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Decisions Towards a MAP Knowledge Management Strategy (KMS)

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Note by the Secretariat

The present document provides the first elements and the general framework for a proposal for a **MAP Knowledge Management Strategy** to be developed during the biennium 2022-23. The **MAP Knowledge Management Strategy** will be aimed at sharing and provide information, policies and data on the Mediterranean through the development and testing of **communication models for UNEP-MAP** based on innovative communication tools relying on digital technologies to support scientific communication and the technical-scientific dissemination in the Mediterranean basin.

The **MAP Knowledge Management Strategy** will be integral part of the UNEP KM Strategy and will have close linkage to the MAP Operational Communication Strategy (**Decision IG.24/02**) developed for the biennium 2020-21 and the updated one 2022-2023, according to the approach defined as "**Communication as one**". The MAP Knowledge Management Strategy will support the implementation of the **Mid-Term Strategy (MTS) 2022 -2027** of UNEP/MAP and facilitate the dissemination of the Barcelona Convention and its Protocols to partners and institutional actors at local, national and international level both among citizens and local communities on which strategic decisions impact.

The development of the strategy will be based on **three key pillars**:

Knowledge Management (KM), as the management of the set of processes and practices to generate, identify, collect, update and disseminate knowledge and awareness and best practices internally and externally to the "MAP System" through textual, multimedia, interactive contents and visuals.

Knowledge Platform (KP), as an operational tool for consultation, dissemination of content that includes databases, publications, visualization material, digital maps, digital storytelling products and tools for interacting with the public such as dashboards, infographics, surveys and questionnaires that require user input actions.

Knowledge Hub (KH), as an internal section of the KP for easy access to technical and specialist contents (technical reports, scientific publications), integrating ease of reading with the immediate reception of information for experts and non-experts using interactive and personalized content navigation tools for a quick link to the official documentation.

Towards a MAP Knowledge Management Strategy (KMS)

I. Why a MAP Knowledge Management Strategy?

INFO/RAC's mission is to provide **adequate information and communication services and infrastructure technologies** aimed at:

- (1) **stakeholder and institutions** at level of the Contracting Parties of Barcelona Convention to implement Article 12 on public participation and Article 26 thus strengthening the information management and communication capabilities of the MAP (Mediterranean Action Plan);
- (2) **citizens**, with a view to dissemination of specialist and scientific content to the general public and continuous exchange and feedback of user-generated content data and information between experts and local communities on human actions and impacts in marine and coastal environments.

The general objectives of the **MAP Communication Strategy** take into account the ongoing process provided by the broader framework of the **2022-2027 Mid-Term Strategy** and address the KM Strategy towards:

- Management of the set of processes and procedures to generate knowledge and awareness on the state of the Mediterranean to support decision making and collective actions aimed at raising citizens' awareness.
- Improvement of the quality and quantity of information materials through the creation of digital products and services that are easily accessible to the specialist and non-specialist public.
- Promotion of the "communication as one" brand to unify the communication strategies of the MAP System.

In particular, the **MAP KM Strategy** intends to:

- Strengthen the **collection and dissemination** of knowledge including technical data and information for the Mediterranean Sea environment;
- Create a **hub, a single access point**, for the Mediterranean Sea knowledge on environmental topics to leverage participation and dialogue between decision makers, researchers and partners;
- Promote the adoption of **communication models** for the involvement of citizens and stakeholders in Mediterranean policies through social communication campaigns, interaction tools such as dashboards and digital maps;
- Develop the **digital tools for consultation and interaction with specialist content** to increase citizens' awareness by promoting environmental monitoring best practices and virtuous attitudes for the management of environmental and marine resources according to co-participation and public engagement approaches;
- Facilitate a **timely exchange of data, information and publications** to improve the internal communication in the MAP System;
- Provide a **reference platform** for stakeholders, decision makers, researchers in the Mediterranean area.

II. Gap analysis and baseline scenario

The development of a **Knowledge Management Strategy** tailored for the UNEP/MAP System and at the same time integrated into Mediterranean Sea knowledge framework, needs to carry out a gap analysis and a review of what is already existing. In view of the implementation of a complete gap analysis and baseline scenario, the following gaps have been identified:

- MAP Components adopt and implement separate communication strategies with consequent **dispersion of data and information** in different platforms whose access is often limited to professionals;
- MAP System initiatives remain **not always perceived as having an impact in the decision-making** and social contexts at the local level;
- **Lack of a unique platform** for the collection and dissemination of data and information on the Mediterranean Sea and Coast environment relating not only to the

MAP System knowledge heritage but also of other institutional actors working in the MED (European Union, UFM, etc.);

- **Unintuitive and non-user-friendly data and information sharing tools** for a large audience;
- **Sporadic media coverage** limited to special events and occasions that do not directly involve citizens, stakeholders and civil society in general.

To reduce these gaps, the development of Knowledge Management intends to promote **new communication paradigms** that rely on the visualization of data and the interaction between online users via social network platforms. These paradigms imply a reorganization of scientific and specialist contents towards a narrative and visual structure of immediate understanding for a wide audience. The interactive visualization of specialized data and contents assumes, in this new communicative dimension, a language of common understanding, accessible at an interdisciplinary level, aimed at overcoming barriers of a linguistic nature and of expertise and cultural background (Grainger et al., 2016; Green et al., 2018; Lacroix et al., 2019; Cortes Arevalo et al., 2020). Communicating scientific and specialist content through visualization dashboards, interactive maps and social media is a way to **reduce the gap between experts and citizens** and raise awareness on MAP System activities and Mediterranean policies in general, as an indicator of the state of the coastal and marine environment (Herring et al., 2016; Newell et al., 2017; Berendsen et al., 2018; Maher et al., 2018). The use of social media, in particular, allows information to be conveyed to a wider audience through a continuous exchange of specialist information, enhancing the social networks within online communities (Maher et al., 2018). In this perspective, online collaboration networks are configured as digital socio-technical tools to facilitate the dissemination of complex contents and to increase collective awareness on environmental issues and policies with a high impact on socio-economic balances and dynamics, favoring collective actions of local level (Maher et al., 2018).

A baseline scenario will be composed exploring all the available resources of Mediterranean Sea basin integrating the overview performed by MED Programme.

III. Methodology

For the MAP Knowledge Management Strategy is proposed the **tripartite model** including:

1. **Dissemination** of technical reports that integrates ease of reading (e.g., executive summary or infographic) with the immediacy in receiving information for both experts and non-experts.
2. **Integration of multimedia and geospatial content** by means of dashboards, infographics and multimedia content for the interaction of non-experts and stakeholders with shared content.
3. **Social media campaigns** via Twitter.

This tripartition constitutes **an original model for the management of the set of processes and practices to generate, identify, collect, update and disseminate data and technical contents of MAP**.

The design of the tripartite model, inspired primarily by the scientific bibliography previously examined, gets also inspiration from examples of dissemination platforms entirely structured in interactive navigation pages, integrating textual information with images and multimedia contents.

A *Get Involved* section will offer opportunities for events in order to create a community of users for public engagement in environmental activities and actions, for awareness-raising and crowdfunding campaigns through interactive tools such as widget and filters.

This platform will be structured for digital storytelling by integrating texts and digital mapping contents and will host web apps based on GIS tools for interactive navigation of specialistic contents, public engagement section and open data libraries.

The portal will offer various section for consulting specialized contents through dashboards, web apps and story maps. All these tools rely on the use of digital maps for dissemination of information supported by infographics and query tools for users' interactions.

IV. Target

Knowledge Management Strategy is addressed to two main macro targets as follows:

Experts: including research centers, institutions, public administrations who develop and implement the specialist contents and policies for action in the decision-making and research fields

Non-experts: the set of citizens and general users without expertise in the environmental field, who receive the contents in a facilitated form by dashboards and navigation widgets.

Specific target included in the two macro targets above will be individuated after the recognition of available environmental data and information.

Knowledge Management Platform

The platform constitutes the output of the strategy and is aimed at the target audience that will be better identified in the strategy.

For the development and implementation of the knowledge Platform the following steps need to be taken into account:

- Reconstruction of the state of the art in the field of communication models present in the literature and implemented in the UNEP-MAP context
- Identification of target audiences and partners
- Mapping of stakeholders to be involved in the definition of Knowledge Management
- Mapping and identification of specialized platforms and content to be integrated within the platform to provide a picture as complete as possible on the policies, studies and data produced by the MAP System and institutional actors in the Mediterranean
- Implementation of a survey for stakeholders to identify strengths / weaknesses of the strategy and promote co-design initiatives of the platform according to a participatory approach to the creation of communication models.
- Dissemination of content through social media campaigns
- Identification and formulation of key messages by identifying hashtags and trending topics.

In this regard, **the core** of Knowledge Management is the development of the Knowledge Platform, as an operational tool for the collection and sharing of specialist and scientific content concerning both the activities of the MAP System, and of other institutional actors. The main aim is to set up a **unique reference platform** for the collection and dissemination of policies and technical and scientific advances in the management and monitoring of marine and coastal environments in the **Mediterranean basin**.

The main objective of the Knowledge Platform is to **support the dialogue between stakeholders, decision-makers and experts** through a continuous exchange of data and information. The difficulty of finding specialized data and information to make impact choices on social, economic and environmental systems at regional level, pushes towards the definition of new innovative communication models, supported by digital technologies and ICT, able to integrate specialized information with multimedia contents of wide and immediate understanding and dissemination to stakeholders and decision makers in the first place. **Rapid advances in digital and web-based technologies** have shifted the role of websites from simple passive and one-sided communication tools to intuitive user interaction with content. In this perspective, the visualization of data and contents in general can play an essential role in the communication and dissemination strategies of scientific progress and policies adopted in the Mediterranean area.

New multimedia models are based on the development and implementation of descriptive dashboards and storymaps to support communication practices for the integrated management of environmental policies. These tools allow a dynamic and interactive consultation of the contents through the combination of narrative texts, images, multimedia contents, graphics and digital maps. Multimedia platforms allow the user not only to use but also to query content in real time via a user-friendly web interface. The use of storymaps and data visualization dashboards as a popularizing tool for specialized content is reflected in various fields of application as it facilitates the cognitive experience of non-expert users.

V. Structural characteristics

As unique and centralized access point for the Mediterranean KP will make available contents of several digital formats, accessible in different modalities based on the target audience identified. Available contents are mainly divided into (1) qualitative contents (technical report, scientific publication) usually provided under

unstructured format such as .doc, .pdf; (2) quantitative data such as tables, statistics and geospatial data provided under structured format as Excel supported format or ESRI shapefile, KMZ/KML in the case of GIS data.

Access to data is divided into two levels of target audience: experts and non-experts (citizens). Experts usually are people authorized to upload documents and data in the platform. The KP will allow access to the content of the MAP System, including open data and public contents or, alternatively, useful information for obtaining password to access restricted contents. The platform will provide data and information on regional and locale scale. The content will be made available in English and French. However, the availability of data on a local scale implies access to materials and **contents produced in other official languages of the Mediterranean countries.**

In light of what will emerge from the gap analysis, the set of perspectives and methodological approaches for the implementation of the Knowledge Platform as an operational tool of the MAP Knowledge Management Strategy will be defined.

The Knowledge Platform architecture will be developed on the basis of the baseline scenario and the network of partners involved in the Mediterranean area.

Regardless of the technological solution chosen, the **integrated tripartite model** for the collection, sharing and public dissemination of information and data will be applied.

The MAP Knowledge Management Platform will include a **Knowledge Hub** to facilitate access to the publication heritage of the MAP System and including also other source of environmental information present in the Mediterranean basin.

The **Knowledge Hub** documentation is made accessible by search tools that facilitate interactive navigation of the content including:

- Free search of keywords.
- Filter tools by document type and category (e.g., Governance and Management, Meeting and Events, Projects and Initiatives, Technical and Scientific Documents, News, Awareness Raising and Advocacy, Training and Learning Resources).
- Filter by projects and organizations (UNEP-MAP, INFO-RAC, MED POL, PAP-RAC, Plan Bleu, SCP-RAC, SPA-RAC, etc.)
- Other filter such as: document format, document language, theme, geographic scope (regional, national, local), Countries.

VI. Social Media campaign as support of KMS

Social Media will represent a central communication channel in the Knowledge Management Strategy. The Twitter communication strategy must be set on the identification of **keywords** on reports and activities that MAP intends to promote. These keywords will have to compose the **hashtags** to be used as part of the social campaign in order to contextualize and direct the dissemination of content in specific and useful communication channels to fuel the debate on the proposed topic.

For the purposes of the campaign, it is useful to conduct preliminary analysis on the stakeholders to be involved in order to **strengthen the online user networks**. The identification of **stakeholders** is also functional to the activity of sharing social content relevant to the activities, initiatives of the MAP System and to a wide dissemination of the contents to institutions and organizations (governmental and non-governmental).

Sharing social content is a strategic activity aimed at creating and strengthening communities of connected users around the topic of environmental management and monitoring. The use of social media is aimed at building a collaborative dialogue on the environmental issue, strengthening relations and collaboration between institutional actors, stakeholders and citizens and creating connections between environmental policy, decision making. The social media strategy aims, first of all, at sharing information of public interest in the environmental field. Secondly, it aims to create connections among institutional actors and between them and the citizenship. Finally, it intends to promote collective actions and cooperation between actors of different roles and nature in the field of environmental management and monitoring. In this vision, INFO/RAC should play a connecting role between the various actors inside and outside the MAP System. In this regard categories of stakeholders will be identified for the composition of the Mediterranean network.

VII. Communication tools

The creation of data visualization dashboards and digital maps responds to the need to facilitate communication and dissemination of content, integrating textual information, multimedia content (images, videos) and statistical infographics to reach a broad and generic audience.

The development of digital products for data visualization responds to the dual need to facilitate the access and understanding of non-expert users (citizens) of complex and specialized issues and to promote the interactivity of the users themselves. Furthermore, it allows experts to analyze communication patterns and interactions between users and institutions by mapping environmental policy instances with local impact.

Dashboards and digital maps therefore aim at a concise and understandable communication of complex and specialized information. Communicating in a concise and understandable manner through digital visualization tools does not imply the adoption of a simplistic language, but rather the adoption of communication and disclosure rules and protocols for the identification of the salient points of specialist content.

The identification of these points involves:

- The clarification of the strategic objectives of MAP documents and reports highlighting their connections and impacts with local governance actions and the impacts on socio-economic and cultural balances, on collective and individual attitudes. In conclusion, it is essential to make the citizen understood about why a specific scientific study is of public interest and how it can affect personal and collective well-being.
- The adoption of data visualization models for immediate understanding of the results obtained or the data used in the study by combining textual information with multimedia content (images, videos), infographics and interactive and dynamic digital maps.
- The adoption of interactive navigation tools aimed at improving the user experience such as: a) **zoom tools** on digital maps or digital interfaces that allow the user to focus on aspects of specific interest; b) **query tools** for applying filters, activating or deactivating display layers, for loading additional content from user's devices or via URL link in order to obtain customized detailed information; c) **interactive consultation tools** such as hyperlinks to external sites or documents.

This last point is particularly useful for the purpose of integrating content and strengthening between partner organizations in the exchange of information and knowledge with citizens, as they direct the user towards complementary and in-depth contents of the strategic mission of INFO/RAC.

VIII. Dissemination of documents and information material

The dissemination of documents and information material should focus on the creation of an **incubation platform** for the contents produced by the MAP System. The multiplicity of actors operating in the Mediterranean context requires the creation of a special section for the systematic and organized collection of the available documentation. The creation of a document collection **knowledge hub** ensures the creation of an integrated and coherent system.

The creation of the **knowledge hub** must take into account the different types of users the MAP System. Mainly, the collection and dissemination of documents should be structured on two levels:

Experts: including research centers, institutions, public administrations who develop and implement specialist contents and policies for action in the decision-making and research fields

Non-experts: the set of citizens and general users without expertise in the environmental field, who receive the contents in a facilitated form through the use of dashboards and navigation widgets.

IX. Conclusions

The proposed model fits and integrates into the context of the communication strategy adopted by UNEP-MAP based on the "Communicating as One" principle. The preliminary analysis of the portals has brought out elements in line with the tripartite model that constitute references and provide material for the development of the architectural and structural components to be systemized within the MAP-KMS.

In this sense, the MAP KMS moves within the general framework constituted by the UNEP KM Strategy by adopting the guiding principles for "Communicating as One" in terms of:

OBJECTIVE 1: *“To enhance MAP’s status as an authoritative voice on the environment and sustainable development in the Mediterranean and Advocate the MTS vision to policymakers”* and OBJECTIVE 2: *“MAP knowledge and MAP information system enhanced and accessible for policy-making, increased awareness*

and understanding” by offering the KP as a facilitated and interactive access point to the data, metadata and material of the UNEP-MAP system in digital formats different. The development of the Knowledge Hub inside the KP also offers a single point of access to technical and scientific contents on the Mediterranean, integrating the contents of the UNEP-MAP with those of the individual Contracting States and of the operational programs in place in the Mediterranean Regional Sea.

The social media campaign via Twitter fulfills the UNEP/MAP Operational Communication Strategy 2022-2023 in terms of enhancing “*Ocean literacy*”, *engaging communication*, *awareness raising and education on the coastal and marine environment towards different targets*, *promoting the "Communicating as One" brand and embarking on digital transformation*, broadening media coverage not only regarding MAP initiatives (such as international events and news) but also regarding what the network of partners, institutional actors, research centers and specific and operational programs in the Mediterranean includes. In particular, the Twitter campaigns will coordinate the communication of MAP according to the principle of “Communicating as One” by leveraging the INFO/RAC account.

MAP KMS will be work in synergy with **InforMEA**, one of the UN main platforms, integrating into the Knowledge Hub the available documentation related to the Barcelona Convention. **InforMEA** is the portal to access information on multilateral agreements in the environmental field implemented by United Nations. Contents in this platform are accessible by thematic subdivision and by geographical areas. In addition to agreements, policies and technical contents, **InforMEA** portal hosts local reports and legislation filtered by geographic area.

Social media campaign via Twitter will support **InforMEA** to inform and involve general public about its initiatives, promoting the dissemination of international reports and environmental governance strategies with local impact and to strengthen network of partners through re-tweet actions from institutional accounts and research centers involved in environmental and climate change issues. Interaction will occur primarily through **hypertext links** that refer to the related documentation accessible by means of widgets and query tools within the KP. The social campaign via Twitter will also cover the relaunch of posts relating to the Mediterranean area made by **InforMEA**.

At level of Mediterranean basin, the **MedProgramme** Knowledge Management Strategy constitutes an essential reference in the design of the MAP KMS. The tripartite model incorporates some elements of the MedProgramme strategy in terms of vision and objectives aimed at:

- Strengthening coordination and operational coherence among Mediterranean partners;
- Leveraging and systematically sharing knowledge assets;
- Strengthening the support to decision making through data and information sharing, capacity building, and regional stakeholder engagement;
- Supporting the objectives of the Barcelona Convention and the work of the MAP system through effective stocktaking and scaling up of programs, policy and governance results

Further elements incorporated from MedProgramme Knowledge Management Strategy are:

- Adoption of digital storytelling and data visualization tools (e.g. infographics, story maps, digital maps) for an interactive navigation of contents;
- Availability of database and metadata descriptions;
- Launch of social media campaign as main channel communication of initiatives and promotion of the platform.

Moving within the general context of UNEP, in full synergy with the InforMEA portal and the KMS of the MedProgramme, the strategy that will be elaborated for UNEP/MAP is aimed at systematizing the Mediterranean Sea knowledge heritage to support governance processes and public awareness and awareness campaigns. The implementation of the KP as an operational tool of the KMS, according to the structure of

the tripartite model, will constitute the fulcrum of the existing documentation of MAP System and a broader network of institutional actor operating in the Mediterranean Sea.

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