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Agenda item 3. Progress Report on the Status of Implementation of the Programme of Work on Knowledge Management, Information and Communication 2024-2025

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Activities carried out in the biennium 2024-2025

Background

The INFO/RAC Centre is responsible for developing the Mediterranean environmental information system and for supporting the Mediterranean Action Plan in key areas including data collection and management, data policy and sharing, communication and advocacy, education and training, dissemination and outreach, partnership and networking, country assistance and training, as well as knowledge management and digital transformation.

This mission has been achieved by providing comprehensive information and communication services, along with technological infrastructure, to support the Contracting Parties in implementing the Barcelona Convention and its Protocols. These efforts have enhanced environmental data management and improved communication and knowledge dissemination within the MAP Barcelona Convention System.

INFO/RAC's activities have included the design and implementation of a unified environmental and spatial data infrastructure, along with network services that facilitate information sharing among Mediterranean coastal states.

To ensure the availability of coherent and scientifically sound environmental knowledge, INFO/RAC has maintained close collaboration with key environmental institutions and international bodies to strengthen environmental data management and foster broader information sharing.

The 2024-2025 Programme of Work has been implemented in collaboration with the Coordinating Unit, the MAP Components and in liaison with other regional organizations.

During the final semester, the remaining activities outlined in the 2024-2025 Programme of Work will be completed, with a particular focus on the year's main event, the 24th Meeting of the Contracting Parties (COP 24), scheduled for December 2025 in Egypt.

The Mediterranean Information System and its components

- 1. The implementation of the MAP Data Policy is ongoing, focusing both on the dissemination of data flow annexes and support to Contracting Parties. The annexes, using a standardized format and specific contents for each data flow are available to provide detailed guidance on data policy implementation. Customizations introduced for each data flow allow a clear understanding of the policy. Targeted dissemination sessions will be organized for Contracting Parties, as needed, to ensure a correct implementation of the policy. The implementation process also considers aspects related to the access and use of MAP data by external stakeholders. To this end, a specific Non-Disclosure Agreement (NDA) has been developed.
- 2. The **InfoMAP Platform**, constitutes the Mediterranean information system, designed to provide and share data, information and knowledge services for the benefit of the components of the Mediterranean Action Plan and the Contracting Parties. Its architecture is diffuse across the various repositories, managed by the MAP components, although it is interconnected to work as a unique system.

The upgrade of the platform concerned access to the reporting system, the harmonisation of the data structure and models, the creation of a common catalogue of resources, the integration of data with the interoperability layer and the creation of a common platform for data visualization and analysis. The update and upgrade of InfoMAP system and its modules has focused on the integration of databases already developed and managed by INFO/RAC and in view of a full integration of data collected by the other MAP Components through databases and platforms, when it is r. The InfoMAP upgrade has been carried out also in view of the integration of the UNEP/MAP Knowledge Management Platform (KMaP) developed by INFO/RAC and with MED Programme Knowledge Management Platform.

The integration of available databases and integrated data in **InfoMAPNode** coming from the other MAP Components has been completed in line with the work carried out by the Data Management Task Force. REMPEC MEDGISMAR public layers (4 layers) have been uploaded; SPA/RAC Mediterranean Biodiversity Platform layers (283 layers) have been all linked using remote services in their actual state. Plan Bleu and MedWaves indicators layers relying on MapX, whose remote services have been made available have been linked (70 layers) using remote services. These data, together with further auxiliary layers used for the redaction of MED-QSR report, have been all reversed into the Data Hub of UNEP-MAP Knowledge Management Platform.

- 3. The **Data Centre** is instrumental to improving the harmonisation and standardisation of data flow management, contributing to the detailed definition of the required data up to the delivery of the final information products such as reports or environmental indicators using languages and tools so that interoperability among systems (inside and outside the MAP) is assured.
- 4. The Barcelona Convention Reporting System (BCRS) has been further enhanced to enable Contracting Parties to report under Article 26 of the Barcelona Convention, as well as under the relevant articles of its Protocols. Notably, the reporting template for the SPA/BD Protocol—specifically Table III, "List of SPAs within the SPA/BD Protocol's geographical coverage"— has been upgraded to align with the provisions of COP 22 Decision IG.25/12. The primary objective of the system is to collect, store, manage, and process compliance reporting data—both textual and numerical—related to the implementation of the Barcelona Convention and its Protocols. While the Secretariat holds the legal responsibility for BCRS, INFO/RAC is in charge of its operation and further development. A continuous Help Desk service has been maintained to support countries throughout the different phases of reporting for the seven mandatory protocols. As a result, there has been an observable increase in the correct submission of reports, including those from previous biennia that had remained in "draft" status, indicating they were incomplete.
- 5. The National Budget Baseline (NBB), an inventory of pollutant emissions from all substantial land sources of the Contracting Parties updated on an annual basis and complying with Art. 5 of the Land Based Sources (LBS) Protocol, managed by INFO/RAC has been updated to allow monitoring of the implementation of the Strategic Action Programme (SAP) to guide the formulation, adoption and implementation of the LBS National Action Plans (NAPs). Changes have been made to facilitate the reporting activity, improve the system with new features and provide documental material to support the reporting activity. New reporting process is underway and within periodic online meeting new functionalities and procedures have been illustrated through specific training sessions. A continuous Help Desk activity was ensured to support the Countries in the different phases of reporting.
- 6. **Information Technology Security** of InfoMAP has been ensured by using a set of cybersecurity strategies that prevent unauthorized access to InfoMAP assets such as servers, networks, and data. It maintains the integrity and confidentiality of sensitive information, blocking the access of hackers due to new infrastructure protections. Measures taken to keep data secure include: making regular backups of files, installation of an antivirus software with protection against viruses and malware; updated password policy to use of long secure passwords in order to prevent brutal force attacks; safe storage of data into the private/hybrid Cloud; only authorized staff allowed into certain computer areas with controlled entry

by ID cards or magnetic swipe cards; backup data encryption techniques to code data in case data is copied or intercepted; restricted access to the systems only for defined system administrators and logged access. Network security is used to prevent unauthorized or malicious users from getting inside InfoMAP Information Technology network. Internet security involves the protection of information that is sent and received in browsers, as well as network security involving web-based applications. These protections are designed to monitor incoming internet traffic for malware as well as unwanted traffic. This protection may come in the form of both firewalls and Intrusion Detection Systems (IDS)/Intrusion Prevention Systems (IPS).

7. Significant efforts have been made to complete the **IMAP Info System** and ensure its full operational capacity for all IMAP Common Indicators. New Data Standards and Data Dictionaries for IMAP Common Indicators 3, 4, 5, 18, 20, and candidate indicator 24 have been developed by INFO/RAC, following revision by the Online Working Groups (OWG), approval by CORMON, and finalization based on inputs received from the Contracting Parties. These final versions have been implemented in the IMAP Info System, expanding the reporting coverage to a total of 18 Common Indicators and supporting the development of the 2023 MED Quality Status Report. The IMAP Info System has also been upgraded with **new functionalities** and **tools**, including Superset and JupyterLab for dashboards and data analysis, as well as an enhanced search bar and improved user management features. Through JupyterLab and Superset, now available only for RACs and CU, it is possible to run analysis and create dashboards for data assessment.

Updates have been made to the IMAP Info System, with additional improvements still in progress. These changes aim to simplify reporting activities by the Contractiong Parties and enhance the ability to search for and download reported data. Special attention has been given to strengthening the help desk function to support Contracting parties in processing and uploading their monitoring data.

In addition to the daily support provided by the INFO/RAC Help Desk—which assists with data uploads, formal checks, and validation within the IMAP Info System—national workshops have been organized to ensure technical assistance to country monitoring teams for effective IMAP data reporting.

Furthermore, video tutorial and guidelines (IMAP User guide and Technical Guide) have been uploaded on IMAP Info System. Specifically, six video tutorials on the following topics have been implemented:

- 1. The workflow
- 2. Download Information Standards and check compliance
- 3. Upload information standards
- 4. Fill in information standards (Section 1 & 2)
- 5. Other contents

Strong support to UNEP/MAP has been provided in the framework of the following projects: EcAp MED III project, EcAp MED Plus project, CAMP Transboundary Otranto project. As part of the MedProgramme Sea Programme (MedProgramme), which falls under UNEP's Mediterranean Action Plan (MAP) and represents the first Global Environment Facility (GEF) programmatic multi-focal area initiative in the Mediterranean Sea, a project agreement has been signed to implement activities under Output 2.4: "Data Sharing Policy for the Mediterranean." These activities are part of MedProgramme Child Project 1.1: "Reducing Pollution from Harmful Chemicals and Wastes in Mediterranean Hotspots and Measuring Progress to Impacts."

Communication, Education, Dissemination and Outreach

8. The implementation of the MAP Operational Communication Strategy (2024–2025) has been implemented reinforcing MAP advocacy and enhanced public awareness and outreach, particularly in

observance of UN Days and key MAP topics.

- 9. In line with INFO/RAC's mandate, significant efforts have been made in communication, education, and dissemination to enhance the visibility of UNEP/MAP and promote sustainability awareness. Through strategic communication and advocacy, the proper knowledge of the Barcelona Convention and its Protocols has been effectively disseminated. The implementation of the strategy adheres to UNEP's identity guidelines and emphasizes the "Communicating as ONE" approach. This ensures the integration of various MAP System activities, promoting their dissemination and presentation in a cohesive and consistent manner.
- 10. The process for the development of a MAP Knowledge Management Strategy has been defined and the work is ongoing for the consolidation of the prototype of the Knowledge Management Platform (KMaP). The prototype is up and running, the Data Hub is currently hosting all the geographic layers reversed from InfoMAPNode instance, MED-QSR 2023 auxiliary data, and many more layers of interest for the Mediterranean Sea; the Knowledge Hub is hosting the libraries of all the RACs, the one of UNEP-MAP and the documents marked as authored by UNEP-MAP in UNEP library. The third pole of KMaP, dedicated to the dissemination and networking activities to raise awareness on UNEP-MAP work and create link with citizens, stakeholders and the scientific community, is under implementation and the prototype of this specific KMaP section will be released within the end of 2025. A first attempt to use KMaP to represent published geographical layers from IMAP has also been carried out: the implementation of a workflow to automatically harvest data from IMAP and represent it inside a KMaP map, to be used as IMAP geo-viewer, is ongoing. Cooperation with UNEP-GRID have been strengthen during the last two years, especially by working together at the building of MED-QSR 2023 website, and specifically while sharing geographical data through remote services offered both by MapX and KMaP, revealing a complete interoperability among the two platforms. Close dialogue with other initiatives such as MED Programme have been maintained. Specific interactions have been held in the building of MED Programmed KM platform, and the participation at MED Programme Steering Committee. Competencies in Knowledge Management and operational support have been provided to MED Programme in view of the hosting and maintenance of the MedProgramme Knowledge Management by INFO/RAC. Lastly, INFO/RAC, on behalf of UNEP-MAP, has been involved in the process of definition of a Global Environmental Data Strategy (GEDS) led by UNEP from the very early beginning: the core principles have been drafted in Vienna in September 2023 by an expert group of which INFO/RAC is part, and we were also invited in all the following consultation phases. The global strategy should be presented by UNEP at the next UNEA-7 conference, in December.
- 11. INFO/RAC has supported the promotion of the **Istanbul Environment Friendly City Award (IEFCA)**, an initiative that recognizes and rewards local authorities' efforts to improve the environment, enhance quality of life, and promote sustainable development in Mediterranean coastal cities. As part of this effort, INFO/RAC supported the Coordinating Unit (CU) in developing a dedicated webpage updated during the application period and an user-friendly application survey, accompanied by a clear vademecum to guide applicants. To further facilitate the dissemination of IEFCA, INFO/RAC produced a promotional video providing key information for prospective candidates.
- 12. Public awareness and outreach on UN Days observance and their topics has been enhanced for Ocean Day through the participation to Our Ocean 2024. INFO/RAC in close cooperation with co-organizers supported the definition and successful delivery of UNEP/MAP side events. Graphic materials were produced for Mediterranean Coast Day 2024 celebrations, and the corresponding website was updated.

Concurrently, a media campaign was launched for dissemination purposes.

- 13. A consultable website for the UNEP 2023 MED QSR publication was developed, a downloadable PDF version of the publication was also created and formatted. In parallel, a web page dedicated to the MED QSR was developed, providing foundational information on the report to aggregate and link all previous editions.
- 14. The campaign for the 50th anniversary of UNEP/MAP was conceived, resulting in the creation of the ODYSSEY RELOADED campaign, including its dedicated website, video and informational outreach material.
- 15. As part of its ongoing communication efforts, INFO/RAC has continued to publish and disseminate the MAP newsletter, **MEDNEWS**, via its online platform. In 2023, the newsletter was restyled with a new layout, and its publication frequency was increased to monthly. The new format is no longer structured in fixed sections; instead, news items are selected and presented based on relevance. During the first year, 10 issues were produced and disseminated on schedule, as planned. The newsletter features a wide range of original and relevant articles that highlight projects, initiatives, events, and key issues involving members of the MAP community. It also serves as a hub for sharing job opportunities and institutional announcements across the MAP network.
- On the social media front, INFO/RAC has strengthened UNEP/MAP's online presence by adopting 16. communication tools such as digital cards, videos, and scheduled posts. This effort is part of a collective strategy pursued by the MAP Communication Task Force, which promotes a unified approach through the consistent use of MAP-specific hashtags. INFO/RAC's LinkedIn and X (formerly Twitter) accounts whose followers primarily include researchers, professionals in the environmental and development sectors, and institutional stakeholders—have played a key role in reinforcing MAP's visibility on platforms where many regional institutions are also active. The MAP Communication Task Force has produced digital content in both English and French, including videos and digital cards featuring quotes, facts, and statistics. Special attention has been given to LinkedIn, identified as a strategic platform for knowledge sharing, sector visibility, and partnership-building. Through regular, targeted content, INFO/RAC has cultivated a network of engaged professionals and institutions, positioning MAP at the forefront of key conversations and collaborations. The INFO/RAC LinkedIn account has consistently published high-quality posts supported by original visuals, videos, and digital cards, while effectively leveraging hashtags and mentions to boost reach. In addition, it has reshared MAP content with tailored commentary and tags to enhance visibility. This has led to a steady growth in the network of contacts and increased exposure for MAP across communication channels. The INFO/RAC X account has also been revitalized, with the introduction of new cards specifically created to promote MAP initiatives, including updates on events and strategic priorities. Looking ahead, and in line with a communication strategy rooted in consistency, inclusivity, and innovation, INFO/RAC plans to expand MAP's digital presence to new platforms. Particular focus will be placed on Bluesky, which offers a structured, non-polarized environment for sharing relevant content and is expected to drive higher-quality engagement than the current X platform.
- 17. In the framework of the activities related to SEAWatcher App, a partnership has been established with the LIFE funded project STRONGSEA. The App aims at enhancing marine litter management providing a tool that is easy and readily available for the reporting of beach, floating or seafloor litter and it is based on the main principles of participatory science (citizen science). SEAWatcher has a simple and intuitive interface, which makes the reporting as easy and fast as possible. A landing page and an explanatory video has been developed (http://www.info-rac.org/seawatcher/index en.html).
- 18. Partnerships and networking efforts have been further strengthened in the current biennium. Activities within existing task forces, including other MAP Components and the broader MAP System, have intensified. Support to Contracting Parties of the Barcelona Convention has been enhanced through increased assistance, training, and knowledge exchange. Collaboration has also expanded to international

and regional organizations such as ACCOBAMS, GFCM, and environmental NGOs. Additionally, relationships with UNEP, EEA, and the European Commission have been reinforced, while the number of organizations working with INFO/RAC has grown. In this regard, two important Memoranda of Understanding (MoUs) have been signed, namely with ACCOBAMS and the Pelagos Agreement. The MoU with ACCOBAMS outlines collaboration between the Parties in the production, storage, and access to environmental data to support monitoring and assessment activities. This partnership aims to enhance marine biodiversity conservation efforts, particularly for cetaceans, in the Mediterranean and Black Sea regions. The MoU with the Pelagos Agreement establishes the collaboration between the Parties to strengthen support for scientific research and international cooperation. It also contributes to achieving the overarching objectives of the Pelagos Agreement for the conservation of marine mammals and their habitats within the Pelagos Sanctuary.

- 19. In the framework of INFO/RAC's educational mandate the Platform training called MedLearn was maintained and updated to support the enlargement of activities of virtual education. Online training activities on thematic and cross-cutting topics have been promoted within the UNEP/MAP Barcelona Convention System. The INFO/RAC MedLearn platform is currently undergoing a graphic restyling. Regarding training activities, courses are planned on the following topics: GIS; IMAP and Governance
- During the 2024–2025 biennium, the INFO/RAC Centre launched the training programme "A Lesson in 20. Environmental Governance: Discovering Actions for the Mediterranean Sea and Its Coasts" as part of the Italian Pathways for Transversal Skills and Orientation (PCTO). The programme engaged students from two secondary schools in Rome: Liceo Classico Torquato Tasso (April-June 2024) and Liceo Scientifico Statale Louis Pasteur (January-April 2025). Each course consisted of 22 hours of training, during which students had the opportunity—thanks to the participation of representatives from INFO/RAC and the Italian Ministry of Environment and Energy Security (MASE)—to gain insight into the roles and responsibilities of key national and international institutions involved in environmental protection. The curriculum covered topics such as the Barcelona Convention, the decision-making mechanisms of the Conference of the Parties (COP), and the functions of the Mediterranean Regional Activity Centres, with a particular focus on INFO/RAC's activities. Theoretical lectures were complemented by interactive workshops designed to engage students in current environmental issues, including sustainable development, and to foster the creation of communication materials based on the course topics. With the support of their teachers, students organized an Environmental Info-Day at their respective schools, aimed at both internal and external audiences (peers, parents, local associations, etc.). During the event, students presented the materials developed during the workshops, showcasing what they had learned throughout the course. In total, 34 students participated in the two editions of the programme. At the same time INFO/RAC has started bilateral exchanges to explore the replicability of the initiative as best practice in other Mediterranean countries.