

WMO Update on Maritime Safety Services

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World Meteorological Organization
Organisation météorologique mondiale

WMO Strategic overview

- Goal to enhance partnerships with IMO, IHO, IMSO and IALA on provision of maritime safety services.
- WMO is now an observer on Arctic Council and participating in working groups on polar shipping (PAME) and marine emergency response (EPPR)
- Improving our service capability through MHEWS and the Global Meteo-alarm Service (including WWMIWS, MEER, and dissemination Tsunami EW services)



WMO STRATEGIC PLAN AT A GLANCE

Vision 2030

By 2030, a world where all nations, especially the most vulnerable, are more resilient to the socioeconomic impact of extreme weather, climate, water and other environmental events, and empowered to boost their sustainable development through the best possible services, whether over land, at sea or in the air

Overarching Priorities

Enhancing preparedness for, and reducing losses of life and property from hydrometeorological extremes

Supporting climate-smart decision making to build resilience and adaptation to climate risk

Enhancing socioeconomic value of weather, climate, hydrological and related environmental services

Core Values

▪ Accountability for Results and Transparency ▪ Collaboration and Partnership ▪ Inclusiveness and Diversity ▪

Long-Term Goals

1 Better serve societal needs:
Delivering authoritative, accessible, user-oriented and fit-for-purpose information and services

2 Enhance Earth system observations and predictions:
Strengthening the technical foundation for the future

3 Advance targeted research:
Leveraging leadership in science to improve understanding of the Earth system for enhanced services

4 Close the capacity gap:
Enhancing service delivery capacity of developing countries to ensure availability of essential information and services

5 Strategic realignment of WMO structure and programmes:
Effective policy- and decision-making and implementation

Strategic Objectives

2020-2023 focus

1.1 Strengthen national multi-hazard early warning/alert systems and extend reach to better enable effective response to the associated risks

1.2 Broaden the provision of policy- and decision-supporting climate information and services

1.3 Further develop services in support of **sustainable water management**

1.4 Enhance the value and innovate the provision of decision-supporting weather information and services

2.1 Optimize the acquisition of observation data through the WMO Integrated Global Observing System

2.2 Improve and increase access to, exchange and management of current and past Earth system observation data and derived products through the WMO Information System

2.3 Enable access and use of numerical analysis and prediction products at all temporal and spatial scales from the WMO seamless Global Data Processing and Forecast System

3.1 Advance scientific knowledge of the Earth system

3.2 Enhance the science-for-service value chain ensuring scientific and technological advances **improve predictive capabilities**

3.3 Advance policy-relevant science

4.1 Address the needs of developing countries to enable them to provide and utilize essential weather, climate, hydrological and related environmental services

4.2 Develop and sustain core competencies and expertise

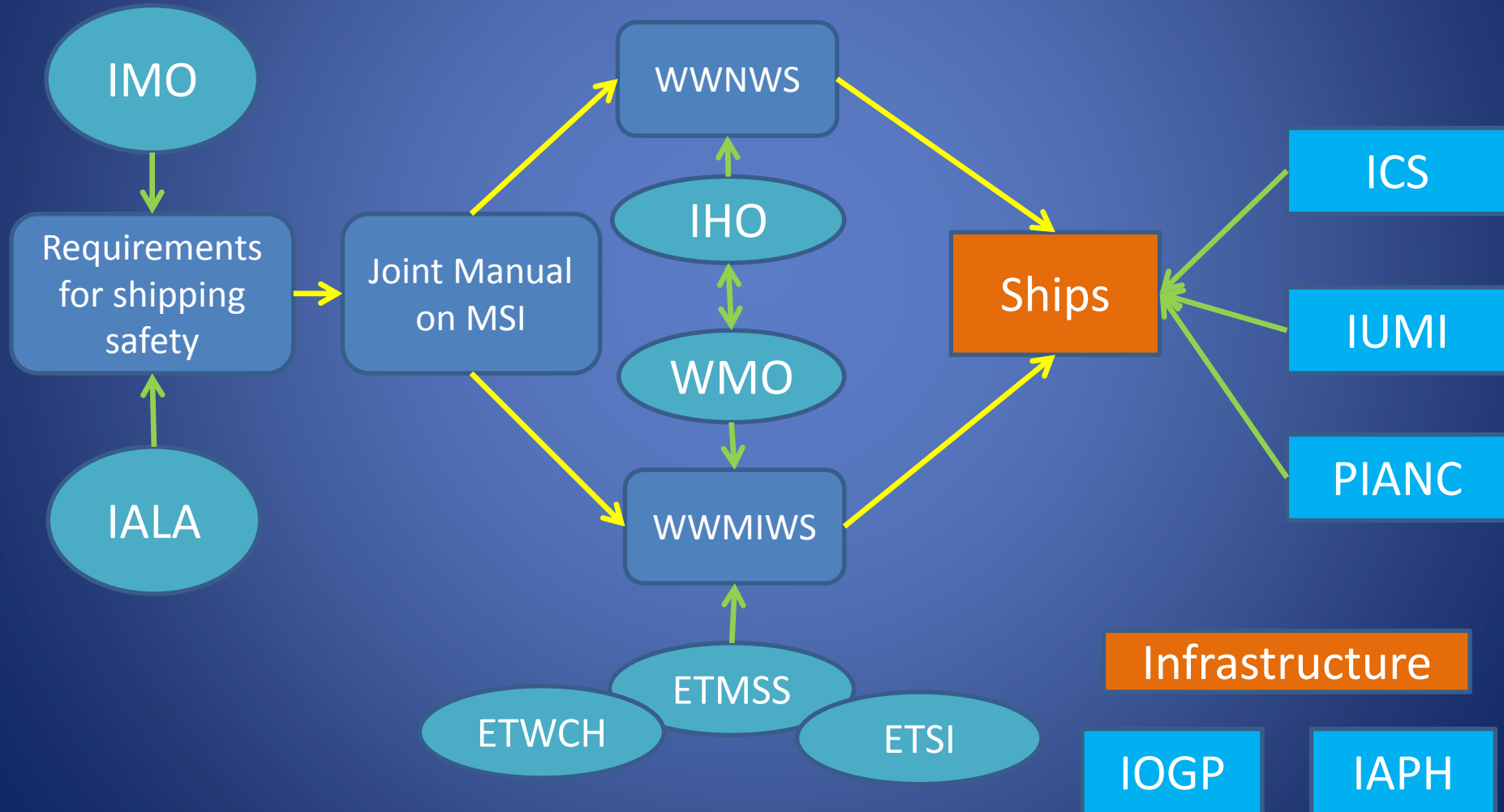
4.3 Scale-up effective partnerships for investment in sustainable and cost-efficient infrastructure and service delivery

5.1 Optimize WMO constituent body structure for more effective decision-making

5.2 Streamline WMO programmes

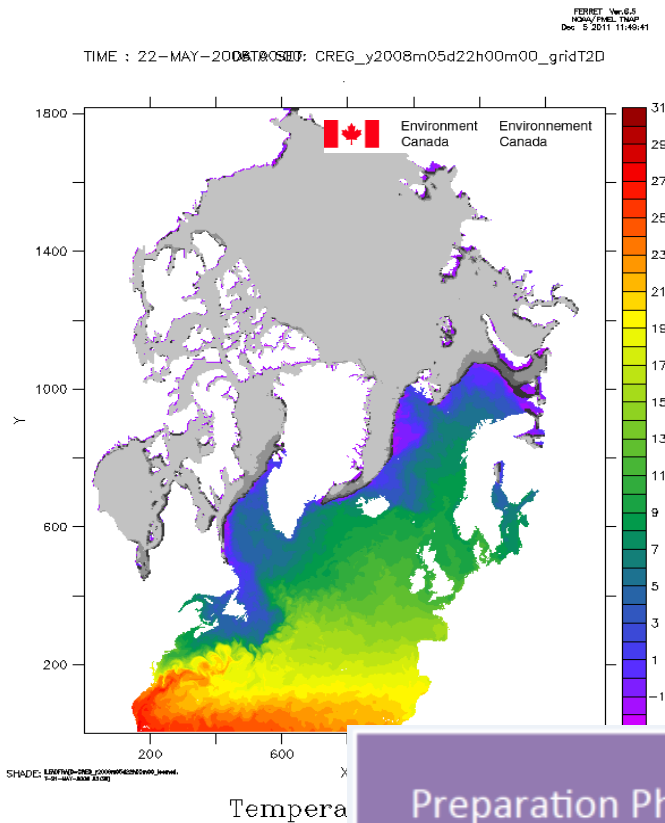
5.3 Advance equal, effective and inclusive participation in governance, scientific cooperation and decision-making

Partnership for Maritime Safety

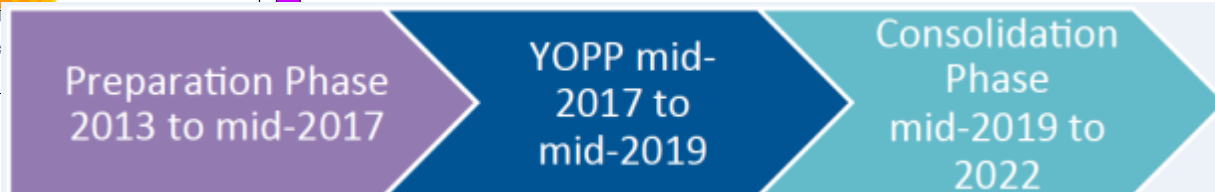
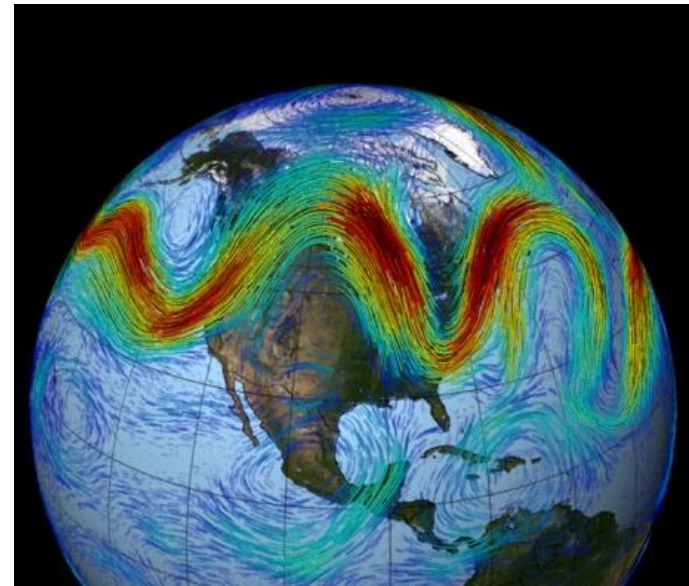


Designing an Arctic Prediction System

The Year of Polar Prediction



WMO Polar Prediction Project is launching a modelling and field campaign (Year of Polar Prediction, mid-2017 to mid-2019) assist planning an Arctic observational network for improving predictive capabilities



The WMO World Weather Research Programme's Polar Prediction Project aims to advance the science in numerical models, data acquisition and assimilation, ensemble forecast methods, verification, and the production of prediction products – all with a polar emphasis

Recent WMO actions to support the Polar Code/1

- **Polar regions are normally data sparse** while additional data collected from these regions can have substantial impact on numerical weather forecasting and other WMO applications.
- In order to improve services provided by WMO Members to society, e.g. support to maritime transportation and safety, WMO welcomes changes that could be introduced in the polar code to promote (or make mandatory) the making of **cryosphere and weather observations from ships sailing in polar regions**.
- The WMO Executive Council Panel of Experts on Polar and High-mountain Observations, Research and Services (EC-PHORS), at its 7th meeting (Ushuaia, March 2017) requested its Observations Task Team to **collaborate with IMO to effect changes in Polar Code** to make cryosphere and weather observations mandatory.

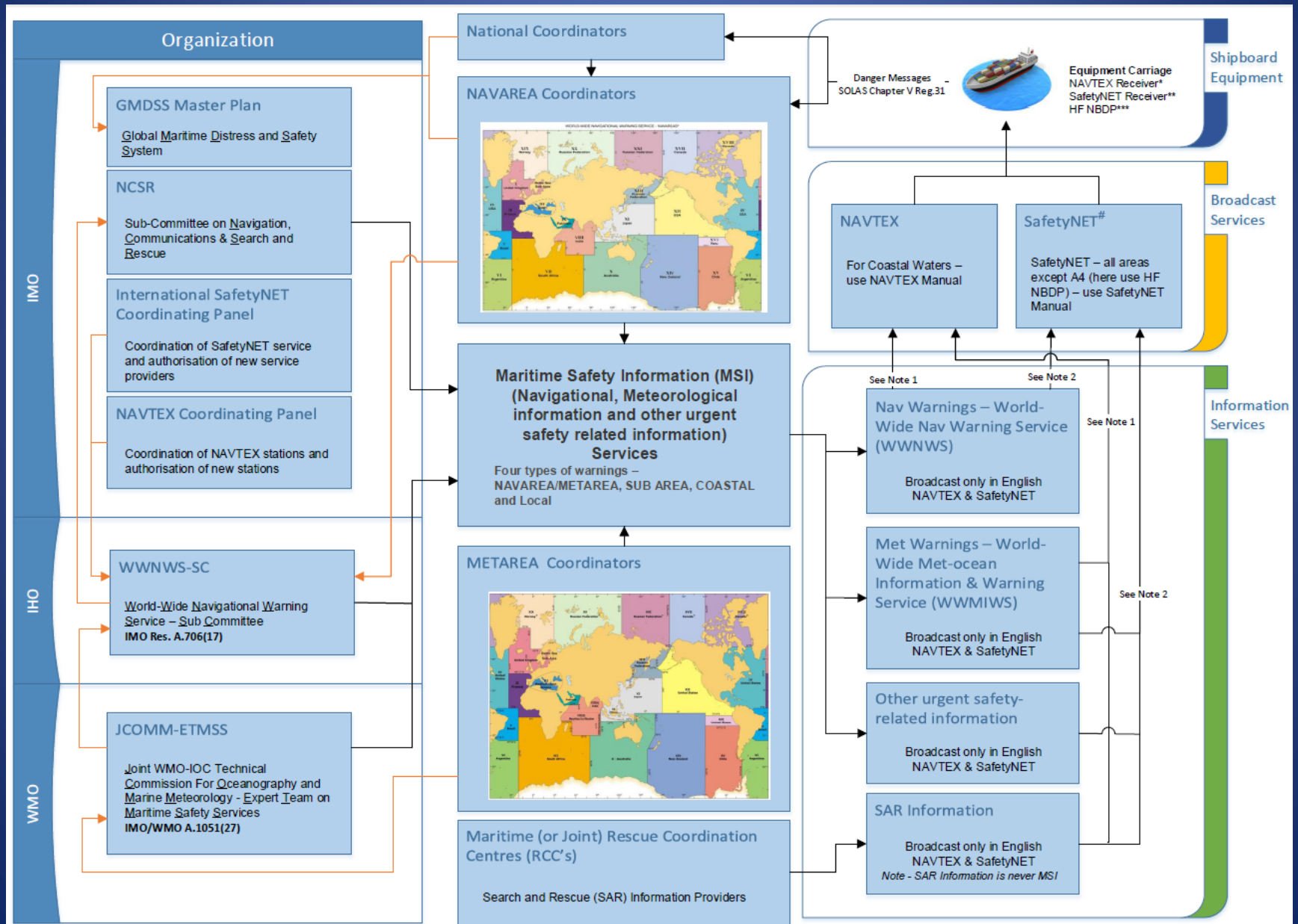


Recent WMO actions to support the Polar Code/2

- International Ice Chart Working Group (IICWG) contributed to the development of the Polar Code
- At 40th Antarctic Treaty Consultative Meeting (Beijing, June 2017) WMO invited the ATCM and the Parties to consider promoting the concept of making the **collection and reporting of weather data mandatory in the Polar Code**.
- WMO have been working closely with IMO and the Protection of the Marine Environment (PAME) Secretariat of the Arctic Council to provide **information for the Arctic Shipping Best Practices Information Forum** in support of the Polar Code



METAREA in the Framework for Maritime Safety Information (MSI) To support the implementation of MSI, it is necessary to enhance supporting function of METAREA.



Formation of WWMIWS Committee and greater recognition of the METAREA Coordinator role in delivery of WWMIWS services

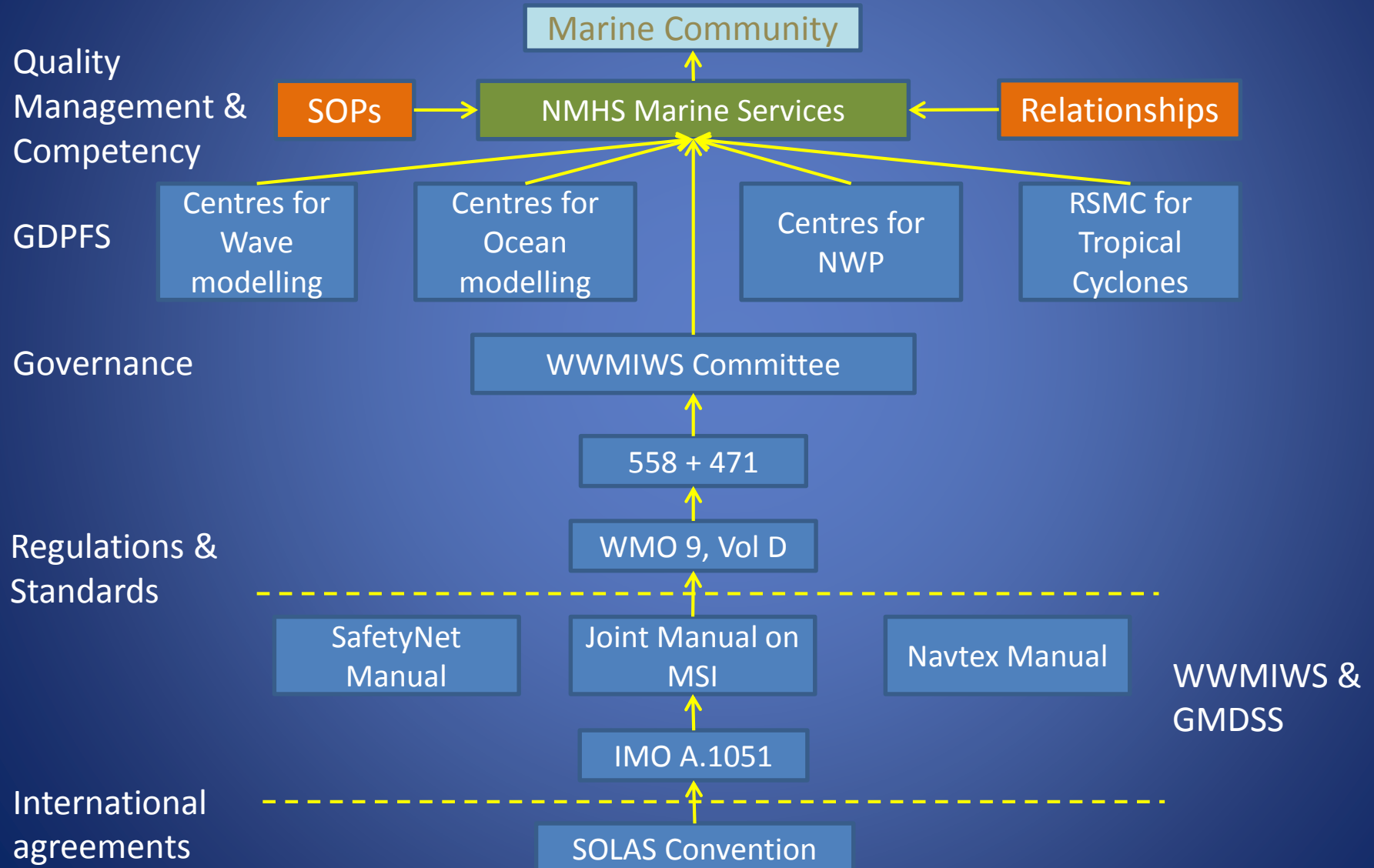
In this regard,

- WMO recognized the delivery of the IMO/WMO Worldwide Met-Ocean Information and Warning Service (WWMIWS) and the formation of a Committee comprising all METAREA Coordinators to coordinate and improve the service delivery in accordance with IMO/WMO service regulations;
- WMO also endorsed updates to the roles and responsibilities of the METAREA Coordinator, which will be included in an update in 2019, of the IMO Assembly Resolution, A.1051, governing the IMO/WMO Worldwide Met-Ocean Information and Warning Service.

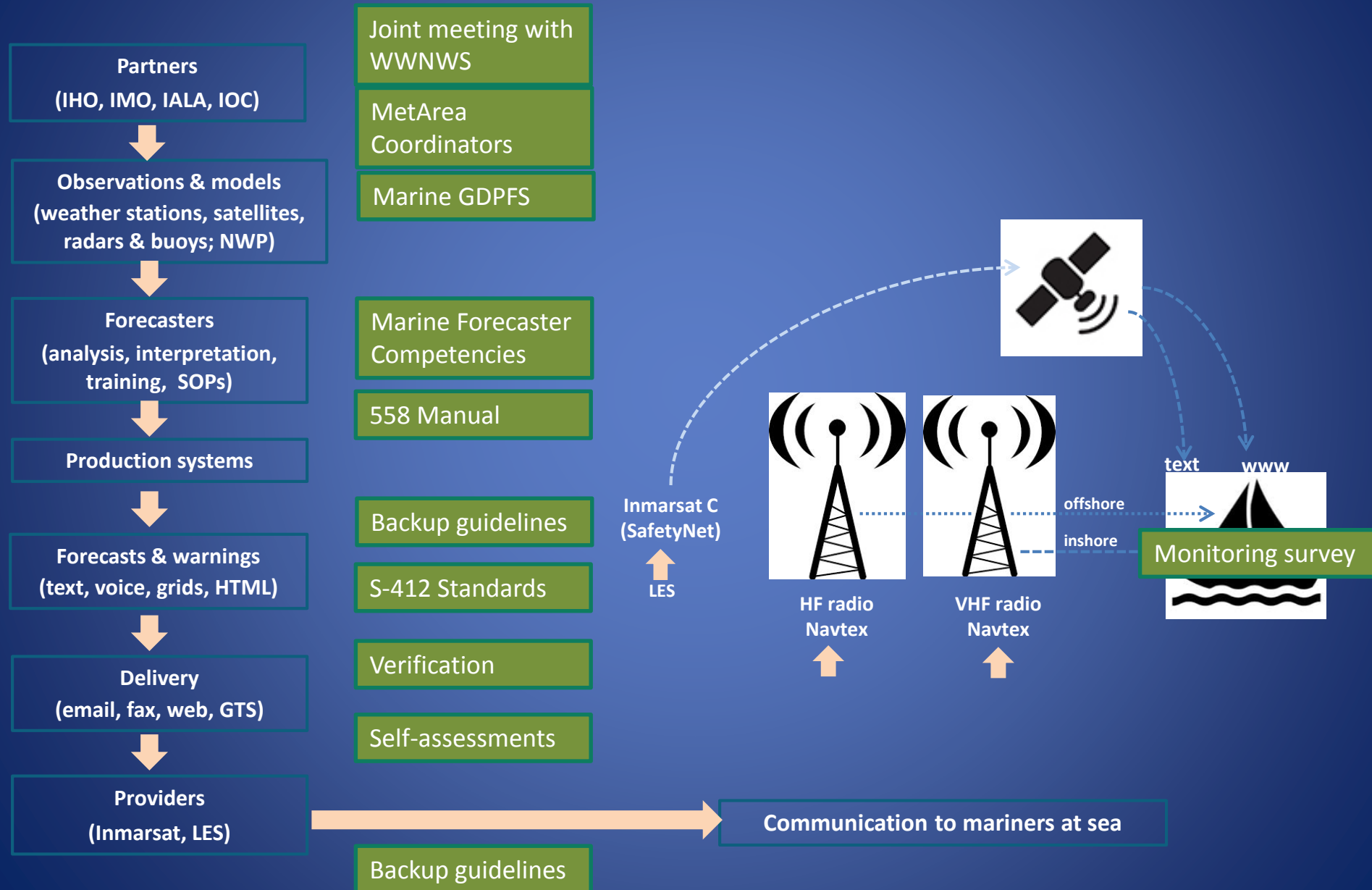


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Purpose: Supporting and enhancing National Marine Weather Services (METAREAs)

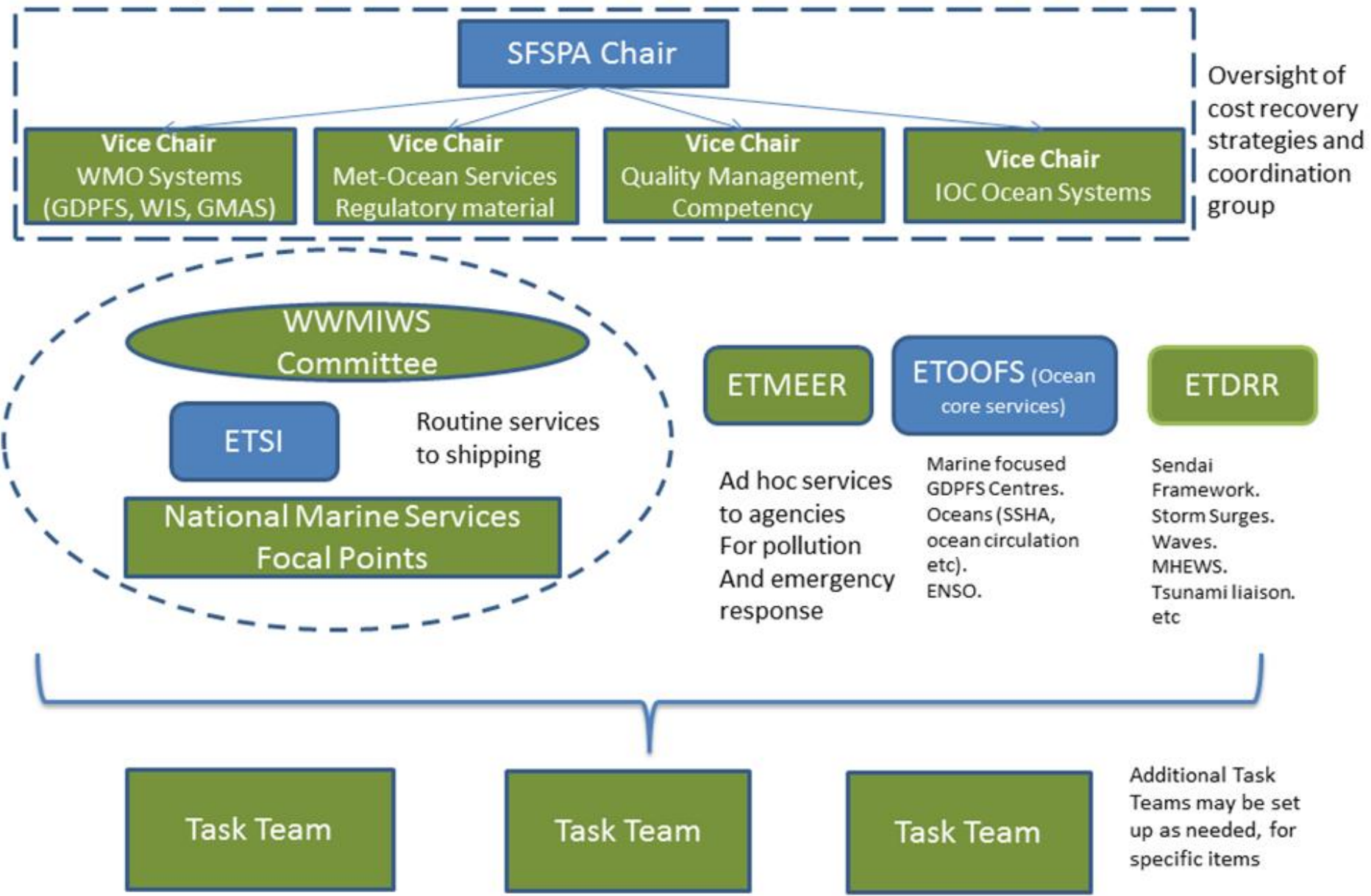


Integration into the End to end service delivery framework for MSI



Green = New
Blue = Existing

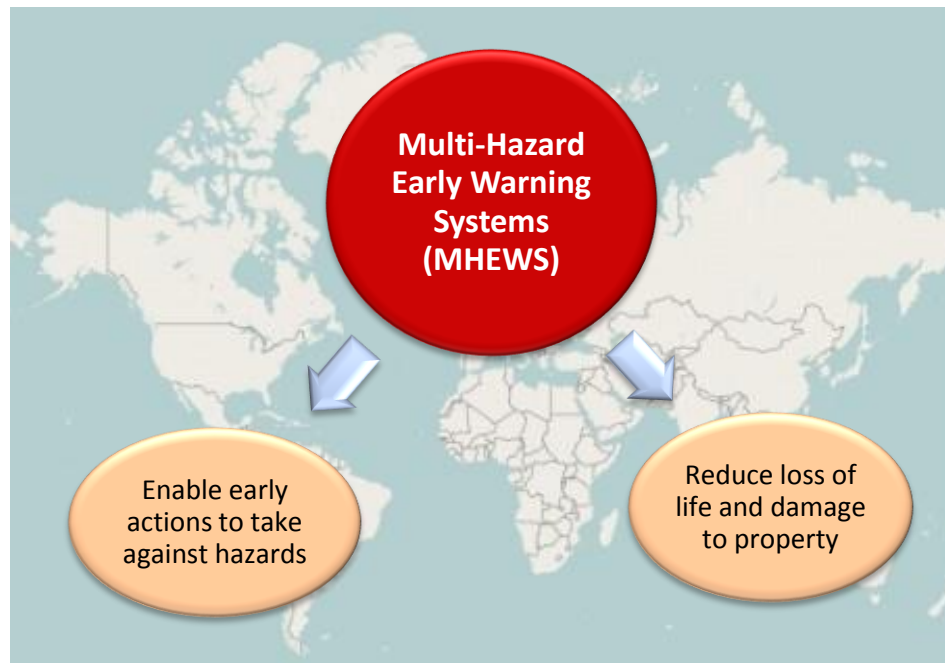
Supported by SFSPA structure



As an Important Component in the Authoritative multi-hazard early warnings

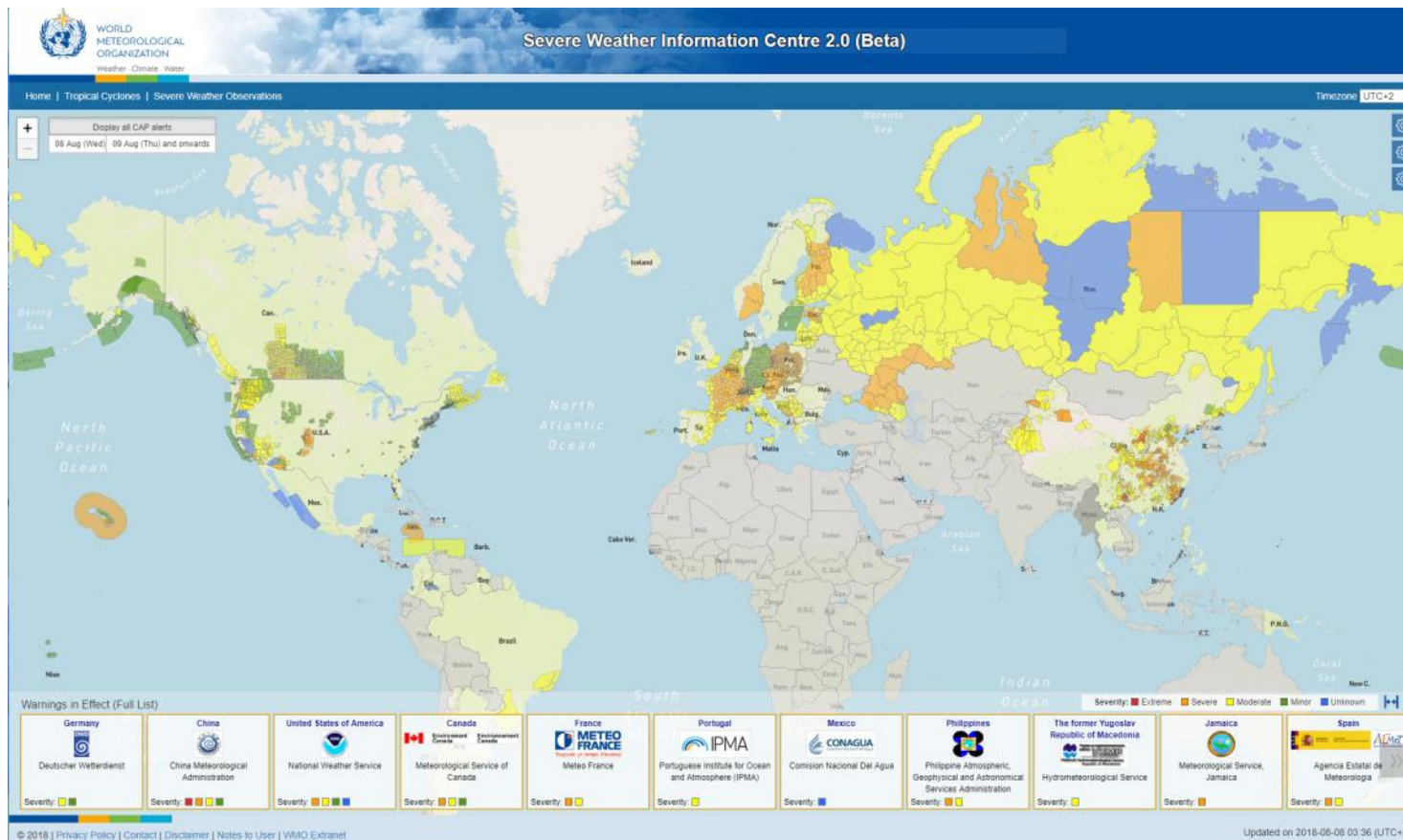
contributes to achieving the targets of the **Sendai Framework for Disaster Risk Reduction 2015-2030** and the **2030 Sustainable Development Goals (SDGs)**

- Proposed **Global Multi-hazard Alert System (GMAS)** will provide authoritative warnings/alerts and information related to high-impact weather, water and climate events



Global Multi-hazard Alert System (GMAS)

- Inclusion of Marine related EW information in the Severe Weather Information Centre (SWIC) and World Weather Information System (WWIS) being revamped to form the **initial core component** of GMAS



Global Multi-hazard Alert System (GMAS)

- Other components of the proposed GMAS could include regional arrangement such as **MeteoAlarm system** in Europe, **MeteoAlert system** in Russian Federation, **GMAS Asia** (GMAS-A) in Asian region including MSI regional arrangements, etc



Support and guidance for countries undergoing the IMO Member State Audit Scheme

- WMO has developed a set of guidelines to assist the IMO Audit team when they are conducting audits in respect to SOLAS obligations. SOLAS Chapter V, Regulation V, outlines the meteorological and ice service responsibilities within each country.
- The guidelines were introduced at IMO's 99th meeting (May 2018) of the Maritime Safety Committee (MSC). The recommendation by MSC was made for WMO to further clarify the mandatory and non-mandatory requirements, and re-submit the guidelines at a future MSC meeting.



Key marine service documentation updated

- WMO No.558 - Manual on Marine Meteorological Services has been updated with [refreshed mandatory and recommended procedures](#) in accordance with WMO's guidelines for technical regulations.
- WMO No.471 - Guide to Marine Meteorological Services has been re-written with [specific focus on documenting user requirements and providing guidance](#) to Members looking to establish or enhance [their marine meteorological services](#).
- WMO No.9, Volume D, [Information for Shipping](#) – Details on [radiofax services](#) have been updated. Details on the [SafetyNET schedule](#) are up to date.



Marine Forecaster Competency implementation

- WMO endorsed a renewed commitment to roll out the marine competencies in line with the Quality Management Framework development and publication of the (new) Guide to Competency (WMO-No. 1205).
- A Task Team will form to develop specific guidance in the context of supporting Members to attain competencies for marine forecasting staff.



Marine-related global forecast support centers

- In order to provide a common foundation for all Members to provide marine meteorological services, a framework of marine-related centers has been established.
- These centers cover:
 - wave modelling
 - ocean modelling
 - marine environment emergency response modelling
 - and complement existing centers for tropical cyclones and atmospheric modelling.



WMO Designated Global Data-processing and Forecasting System Centres



" World Meteorological Centres are also Global Producing Centres for a) Deterministic Numerical Weather Prediction, b) Ensemble Numerical Weather Prediction, and c) Long-Range Forecasts.

DESIGNATIONS USED

The depiction and use of boundaries, geographic names and related data shown on maps and included in lists, tables, documents, and databases on this web site are not warranted to be error free nor do they necessarily imply official endorsement or acceptance by the WMO.

National Marine Services Focal Points

- WMO approved the establishment of National Marine Services Focal Points in Oct 2017. They will work together with METAEAR Coordinators
- These Focal Points will provide a direct and focused contact point within each Member, for communication and dissemination of marine and coastal service delivery information.
- The global network will enable Members to share best practices and facilitate a community of practice on marine and coastal service delivery.



Thank you Merci



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