

Technical Expert Group -MSP Data  
TEG Follow-up work  
28<sup>th</sup> March 2022  
WEBEX meeting

*All presentations given during the meeting will be available on the [European MSP Platform](#).*

## **1. Introduction - Andrej Abramic & Joni Kaitaranta, TEG co-chairs**

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**Andrej Abramic (Co-Chair):** Welcomed everyone to the 8<sup>th</sup> meeting of the TEG on MSP Data. The meeting is divided in two parts. The first part will consist of two guest presentations, and in the second part the state of play of the 5 sub-groups will be presented.

The first face to face TEG meeting is being planned for Las Palmas, Canarias on 6 July, the idea is to present the developments of the group and how to proceed. On the 7<sup>th</sup> July we will have a special session as part of the MapSIS 2022 event of the [8<sup>th</sup> International Symposium on Marine Sciences \(ISMS 2022\)](#) being organized by the University of Las Palmas, proposals for organising a session can already be sent – [Please see link](#).

## **2. Presentation on Marine Functional Zoning in China and it's Data Support - Professor Teng Xin**

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**Andrej Abramic (Co-Chair):** Our next speaker is a Professor Teng Xin working at the National Ocean Technology Centre, Ministry of Natural Resources, he is an expert of the UNESCO project MSPglobal, a member of the Marine Spatial Planning Academy from the China Oceanic Development Foundation, he is working on a project related to MSP and Blue Growth and has published more than 20 papers.

**Professor Teng Xin:** China's marine management can be traced back to the Zhou Dynasty more than 3,000 years ago. King Wen of Zhou set up officials in charge of fishery administration and stipulated fishing prohibition periods as major state policy. China's Marine Functional Zoning (MFZ) refers to the division of the sea area into different functional zones based on the location conditions, the natural environment, natural resources, development and conservation status of the sea area, as well as the economic demand and social development. It is used to control the use of the sea area, protect the marine ecological environment, and promote the rational development of the sea area and the sustainable development of the marine economy. It is the fundamental work that provides scientific basis for marine development, protection and management.

### **China Marine Functional Zoning History**

MFZ has a history of more than 40 years in China, this period can be divided into five stages (Please see [presentation](#) for more information).

- Proposition of MFZ (1979-1988)
- First round of MFZ (1989-1995)
- Second round of MFZ (1998-2003)
- Third round of MFZ (2010-2012)
- National Territorial Spatial Planning (2021-2035)

### **The Data system of MFZ in China**

Since 1997 China has developed a technical directive for MFZ. It has a unified working base with integrated marine survey data, coastal measurements and correction data, and the surveys from relevant special projects. It applied the resulting data to the third national territorial investigation and basic surveying and mapping, as well as on monitoring of geographic conditions. This was combined with an evaluation of resource and environmental carrying capacity, an evaluation of sustainability for territorial space development, ecological protection red lines and related planning results.

There are 8 categories for Marine Spatial Planning Data within the Framework: natural resource data, development and utilisation data, eco-environmental data, natural disasters and defence data, a human activity approval data, related planning data, thematic study data, social economy data. If a technical organisation is undertaking work for the national government, they will have data from national level as it relates to national authorities, if you work from provincial part, you will have data from provincial authorities. They are conducting a survey to gather new data.

### **The data support of MFZ in China**

MSP has many steps, in China there are also a lot of steps, Professor Xin has analysed how data is supporting each step of MFZ. The data supports the basic analysis and thematic research planning, guarantees the science of planning goals and indicators, implementing reasonable zoning and use regulations, supporting planning implementation and monitoring and evaluation.

#### **Q/A:**

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**Q: MSP AM:** what you described is a long history of planning MSP, with this long evolution, does that make it harder to be flexible and adapt your plans for the future? For example, regarding climate change, ocean sciences etc.

**A: Pr. TENG Xin:** In China every ten years we have one revision of MFZ. China has 3 levels of zoning, if the provincial level is willing to be flexible during this 10 years period, the provincial government can apply this plan to MNR (SOA) on behalf of Chinese central government and they will identify experts to discuss suggestions, and the provincial government will change the plan if accepted. But the national level plan cannot be changed because it's a very general foundational and instructive plan.

**Q: Amedeo Fadini - CNR:** Are there transboundary processes with other states?

**A: Pr. TENG Xin:** We have some transboundary cooperation with other countries, and governments, for example we have cooperation research with overseas governments, universities and institutes, such as Bangladesh, Indonesia, etc. but not transboundary process, it's only about MSP research.

For more detailed information and details, you can email the Professor at: [notctengxin@163.com](mailto:notctengxin@163.com)

### **3. Presentation of the - eMSP-NBSR project: Community of Practice on Data sharing, information and communication technology serving MSP**

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**Adeline Souf - SHOM:** It will be presented by Berenice Lequesne, but I want to introduce Jean Baptiste Suzanne who joined the MSP unit of SHOM.

**Berenice Lequesne - SHOM:** Project manager of eMSP NBSR.

The project is funded by the European Maritime and Fisheries Fund managed by CINEA, it will last for 30 months from September 2021 to February 2024, the estimated project cost is 3,123,394.41€ with a requested EU contribution of about 2,469,145.65 €. The project consortium constitutes 15 project partners with 9 countries involved, led by the Netherlands' Enterprise Agency (RVO).

The project will enable maritime spatial planners of managing authorities and policymakers from the North and Baltic Sea Regions to reflect on current MSP practices, especially MSP implementation, learn effectively from each other, collectively identify future problems and solutions, reflect on ambitions and challenges for MSP stemming from policy developments under the EU Green Deal and other related EU initiatives. This will provide new knowledge and information to national governments and the European Commission on implementation, development and research actions, and managerial approaches that can or should be taken to deal with future challenges and opportunities afforded by the sea in a coherent way and with involvement of industry, academia and non-governmental organisations.

The project will generate new knowledge that is relevant for the North and Baltic Sea Region in five key emerging topics (project learning strands), each addressed by two cross cutting issues – climate change and the EU Green Deal:

1. Ocean governance;
2. Ecosystem-based approach;
3. Sustainable blue economy;
4. Monitoring and evaluation;
5. Data sharing, information and communication technology serving MSP.

A video presenting the project is accessible [here](#).

The goals of the Community of Practice (CoP) Data Sharing, information and communication technology serving MSP are to:

- Evaluate the coherence of the MSP data and information available across borders.
- Understand the process of MSP from the data perspective to environmental impact assessment, cost benefit analysis, mitigation measures, maritime surveillance assessment and climate change.
- Share MSP plans to the authorities responsible for implementation and connect this with activities to ensure maritime surveillance.
- Provide recommendations to authorities and data users regarding MSP plan dissemination and interoperability through the existing mechanisms and sea basins.

The aim is to raise understanding of the national and sea basin MSP plans to the authorities in charge of implementation of MSP to deal with current and future challenges and opportunities through data digitalisation; To share knowledge and information to further build on existing regional maritime initiatives and project outputs related to the definition of MSP plan data.

There are different objectives for this community of practices: Analyse standardization and consistency of the data format, spatial continuity aspects (cross-border, spatialization, scale and symbology) and terminology; Come up with a proposal for minimum dataset list, from data perspective for the other CoP; Investigate the linkages between MSP plans and maritime surveillance.; Allow national MSP authorities to strengthen the MSP process in the upcoming reviews of plans, regarding the data challenges in light of changing technologies, climate change and the increasing amount of data; Illustrate data and tools needed to enforce and for future planning; Suggest to MSP authorities and sea users a better use of data available to make planning effective, regarding MSP plans dissemination and interoperability through the existing mechanisms and sea basin.

This will be done thanks to surveys and the data terms report (inventory) on terminology, workshops, interviews of the MSP authorities and MSP data officers, platform providers and scientific fellows to get information and present results, policy brief; two study cases - an illustration of this Learning Strand in MSP.

Partners will be able to exchange through an exchange and interactive platform. The CoP will be informed of events and CoP actions (and eMSP-NBSR project in general) by newsletters and emails. Participants can be part of the core group, contributors or followers.

SHOM invite the audience to join the CoP because there is a need for experts. You can register [here](#) or write directly to: [berenice.lequesne@shom.fr](mailto:berenice.lequesne@shom.fr)

#### **4. TEG sub-groups progress, update of activities:**

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Subgroups were established last year to further work on identified topics. Below an update on their activities and progress is presented.

##### **MSFD & MSP Data Management – Stefano Menegon**

This subgroup relates to MSFD and MSP. The main objective is to share experience on using MSFD outcomes and related data to support MSP processes and identify a coherent approach to facilitate the connection between MSFD outputs and MSP process for EU MS including considerations of Land-Sea Interactions (LSI). The main focus is to investigate data and metadata aspects.

The outline of the group is divided in 3 parts; experience identifications: with a review on how the MSFD has supported the marine planning processes. The subgroup started to investigate internally with a survey sent to some Member States (MS), they will then refine the survey to include external experiences. The second part consists of an analysis of the initial settings, the main results will be described in a brief report.

To detail the experience identification, the subgroup has started a first round of collection of MSFD and Planning experiences, so far, they have collected 10 answers explaining how MSFD has been linked to MSP processes of EU countries (Denmark, France, Greece, Italy, Ireland, Malta, Netherlands, Poland, Spanish, Sweden) and they expect one more answer in the coming days (Finland). Based on this, they want to set up the analysis framework to identify the main aspects. They want to improve the questionnaire and will try to involve external experience, from ICES for example. They will discuss this in the next meeting to be held in next couple of weeks. Based on the responses, they will try to identify the main aspects on which they want to focus. The expected timeline has been adjusted because they had some delays ([presentation](#)). The next step will be the refinement of the survey and they may need some support from the Commission.

#### Q/A:

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**Q: Juan Ronco Zapatero (DG MARE):** Thank you for the work you are doing. Do you try to have synergies between MSP and MSFD in terms of data, information or implementation? Have you already identified a MS that has tried to put in practice or implement these synergies in term of data use/data collection? Perhaps you will need supports from the Commission: What type of support are you thinking of.?

**A: Stefano Menegon - CN:** We have already identified MS and we have received answers from 10 countries, from first analysis we have improve this information, to maybe ask for additional aspects, but they are MS for whom there is alignment between the two directives, in terms of objectives and monitoring programmes; in terms of indicators that are collected within the MSFD. But this is not the case for all MS.

For the support, we are expecting 11 answers and it will be useful to extend the distribution of the survey once we will have finalised it. It could be useful to send it to others MS to complete the survey and this can be done thanks to the Commission.

*Chat: Caitriona NicA: In Ireland we have set up a coordinated approach for MSP and MSFD... the same organisation managing the data for both. Same data governance procedures. Using MSFD data for Ocean Health objectives and policies of the MSP etc.*

#### Metadata Standard for Marine Plans - Adam Leadbetter

The subgroup went for a process of identification of use cases and requirements, then had a look to see what existing metadata standards and profiles might be available and they targeted schema identification. They are now in process of analysing the metadata guidelines available, and they expect to disseminate their results in September 2022. The group found 17 use cases in broad areas (location and spatial hierarchy, relevant organisation and their roles, connection with EMODnet and other thematic data sources). The existing profiles they looked at came from the EU MSP Platform and the Baltic area MSP Plan area metadata, they have also been thinking how they can connect their outputs to form metadata schema into INSPIRE and EMODnet Human Activity. They have got a draft doc that describes where they are in more detailed. At the moment the marine plan links to the time coverage, geographic coverage, dataset, legislation, policy, and connecting to the organisation responsible for it.

Immediate help from the TEG is needed because they need some volunteers who would like to help to trial the metadata profile. They will then finalise the metadata profile and guidelines. They already presented the current state of work to IOC IODE Ocean Data Conference during February 2022.

#### Q/A:

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**Joni Kaitaranta (Co-chair):** I have comments after this presentation, one of challenges for the MSFD & MSP data management sub-group has been to find out what data has been used for MSP (input data). When applying this metadata profile, there would be the possibility to include in the metadata of the plan which datasets have been used in input data and those can be associated to MSFD on a descriptor level. Therefore, applying the metadata model will give us information about this.

**Q: Pascal Derycke:** I have seen the different metadata standards it would be also nice to include the GeoDCATt extension because this application profile is implemented in Europe in different open data catalogues.

**A: Adam Leadbetter:** Marine plan is not a dataset and GeoDCAT describes datasets. We can think about it but we need to see how appropriate GeoDCAT would be in this context.

**Q: Pascal Derycke:** In your [slide](#) n°4, you mentioned Schema.org, this is not for the dataset?

**A: Adam Leadbetter:** There are many classes within Schema.org and it's not only for datasets.

### **Network Services for MSP – Pascal Derycke**

The subgroup has been working on “as is & to be use cases”. “As is” it's two use cases based on working on discoverability and data availability. [The first one](#) has already been designed, the idea was to do machine learning, but at the end they discovered that it was better to do image processing. This first use case is based on discoverability, they are using HELCOM web map service on MSP Plan areas in the Baltic, and the idea is to select an area and be able to collect all available information. It has been implemented and they are collecting feedback. The second one is about pipeline routes, they focus more on what kind of data is missing so they are working with a team of archaeologists, and they come up with question on where to set up pipelines, they already wrote a paper on this use-case. This use case is based on the same technology as the first one.

The two other use cases are about “to be”. The first one is about INSPIRE for the Semantic web and the second one on big data analytics. The first one has been developed during Ocean Hackathon in Boulogne-sur-mer last year, they have been able to build indicators through web scrolling, they went to the web to collect information. They wanted to have a pilot to address the issue of not having sufficient information on Human Activities for instance on the coast for MSP. They are only using information which is available in the Web.

The second “to be” use case has been implemented during the first Blue Cloud Hackathon. They decided not to go to the INSPIRE web service but to operate a total shift in the paradigm, they have been using an elastic search database where they put all types of information into a database and instead of downloading the data and they were able to process it in the cloud, we were able to process it within the data base. It's very similar to what google does.

Next steps are the implementation of use-cases in the [Marine-Analyst.eu](#) digital platform (for augmented data access), to have feedback from use cases and discuss it, and finally write a paper per use-case. Laurent from IFREMER has decided to work on MSP scientific publication for the Bay de Seine in France. The Marine Analyst is a digital platform for augmented data access it works as an aggregator for marine information, they already have a huge community of users.

### **MSP Data Framework – Andrej Abramic**

The MSP data framework is divided into seven clusters, and they decided not just to define the clusters but to see if they can structure them.

The first cluster is Marine and Coastal environment, they would like to use MSFD GES and quality descriptors as well as WFD GES.

The second cluster is about conservation and designation areas, they are dealing with Natura 2000, CDDA (IUCN class), INSPIRE model on Protected sites and designation code list, including restriction or regulation.

The third cluster is oceanographic characteristics and they added to it coastal climate and hydrography. This cluster deals with waves, currents, temperature, rainfall, wind... they look into BODC, SeaDataNet vocabularies, Essential Ocean Variables, INSPIRE Hydrography team classifications.

The fourth and fifth clusters are related to coastal land use, land cover & planning; and operative maritime uses and maritime planning. For the 4<sup>th</sup> one they started to look into [Hierarchical INSPIRE Land Use classification](#) and for the 5<sup>th</sup> cluster they use an [extended code list](#).

The 6<sup>th</sup> cluster is related to the socio-economic information, they want to collect information on coastal population, unemployment, but they don't know how to properly structure information and expect to have some support/collaboration from the subgroup on socioeconomic impacts of MSP.

The last cluster is governance information, they deal with competences, international convention, supplementary regulation they are looking into INSPIRE in theme administrative units and maritime units.

This is the MSP data Framework v1.2 and they expect to present the v2.0 in July and a report in September. They want to have inputs from national processes which have a link with the TEG. They are developing a survey that will be shared in the coming weeks.

### **Socioeconomic Impact of MSP - Jose Santiago**

The objective of the subgroup is to deliver practical approaches to integrate the economic and social dimensions in MSP, to advance knowledge and methodological approaches for gathering socio-economic data linked to MSP, and to reinforce the provision of evidence-based decision-making by integrating the socioeconomic dimension. Now they are dealing with the first task which is the review of initiatives and literature. They want to launch a survey and they will focus on the socioeconomic dimension of MSP. They will try to have outcomes for the Las Palmas meeting.

Nowadays they have a draft work, they classified around 100 papers regarding functional classifications in 4 groups. They also classified these papers following the step-by-step approach. They found a lot of literature focused on the needs of authority in the preparation stage of the MSP, literature are more related to the existing conditions in the elaboration phase of the MSP and then most is classified as “monitoring” during the implementation of the plans.

They are trying to focus on this review of the literature, and the subgroup wants to launch guest speakers to talk about the socioeconomic aspects, launch a survey to identify challenges on the implementation of socioeconomic aspects in MSP processes and produce a pilot case study to provide examples of applying socioeconomic indicators.

#### **Q/A:**

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**Q: Juan Ronco Zapatero (DG MARE):** How will you disseminate the results of your work, are you going to publish or produce interim outputs?

**A: Jose Santiago:** The commitment is to write a guideline on how to integrate socioeconomic data into MSP, trying to touch on the three phases: design, preparation and the implementation of the MSP and maybe we can publish something about the literature review.

**A: Juan Ronco Zapatero (DG MARE):** This could be very interesting to see the type of publication.

### **5. Conclusion, wrap-up and following steps**

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**Joni Kaitaranta (Co-chair):** Thanks everybody for the meeting, there were interesting presentations from experiences in China, and about the eMSP project and then regarding the advancement of each subgroup. There will be further work coming for the subgroups and surveys to be circulated. There is also the idea of having a face-to-face meeting in July in connection with the ICMS 2022 event in Las Palmas.

**Andrej Abramic (Co-chair):** It would be interesting to have all this work presented today at the event in Las Palmas, we are also waiting for proposals regarding possible sessions. Maybe DG MARE would like to have inputs regarding this.

**Juan Ronco Zapatero (DG MARE):** Anja DETANT from CINEA has been circulating the question about what we would suggest for sessions, we have contributed, and she will let you know the outcomes of this “survey”.

**Andrej Abramic (Co-chair):** Save the date 6-7 of July!

**Joni Kaitaranta (Co-chair):** The most important thing is that the work of the subgroups will continue on their sides, and there is still time to join the subgroups.

**Juan Ronco Zapatero (DG MARE):** We will be having a conference on MSP in mid-June to look at the past and future of MSP, and perhaps the TEG can join and the MSEG will be organised in back-to-back to this conference.

**MSP AM:** Yes, it will be organised on the 14<sup>th</sup> and 15<sup>th</sup> of June in Brest, France and we hope to share more information in due course, and we expect to have sessions related on Data for MSP.