

SWPHC18 – IHO Strategic Plan 2021-2026: GAP Analysis

(Ref: IHO Strategic Plan 2021-2026)

Members, Associate Members and Observer States



Coastal State:

GOAL	Target	Current State	Gap	Actions
<p>Goal 1: Evolving the hydrographic support for safety and efficiency of maritime navigation, undergoing profound transformation</p>	<ul style="list-style-type: none"> • Deliver standards for hydrographic data and specifications of hydrographic products; support their regular production; and coordinate regional and global services for their provision • Develop standards, specifications and guidelines in the areas of data assurance, including cyber security and data quality assessment • Use capacity building and training to develop and increase the ability of Member States to support safety and efficiency of maritime navigation 	<p>e.g.</p> <ul style="list-style-type: none"> • refer to Strategic Performance Indicators (SPI) • IHO Universal Hydrographic Data Model (S-100) not implemented • engagement in IHO and SWPHC WGs • refer to current state of SWP PICTs IHO Capacity Building Strategy - SWPHC17 Feb 2020 	<p>e.g.</p> <ul style="list-style-type: none"> • no operationalised production and distribution of S-100 data products and services • limited capability and resources to meet the requirements and delivery of the S-100 implementation plan • lack of support from Government institutions for maritime navigation • lack of understanding of maritime navigation transformation 	<p>e.g.</p> <ul style="list-style-type: none"> • participation of Coastal State at the IHO and SWPHC WGs and Committee levels • assistance sought from IHO, Primary Charting Authority, SWPHC, SPC, IALA, IMO • ensure adequate institutional arrangements in place for Hydrographic Governance • capacity building activities through IHO capacity building strategy or other donor organisations • engage with relevant Government departments and the Maritime Safety Authority to increase aware and support for e-Navigation • prepare business case for e-Navigation strategy

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GOAL	Target	Current State	Gap	Actions
<p>Goal 2: Increasing the use of hydrographic data for the benefit of society</p>	<ul style="list-style-type: none"> • Build a portal to support and promote regional and international cooperation in marine spatial data infrastructures (MSDI) • Promote new tools and methods to accelerate and increase coverage, consistency, quality of surveys in poorly surveyed areas • Apply UN shared guiding principles for geospatial information management in order to ensure interoperability and extended use of hydrographic data in combination with other marine-related data 	<p>e.g.</p> <ul style="list-style-type: none"> • refer to Strategic Performance Indicators (SPI) • FAIR data principles (Findable Accessible Interoperable and Reusable) accepted and implemented • UN-GGIM Integrated Geospatial Information Framework (IGIF) action plans developed • refer to IHO Publication C-55 Status of Hydrographic Surveying and Nautical Charting Worldwide • use of IHO S-44 	<p>e.g.</p> <ul style="list-style-type: none"> • multiple areas inadequately surveyed • data is poorly managed, unavailable and not shared i.e. open, free and unrestricted 	<p>e.g.</p> <ul style="list-style-type: none"> • engage with PCA to prepare hydrographic survey programme • prepare survey specifications using IHO S-44 • Implement FAIR data principles • Implement UN-GGIM IGIF • Provide data to existing portals, such as IHO DCDB • assistance sought from IHO, Primary Charting Authority, SWPHC, SPC, IALA, IMO

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GOAL	Target	Current State	Gap	Actions
Goal 3: Participating actively in international initiatives related to the knowledge and the sustainable use of the Ocean	<ul style="list-style-type: none"> Collaborate with other bodies who deliver capacity-building and training to improve effectiveness of capacity-building activities and programmes Improve knowledge of the world's seafloors Implement a comprehensive IHO digital communication strategy in order to enhance its visibility and accessibility to its work 	<p>e.g.</p> <ul style="list-style-type: none"> refer to Strategic Performance Indicators (SPI) no MSI capability engage with SWPHC CB activities lack of knowledge and awareness of UN Decade of Ocean Science or Seabed 2030 Project data contributed to IHO Data Centre for Digital Bathymetry (DCDB) and Seabed 2030 CSB initiatives supported no digital communications strategy for hydrography 	<p>e.g.</p> <ul style="list-style-type: none"> need to achieve IHO CB Strategy Phase 1 increase Government knowledge and support for UN Decade of Ocean Science seafloor data is poorly managed, unavailable and not shared i.e. open, free and unrestricted no support for hydrography comms 	<p>e.g.</p> <ul style="list-style-type: none"> engage with regional CB activities i.e. SWPHC, SPC, IALA, IMO and bilateral development programmes engage with Government institutions to gain support for international ocean initiatives prepare policy paper to release seafloor data to the IHO DCDB and Seabed 2030 engage with Seabed 2030 Project to install bathymetric data loggers for CSB initiatives seek support to develop a communications strategy contribute papers to the IHR and other seabed publications develop social media strategy

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GOAL	Target	Current State	Gap	Actions
Goal 2: Increasing the use of hydrographic data for the benefit of society	<ul style="list-style-type: none"> Build a portal to support and promote regional and international cooperation in marine spatial data infrastructures (MSDI) 	<ul style="list-style-type: none"> Various maturity levels regarding data MSDI between nations Some data discovery and access portals exist within region. Mixed regional awareness and tracking of NSDI and MSDI Complex mix of data owners, data archive centres, and data portals. 	<ul style="list-style-type: none"> Lack of regional tracking of MSDI maturity level of nations Lack of regional listing of data or product WMS and FMS Differing implementation of data governance 	<ul style="list-style-type: none"> Establish tracking mechanism for data holdings within the region. Establish tracking mechanism for SDI and MSDI maturity by nation. Consider regional data governance guidelines (to include releasability and sharing) specific to marine data within the larger IGIF and MSDI frameworks.
	<ul style="list-style-type: none"> Promote new tools and methods to accelerate and increase coverage, consistency, quality of surveys in poorly surveyed areas 	<ul style="list-style-type: none"> Reliance on traditional survey tools and methods Slow collection rates and large coverage gaps Varying data quality due to age, who collected it, how it was collected 	<ul style="list-style-type: none"> Excessive time and cost required to educate/equip for necessary capability and capacity (availability) Slow collection rates and large coverage gaps over a vast region Limited awareness of survey planning and execution across the region Difficult discovery and limited awareness of poorest quality data 	<ul style="list-style-type: none"> Leverage regional MS and non-gov partners (business case studies) Promote crowd source and satellite derived bathymetry; Airborne LiDAR; USVs; etc. Conduct regionally partnered, cooperative surveys to increase coverage and provide CB in the field Promote hydrographic governance and value to local/regional economy to regional gov't Scope, prioritize and share the areas within

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				<p>the region that are inadequately surveyed to create opportunity for partnership, greater standardization, and regional growth</p> <ul style="list-style-type: none"> ● Leverage IHO sponsored CAT A and PCA hosted CAT B programs ● Encourage use of recognised geospatial standards including IHO standards, geospatial metadata standards, OGC standards and consistent survey collection standards
	<ul style="list-style-type: none"> ● Apply UN shared guiding principles for geospatial information management in order to ensure interoperability and extended use of hydrographic data in combination with other marine related data. 	<ul style="list-style-type: none"> ● Unknown 	<ul style="list-style-type: none"> ● Need to define starting point ● Who are the MS in the region and how do they assess their status in adopting and applying the principles? ● Which SWPHC apply the principles now and do they consider it a success? ● Which MS participate in the UNGGIM? ● What does success look like? ● Identify best practices and documentation for implementation 	<ul style="list-style-type: none"> ● Identify current status of MS with regard to the principles, IGIF and participation in GGGIM ● Promote awareness of the upcoming IGIF-W seminar in Singapore ● Share best practices and linkages to similar relevant networks in this region, GLOSS, Tsunami Warning Center, etc.

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Actions Identified to Develop SWPHC 3-6 Year Draft Work Plan & Priorities

Aligned to IHO Strategic Plan Goals & Targets

Goal 1 - Evolving the hydrographic support for safety and efficiency of maritime navigation, undergoing profound transformation

- Share and collaborate S100 implementation strategies among members
- Identify/Develop Capacity Building tools for S1XX implementation
- Identify available (or support development of) Risk Assessment tool(s) to analyze and prioritize regional marine/environmental hazards
- Emphasize “hydrographic information” and de-emphasize “hydrographic data” in all Capacity Building efforts

Goal 2 - Increasing the use of hydrographic data for the benefit of society

- Leverage the MSDIWG Maturity Assessment effort to establish a regional MSDI baseline
- Conduct a regional inventory of operational Portals; consider establishing a SWPHC Portal; work with IHO in developing Portal-of-Portals
- Promote more Capacity Building focused, partnered surveys among Member States and PCAs to increase awareness of new survey tools and techniques
- Prepare the region for operationalization of a Geospatial Information Framework; build awareness of World Bank sponsored virtual training

Goal 3 - Participating actively in international initiatives related to the knowledge and the sustainable use of the Ocean

- Continue to emphasize basic through advanced level MSI training
- Establish a cohesive awareness of regional Ocean/Marine Affairs and/or Policy initiatives and priorities
- Ensure SWPHC activities are deliberately aligned to UN Decade initiatives



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- Explore “Catalytic” Capacity Building activities and seek IHO funding to resource
- Consider implementing a “Theory of Change” model to organize the SWPHC Work Plan