience; and
- b. the *Transport Sector Plan 2014-2019* published by the Ministry of Works, Transport and Infrastructure which provides a coordinated planning framework promoting a whole of Government perspective in the prioritisation and funding in the transport sector.

Conclusions

37. To support Samoa in meeting its international treaty obligations under SOLAS V/9, a bilateral arrangement with LINZ for the provision of hydrographic services is seen as the most logical and effective approach.

38. A bilateral arrangement should include opportunities to build on existing capacity and capability to enable Samoa meet these obligations.

39. There is a need for a coordinated approach to collecting and disseminating safety-critical information.

40. Priority should be given to IHO Phase 1 Capacity Building; to formally designating a National MSI Coordinator. This would enable navigationally significant information to be *collected* and subsequently *promulgated*; both through immediate warnings to shipping when warranted, and through the incorporation of new or revised information in existing published charts.

41. IHO Phase 2 & 3 Capacity Building; the development of an in-country hydrographic surveying and charting capability, may be considered as part of a longer term strategy by the Government of Samoa.

42. Noting that MWTI and MNRE have significant topographic mapping/GIS capabilities, Samoa should continue to rely on LINZ to publish official nautical charts for the foreseeable future. It is for Samoa to consider and prioritise capacity building needs to meet their obligations; and for LINZ to support and enable this through a bilateral arrangement. However, there is a fundamental obligation on Samoa to ensure that LINZ is provided with all the relevant information required for inclusion in those charts.

43. Samoa holds a significant LiDAR dataset collected as part of the Climate Change Resilience Project,

which would greatly improve the quality of Samoa's nautical charts.

Recommendations

44. Based on the discussions held and from the information provided, the relevant Samoa authorities should consider the following actions:

- a. **The Government of Samoa** to ratify its status as an associate member (as a non-IHO-Member State) of the South West Pacific Hydrographic Commission (SWPHC) and attend the next meeting in Nouméa, New Caledonia 30 November – 2 December 2016.
- b. **The Government of Samoa** to formally establish a national hydrographic governance structure, to ensure the provision of hydrographic services in accordance with the International Convention for the Safety of Life at Sea (SOLAS) and contemporary international practice. The national framework should establish:
 1. a National MSI Coordinator position;
 2. a minimum level of in-country MSI capability; and
 3. a bilateral arrangement with LINZ, the New Zealand Hydrographic Authority, for the provision of hydrographic services.
- c. **The Government of Samoa** to establish a close liaison with LINZ to ensure navigationally significant information is forwarded and included in existing charts of the country;
- d. **The Government of Samoa** to form a National Hydrographic Committee to coordinate national hydrographic requirements. This committee should include representation from all stakeholder groups, including but not limited to: Ministry of Works, Transport and Infrastructure; Ministry of Natural Resource and Environment; Ministry of Agriculture and Fisheries; Ministry of Finance; Ministry of Police; Samoa Ports Authority; Samoa Shipping Corporation; Samoa Tourism Authority; SPC and other potential assistance agencies;
- e. **The Government of Samoa** to consider including Safety-of-Navigation requirements in future versions of the *Transport Sector Plan* and *Strategy for the Development of Samoa*; and
- f. **The Government of Samoa** to compile information for the IHO Yearbook and submit to the IHO Secretariat using [http://iho.int/iho_pubs/periodical/P5YEARBOOK_ANNUAIRE.pdf], using template at Annex D.

SAMOA CHARTING COVERAGE

Chart Number	Title	Date	Plans	Scale	ENC
NZ 86	Samoa Islands	Oct 93(F)* Jun 10(M)	N/A	500 000	NZ300086
NZ 861	Plans in Samoa	Jun 10(F)*	Satupa'itea Road	50 000	N/A
			Falealupo Road	25 000	N/A
			Sala'ilua Bay	50 000	N/A
			Vailele Bay	20 050	N/A
			Falefa Harbour	39 030	N/A
			Uafato Bay	12 260	N/A
			Falealili Harbour	33 300	N/A
			Safata Harbour	27 920	N/A
			Saoluafata Harbour	25 000	N/A
			Fagaloa Bay	25 000	N/A
Fagali'i Bay	24 270	N/A			
NZ864	Apolima Strait	Oct 93(F)* Jun 10(M)	Apolima Strait	50 000	NZ400864
			Matautu Bay	50 000	NZ408641
NZ 865	Approaches to Apia	Oct 93(F)* Jun 10(M)	N/A	50 000	NZ400865
NZ 1414	Asau Harbour	Oct 80 (M)*	N/A	10 000	N/A
NZ 8645	Plans in Apolima Strait	Oct 93(F)* Jun 10(M)	Mulifanua Harbour	10 000	NZ586451
			Salelologa Harbour	10 000	NZ508645
NZ 8655	Apia Harbour	Oct 93(F)* Jun 10(M)	N/A	7 500	NZ508655

*Complied from previously published BA charts
(F) indicates the first time it was published as a NZ chart in fathoms
(M) indicates the first time it was published as a NZ chart in metres

Detailed information of the full NZ chart folio can be found on the LINZ website at:
<http://www.linz.govt.nz/sea/charts/paper-charts/nz202-chart-catalogue>

NZMariner is the product name of New Zealand's Official RNC folio, and is available for download from the LINZ website at: <http://www.linz.govt.nz/sea/charts/nzmariner-official-raster-navigational-charts-rncs>

NZENCs – New Zealand ENC cells, prefixed by 'NZ', are available from chart retailers through the International Centre for ENCs (IC-ENC) www.ic-enc.org and PRIMAR global distribution network www.primar.org. For more information see <http://www.linz.govt.nz/sea/charts/electronic-navigational-charts-encs>

IN-COUNTRY MEETINGS

8th – 12th August 2016

Monday 8th August – Individual Presentation & Briefing

New Zealand High Commission
Ministry of Finance
Ministry of Foreign Affairs and Trade
Ministry of the Prime Minister and Cabinet
Ministry of Works, Transport and Infrastructure

Tuesday 9th August – Individual Presentation & Briefing

Ministry of Natural Resources and Environment
Ministry of Agriculture and Fisheries
Ministry of Revenue – Customs
Samoa Ports Authority
Samoa Shipping Corporation

Wednesday 10th August – Individual Presentation & Briefing

Ministry of Police
Ministry of Commerce, Industry and Labour
Samoa Tourism Authority
Ministry of Communications and Information Technology
National University of Samoa (NUS), Faculty of Applied Science, School of Maritime Training

Thursday 11th August – Individual and Wrap-up Presentations

Ministry of Commerce, Industry and Labour
Ministry of Prime Minister and Cabinet
National University of Samoa (NUS), Faculty of Applied Science, School of Maritime Training
Samoa Ports Authority
Samoa Shipping Corporation
Samoa Tourism Authority
Ministry of Natural Resources and Environment
Ministry of Works, Transport and Infrastructure
Samoa Shipping Services

Friday 12th August – Briefing and Wrap-up Presentations

New Zealand High Commission
Ministry of Works, Transport and Infrastructure
Samoa Shipping Service Ltd
Samoa Ports Authority

LIST OF CONTACTS

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	Suafo'a JK Meredith Crewing Manager	

IHO Year Book Template

IHO/OHI Yearbook/Annuaire/Anuario	
Country name / nom du pays	
Agency name / nom d'agence:	
Contact information/ Informations de contact / Información de contacto	
-National Hydrographer or equivalent -Directeur du service hydrographique ou équivalent -Director del Servicio Hidrográfico o equivalente	Post: Name: Postal address: Tel: Fax: Email:
-Head of the Hydrographic Office (if different from the person indicated above) -Directeur du Service Hydrographique (si différent de la personne indiquée ci-dessus) -Director del Servicio Hidrográfico (si diferente de la persona indicada anteriormente)	Post: Name: Postal address: Tel: Fax: Email:
-Other point(s) of contact -Autre(s) point(s) de contact -Otro punto(s) de contacto	
-Web site -site web -sitio web	
Country information / Informations sur le pays/ Información sobre el país	
-Declared National Tonnage -Tonnage national déclaré -Tonelaje Nacional Declarado	Tonnage: Date:
-National day -Fête nationale -Fiesta nacional	
-Date of establishment and Relevant National Legislation -Date de mise en place et législation nationale pertinente -Fecha de constitución y legislación nacional pertinente	
-Date first joined IHO -Date d'adhésion à l'OHI -Fecha de adhesión a la OHI	

-Date ratification Convention -Date de ratification de la Convention -Fecha de ratificación de la Convención	
-Remarks on membership -Remarques sur l'adhésion -Comentariossobre la adhesión	
Agency information/ Information sur l'agence/ Informaciónsobre la agencia	
-Top level parent organisation -Organismemère -Organizaciónasocieda de nivel superior	
-Principal functions of the organisation or the department -Attribution principales de l'organismeou du département -Principalesfunciones de la Organización o departamento	
-Annual operating budget -Budget annuel -presupuestoanual	
-Total number of staff employed -Effectifstotaux -Número total de personal empleado	
-Number of INT charts published -Nombres de cartes INT publiées -Número de cartas INT publicadas	
-Total number of paper charts published -Nombre total de cartes papier publiées -Número total de cartas de papelpublicadas	
-Number of ENC cells published -Nombres de cellules ENC publiées -Número de células ENC publicadas	
-Number of Other charts -Nombred'Autrescartes -Número de Otras cartas	

-Type of publications produced -Type d'ouvrages produits -Tipo de publicaciones producidas			
-Detail of surveying vessels/ aircraft -Détail des bâtiments hydrographiques / aéronefs -Detalle de los buques hidrográficos / aeronaves	-Name -Nom -Nombre	-Displacement -Déplacement - Desplazamiento	-Date Launched -Date de mise en service -Fecha de botado
-Other information of interest -Autres informations utiles -Otra información de interés			