MARITIME AUTHORITY
SOLOMON ISLANDS

Digitalisation of Navigation in Solomon Islands

21st Meeting of the South-West Pacific Hydrographic Commission (SWPHC21)
28 February-1 March 2024, Nadi, Fiji

SIMA Act 2018

SIMA's powers and functions:

(h) to prepare hydrographic charts and surveys for maritime use.

SIMA Corporate Plan 2024-2027

II. Improved Safety of Navigation, Environment Protection & Response

All people and maritime operators benefit safe navigation, clean seas and efficient response to all marine incidents in Solomon Islands waters

5 Deliver effective and compliant safety of navigation services to people and maritime operators in Solomon Islands

6 Improve capacity and systems in Solomon Islands to prevent, prepare and respond to air and marine pollution in Solomon Islands waters

	Strategic Action	Indicator	Target
5	Deliver effective and compliant safety of navigation services to people and maritime operators in Solomon Islands waters	I.5 Evidence of improved delivery of effective and compliant safety of navigation services I.5.5. number of hydrographic surveys carried out in priority areas annually I.5.6. evidence of multibeam hydrography capacity, equipment and systems	by 2027, SIMA has the capacity to conduct at least 3 hydrographic surveys in priority areas every year, to deliver multi-beam surveys and to produce quality data to the primary charting authority

SOLOMON MARITIME…

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…TODAY

744,407 population on 300+ islands

in 2050 1,333,614 population

1.6 million km² area 98% ocean – 1.2 million km² Search and Rescue Region

184 domestic vessels
77 carrying passengers & goods
107 serving productive industries

Thousands of small boats (<10m)

241 foreign vessels 622 calls incl.
111 (267 calls) fishing vessels & 31 (57 calls) bulk carriers

2 international ports (Noro and Honiara)

258 sufferance wharves export from logging and mining industries

Domestic vessels & small boats multiplied
Inter-provincial land/sea connectivity

4000+ pax/week Malaita Prov.
1000+ pax/week Isabel Prov.
800+ pax/week Western Prov.
Small craft capacity unknown

More & bigger foreign vessels
Auki & Buala major hubs / ports

30,000+ containers Honiara Port
SBD3.2B logging export
SBD330M fish export

Hydrography in Solomon Islands now…

Survey Boats

SIMA Stubi Craft 12m

SMB Sealark 6m Aluminium Boat

GNSS Receiver & Data Recorder

Transducers –
1x Single Beam Echo Sounder (SBES)
1x SBES (Dual Low and High Frequency)

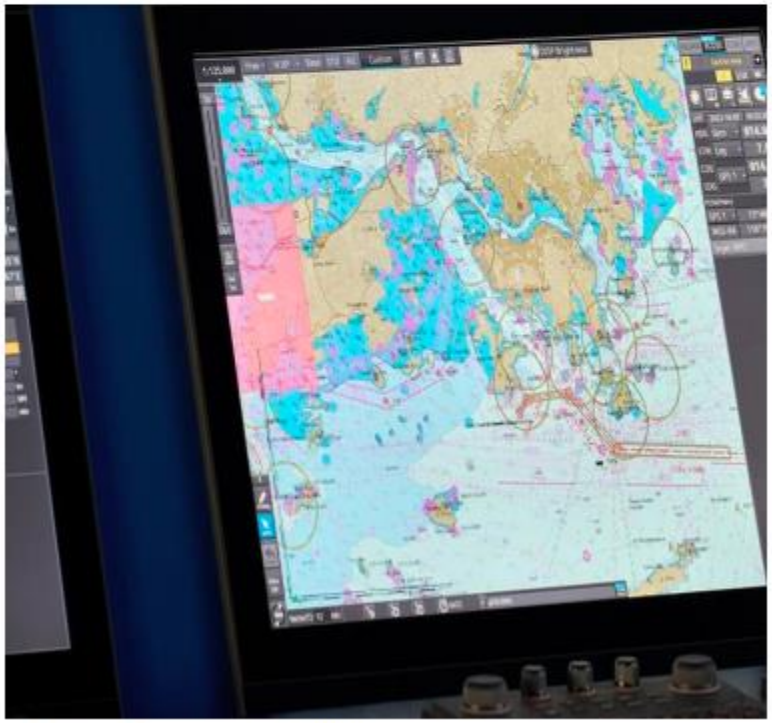
CeeHydro Systems Survey Equipment -
- CeeScope
- CeeTide
- Hypack Surveying Software for Bathymetry Data Recording & Processing

Side Scan Sonar – Starfish 485

SAFETY OF NAVIGATION = E-NAVIGATION FOR ALL

SIMA MARITIME AUTHORITY SOLOMON ISLANDS

- All Solomon Islands waters will be covered by Electronic Navigational Charts
- Digitalised data will be updated at all times and broadcasted to all at sea
- Everyone will access electronic navigational charts



Source: American nautical services

STRATEGIC AREAS

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Maritime Development and Resilience Strategy aligns to the National Development Strategy 2016-2035 and the National Ocean Policy 2018

Effective Maritime Governance & Partnerships	Safe, Green & Clean Mobility at Sea	Digital Navigation and Security	Improved Maritime Capacity & Gender
An enabling maritime governance & regulatory environment	Safety, energy efficiency & technology in domestic shipping	Maritime security & surveillance	The New Maritime College
Genuine & effective core/extended partnerships	Safe & new small boats in communities	E-navigation for all	Resourcing maritime training

DIGITALISATION OF NAVIGATION IN SOLOMON ISLANDS

Develop hydrography and electronic navigation for all in Solomon Islands waters

Strengthened cooperation and single-beam hydrographic capacity and systems

- to collect and compile hydrographic data and publish navigational charts in Solomon Islands

Develop multi-beam hydrography capacity and systems

- to support digitalisation of navigation and e-navigation in Solomon Islands waters

Provide e-navigation services to all in Solomon Islands waters and reliable and quality hydrographic data

- to support navigation, marine spatial planning, maritime boundaries and continental shelf delimitation and marine activities

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Overall objective

Develop hydrography and electronic navigation for all in Solmon Islands waters.

Implementation period	2024-2030	2024	2025	2026	2027	2028	2029	2030
Total cost (SBD)	63,146,924	*$5,892,040*	*$3,284,741*	*$5,090,978*	*$6,829,322*	*$10,304,499*	*$14,073,295*	*$17,672,049*

Outcome	Activities	Expected results	Costs (SBD)			
1. Strengthened cooperation and single-beam hydrographic capacity and systems.	• Implement AHO-SIMA memorandum of understanding to build capacity to process and conduct quality controls on hydrographic data. • Purchase and maintain single-beam hydrographic equipment and software. • Develop capacity of SIMA hydrographers and marine cartographers on hydrographic data processing and quality control, and on navigational chart production.	• Single-beam hydrographic equipment and software are owned and maintained by SIMA. • SIMA's hydrographers and marine cartographers process quality hydrographic data and produce navigational charts in accordance with AHO standards. • Hydrographic data are safely stored in SIMA's system and backed up with AHO.	Remuneration costs: 3 hydrographers, 2 marine cartographers, 1 administrator		$7,690,186	$15,238,675
			Operational costs:	Travel costs: Airfares & perdiem	$2,758,486	
				Services costs: Consultancy, etc.	$142,100	
				Goods & Equipment costs: Hardware, software, equipment, etc.	$3,296,656	
			Administrative costs: Other costs (taxes, stationaries, etc.)		$1,351,246	
2. Develop multi-beam hydrographic capacity and systems.	• Purchase and maintain multi-beam hydrographic equipment and software including fittings on SIMA's boat and larger Solomon Islands vessels. • Develop capacity of SIMA hydrographers and marine cartographers on high-resolution bathymetric data processing and quality control, other hydrographic data, and on electronic navigational charts (ENCs) production.	• Multi-beam hydrographic equipment and software are owned and maintained by SIMA. • SIMA's hydrographers and marine cartographers are qualified to collect and process high-resolution quality bathymetric data and other hydrographic data, and produce ENCs in accordance with IHO standards. • Hydrographic data are safely stored in SIMA's system and backed up with AHO.	Remuneration costs: Extra 1 hydrographer, 1 marine cartographer, 1 IT expert		$4,756,110	$39,274,329
			Operational costs:	Travel costs: Airfares & perdiem	$1,379,243	
				Services costs: Consultancy, etc.	$31,307,853	
				Goods & Equipment costs: Hardware, software, equipment, etc.	$1,413,000	
			Administrative costs: Other costs (taxes, stationaries, etc.)		$418,123	
3. Provide e-navigation services to all in Solomon Islands waters and reliable and quality hydrographic data.	• Develop SIMA's integrated database and website to provide open-source maritime safety information on all available media platforms. • Upgrade technical regulations related to maritime safety to use ENCs and approved digital navigation applications.	• Maritime safety information and data are open-source and made available through SIMA's system and media platforms. • Maritime regulations require use of ENCs and SIMA approved digital navigation applications.	Remuneration costs: 1 Maritime Safety Information coordinator		$1,984,881	$2,893,290
			Operational costs:	Travel costs: Airfares & perdiem	$459,748	
				Services costs: Consultancy, etc.	$155,412	
				Goods & Equipment costs: Hardware, software, equipment, etc.		
			Administrative costs: Other costs (taxes, stationaries, etc.)		293,249	
			Management costs:		$5,740,629	

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