

COOK ISLANDS



COUNTRY REPORT

Prepared by: Vaipo MATAORA
Director of Civil Works and Hydrography
Infrastructure Cook Islands
vaipo.mataora@cookislands.gov.ck

Table of Contents

1.0 Executive Summary	3
1.01 HYDROGRAPHIC SERVICES	3
1.02 Bilateral Arrangement – CINHS and LINZ	4
2.0 INPUT TO THE IHO PUBLICATION P-5 (YEARBOOK).....	4
3.0 SURVEYS.....	7
3.01 COVERAGE OF NEW SURVEYS	7
3.02 Arorangi Reef Passage.....	7
3.03 Mangaia Island	7
3.04 NEW TECHNOLOGIES/EQUIPMENT	8
3.05 NEW SHIPS.....	8
4.0 NEW CHARTS & UPDATES.....	8
5.0 NEW PUBLICATIONS & UPDATES	9
6.0 MSI.....	9
7.0 S-55	9
8.0 CAPACITY BUILDING.....	10
9.0 OCEANOGRAPHIC ACTIVITIES	11
10.0 OTHER ACTIVITIES.....	11
11.0 CONCLUSIONS.....	11

1.0 EXECUTIVE SUMMARY

1.01 HYDROGRAPHIC SERVICES

The Cook Islands National hydrographic Service and National Coordinating Committee has been established on the 6th September 2016 which the Cook Islands government gave its approval during a cabinet meeting held at parliament chamber, on Tuesday 14 June 2016.

The main government entities involved in the formation and management of hydrographic matters for the Cook Islands are Infrastructure Cook Islands (ICI) and the Ministry of Transport (MoT).

The establishment of the CIHS included the agreement to appoint a Maritime Safety Information (MSI) Coordinator; develop National Hydrographic Regulations and Policies and develop a National Maritime Spatial Data Infrastructure System.

SOLAS Chapter V Regulations 4 and 9 require a Coastal State to ensure Maritime Safety Information (MSI) and hydrographic services are provided.

The Cook Islands National Hydrographic Coordinating Committee (CINHCC) has been formed to ensure consistent and effective oversight of the various elements related to hydrography to enhance and promote safe, efficient and pollution free maritime transport within the Cook Islands.

The composition of the Cook Islands National Hydrographic Coordinating Committee are;

Core Members

- Vaipo Mataora, Director, Civil Works & Hydrography, Infrastructure Cook Islands
- Steve Simpson, Director of Marine, Ministry of Transport
- Saungaki Rasmussen, Harbour Master, Cook Islands Ports Authority

Members

- Jack Numanga , Director of Development, Tourism
- Josh Mitchell, Director United Nations and Treaties, MFAI
- Sonny Tatuava, Senior Fishery Officer, MMR
- Tepaki Baxter, Captain Patrol Boat, Police (Surveillance)

Specifically, the CINHCC will coordinate national hydrographic requirements through:

1. Reviewing and verifying charted information is correct and up to date;
2. Reviewing and verifying information in notices to mariners, sailing directions, lists or lights, etc. related to the Cook Islands is correct and up to date;
3. Verifying processes and procedures for MSI are implemented effectively;
4. Reviewing reports and audits of hydrographic, aids to navigation, MSI or related matters and ensuring action plans are implemented to address findings;
5. Clarifying procedures and processes for implementation of aids to navigation (AtoN) to ensure information is included as MSI / on charts.
6. Reviewing and managing the Memorandum of Understanding (MoU) with Land Information New Zealand (LINZ) with regards to surveys, nautical charts and promulgation of MSI.

1.02 BILATERAL ARRANGEMENT – CINHS AND LINZ

The Bilateral Agreement between the Cook Islands and LINZ were signed on the 14th October 2016 during Stuart Caie’s (LINZ) visit to the Cook Islands on 6th October 2016. Ngametua Pokino Secretary of Infrastructure Cook Islands signed the Bilateral Agreement on behalf of the Cook Islands Government and Stuart Caie representing LINZ. Infrastructure Cook Islands the designated government agency to lead the National Hydrographic Service along with Ministry of Transport are proud of the remarkable achievement the Cook Islands have made in the last 5 to 10 years to pave the way for hydrographic services and the safety of navigation in our international waters.

2.0 INPUT TO THE IHO PUBLICATION P-5 (YEARBOOK)

Country: COOK ISLANDS

Organization: COOK ISLANDS NATIONAL HYDROGRAPHIC SERVICE

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: Director of Civil Work & Hydrography Name: Vaipo Mataora Postal address: Infrastructure Cook Islands Tel: (682) 20321 Fax: (682) 24321 Email: vaipo.mataora@cookislands.gov.ck
-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	
Country information / Informations sur le pays/ Información sobre el país	
-Declared National Tonnage -Tonnage national déclaré -Tonelaje Nacional Declarado	Tonnage: 1,761,784.39 560 Vessels Registered Date:16/11/2016

-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	6th September 2016
-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	
Agency information/ Information sur l'agence/ Información sobre la agencia	
-Top level parent organisation -Organisme mère -Organización asociada de nivel superior	Infrastructure Cook Islands
-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	-Number of crew -Nombre de l'équipage -Tripulación
-Other information of interest				

-Autres informations utiles
-Otra información de interés

3.0 SURVEYS

3.01 COVERAGE OF NEW SURVEYS

3.02 ARORANGI REEF PASSAGE – Post Construction Survey – Surveyed by Discovery Marine Limited.

DML was contracted by CIPA to undertake a post construction survey of a reef passage at Arorangi, located on the Western shoreline of Rarotonga, Cook Islands.

In 2011 DML supervised a pre construction survey of the reef entrance undertaken by Applied Geoscience and Technology Division of SPC (SOPAC). Reference B provides a summary of the work undertaken.

The post construction survey was completed by DML from 8-12 April 2013, following the construction of a jetty and turning basin at the existing reef passage. The aim of the development was to deepen and widen the reef passage, and construct a landing facility for cruise Ship tenders, to be useable through all states of tide with a minimum depth of 1m at Chart Datum.

Prior to the 2011 pre construction survey, LINZ had provided CIPA with a survey specification, to be used as guidance (reference A). DML undertook all fieldwork in accordance with industry accepted practices and using the LINZ specification as a guiding document.

The survey was conducted by DML using local vessels of opportunity and a complete set of portable survey equipment. A team of two experienced surveyors arrived in Rarotonga on Sunday 7 April (CKT) and resided in rental accommodation. Fieldwork was progressed from 8 -12 April and the team departed Rarotonga on Saturday 13 April.

3.03 MANGAIA ISLAND - Singlebeam Bathymetry Survey – A Geospatial Framework for Climate Change Adaptation in the Coastal Zone of Mangaia. Surveyed by SPC- Geoscience and Technology Division.

This report describes a bathymetric survey offshore at Oneroa village and the airport at Mangaia Island, Cook Islands. The survey was a component of the Project entitled “A Geospatial Framework for Climate Change Adaptation in the Coastal Zone of Mangaia”, conducted by the Secretariat of the Pacific Regional Environmental Programme (SPREP), in collaboration with the National Institute of Water & Atmospheric Research Ltd (NIWA), New Zealand, and the Infrastructure Cook Islands, Cook Islands, through the Pacific Adaptation to Climate Change (PACC) Project, to underpin and inform climate change adaptation decisions for the coastal areas of Mangaia. The PACC Project is implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP). A component of this Project called for an investigation of the nearshore seabed around the island of Mangaia. The survey was carried out using a single beam echosounder (SBES) over a period of three weeks in January and February 2011. Good SBES data were obtained in the area seaward of the reef crest to an average distance of 1.0 km offshore, reaching water depths of some 200 m in front of the

village of Oneroa and the airport. The bathymetric data were merged with topographic data (Damlamian et al. 2012) to derive a coastal terrain model and subsequently used to support a risk-based approach to climate change adaptation in Mangaia, which is described in detail in Stephens and Ramsay (2012), with results shown in map format by Kruger (2012).

3.04 NEW TECHNOLOGIES/EQUIPMENT

The Cook Islands National Hydrographic Service does not have any new equipments and technologies due to its establishment which have been supported by the government of the Cook Islands. The National Hydrographic Service at present will very much have to rely on LINZ the Cook Islands Primary Charting Authority to assist the Cook Islands with hydrographical surveying and other hydrographic related activities. However the National Service in the near future require to build its own capacity and capabilities to meet the requirements in the fields of hydrographic and cartographic and will be seeking funding opportunities and assistance from the government of the Cook Islands and our national, regional and international partners such as IHO for the acquisition of equipments.

3.05 NEW SHIPS

The Cook Islands does not have any ships or capacity nor funding to acquire any ships or boats until the National Hydrographic Service have its own technical and management staff.

Problems encountered

The Cook Islands at the interim does not have the capability and capacity to undertake hydrographic surveying due to the lack of;

- Funding
- Equipments, hardware/software
- Human resources (technical)

4.0 NEW CHARTS & UPDATES

New Zealand paper chart coverage of the Cook Islands includes one small scale planning chart (scale 1:10m), one small scale chart showing all the Cook Islands (scale 1:1.5m) and three large scale plans of the Northern Cook Islands, Southern Cook Islands and Rarotonga. Raster Navigational Charts (RNC) are available for all paper charts. Electronic Navigational Charts (ENC) coverage is now required to support recent amendments to the UN Convention on the Safety of Life at Sea (SOLAS) concerning the use of Electronic Chart Display and Information Systems (ECDIS) in ships. ENCs of the Cook Islands 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.

In 2010 a technical report prepared by LINZ to assist in the determination of the maritime boundary between the Cook Islands and Tokelau indicated a misclosure of approx. 800 metres in the location of Pukapuka on the official chart compared to the WGS84 GPS control positions. LINZ has been approached by a cruise ship operator who wishes to expand its operations in the South West Pacific, including the Cook Islands, but is concerned at the current standard of nautical charting. From 2012 onwards under new SOLAS Carriage Requirements, ECDIS using official ENCs will become a mandatory carriage requirement in all new cruise ships greater than 500 gross tonnes. There will be no requirement to carry paper charts. Significant positioning inconsistencies are to be found in the existing ENCs covering the Cook Islands.

There is a high level of interest in seabed mining in the Cook Islands. Legislation has been passed and policy work is underway to enable exploitation of resources while ensuring protection of the marine environment. The Ports Authority in Rarotonga is engaged in significant new infrastructure developments in the main port of Avatiu and the construction of a new cruise tender landing stage at Arorangi

5.0 NEW PUBLICATIONS & UPDATES

The Cook Islands National Hydrographic Services rely on LINZ the primary charting authority for new publications and updates in terms of our charting requirements.

6.0 MSI

The appointment of Stephen Simpson, Director of Maritime, under the Ministry of Transport as the Cook Islands Maritime Safety Information Coordinator have elevated the Cook Islands status of meeting its international obligations which the Cook Islands National Hydrographic Coordinating Committee have unanimously supported Stephen appointment. This will improve and strengthen the Cook Islands MSI promulgation of maritime informations to the Cook Islands primary charting authority (LINZ) to promulgate or broadcast maritime informations to vessels navigating in our international waters. The CINHCC is very much grateful to Stephen for accepting his appointment. Stephen Simpson and Vaipo Mataora have attended all IHO funded MSI capacity building training representing the Cook Islands. The promulgation of MSI from the Cook Islands to LINZ is through email, the Cook Islands yet to improve its infrastructure for the transmission of MSI informations, coastal and national waters.

7.0 S-55

Input to the IHO Publication C-55 (*Status of Hydrographic Surveying and Charting Worldwide*)

Country: COOK ISLANDS

C-55 Summary for:				Comments on Charts:
Country:	Cook Islands			
Country Iso Code:				
Country SubCode:				
INT Region:	L			
Country/Depend:				
Last updated:	IHB November 2016			
Provided by:	IHB			
Chart coverage	Passage (%)	Coastal (%)	Port (%)	Comments on Surveys:
INT	100	100	30	

RNC	100	0	30
ENC	100	0	30
Status of Paper Charts			
Paper charts with depths in meters (%)			100
Paper charts referenced to a satellite datum (%)			100
Status of surveys	Adequate (%)	Resurvey (%)	No survey (%)
0-200m	5	95	0
> 200m	0	20	80

MSI	Y/N	Comments on MSI:
Local warning	Portal	
Coastal warning	Portal	
Nav warning	NZ	Provided by NZ, NAVAREA XIV
Port warning	NO	
GMDSS	Y/N	Comments on GMDSS:
Master Plan		
Area A1	NO	
Area A2	NO	
Area A3	NO	
NAVTEX	NO	
SafetyNet	YES	NAVAREA XIV messages broadcast via SafetyNET

8.0 CAPACITY BUILDING

The Cook Islands have attended all the below capacity training offered by IHO and pave the way in strengthening our capacity in hydrographic surveying and cartographic activities. The Cook Islands now have established its National Hydrographic Service and in future the NHS service will become an independent entity for government to carry out its functions particularly in hydrographic surveying and other related surveying activities. And the Cook Islands will like to continue to attend future capacity training offered by the South West Pacific Hydrographic Commission (SWPHC) in collaboration with IHO, SPC and IMO.

- MSI training completed in Sydney, August 2010
- Hydrographic Survey and Introduction to Chart Production 11-22 October 2010
- 9th SWPHC held in Papua New Guinea (2011)
- 10th SWPHC held in Brisbane (2012).
- Regional Training on Hydrography Surveying 24th September to 5th October 2012, Suva, Fiji.
- MSI Training Wellington New Zealand 25-27 August 2014

- South West Pacific Hydrographic Commission workshop on Tides and Water Levels, 26 – 30 October 2015, Wollongong, Australia.
- MSI Training Wellington New Zealand 22 – 24 August 2016

9.0 OCEANOGRAPHIC ACTIVITIES

The Cook Islands to date have not engaged in any oceanographic activities since the last RHC.

10.0 OTHER ACTIVITIES

Pacific Regional Navigation Initiative

- \$5M over 5 years
- Bilateral with LINZ
- Chart modernisation programme
- Capability building & training
- Release hydrography risk assessment reports
- IALA AtoN assessment (July 2016)
- Marine Spatial Data Infrastructure (MSDI)

11.0 CONCLUSIONS.

- The Cook Islands have finally established the Cook Islands National Hydrographic Service on the 6th September 2016
- The Cook Islands have established the Cook Islands National Hydrographic Coordinated Committee on the 6th September 2016
- The Cook Islands National Hydrographic Service and the National Hydrographic Coordinated Committee endorsed the appointment of Stephen Simpson as the Cook Islands Maritime Safety Information (MSI) National Coordinator.
- The Bilateral agreement between the Government of the Cook Islands and LINZ have been signed on the 14th October 2016.
- The Cook Islands Ministry of Foreign Affairs and Immigration have approved the Data Release Agreement for SPC to release data on behalf of the Cook Islands to support the Pacific Regional Navigation Initiative (PRNI) 15th November 2016.