



## Report: IHO Technical Assessment Visit to Niue 1-5 February 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 Niue from 1 to 5 February 2016 on behalf of the International Hydrographic Organization (IHO).

### Introduction

2. The IHO is an intergovernmental technical organisation, comprising 85 Member States. The IHO seeks to ensure that all States with coastlines 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 recognised competent authority of the United Nations for hydrography and nautical charting. The International Hydrographic Bureau (IHB), based in Monaco, provides the secretariat function for the IHO.

3. Through the NZ led Pacific Regional Navigation Initiative (PRNI) the Technical Visit Team was able to conduct this IHO Technical Visit. PRNI is a 5 year programme focusing on navigation-related aspects of maritime safety. It is a partnership between NZ Ministry of Foreign Affairs and Trade (MFAT), Land Information New Zealand (LINZ) and the Secretariat of the Pacific Community (SPC).

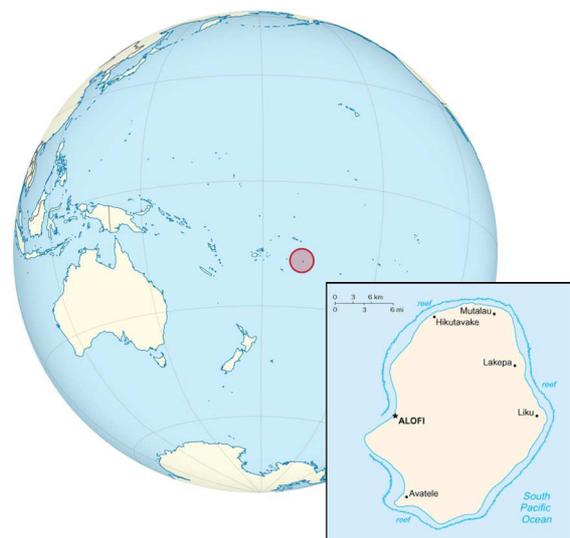
### Background

4. Located approximately 230NM east of Tonga, Niue is the largest raised coral atoll in the world. It is a single island nation with a land area of 260km<sup>2</sup> and an EEZ of 390,000km<sup>2</sup>. The terrain consists of steep cliffs rising to 30-40m above sea level along the coast with a central plateau approximately 60m above sea level. The island is surrounded by coral reef extending 10-30m from the cliffs, with occasional passages on the western coast. There are three outlying coral reefs within the EEZ; Beveridge Reef (130M SE of Niue), an environmentally significant feature that is the subject of international interest; Antiope Reef (90NM NE); and Harans Reef (158NM SSE).

5. In 2004 Cyclone Heta, a Category 5 tropical cyclone caused catastrophic damage to Niue. Houses atop 30m high cliffs or 100m inland were destroyed by waves generated by the cyclone.

6. Niue is not a member of the United Nations but UN organisations have accepted its status as a freely-associated state as equivalent to independence for the purposes of international law. In 2012 Niue signed the International Maritime Organization (IMO) International Convention for the Safety of Life at Sea (SOLAS).

7. Niue's economy is fragile and faces many constraints including limited land, poor soil, limited air service, a shortage of skilled professionals and entrepreneurs, and a declining population. Niue depends on imported fuel and food to supplement its subsistence agriculture and fishing, and this is reflected in its trading relationship with



New Zealand. Tourism accounts for approximately 30% of GDP. Key exports that contribute to GDP include Nonu fruit juice and honey.

8. In 2012 Niue signed the Statutes of the South West Hydrographic Commission (SWPHC).

### **Relationship with New Zealand**

9. Niue became a British Protectorate in 1900 and was annexed to New Zealand in 1901. In 1974 the people of Niue adopted a Constitution providing for self-government in free association with New Zealand. Under the Niue Constitution, New Zealand provides necessary economic and administrative assistance, and is responsible for Niue's defence and surveillance of its Exclusive Economic Zone (EEZ).

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

11. New Zealand joined the IHO in 1967 and recent advice from the MFAT is that New Zealand's IHO membership does not include Niue.

### **Existing Chart Coverage**

12. New Zealand paper chart coverage of Niue includes three small scale planning charts (one of scale 1:10,000,000 and two of 1:3,500,000); one medium scale plan of Niue (scale 1:150,000); and two large scale plans of Alofi Anchorage and Alofi Wharf (1:6,000 and 1:1,000 respectively). Raster Navigational Charts (RNC) are available for all paper charts. Full details of the paper chart coverage are shown in Annex A to this report.

13. 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 Niue have been created based on the existing New Zealand paper charts and are available to the mariner worldwide through the established global chart distribution services. Details are shown in Annex A.

### **Current Developments**

14. The following government departments and agencies have an interest in the maritime domain:

- a. Ministry of Infrastructure: Communications, Transport and Utilities
- b. Ministry of Social Services: Department of Justice, Lands & Survey
- c. Ministry of Natural Resources: Agriculture, Forestry and Fisheries; Environment; and Meteorological Services
- d. Police
- e. Crown Law

15. Although a small nation, Niue has a relatively large EEZ encompassing Beveridge Reef, an environmentally significant feature that is the subject of international interest. The Government recognises the importance of marine spatial planning and is involved in a joint private/government funded project to conserve and sustainably manage Niue's waters.

16. A sea level monitoring station was installed at Alofi in 2015 as part of the Pacific Sea Level Monitoring Project, operated by the Bureau of Meteorology under the Climate and Oceans Support Program in the Pacific (COSPPac).

17. In 2011 the Government of Niue commissioned a study to investigate options to develop a new wharf and marina adjacent to the existing wharf at Alofi. Further wave modelling and funding is required before a decision is taken to whether to proceed with a preferred option.

18. In 2014 the Public Works Department, Ministry of Infrastructure, commissioned a study to determine necessary works required to repair the undermining of the existing wharf. Repair works were undertaken the same year. Further repairs are needed to arrest continued undermining and erosion of the wharf structure.

### **Visit**

19. The New Zealand High Commission in Niue 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.

20. The purpose of the technical visit was explained with the aid of a presentation outlining Niue’s SOLAS obligations and the PRNI programme of works, which led to discussions on the general status of hydrography and charting in Niue. Capacity building opportunities were discussed and a high level action plan agreed. The presentations are attached.

### Additional Information

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

### Findings

22. The Government and its Administration were largely unaware of the role of hydrography, the importance of nautical charting or the State’s obligations under SOLAS V/9 and SOLAS V/4.

23. 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 Infrastructure: Communications, Transport and Utilities
- Ministry of Social Services: Department of Justice, Lands & Survey
- Ministry of Natural Resources: Department of Agriculture, Forestry and Fisheries; Environment; and Meteorological Services
- Finance and Planning
- Niue Police
- Niue Disaster Council
- Niue Tourism

24. Records show that many of the hydrographic surveys of Niue were conducted some years ago and include data of limited hydrographic quality including ocean passage sounding sheets and adoptions from old Admiralty charts in fathoms and feet. The most recent hydrographic survey was a sketch survey of the Alofi wharf, conducted by the Royal New Zealand Navy (RNZN) in 2005.

25. SPC have carried out two multibeam bathymetric surveys in and around Niue; one for scientific purposes in 2005 around the island; the other to investigate options to develop a new wharf and marina at Alofi. These surveys may be of suitable quality to be used to improve the quality of the nautical chart.

26. There is no hydrographic capability in Niue. A sea level monitoring station was installed at Alofi in 2015 as part of the Pacific Sea Level Monitoring Project, operated by the Bureau of Meteorology under the Climate and Oceans Support Program in the Pacific (COSPPac).

27. The majority of traffic passes through Niue waters in an East-West direction, generally transiting between the Cook Islands and Tonga.

28. Niue relies on sea-borne trade to import virtually all of the islands commodities. Containerised cargo is off-loaded via a barge and mobile crane at the Alofi wharf, which is subject to ongoing erosion due to the exposed nature of the structure.

29. A monthly cargo vessel delivers all sea-borne trade. Due to the size of the vessel and sea conditions, the vessel anchors the wharf at Alofi and containers are transferred by boat and barge. A breakdown of imports is provided below. There is no bulk-loading facility nor is there any local trade around Niue.

Year	No. of containers					Weight (kg)
	Reefers	General	Break Bulk	Tanktainer	Vehicle	
2013	24	234	322	150	159	6,895,020
2014	27	269	283	141	146	6,918,531
2015	25	281	412	153	155	7,430,990

30. Although a relatively small share of the tourism market, the cruise ship industry is likely to increase in the future, particularly eco-tourism. An alternative point-of-entry is being investigated at Avatele, SW of Alofi, although the local council is resistant. Currently, cruise ships anchor off Alofi and transfer passengers by tender.

31. Leisure cruising is seasonal and yacht moorings (20) are deployed by the Niue Yacht Club between April and November. In 2011 a study was conducted to extend the Alofi wharf to provide safe access for local fishing

boats (<6m) and constructing a marina. Income from yachts is approx. 2% of the total income of all tourism. The largest yacht to visit Niue is *M5*, a 75m sloop-rigged super yacht.

32. The Ministry of Natural Resources is concerned with illegal fishing activities within Niue’s EEZ. As a consequence, the EEZ maritime boundary should be included on the official nautical charts in order to aid awareness, surveillance and enforcement. Foreign purse-seine fishing vessels operate to the north of Niue but rarely venture inside the Niue EEZ.

33. Three long-line fishing vessels (Fiji registered) are licensed to fish within the Niue EEZ and catch approx. 200 tonnes per year. The vessels operate from Suva, Fiji and generally offload catch in Fiji or Samoa. There are approx. 20 local fishing boats <6m in length generally operating within 3NM of the coast, and one local 10m, 2.5T long-line fishing boat that operates within 12NM of the coast.

34. Artisanal fishing is prevalent in Niue, using single seat outrigger canoes that fish near FADs generally 1-2NM from the coast.

35. Niue Telecom operates the coastal radio station Niue Radio. Operating 24/7, Niue Radio is well placed to fulfill the role of National MSI Coordinator.

36. In 2012 the Niue ship registry was established. The Merchant Shipping (Registration of Foreign Vessels) Act 2012 was enacted by the Government of Niue to allow vessels under foreign ownership to fly the Niue flag. The ship registry is based in Singapore.

37. Nautical charts of Niue are not readily available locally because there is no recognised chart agent in Niue. All Niue chart users’ requirements must be sourced from agents in New Zealand or elsewhere in the world.

38. The table below lists Niue’s attendance at workshops and courses, funded through IHO and IMO capacity building programmes.

Year	Type	Event	Where	Who
2012	Technical Workshop	Ports and Shallow Water Bathymetry	Australia	Richard Siataga
	Meeting	SWPHC 11 <sup>th</sup> Meeting	Australia	Richard Siataga
	Miscellaneous Short Course	IMO Regional Training Course in Hydrographic Surveying	Fiji	Hubert Kalauni
2014	MSI Short Course	Maritime Safety Information Training Course	New Zealand	Richard Siataga
2015	Technical Workshop	Tides & Water Levels	Australia	Lanze Mautama

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

40. With the exception of tsunami and cyclone warnings broadcast by Niue Radio, no other MSI is promulgated by Niue. Niue Telecom, who operate Niue Radio, have not received MSI training.

41. GMDSS Status. NZ, through the NAVAREA XIV Coordinator and RCCNZ, provides navigation warnings via SafetyNET (POR) and SAR assistance to Niue, respectively.

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

42. The Ministry of Infrastructure (Transport), is responsible for maintaining the wharf and channel at Alofi. The Ministry of Natural Resources, Department of Agriculture, Forestry and Fisheries, (DAFF) is responsible for Aids to Navigation (AtoN). In the past, the Department of Justice, Lands and Survey have provided MSI to LINZ for promulgation as Notice to Mariners with respect to AtoN. Currently there are only two AtoN; the lit beacons forming the leading line at Alofi wharf, on the western cost of Niue.

43. The New Zealand Defence Force provides fishery protection services. Maritime New Zealand, through the Rescue Coordination Centre New Zealand (RCCNZ), provides SAR assistance.

## Conclusions

44. Niue is not currently meeting its international treaty obligations to ensure that appropriate hydrographic services are in place.
45. A bilateral arrangement with LINZ for the provision of hydrographic services is seen as the most logical and effective way for Niue to meet their international treaty obligations.
46. Priority should also be given 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.
47. The development of an in-country hydrographic data gathering capability is not currently seen as an economically sustainable option. The RNZN has provided hydrographic surveying services in the past. Technical expertise is offered by LINZ for future scientific surveys of Beveridge Reef i.e. technical specifications for acquisition and delivery of bathymetry and backscatter data to improve the chart coverage and contribute to marine spatial planning.
48. It is unrealistic to consider establishing an in-country chart production facility. Subject to the continuing agreement of LINZ, Niue should rely on LINZ to publish official charts; however, there is a fundamental obligation on Niue to ensure that LINZ is provided with all the relevant information required for inclusion in those charts.

## Recommendations

49. Based on the discussions held and from the information provided, the relevant Niue authorities should consider the following actions:
- a. **The Government of Niue** to ratify 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 Niue** 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 Niue** to establish a close liaison with LINZ to ensure navigationally significant information is forwarded and included in existing charts of the country; and
  - d. **The Government of Niue** 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 Infrastructure: Communications, Transport and Utilities; Ministry of Social Services: Department of Justice, Lands & Survey; Ministry of Natural Resources: Departments of Agriculture, Forestry and Fisheries, Environment, and Meteorological Services; Finance and Planning; Niue Police; Niue Disaster Council; Niue Tourism; provincial representatives; tourism operators; SPC and other potential assistance agencies.
  - e. **The Government of Niue** to compile information for the IHO Yearbook and submit to the IHO Secretariat using [[http://iho.int/iho\\_pubs/periodical/P5YEARBOOK\\_ANNUAIRE.pdf](http://iho.int/iho_pubs/periodical/P5YEARBOOK_ANNUAIRE.pdf)], using template at Annex D.

**NIUE CHARTING COVERAGE**

<b>Chart Number</b>	<b>Title</b>	<b>Date</b>	<b>Plans</b>	<b>Scale</b>	<b>ENC</b>
NZ 14630 (INT 630)	Samoa Islands to Southern Cook Islands	Apr 93 (NC) Apr 97 (NE)	N/A	1:1 500 000	N/A
NZ 14631 (INT 631)	Samoa Islands to Tonga including Niue	Apr 93 (NC) Apr 97 (NE)	N/A	1:1 500 000	NZ214631
NZ 845	Niue	Oct 93 (F)* Jul 96 (M) Apr 09 (NE)	Niue	1:150 000	NZ300845
		Oct 93 (F)* Jul 96 (M) Apr 09 (NE)	Alofi Anchorage	1:6 000	NZ608451
		Jul 96 (NC) Apr 09 (NE)	Alofi Landing	1:1 000	NZ608452

\*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>

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

**IN-COUNTRY MEETINGS**

**1<sup>st</sup> – 5<sup>th</sup> February 2016**

**Monday 1 February - Individual Presentation & Briefing**

New Zealand High Commission

Ministry of Infrastructure: Communications, Transport and Utilities

Ministry of Social Services: Department of Justice, Lands and Surveys

Finance and Planning

**Tuesday 2 February – Individual Presentation & Briefing**

Ministry of Natural Resources: Agriculture, Forestry and Fisheries; Environment; and Meteorological Services

**Wednesday 3 February – Individual Presentation & Briefing**

Crown Law

Telecom Niue

Office of the Premier

Cabinet and Parliamentary Services

**Thursday 4 February – Individual and Wrap-up Presentations & Briefing**

Niue Tourism

Niue Police

Niue Disaster Council

Crown Law

Ministry of Infrastructure: Communications, Transport and Utilities

Finance and Planning

**Friday 5 February – Briefing**

New Zealand High Commission

**LIST OF CONTACTS**

<b>Organisation</b>	<b>Contact</b>	<b>Email</b>
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Secretary of Government	Peleni Talagi Attorney General Acting SoG	Peleni.talagi@mail.gov.nu
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Niue Disaster Council	Robin Hekau National Coordinator	Robin.hekau@mail.gov.nu
Finance & Planning	Doreen Siataga Acting on behalf of Financial Secretary	Doreen.siataga@mail.gov.nu
	Poi Kapaga Financial Secretary	Poi.Kapaga@mail.gov.nu
Cabinet & Parliamentary Services	Christine Ioane Director	Christine.Ioane@mail.gov.nu
Niue Tourism	Felicity Bollen Director of Niue Tourism	Felicity.bollen@mail.gov.nu

## IHO Year Book Template

<b>IHO/OHI Yearbook/Annuaire/Anuario</b>	
Country name / nom du pays	
Agency name / nom d'agence:	
<b>Contact information/ Informations de contact / Información de contacto</b>	
-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 -Otros punto(s) de contacto	
-Web site -site web -sitio web	
<b>Country information / Informations sur le pays/ Información sobre el país</b>	
-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 -Comentarios sobre la adhesión	
<b>Agency information/ Information sur l'agence/ Información sobre la agencia</b>	
-Top level parent organisation -Organisme mère -Organización asociada de nivel superior	
-Principal functions of the organisation or the department -Attribution principales de l'organisme ou du département -Principales funciones de la Organización o departamento	
-Annual operating budget -Budget annuel -presupuesto anual	
-Total number of staff employed -Effectifs totaux -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 papel publicadas	
-Number of ENC cells published -Nombres de cellules ENC publiées -Número de células ENC publicadas	
-Number of Other charts -Nombre d'Autres cartes -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			