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MedProgramme Knowledge Management Strategy

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UNEP/MAP
Athens, 2020

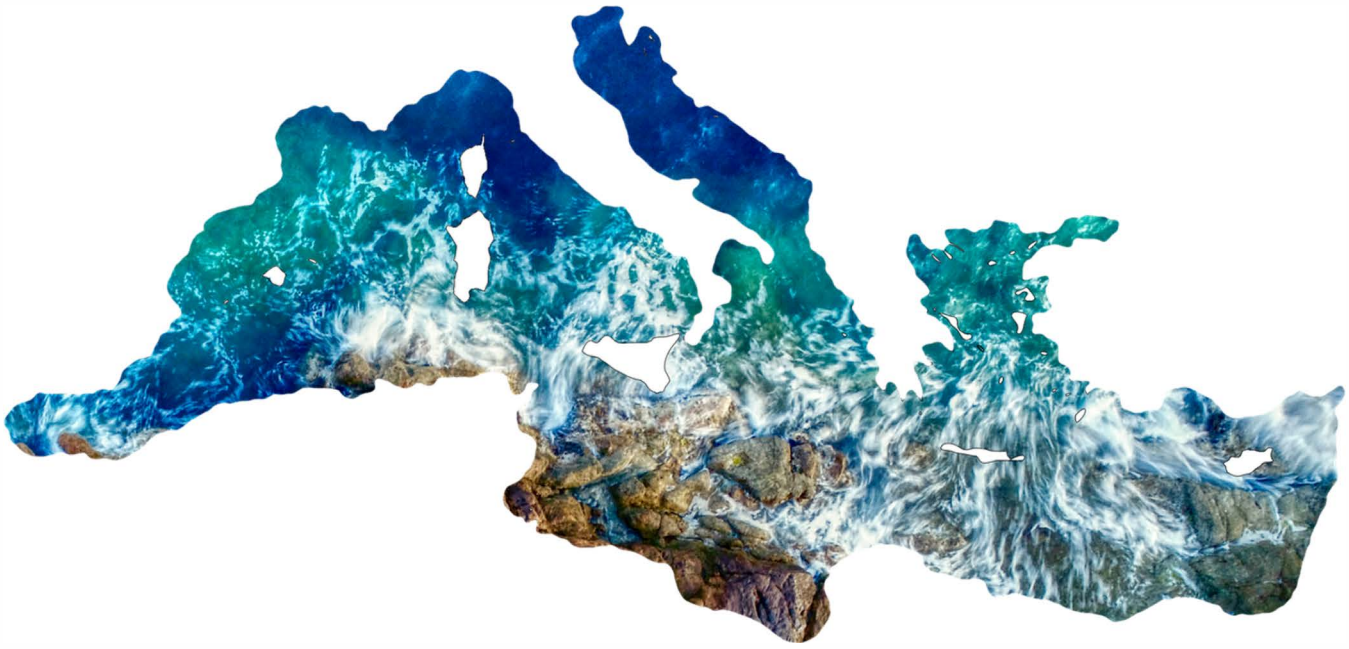
ANNEX P

GEF/UN Environment

"Mediterranean Sea Programme (MedProgramme)

Enhancing Environmental Security"

(2019- 2024)



gef

UN environment

United Nations Environment Programme

Mediterranean Action Plan
Barcelona Convention

The strategy was developed in the framework of the Project Preparation Grant (PPG) of the MedProgramme by Lucilla Minelli, UN Environment/Mediterranean Action Plan (MAP) consultant. June-October 2018

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1. Overview and background

1.1 Purpose

The purpose of the present Knowledge Management (KM) strategy[1] is to offer a structured and integrated approach to leverage and systematically share knowledge assets generated by the Child Projects of the MedProgramme with the intended beneficiaries and audiences. In doing so, the strategy aims to maximize the MedProgramme's impact by: strengthening operational coherence; harnessing synergies and pooling resources, including time; inform policy makers and key stakeholders about the MedProgramme (its activities, needs, outputs, meetings, results, etc.) and of the benefits arising from the Programme interventions. It will also contribute to the objectives of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention), the Minamata Convention on Mercury and the Stockholm Convention on Persistent Organic Pollutants by fostering a broader culture of learning, cooperation and environmental sustainability in the region.

1.2 Context

The present KM strategy is designed to support the implementation of the GEF/UN Environment "Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security" (2019- 2024)[2].The MedProgramme represents the first GEF programmatic multi-focal area initiative in the Mediterranean Sea aiming to operationalize priority actions to reduce major transboundary environmental stresses in its coastal areas while strengthening climate resilience and water security and improving the health and livelihoods of coastal populations. The MedProgramme is implemented in nine beneficiary countries sharing the Mediterranean basin: Albania, Algeria, Bosnia and Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco and Tunisia. Its eight Child Projects[3] cut across four different Focal Areas of the Global Environment Facility (International Waters [IW], Biodiversity [BD], Chemicals and Waste [CW], and Climate Change [CC]) and involve a wide spectrum of developmental and societal sectors, ranging from banking institutions, the private sector, governmental and non-governmental bodies, industry, research, media, and various other organizations. It builds on the MedPartnership and ClimVar & ICZM[4] GEF projects which have enriched the knowledge on the Mediterranean environment and unraveled the implications of climate change and variability; strengthened countries' mutual trust, cooperation and common purpose; consolidated the partnership among countries,

[1] The strategy is illustrated in relevant sections of MedProgramme Child Project 4.1. The full document is annexed to individual MedProgramme Child Project documents to provide a harmonized and consistent reference across the entire portfolio of interventions.

[2] GEF Lead Implementing Agency: UN Environment. Other GEF Implementing Agency: European Bank for Reconstruction and Development (EBRD). Leading Executing Agency: UN Environment/MAP. Executing partners: UNESCO International Hydrological Programme (IHP), European Investment Bank (EIB), Global Water Partnership – Mediterranean (GWP-Med), WWF Mediterranean Programme Office (WWF MedPO), IUCN, Priority Actions Programme Regional Activity Centre (PAP/RAC), Plan Bleu Regional Activity Centre (Plan Bleu), Specially Protected Areas Regional Activity Centre (SPA/RAC) and the Sustainable Consumption and Production Regional Activity Centre (SCP/RAC).

[3] At the time of its approval in October 2016, the MedProgramme was comprised of seven Child Projects. Subsequently, a Mediterranean climate change adaptation project was developed by UN Environment/MAP for financing through the Special Climate Change Fund (SCCF). It was agreed by the UN Environment/MAP, UN Environment and the GEF Secretariat that this SCCF project would be managed for all intents and purposes as an additional Child Project of the MedProgramme. Hence the reference to eight Child Projects of the MedProgramme.

[4] More info on MedPartnership, ClimVar and ICZM (Integration of climatic variability and change into national strategies to implement the ICZM Protocol in the Mediterranean) projects: http://www.themedpartnership.org/, https://iwlearn.net/iw-projects/2600 and https://iwlearn.net/iw-projects/3990. Some partners to the MedPartnership developed a series of dedicated websites for their activities. For instance, PAP/RAC activities on MedPartnership can be found at: https://pap-thecoastcentre.org/medpartnership ; https://pap- thecoastcentre.org/climvar/ and https://pap-thecoastcentre.org/projects/

UN bodies, civil society organizations, bilateral donors and the European Union (EU); and tested on the ground the feasibility and effectiveness of technical and policy instruments aimed at addressing major present and future threats to environmental sustainability and climate related impacts.

The Mediterranean countries have worked together with GEF IW support since the late 1990s to set priorities related to national, as well as transboundary environmental concerns (Transboundary diagnostic analysis [TDA] for the Mediterranean Sea[5]) and have jointly agreed on the interventions needed to address these priorities in two Strategic Action Programmes (SAPs): 1) The Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED); and 2) the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP-BIO).

Following the formal adoption by the Barcelona Convention of the SAP-MED and SAP-BIO (2005 and 2003), the Mediterranean countries translated the SAP priorities into National Action Plans (NAPs), and benefited from international support in moving towards on the ground implementation. The MedPartnership project (2010-2015) supported countries in the initial implementation of the SAPs and of the newly developed Protocol on Integrated Coastal Zone Management (ICZM), which was adopted in 2011.

More recently, the 2015 – 2016 update of the NAPs associated with the SAP-MED has succeeded in creating additional momentum at local, national and regional levels, with a remarkable level of involvement and participation of all stakeholders. In each country, national and local authorities, the industrial sector and Non-governmental Organizations (NGOs) discussed priorities, possible actions and opportunities for investment thus making the NAPs a realistic initiative. These significant achievements, while not yet bringing about measurable changes in the levels of environmental stress or in degradation trends, have however created the indispensable foundation and the enabling conditions for initiating national actions targeting major causes of marine and coastal transboundary degradation. To confront the challenge of implementation, to execute the SAPs and to reinforce implementation of the NAPs thereby achieving concrete and lasting results, are the raisons d'être of MedProgramme.

The Barcelona Convention provides the policy framework under which the MedProgramme will operate and the UN Environment Mediterranean Action Plan (MAP) system will ultimately carry forward the legacy of the outcomes of the MedProgramme's Child Projects, and in particular of its knowledge management mechanisms, approaches and tools. The MAP Regional Activity Centers (RACs) will play a crucial role in sustaining and amplifying these efforts. Moreover, regular reporting to the Meeting of Contracting Parties to the Barcelona Convention on the progress made by the MedProgramme will be ensured through the UN Environment/Mediterranean Action Plan-Barcelona Convention Secretariat.

[5] Transboundary diagnostic analysis (TDA) for the Mediterranean Sea, UNEP/MAP, 2005 - https://wedocs.unep.org/bitstream/handle/20.500.11822/598/medtda.pdf?sequence=2&isAllowed=y

Box 1 The Barcelona Convention and the MAP system

The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (referred to as the Barcelona Convention) is a regional convention adopted in 1976 to prevent and abate pollution from ships, aircraft and land-based sources in the Mediterranean Sea. It is developed under the UN Environment Regional Seas Programme which was established in 1974 with the scope of coordinating activities aimed at the protection of the marine environment through a regional approach. The Mediterranean Action Plan (MAP) was the first UN Environment initiative to be developed under the Programme and became the model for other seas across the globe. Since 1975, MAP has provided the institutional framework for cooperation in addressing common challenges of marine environmental degradation adopted by the Mediterranean States and the European Union.

There are 22 Contracting Parties (Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, the European Union, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia, Turkey) and they decide on MAP strategies, budget and programme of work in pursuit of MAP's goal at their Ministerial level meetings, held every two years. They appoint Focal Points to review the progress of work and ensure the implementation of recommendations at the national level. A rotating Bureau of six representatives of the Contracting Parties guides and advises the MAP Secretariat (located in Athens) in the interim period between the biannual meetings.

More information on the Coordinating Unit for the Mediterranean Action Plan, Secretariat to the Barcelona Convention and its Protocols at: http://web.unep.org/unepmap/.

The Minamata Convention on Mercury[6], the Stockholm Convention on Persistent Organic Pollutants[7], the Basel Convention[8] and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activity (GPA)[7] are also among the key guiding frameworks for the Child Projects focusing on reduction of land-based pollution (Component 1 of the MedProgramme).

In terms of knowledge management (KM), the MedProgramme holds a tremendous opportunity to generate new information and consciousness, encourage transboundary cooperation, scale up needed investments and raise general awareness about the benefits arising from good governance and management of natural resources in coastal areas.

The eight Child Projects (CP) of the MedProgramme are expected to deliver a set of complementary results embracing the categories of priorities identified by the TDA for the Mediterranean Sea which are translated into three components of the program: i) Reduction of Land-Based Pollution in Priority Coastal Hotspots and measuring progress to impacts; ii) Enhancing Sustainability and Climate Resilience in the Coastal Zone; and iii) Protecting Marine Biodiversity (see Table 2, MedProgramme Components, Child Projects and GEF Focal Areas, page 16).

[6] The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. It entered into force on 16 August 2017. More info: http://www.mercuryconvention.org

[7] The Stockholm Convention on Persistent Organic Pollutants is an international environmental treaty, signed in 2001 and effective from May 2004, that aims to eliminate or restrict the production and use of persistent organic pollutants (POPs). More info: http://chm.pops.int

[8] The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal is an international treaty that was designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries (LDCs). The Convention was opened for signature on 22 March 1989 and entered into force on 5 May 1992. As of February 2018, 185 states and the European Union are parties to the Convention. More info: http://www.basel.int

[9] The UNEP Global Programme of Action (UNEP/GPA) aims at preventing the degradation of the marine environment from land-based activities by facilitating the realization of the duty of States to preserve and protect the marine environment. It is unique in that it is the only global initiative directly addressing the connectivity between terrestrial, freshwater, coastal and marine ecosystems. More info: https://www.unenvironment.org/nairobiconvention/unep- global-programme-action-unepgpa

The fourth component (Knowledge Management and Programme Coordination) includes Child Project 4.1 "Mediterranean Sea LME Environment and Climate Regional Support Project" which plays a key role within the MedProgramme as it "implements mechanisms for Programme-wide learning and dissemination of knowledge, monitoring the Programme's progress to impacts, and fostering synergistic interactions among Child Projects". Within the GEF programmatic approaches there is a need to ensure programme coherence and impact through coordination among diverse sets of multi-focal area Child Projects contributing to the same programme outcomes. A Support Project functions as a trait d'union (a common link) among Child Projects by providing overall coordination of the programme portfolio, resource-saving services, a robust system to managing knowledge effectively and a sound action plan for gender mainstreaming.

The present strategy provides the context and the boundaries within which KM will operate in the MedProgramme, essentially answering the strategic questions: where are we now? (baseline and project needs), what do we want to achieve? (vision and objectives), and how to get there? (framework for processes, tools, activities and governance).

The present strategy does not aim to provide a final definition of the tools, software and instruments that will be used to reach its goals. Although a wide range of them is considered and analysed, their selection will take place during the inception phase of the MedProgramme together with its stakeholders (countries and executing partners). This process will be driven by the specific needs of the stakeholders and will follow a competitive process for selection ensuring an efficient use of resources.

1.3 Where are we? (Baseline Scenario)

A baseline scenario in the context of this strategy was built through a detailed scanning of existing initiatives related to KM and the objectives of the MedProgramme, and a survey addressed to project designers aimed at diagnosing needs and expectations related to KM and outreach of Child Projects.

The overview of regional (and global when relevant) initiatives on knowledge/ information management focusing on pollution reduction, biodiversity, water resources (fresh water and marine) and climate change revealed that there is a great potential for cross-fertilization and incremental innovation. At the same time, the analysis brought to light some challenges, such as fragmentation, the inability of some projects to sustain their results, insufficient resources or attention devoted to KM approaches, gaps in information sharing, among others, which point to the need to clearly address these challenges at the onset of the MedProgramme.
The responses to the web-based survey served to inform the design of the strategy and its levels, in terms of target audiences, objectives, tools and activities.

1.4 What do we want to achieve? (KM Vision and Objectives)

The MedProgramme strives to become a knowledge hub in the Mediterranean region to scale up successful practices, encourage broader adoption, promote knowledge sharing and support the common objectives of the parties to the Barcelona Convention.
In this effort, it also pioneers a new integrated KM methodology for GEF-financed programs in line with GEF programmatic approaches. The strategy puts in place a framework that will underpin and guide the MedProgramme knowledge-sharing activities and support the achievement of the programme outcome(s), reflecting the complexity of its portfolio while ensuring that its findings are effectively translated, shared and delivered to the intended audiences.

The strategy aims to maximize the MedProgramme impact by (the KM strategy objectives):

- Strengthening coordination and operational coherence among Child Projects and their partners;
- Monitoring the execution of the activities under the entire Programme to assess progress to impact;
- Leveraging and systematically sharing knowledge assets generated by the Child Projects with the intended beneficiaries and audiences;
- Strengthening the science-policy interface (SPI) and influencing 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 programme results; and
- Fostering incremental innovation within GEF programmatic approaches and enriching the knowledge base of GEF Implementing and Executing Agencies.

1.5 How to get there?

In order to achieve this vision and related objectives, three interconnected functional levels[10] have been identified to articulate the KM strategy:

1. at the **PORTFOLIO LEVEL** to support the work of project managers and executing partners by providing project management tools and training to key regional stakeholders;
2. at the **GENERAL PUBLIC LEVEL** to share results, inform and influence target audiences by reaching out to and engaging with civil society, media, and representatives of non-scientific community;
3. at the **POLICY and DECISION-MAKING LEVEL** to support the Contracting Parties of the Barcelona Convention, relevant decision makers in the region and the work of GEF Implementing and Executing Agencies by contributing to relevant regional policy processes and related GEF initiatives (particularly the IW:LEARN project).

Organizational coherence and strong synergies among MedProgramme Child Projects are considered critical to sustain effective knowledge sharing and ensure the successful achievement of the KM objectives. Careful consideration was given to the different types of knowledge that will be generated throughout the lifespan of the programme to ensure that intangible assets (tacit knowledge, intended as human and intellectual capital) as well as technical and codified information (explicit knowledge) are properly valued and managed.

1.6 Methodology

The strategy was prepared during the period June - September 2018 in the framework of the Project Preparation Grant (PPG) phase of the MedProgramme (October 2017- December 2018) in close coordination with the senior staff of the UN Environment/Mediterranean Action Plan Secretariat. It is based on the analysis of the Program Framework Document (PFD) of the MedProgramme[11] various background documentation (including the Report from the First Regional Consultation held on 7-8 March 2018 in Athens which confirmed the decision of the countries to prepare a KM strategy), the results of a dedicated online survey, exchanges

[10] Activities and tools outlined in this strategy contribute to one or more of these operational levels.

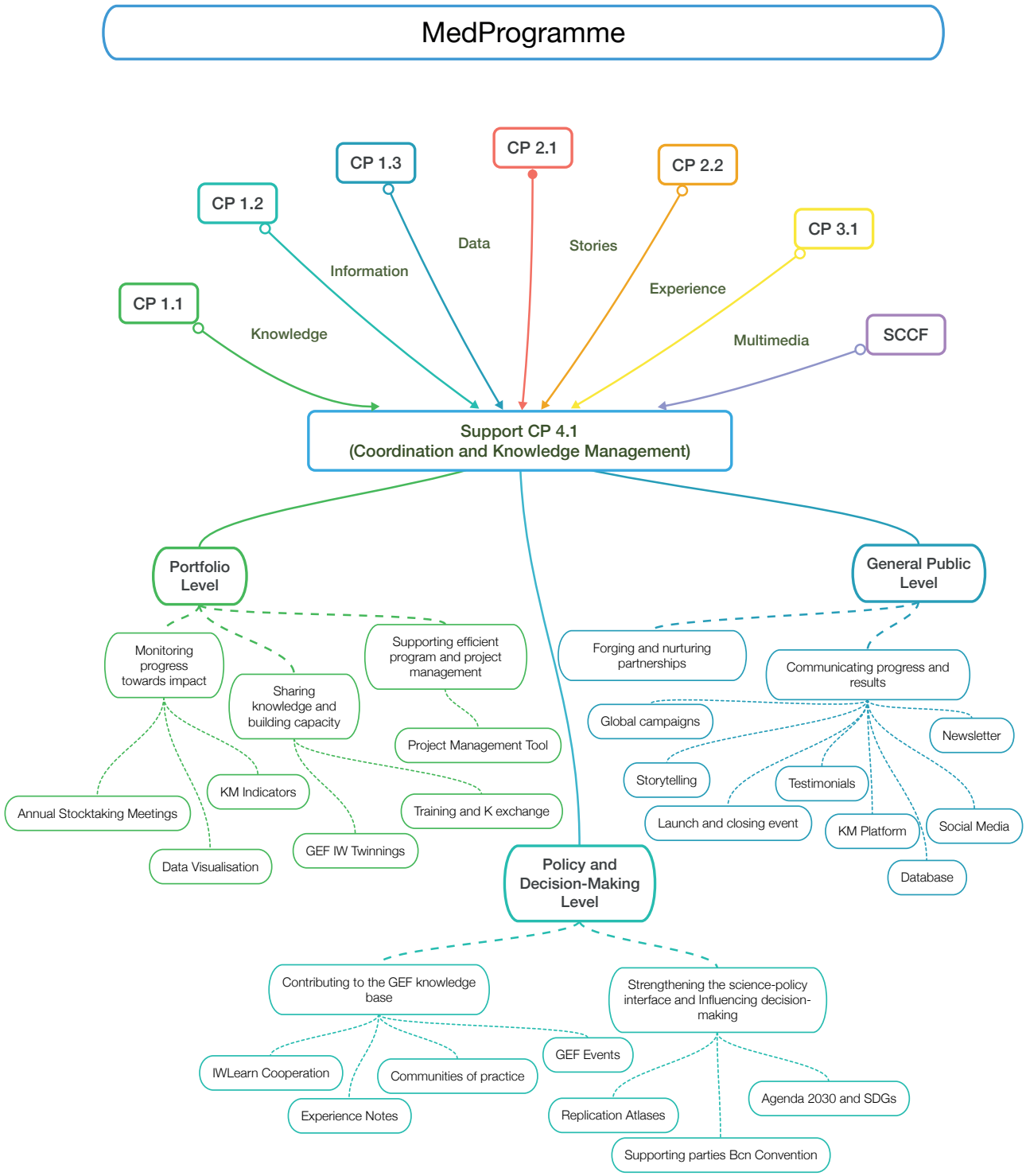
[11] The Program Framework Document (PFD) was approved by the GEF Council on 26 October 2016. More info: https://www.thegef.org/project/mediterranean-sea-programme-medprogramme-enhancing-environmental-securitynairobiconvention/unep- global-programme-action-unepgpa

with project designers (with in-depth review of available drafts of Child Project documents), desk research, contact with relevant technical counterparts (i.e. for project management tool, visualization, etc). Further inputs were collected during the Second Regional Consultations for the MedProgramme held on 20 and 21 September 2018 at UNESCO HQ in Paris. Moreover, the design of the strategy took into account lessons learned from the predecessor project of the MedProgramme, the MedPartnership Project.
The approach illustrated in the present strategy will be operationalized during the MedProgramme inception phase in 2019.

1.7 Implementation

The overall KM strategy is built within the MedProgramme Support Child Project 4.1 and executed by the MedProgramme Coordinating Unit (MedPCU) in close coordination with all Child Projects. Outcomes and outputs of Child Project 4.1 are closely aligned with the present strategy, which, in addition to the logframe in the project document, also envisions actions to be possibly undertaken in the course of the execution of the Programme. The final detailed list of tools, activities and initiatives (and their costs) will be validated during the MedProgramme inception phase and fully agreed with the countries, executing partners and stakeholders of the Programme.

Fig. 1 Knowledge production, management and dissemination in the MedProgramme



2. Baseline scenario and projects needs

2.1 Overview of regional KM initiatives

> *Connection, not collection: that's the essence of knowledge management*. –Tom Stewart

As the MedProgramme cuts across four different GEF Focal Areas (Biodiversity, Chemicals and Waste, International Waters and Climate Change), its results will be relevant for many different sectors and activities in the Mediterranean region. A review of the existing initiatives related to knowledge management in these domains was carried out with the purpose to: 1) avoid unnecessary duplication; 2) replicate and build on successful practices; and 3) establish potential synergies and partnerships. The research included knowledge platforms, databases, initiatives and projects on knowledge/information sharing in the Mediterranean region (or globally when relevant) focusing on pollution reduction, biodiversity, water resources (fresh and marine) and climate change.

The result is a detailed knowledge map that will be useful during the execution of the MedProgramme to: establish collaborations (for content sharing and use of respective networks to increase impact and dissemination), benefit from existing collected data and technical information, make reference to relevant policy and legal frameworks, get inspiration from effective data visualization examples and platform designs, and replicate/ participate in successful awareness raising campaigns and capacity building activities (see legend in Table 1 "Relevance for the MedProgramme").

Against this baseline, the MedProgramme will generate new data and develop additional capacity of beneficiary countries to reduce pollution in marine and freshwater coastal bodies, increase resilience to climate change, improve the governance of water resources, promote the nexus approach and protect biodiversity and ecosystems.

The analysis of the knowledge map shows that there is an existing wealth of information in these domains. This poses a number of challenges as well as opportunities for effective knowledge sharing. The risk of fragmentation is high, and coordination among similar or complementary initiatives is not always optimal. Often, the results of projects are not fully sustained after their closure (possibly due to lack of funds after project execution is completed, insufficient ownership of results by key stakeholders and partners, or inadequate emphasis and instruments dedicated to KM). Another crucial issue remains the integration of different environmental datasets. Aware of these challenges, the MedProgramme is tackling KM at the very outset identifying possible solutions to overcome them. Moreover, there is ample room for cross-fertilization and learning: one must avoid the temptation to reinvent the wheel, and build instead on existing knowledge useful for incremental innovation. Lastly, the wealth of partners involved in the MedProgramme and especially the MAP system, can prevent pitfalls due to lack of ownership by leveraging and sustaining the KM efforts through their networks.

Legend Table 1

Potential Collaboration for Content Sharing and use of Respective Networks to Increas Impact and Dissemination	Relevant Scientific Data and Technical Information	IW BD CW CC GEF Focal Areas (International Waters, Biodiversivity, Chemical and Waste, Climate Change)
Reference to Key Policy and legal Frameworks	Effective Example(s) of Dat Visualisation, Web Design and UX	Succesful Awareness Raising, Outreach and Capacity Building

Table 1 Overview of selected knowledge platforms and initiatives relevant for the MedProgramme (2018)

A selection of platforms, databases, initiatives and projects on knowledge - and information - sharing in the Mediterranean region (or globally when relevant) focusing on pollution reduction, biodiversity, water resources and climate change compiled for the purpose of drawing a KM baseline scenario for the GEF/UN Environment "MedProgramme".

Initiative Name and URL	Organizations	Where - When - What	Relevance for MedProgramme
AMAre https://amare.interreg-med.eu https://bit.ly/2BxKG9J	**Executing Partners:** CNR, Interreg Mediterranean **Donors:** ERDF, IPA	**Geographical Area:** Mediterranean Sea **Activity Period:** 36 months (ongoing) **Description:** The objectives of this project are 1- to develop shared methodologies and geospatial tools for multiple stressors assessment, coordinated environmental monitoring, multi criteria analyses and stakeholders' engagements; 2- to translate these guidelines into concrete pilot actions and coordinated strategies in selected Marine Protected Areas (MPAs) to solve hot spots of conflicts affecting marine biodiversity and the services it provides.	BD CW
AQUACROSS http://dataportal.aquacross.eu	**Executing Partners:** IOC-UNESCO **Donors:** EU	**Geographical Area:** Europe **Activity Period:** 2018 - ongoing **Description:** Aquacross Information Platform aims to provide open access to a wide range of resources related to aquatic (freshwater, marine and coastal) ecosystem and biodiversity management at the European level. The primary focus is on data used in the various project Case Studies and Work packages, and resulting maps, model outputs and tools.	IW BD
Aquastat http://www.fao.org/nr/water/aquastat/main/index.stm	FAO	**Geographical Area:** Global (particular focus on Africa, Asia, Latin America, and the Caribbean) **Activity Period:** 1994 - ongoing **Description:** AQUASTAT started with the aim to contribute to FAO's goals through the collection, analysis and dissemination of information related to water resources, water uses and agricultural water management, with an emphasis on countries in Africa, Asia, Latin America, and the Caribbean. AQUASTAT is FAO's global water information system, developed by the Land and Water Division. It is the most quoted source on global water statistics. We collect, analyze and disseminate data and information by country on water resources, water uses, agricultural water management.	IW CW CC
Basel, Rotterdam and Stockholm Conventions Joint Clearing House Mechanism http://synergies.pops.int/Implementation/KnowledgeManagementandOutreach/Clearinghousemechanism/tabid/5382/language/en-US/Default.aspx	UN and UN Environment	**Geographical Area:** Global **Activity Period:** 2001 - ongoing **Description:** The joint clearing-house mechanism is a multi-stakeholder global system that facilitate the exchange of information and expertise relevant for the Basel, Rotterdam and Stockholm conventions. To achieve such an objective the Secretariat has developed, and is continuously enhancing, a global knowledge base made of *information* and *tools*, fed and used by all members of the clearing-house *community*.	IW CW
Biodiversity Information System for Europe (BISE) https://biodiversity.europa.eu/	European Commission, European Environment Agency	**Geographical Area:** Europe **Activity Period:** Ongoing **Description:** BISE is a single entry point for data and information on biodiversity supporting the implementation of the EU strategy and the Aichi targets in Europe.	IW BD CW
Blue Med Virtual Knowledge Centre http://www.bluemed-initiative.eu/virtual-knowledge-centre/	**Executing Partners:** UfM, EU Commission, EIB, IMO **Donors:** EU Commission	**Geographical Area:** Mediterranean Area **Activity Period:** 2014 - ongoing **Description:** The Digi-gate for Marine and Maritime Knowledge in the Mediterranean. The Virtual Knowledge Centre (VKC) was launched with the objective to provide a centralised platform for marine and maritime information and to improve synergies across different initiatives and projects in the Mediterranean region.	IW
Climate-ADAPT https://climate-adapt.eea.europa.eu	EU Commission, European Environment Agency	**Geographical Area:** Europe **Activity Period:** 2012 - ongoing **Description:** Climate-ADAPT aims to support Europe in adapting to climate change. It is an initiative of the European Commission and helps users to access and share data and information on: Expected climate change in Europe; Current and future vulnerability of regions and sectors; EU, national and transnational adaptation strategies and actions; Adaptation case studies and potential adaptation options; Tools that support adaptation planning.	CC
CONSUME-LESS Consume Less in Mediterranean Touristic Communities https://consume-less.interreg-med.eu		**Geographical Area:** Mediterranean Area **Activity Period:** 2016 - 2019 **Description:** Consume-Less aims to develop integrated sustainable energy, water and waste management strategies and to promote sustainable tourism models in Mediterranean cities. Six pilot areas are involved: Gozo, Vélez-Málaga, Saranda, Ragusa, Realmonte and Naxos.	CW
COPERNICUS Marine Environment Monitoring Service http://marine.copernicus.eu	**Executing Partners:** EU Commission, ESA, EUMETSAT, ECMWF **Donors:** EU Commission	**Geographical Area:** Global **Activity Period:** 2015 - ongoing **Description:** The Copernicus Marine Environment Monitoring Service (CMEMS) provides regular and systematic reference information on the physical state, variability and dynamics of the ocean and marine ecosystems for the global ocean and the European regional seas.	IW BD CW CC
COPERNICUS Land Monitoring Service https://land.copernicus.eu/ https://scihub.copernicus.eu/ https://www.sentinel-hub.com/	**Executing Partners:** EU Commission, ESA, EUMETSAT, ECMWF **Donors:** EU Commission	**Geographical Area:** Global **Activity Period:** 2015 - ongoing **Description:** Copernicus Land Monitoring Service (CLMS) provides geographical information on land cover to a broad range of users in the field of environmental terrestrial applications. This includes land use, land cover characteristics and changes, vegetation state, water cycle and earth surface energy variables.	BD CW CC

EMODnet http://www.emodnet.eu/	**Executing Partners:** EU **Donors:** EU Commission DG MARE	**Geographical Area:** Europe Marine Environment **Activity period:** 2013 - ongoing **Description:** The European Marine Observation and Data Network (EMODnet) consists of more than 160 organisations that together work on assembling, harmonising and making marine data, products and metadata more available to public and private users. The main purpose of EMODnet is to unlock fragmented and hidden marine data resources and to make these available to individuals and organisations (public and private), and to facilitate investment in sustainable coastal and offshore activities through improved access to quality-assured, standardised and harmonised marine data which are interoperable and free of restrictions on use. EMODnet provides access to European marine data across seven discipline-based themes: Bathymetry; Geology; Seabed habitats; Chemistry; Biology; Physics; Human activities. EMODnet motto is 'collect data once and use it many times'.						IW	BD	CW	
Environment LIVE https://environmentlive.unep.org	UN Environment	**Geographical Area:** Global **Activity Period:** Ongoing **Description:** Environment Live provides the UN Member States open access to information and knowledge on the environment at the global, regional and national levels. Environment Live is a dynamic on-line platform for sharing contextualized data and knowledge to keep the environment under review.						IW	BD	CW	CC
Euro-Mediterranean Information System on know-how in the Water sector (EMWIS) http://www.semide.net/; http://www.emwis.org	**Executing Partners:** UfM, EEA, GWP, WWC, Lebanese Minister of Energy and Water, INBO-MENBO, MED-EUWI, IME, ACWUA, AQUAMADRE, EcoMENA, MEDRC, UNU-INWEH, L'Ambassade de l'Eau **Donors:** EU Commission, EuropeAid Co-operation Office & EC DG Environment, France, Italy and Spain	**Geographical Area:** Mediterranean Sea **Activity Period:** 1999 - 2020 **Description:** EMWIS is an initiative of the Euro-Mediterranean Partnership. It provides a strategic tool for exchanging information and knowledge in the water sector between and within the Euro Mediterranean partnership countries. All the countries involved in the Union for the Mediterranean (UfM) are concerned: The 27 EU member states of the EU and the 16 Mediterranean Partner Countries (Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Jordan, Israel, Lebanon, Mauritania, Monaco, Montenegro, Morocco, Palestinian Authority, Syria, Tunisia, Turkey).						IW			
European MSP Platform https://www.msp-platform.eu/	**Executing Partners:** EASME on behalf of DG MARE **Donors:** EU Commission under the EMFF	**Geographical Area:** Europe **Activity Period:** Ongoing **Description:** The European MSP Platform is an information and communication gateway designed to offer support to all EU Member States in their efforts to implement Maritime Spatial Planning (MSP) in the years to come. Funded by the EU Directorate General for Maritime Affairs and Fisheries (DG MARE), the European MSP Platform acts as the central exchange forum for the rich knowledge generated in past, current and upcoming MSP processes and projects.						IW			
European Ocean Biogeographic Information System – EurOBIS http://www.eurobis.org	EMODnet, MarBEF, LifeWatch, Flanders Marine Institute (VLIZ)	**Geographical Area:** Mediterranean Area **Activity Period:** 2004 - ongoing **Description:** EurOBIS - the European Node of the international Ocean Biogeographic Information System (OBIS) - publishes distribution data on marine species, collected within European marine waters or collected by European researchers outside European marine waters. EurOBIS is an online marine biogeographic database compiling data on all living marine creatures. The principle aims of EurOBIS are to centralize the largely scattered biogeographic data on marine species collected by European institutions and to make these data freely available and easily accessible.						IW	BD		
FATE and impact of pollutants in terrestrial and aquatic ecosystems http://fate.jrc.ec.europa.eu/rational/home.html	**Executing Partners:** EU Commission, JRC, Institute for Environment and Sustainability **Donors:** EU, JRC	**Geographical Area:** Europe **Activity Period:** 2009 - 2015 **Description:** FATE is the ensemble name for the pool of activities related to the assessment of fate and impacts of pollutants in terrestrial and aquatic ecosystems carried out at the Institute for Environment and Sustainability (IES) of the Joint Research Centre (JRC). Contaminants spread across different environmental media through atmospheric deposition, leaching from soil to groundwater, accumulation in rivers and lakes, and discharge into the sea. FATE addresses the fate and impacts of pollutants across a range of temporal and spatial scales depending on the policy question and making the best use of available data. The results are pollution risk and vulnerability maps, which are very useful to assess the impact of EU policies, raise public awareness and facilitate planning of management scenarios.							BD	CW	
GBIF | Global Biodiversity Information Facility https://www.gbif.org	EMODnet, EU, EU BON, Japan Ministry of Environment	**Geographical Area:** Global **Activity Period:** 1999 - ongoing **Description:** GBIF—the Global Biodiversity Information Facility—is an international network and research infrastructure funded by the world's governments and aimed at providing anyone, anywhere, open access to data about all types of life on Earth. Coordinated through its Secretariat in Copenhagen, the GBIF network of participating countries and organizations, working through participant nodes, provides data-holding institutions around the world with common standards and open-source tools that enable them to share information about where and when species have been recorded.							BD		
General Fisheries Commission for the Mediterranean (GFCM) http://www.fao.org/gfcm/data/en/	FAO	**Geographical Area:** Mediterranean Sea and Black Sea **Activity Period:** 1997 - ongoing **Description:** The General Fisheries Commission for the Mediterranean (GFCM) is a regional fisheries management organization (RFMO) established under the provisions of Article XIV of the FAO Constitution. The GFCM initially started its activities as a Council in 1952, when the Agreement for its establishment came into force, and became a Commission in 1997. The main objective of the GFCM is to ensure the conservation and the sustainable use, at the biological, social, economic and environmental level, of living marine resources as well as the sustainable development of aquaculture in the Mediterranean and in the Black Sea (GFCM area of application).						IW	BD		
Geo-referenced information system for coastal aquifers in the Mediterranean (INWEB) http://www.inweb.gr/index.php?option=com_wrapper&view=wrapper&Itemid=220#	**Executing Partners:** UNESCO Chair and Network/International Network of Water-Environment, Centres for the Balkans (INWEB), Aristotle University of Thessaloniki. **Donors:** UNESCO	**Geographical Area:** Mediterranean Area **Activity Period:** 2003 - 2015 **Description:** The UNESCO Chair/INWEB is a network of academic and non-academic institutions. Each of the ten Balkan member countries has a focal point for its own country's members. Concentrating mainly on transboundary issues, the UNESCO Chair/INWEB promotes a multi-disciplinary approach to water resources management issues, involving scientists, engineers, economists, legal experts and sociologists. It encourages initiatives on water resources management issues from the bottom up, and promotes joint training projects and the sharing of expertise. The objectives of INWEB are to: 1. Establish an open international network of communication and shared expertise in the Balkans and other developing countries to facilitate the exchange of information and expertise in the field of water and the environment; 2. Promote the services to the region of an international body of recognised experts in water and environmental issues; 3. Create and maintain a database on transboundary water and the environment by developing an inventory of existing transboundary monitoring systems for water resources and the environment.						IW			

GODEM - Optimised Management of Waste in the Mediterranean https://lra4dev.cor.europa.eu/portal/EN/coopmonth/Pages/GODEM.aspx	EU Commission	**Geographical Area:** Mediterranean Basin **Activity Period:** 2010 - 2012 **Description:** The project is aimed at settling a network for the exchange of information and experiences between European local/regional authorities and institutions of the southern Mediterranean on the sustainable management of waste treatment.									CW	
Green Growth Knowledge Platform - GGKP http://www.greengrowthknowledge.org	**Executing Partners:** GGGI; OECD; World Bank; UNEP. **Donors:** MAVA, Swiss, Netherlands, Germany	**Geographical Area:** Global **Activity Period:** 2012 - ongoing **Description:** The GGKP is a global community of organisations and experts committed to collaboratively generating, managing and sharing green growth knowledge and data to mobilise a sustainable future.									CW	CC
H2020/SEIS Info system https://eni-seis.eionet.europa.eu/south https://www.h2020.net/	**Executing Partners:** EEA, UN Environment MAP **Donors:** EU	**Geographical Area:** South Mediterranean (Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Tunisia) **Activity Period:** 2015 - ongoing **Description:** ENI SEIS II South Project aims to contribute to the reduction of the marine pollution in the Mediterranean by developing a Shared Environmental Information System (SEIS) supporting the regular production and sharing of quality assessed environmental data, indicators and information.							IW		CW	
ICZM Platform http://www.iczmplatform.org	**Executing Partners:** PAP/RAC **Donors:** MTF	**Geographical Area:** Mediterranean Area **Activity Period:** 2018 - ongoing **Description:** This interactive space is designed as a multi-disciplinary "bank" of information, documentation and good practices related to ICZM in the Mediterranean (and elsewhere), as well as a place for networking and exchange. This platform provides information on the legal and policy framework, capacity building, awareness raising, data base of projects, library and the resources for networking.							IW			CC
IMAP Info Pilot System (website under development as of 11/2018)	**Executing Partners:** UN Environment MAP, InfoRAC **Donors:** UN Environment MAP, EC	**Geographical Area:** Mediterranean Basin **Activity Period:** **Description:** Pilot IMAP compatible Data and Information System, connected to MAP Components' information systems and other relevant regional knowledge platforms, will provide data based on data standards and data dictionaries for ten selected IMAP Common Indicators.							IW			
INSPIRE Knowledge Base https://inspire.ec.europa.eu	Member States of the EU	**Geographical Area:** EU **Activity Period:** 2007 - ongoing **Description:** The INSPIRE Directive aims to create a European Union spatial data infrastructure for the purposes of EU environmental policies and policies or activities which may have an impact on the environment. This European Spatial Data Infrastructure will enable the sharing of environmental spatial information among public sector organisations, facilitate public access to spatial information across Europe and assist in policy-making across boundaries. INSPIRE is based on the infrastructures for spatial information established and operated by the Member States of the European Union. The Directive addresses 34 spatial data themes needed for environmental applications. The Directive came into force on 15 May 2007 and will be implemented in various stages, with full implementation required by 2021.										
INTEGRATED COASTAL WATER MANAGEMENT FOR MED (ICWM) https://business.esa.int/projects/icwm-for-med	ESA; Planetek	**Geographical Area:** Tyrrhenian Sea **Activity Period:** 2015 - ongoing **Description:** The objective of ICWM for MED is to demonstrate the benefits of a service based on the integration of Earth Observation based products, Satellite Communication and Navigation solutions together with Terrestrial assets and crowdsourcing features, for the set-up of an improved coastal surveillance and water quality monitoring service.							IW		CW	
Interreg Mediterranean https://interreg-med.eu; http://forum.interreg-med.eu/en/med-community/(Forum)	European Regional Development Fund, IPA fund	**Geographical Area:** Mediterranean Basin **Activity Period:** 2014 - 2020 **Description:** 13 countries are working together in the transnational European Cooperation Programme for the Mediterranean area towards low carbon economy, the protection of natural and cultural resources and the strengthening of innovation The main objective of the Interreg MED Programme is to promote sustainable growth in the Mediterranean area by fostering innovative concepts and practices and a reasonable use of resources and by supporting social integration through an integrated and territorially based cooperation approach. In the period 2014-2020, Interreg MED Programme will promote cooperation between a varied typology of actors of these thirteen Mediterranean countries.							IW	BD		CC
IODE https://www.iode.org	**Executing Partners:** UNESCO IODE **Donors:** UNESCO	**Geographical Area:** Global **Activity Period:** 1961 - ongoing **Description:** The programme "International Oceanographic Data and Information Exchange" (IODE) of the "Intergovernmental Oceanographic Commission" (IOC) of UNESCO was established in 1961. Its purpose is to enhance marine research, exploitation and development, by facilitating the exchange of oceanographic data and information between participating Member States, and by meeting the needs of users for data and information products.							IW			
IW:LEARN (Global Environment Facility's International Waters Learning Exchange and Resource Network) www.iwlearn.net	**Executing Partners:** UNDP; UN Environment. **Donors:** GEF	**Geographical Area:** Global (GEF IW portfolio) **Activity Period:** 2004 - ongoing **Description:** IW:LEARN is the Global Environment Facility's (GEF) International Waters Learning Exchange and Resource Network. The IW:LEARN project was established to strengthen transboundary water management around the globe by collecting and sharing best practices, lessons learned, and innovative solutions to common problems across the GEF International Waters portfolio. It promotes learning among project managers, country official, implementing agencies, and other partners.							IW			
IW:LEARN Groundawater Community of Practice http://groundwatercop.iwlearn.net	**Executing Partners:** UNDP, UN Environment (Implementing Agencies); UNESCO International Hydrological Programme (Executing Agency) **Donors:** GEF	**Geographical Area:** Global (GEF IW portfolio) **Activity Period:** 2012 - ongoing **Description:** The GW CoPs aims to accelerate learning from and within the GEF IW portfolio, and promote replication of good practices in transboundary freshwater management. The CoP acts as a catalytic coalition among GEF IW projects to promote learning that meets project-level priorities. It is designed to build on existing knowledge from inside and outside the GEF portfolio and be responsive to the learning needs of the GEF IW projects .The COP provide an opportunity to build capacity on groundwater resources management and promote the conjunctive management with surface freshwater and marine waters.							IW	BD	CW	

MAMIAS - Marine Mediterranean Invasive Alien Species http://www.mamias.org	UNEP/MAP, RAC/SPA	**Geographical Area:** Mediterranean Sea **Activity Period:** 2012 - ongoing **Description:** The Database includes among Alien species, cryptogenic ones. Tropical Atlantic species, which have expanded their geographic distribution in the Mediterranean, are noted as range expansion, or vagrant. The Database includes also species that have been occasionally reported as alien but were subsequently excluded from lists, along with the reasoning of their exclusion.								BD		
MAPAMED http://www.rac-spa.org/mapamed	MedPAN and SPA/RAC	**Geographical Area:** Mediterranean Sea **Activity Period:** 2012 - ongoing **Description:** MAPAMED (Marine Protected Areas in the Mediterranean) is a GIS database that gathers information on marine protected areas of the Mediterranean, and more generally on sites of interest to the conservation of the marine environment. It is developed and jointly administered by the MedPAN association and SPA/RAC. MAPAMED (i) facilitates the access and the sharing of data on Mediterranean MPAs, (ii) allows the analysis and the evaluation of the status and trends of the MPA network and (iii) identifies ecological and management issues at a supra-AMP scale.							IW	BD		
MapX https://www.mapx.org	UN Environment, World Bank, GRID-Geneva	**Geographical Area:** Global **Activity Period:** Ongoing **Description:** MapX was developed by UN Environment, the World Bank and the Global Resource Information Database (GRID-Geneva) to capitalize on the use of new digital technologies and cloud computing in the sustainable management of natural resources. One of the founding principles was to equalize information held by different stakeholders as a prerequisite to better dialogue, decision making and monitoring. MapX evolved from an initial focus on extractive resources to include a range of different resource types and themes. Of particular relevance for the MedProgramme are the data layers in MapX developed by UN Environment for MapX to support countries in meeting their reporting obligations on mercury use and emissions under the Minamata Convention, and to manage spatial information regarding PCBs and facilitate reporting for the Stockholm Convention.							IW	BD	CW	CC
Marine Biodiversity and Ecosystem Functioning EU Network of Excellence - MarBEF http://www.marbef.org	EU	**Geographical Area:** Europe Marine Environment **Activity Period:** 2004 - 2009 **Description:** A key task of the MarBEF Network is the integration of different resources related to marine biodiversity. The inventory of these resources can be found on this website. At the moment, this relational database includes information on different European marine biodiversity research sites and European marine biodiversity datasets. The European Register of Marine Species, ERMS and the European node of the Ocean Biogeographic Information System, EurOBIS is also accessible through this website. The terms of use of data are formulated in the MarBEF data policy.							IW	BD		
MED POL Info System http://www.info-rac.org/en/activities/infomap	UNEP/MAP	**Geographical Area:** Mediterranean Sea **Activity Period:** 2001 - ongoing **Description:** MED POL Info System is an online portal that allows Contracting Parties to submit their quality assured data generated from the implementation of the national marine pollution programmes designed in accordance with LBS Protocol.							IW		CW	
MED-3R Euro-Mediterranean Strategic Platform for a Suitable Waste Management - Recycle, Reduce, Reemploy http://www.med-3r.org/index.php/en/about/the-med-3r-project	**Executing Partners:** Mediterranean Sea Basin Programme ENPI CBCMED **Donors:** 90% European Union, 10% Partners	**Geographical Area:** Mediterranean Basin **Activity Period:** 2012 – 2015 **Description:** MED-3R sets up an institutional innovation of multi-level governance, implemented on the basis of strategic platform: "The Euro-Mediterranean Strategic Platform for a Suitable Waste Management" to the benefit of technical managers and experts on waste management over the Mediterranean basin.									CW	
MEDACES - Mediterranean Database of Cetacean Strandings medaces.uv.es/home_eng.htm	**Executing Partners:** RAC/SPA, ICBIBE **Donors:** Spanish Ministry of the Environment, and Rural and Marine Affairs (MMA)	**Geographical Area:** Mediterranean Sea **Activity Period:** 2001 - ? **Description:** In November 2001, the 12th Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols, within the "Biological Diversity and Specially Protected Areas" section, recommended for implementing the Action Plan for the Conservation of Cetaceans in the Mediterranean Sea, to approve the offer by Spain with regard to the establishment in Valencia of a Mediterranean database on cetacean strandings (MEDACES).								BD		
MedICIP http://medicip.grid.unep.ch	**Executing Partners:** UNEP/MAP, Plan Bleu, GWP, PAP/RAC **Donors:** GEF	**Geographical Area:** Mediterranean Basin **Activity Period:** 2009 - 2015 **Description:** MedICIP is an online multi countries effort to share data and information on Climate Change in the Mediterranean coastal areas. It is a "portal of portals" which gathers data, information and web links towards other institutions (national and regional), in support the implementation of the ICZM protocol.							IW			CC
Mediterranean Basin Biodiversity Hotspot http://www.birdlife.org/cepf-med/hotspot	**Executing Partners:** CEFP (Critical Ecosytem Partnership Fund); Bird's Life; LPO; DOPPS. **Donors:** CEPF (GEF, World Bank, AFD, CI, EU, Japan Gov.)	**Geographical Area:** Mediterranean Basin **Activity Period:** 2012 - 2022 **Description:** During the initial investment, 108 grants were awarded to 84 different organizations in 12 countries. This first investment phase demonstrated that civil society organizations do exist in each hotspot country, and that adequate financial support, combined with technical support, has the potential to build strong constituencies able to tackle conservation issues at the local level. CEPF's second phase of investment will focus on protecting plants, promoting regional networking and preserving three ecosystems—coastal, freshwater and traditionally managed landscapes. CEPF is a joint initiative of l'Agence Française de Développement, Conservation International, the European Union, the Global Environment Facility, the Government of Japan, the MacArthur Foundation and the World Bank.								BD		CC
MEDITERRANEAN OBSERVATORY ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT http://obs.planbleu.org/en/	**Executing Partners:** Plan Bleu, UNEP/MAP **Donors:** MAVA, UN Environment	**Geographical Area:** Mediterranean Basin **Activity Period:** Ongoing **Description:** Plan Bleu, acting as a Mediterranean Observatory on Environment and Sustainable Development, has developed an experience in collecting, managing and disseminating data on Sustainable development issues in the Mediterranean Region. One of Plan Bleu's mission is to provide the Contracting Parties of Barcelona Convention with environmental and sustainable development statistics, indicators and assessments to support their action and decision making process.							IW			CC

Mediterranean Water Knowledge Platform (MWKP) http://www.emwis.net/initiatives/MWKP	International Office for Water (IOWater); Institut Méditerranéen de l'Eau (IME); Union for the Mediterranean (UfM)	**Geographical Area:** Mediterranean Basin **Activity Period:** (Phase 1) 2013-2016 - (Phase 2) 2016-2018 **Description:** The regional project towards a Mediterranean Water Knowledge Platform got the UfM label on 8 April 2014, at the unanimity of 43 countries members of the Union for the Mediterranean. The project has two components: the 1st one, coordinated by the International Office for Water (IOWater), aims at strengthening the National Information Systems on Water in line with the regional approach taken implemented by the Euro-Mediterranean Information System on know-how in the Water sector (EMWIS); the 2nd one, coordinated by the Institut Méditerranéen de l'Eau (IME), is based on the exploitation of data and information on water for the preparation of a Mediterranean White Paper on Water. This White Paper is part of logical showcasing best practices for integrated water resources management.		✓	✓			IW			
MEDLEM (MEDiterranean Large Elasmobranchs Monitoring) PROGRAM www.arpat.toscana.it/medlem	ARPAT (agenzia regionale per la protezione ambientale della Toscana)	**Geographical Area:** Mediterranean Sea **Activity Period:** 2002 - ongoing **Description:** MedLem is a monitoring programme on the captures and sightings of the large cartilaginous fishes occurring in the Mediterranean Sea. A tool for storing and sharing the large shark's data collected in the mediterranean countries. The database is under maintenance: it will be on line again at the end of 2017.							BD		
MedOpen http://www.medopen.org	**Executing Partners:** PAP/RAC **Donors:** UNEP	**Geographical Area:** Mediterranean Area **Activity Period:** Ongoing **Description:** MedOpen aims at assisting Mediterranean countries in building capacities for coastal management. The training programme has been created to share ideas, knowledge and strategies to forward the art of designing and implementing local, national and regional place-based integrated coastal zone management (ICZM), as well as to enhance a policy dialogue and build / improve capacities on implications of climate variability and change (CV&C) considerations. The MedOpen training is completely free of charge.	✓		✓		✓	IW			
MedPAN - The network of Marine Protected Areas managers in the Mediterranean http://medpan.org	**Executing Partners:** UNEP RAC/SPA, WWF, IUCN **Donors:** EU Commission, UNEP, WWF and others	**Geographical Area:** Mediterranean Sea **Activity Period:** 2008 - ongoing **Description:** The MedPAN network's mission is to promote, through a partnership approach, the sustainability and operation of a network of Marine Protected Areas in the Mediterranean which are ecologically representative, connected and effectively managed to help reduce the current rate of marine biodiversity loss.	✓		✓			IW	BD		CC
NBB PRTR (website under development as of 11/2018)	**Executing Partners:** UN Environment MAP, InfoRAC **Donors:** UN Environment MAP, EC	**Geographical Area:** Mediterranean Basin **Activity Period:** **Description:** Provides information on pollution load from sectors and activities in accordance with the requirements LBS Protocol of Barcelona Convention	✓	✓	✓			IW		CW	
OBIS - Ocean Biogeographic Information System http://www.iobis.org/	IOC-UNESCO, IODE	**Geographical Area:** Global **Activity Period:** 1997 - ongoing **Description:** OBIS is a global open-access data and information clearing-house on marine biodiversity for science, conservation and sustainable development. Its aim is to build and maintain a global alliance that collaborates with scientific communities to facilitate free and open access to, and application of, biodiversity and biogeographic data and information on marine life. Obis mission is to build and maintain a global alliance that collaborates with scientific communities to facilitate free and open access to, and application of, biodiversity and biogeographic data and information on marine life.	✓	✓	✓	✓		IW	BD		
OpenChannels https://www.openchannels.org/	**Executing Partners:** Open Communication for The Ocean and Partners **Donors:** Gordon and Betty Moore Foundation	**Geographical Area:** Global **Activity Period:** 2012 - ongoing **Description:** OpenChannels aims to foster a vibrant online community of ocean planners and managers sharing experience, knowledge, and advice with peers. In doing so, we can speed the advancement of sustainable ocean management and conservation. OpenChannels is designed to be highly focused on user needs. We want to provide access to all the information that ocean planners and managers need to do their jobs most effectively, including existing high-quality content and new information products and services.	✓		✓	✓	✓	IW			
PANACeA project https://biodiversity-protection.interreg-med.eu	**Executing Partners:** Malaga University, Interreg Mediterranean, Plan Bleu **Donors:** ERDF, IPA	**Geographical Area:** Mediterranean Basin **Activity Period:** 36 months (ongoing) **Description:** Devised as a one entry point to scientific evidence supporting best practice on protected area management and environmental policymaking in the region, the Mediterranean Biodiversity Protection Platform (BPP) gathers the expert knowledge generated by the Mediterranean biodiversity protection community as main providers of content. The MedBiodiversity Knowledge platform will open in 2018.	✓						BD		CC
Pegaso Project - People for Ecosystem-based Governance in Assessing Sustainable development of Ocean and coast http://pegasosdi.uab.es/	Universitat Autònoma de Barcelona (UAB)	**Geographical Area:** Mediterranean Sea and Black Sea **Activity Period:** 2010 - 2014 **Description:** The main objective of PEGASO is to build on existing capacities and develop common novel approaches to support integrated policies for the coastal, marine and maritime realms of the Mediterranean and Black Sea Basins in ways that are consistent with and relevant to the implementation of the ICZM Protocol for the Mediterranean. The PEGASO SDI is a distributed sharing infrastructure made up of GeoNodes and with three main components: a map viewer, map services and a spatial catalog.		✓				IW			
Protected Planet https://www.protectedplanet.net/marine	**Executing Partners:** UNEP-WCMC, IUCN **Donors:** UNEP, IUCN	**Geographical Area:** Global **Activity Period:** 2014-ongoing **Description:** Protected Planet is the most up to date and complete source of information on protected areas, updated monthly with submissions from governments, non-governmental organizations, landowners and communities. It is managed by the United Nations Environment World Conservation Monitoring Centre with support from IUCN and its World Commission on Protected Areas (WCPA). It is a publicly available online platform where users can discover terrestrial and marine protected areas, access related statistics and download data from the World Database on Protected Areas (WDPA).	✓		✓	✓	✓	IW	BD		
SPACE ALBORAN http://www.iucn-geoportalboran.org/	**Executing Partners:** IUCN Center for Mediterranean Cooperation **Donors:** IUCN, EU, MAVA, POCTAFEX	**Geographical Area:** Alboran sea (Gibraltar strait) **Activity Period:** 2007 - ongoing **Description:** The geoportal's aim is to promote governance of the natural resources of the Alboran sea. A space for governance that promotes the exchange of knowledge, participation, management and learning.		✓		✓	✓	IW	BD		

Strategic Approach to International Chemicals Management (SAICM) http://www.saicm.org/Home/tabid/5410/language/en-US/Default.aspx	**Donors:** UN Environment, ICCA, EU + 15 countries	**Geographical Area:** Global **Activity Period:** 2006 - ongoing **Description:** SAICM was developed by a multi-stakeholder and multi-sectoral Preparatory Committee and supports the achievement of the 2020 goal agreed at the 2002 Johannesburg World Summit on Sustainable Development. SAICM overall objective is the achievement of the sound management of chemicals throughout their life cycle so that by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health.									CW	
The Mediterranean Biodiversity Platform http://data.medchm.net/en/	**Executing Partners:** SPA/RAC **Donors:** MAVA Foundation	**Geographical Area:** Mediterranean Sea **Activity Period:** 2017 - ongoing **Description:** The Mediterranean Biodiversity Platform is an online tool to inventory, catalog and store data on marine and coastal biodiversity in the Mediterranean, and view them on maps.							IW	BD		
The MPA Action Agenda https://www.mpaaction.org/	WWF and partners	**Geographical Area:** Global **Activity Period:** 2014 - ongoing **Description:** The MPA Action Toolkit is an online platform designed for MPA managers and establishers, marine researchers and other MPA advocates. The objective of this online platform is to share knowledge on MPAs and tools that can contribute to MPA advocacy. On this toolkit you find infographics, videos, academic articles, reports and other types of material that can be used for MPA advocacy and relating activities.							IW	BD		
The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership) Project http://themedpartnership.org	**Executing Partners:** UNEP/MAP **Donors:** GEF, EU, others	**Geographical Area:** Mediterranean Basin (Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Lebanon, Libya, Morocco, Montenegro, Palestine, Syria, Tunisia and Turkey) **Activity period:** 2010 - 2015 **Description:** The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership) is a collective effort of leading environmental institutions and organizations together with countries sharing the Mediterranean Sea to address the main environmental challenges that Mediterranean marine and coastal ecosystems face. The goals include: to improve environmental conditions of pollution and biodiversity hotspots and other priority areas under stress, to promote the sustainable use of marine and coastal resources through integrated approaches, to reduce pollution from land-based sources, to enhance the protection of 'critical' habitats and species, and to integrate climate considerations into national marine and coastal planning.							IW	BD		
UN Environment World Conservation Monitoring Centre https://www.unep-wcmc.org/	UNEP, WCMC	**Geographical Area:** Global **Activity Period:** Ongoing **Description:** The UN Environment World Conservation Monitoring Centre (UNEP-WCMC) works with scientists and policy makers worldwide to place biodiversity at the heart of environment and development decision-making to enable enlightened choices for people and the planet. Our 100-strong international team are recognised leaders in their field and have unrivalled understanding of the institutional landscape surrounding biodiversity policy and ecosystem management. Based in Cambridge, UK, UNEP-WCMC is a collaboration between UN Environment and the UK charity, WCMC. By working with expert partners worldwide, we draw together, analyse and interpret information on biodiversity, and strengthen the ability of others to do so.							IW	BD		
Water Information Network System (WINS) http://ihp-wins.unesco.org/	UNESCO IHP	**Geographical Area:** Global **Activity Period:** 2017 - ongoing **Description:** Launched in January 2017 by the International Hydrological Programme of UNESCO, WINS is an open-access and participatory platform to share, access and visualize water-related information at all levels. It provides also a networking hub through online working groups, which aims to facilitate exchange among stakeholders. As of june 2018, 40 Member States have joined the platform.							IW			
WISE - Water Information System for Europe https://water.europa.eu; https://water.europa.eu/freshwater; https://water.europa.eu/marine	**Executing Partners:** DG-ENV, JRC, EEA, Eurostat **Donors:** EU Commission, European Environmental Agency (EEA)	**Geographical Area:** Europe Marine Environment **Activity Period:** 2007 - ongoing **Description:** The Water Information System for Europe (WISE) is a partnership between the European Commission (DG Environment, Joint Research Centre and Eurostat) and The European Environment Agency. WISE is a gateway to informations on European marine issues in support of ocean governance and ecosystem based management							IW	BD	CW	
WOCAT - World Overview of Conservation Approaches and Technologies https://www.wocat.net/en/about	Universitat Bern, SDC, GIZ, CIAT, ICARDA, FAO, ISRIC, ICIMOD	**Geographical Area:** Global **Activity Period:** 1992 - ongoing **Description:** The World Overview of Conservation Approaches and Technologies (WOCAT) is a Network that was established in 1992. The WOCAT Network launched efforts to compile, document, evaluate, share, disseminate, and apply sustainable land management (SLM) knowledge. It was far ahead of others in recognizing the vital importance of SLM and the pressing need for corresponding knowledge management. In early 2014, WOCAT's growth and ongoing improvement culminated in its being officially recognized by the UNCCD as the primary recommended database for SLM best practices.							IW		CW	CC
World Resource Institute http://www.wri.org	WRI	**Geographical Area:** Global **Activity Period:** 1982 - ongoing **Description:** World Resources Institute (WRI) is a global research organization that spans more than 60 countries. Our more than 700 experts and staff turn big ideas into action at the nexus of environment, economic opportunity and human well-being. We start with data, creating user-friendly information systems, protocols and standards. We conduct independent, unbiased research to analyze relationships and design solutions, and communicate our findings in a compelling manner.							IW	BD		CC
World Water Quality Portal http://www.worldwaterquality.org	**Executing Partners:** UNESCO-IHP, IIWQ (International Initiative on Water Quality), EOMAP **Donors:** UNESCO-IHP	**Geographical Area:** Global **Activity Period:** Ongoing **Description:** UNESCO, through its International Initiative on Water Quality (IIWQ) under IHP, has launched the first comprehensive worldwide water quality online portal for freshwater systems, lakes and rivers, retrieved from satellite-based earth observation data, to assist with global water quality assessment and capacity building.							IW		CW	

2.2 Analysis of preliminary survey results

Every project creates knowledge. Every project depends on knowledge. –Unknown

The eight Child Projects of the MedProgramme are expected to produce different sets of outputs and results while contributing to the overarching goal of enhancing environmental security in the region, embracing three categories of transboundary concern (components 1, 2 and 3) as illustrated in Table 2. The fourth component hosts the Support Child Project on coordination and knowledge management.

Table 2 MedProgramme Components, Child Projects and GEF Focal Areas

Mediterranean Sea Programme (MedProgramme)		
MedProgramme Component	**Child Project**	**GEF Focal Areas**
1. Reduction of Land Based Pollution in Priority Coastal Hotspots, and measuring progress to impacts.	1.1 "Reducing Pollution from Harmful Chemicals and Wastes in Mediterranean Hot Spots and Measuring Progress to Impacts"	**IW and CW**
	1.2 "Mediterranean Pollution Hot Spots Investment Project"	**IW**
	1.3 "Mediterranean Sea Finance for Water Systems and Clean Coasts (FINWACC)"	**IW**
2. Enhancing Sustainability and Climate Resilience in the Coastal Zone.	2.1 "Mediterranean Coastal Zones Climate Resilience Water Security and Habitat Protection"	**IW**
	2.2 "Mediterranean Coastal Zones: Managing the Water-Food-Energy and Ecosystem NEXUS"	**IW**
	SCCF "Enhancing regional climate change adaptation in the Mediterranean Marine and Coastal Areas"	**CC**
3. Protecting Marine Biodiversity	3.1 "Management Support and Expansion of Marine Protected Areas in Libya"	**BD**
4. Knowledge Management and Programme Coordination	4.1 "Mediterranean Sea Basin Environment and Climate Regional Support Project"	**IW and CW**

In order to diagnose KM-related needs and expectations of Child Projects (CP), a preliminary survey[12] was prepared and shared with project designers (July-August 2018). The designers of all projects participated in the web-based survey (27 questions), sometimes with representation of more than one person per CP. The analysis of the answers helped building the KM approach, identifying tools and levels of intervention particularly related to:

- Target audiences
- Project / Programme management
- Managing and Visualizing the data
- Information and Knowledge Management

Relevant results of the survey are presented below by cluster topics, however overall the following can be observed:

- The Child Projects of the MedProgramme will produce a rich and heterogenous amount of data and results (quantitative, qualitative, normative). A responsive system to manage the information flow is therefore needed to: capture, store and digest raw data; ensure smooth reporting and coordination; offer a digital representation of the progress through visualization tools for both spatial and non-spatial information; and use the collective information to package appropriate products and knowledge-sharing assets for the intended target audiences of the MedProgramme.

- Data sharing and data collection modalities are critical for generating and managing knowledge. Defining how projects will prepare and make available their data should be addressed at the beginning of the Inception phase of the MedProgramme, once indicators are selected for all Child Projects. A dedicated workshop should be organized to identify sharing standards, protocols and practices for data collection and reporting, including to ensure data quality, respect of privacy and compatibility with data visualization tools on the MedProgramme portal.

- The primary audience of the MedProgramme CPs are policy- and decision-makers in the region. However, in order to influence policy making there is a need to engage and involve a large number of diverse stakeholders to inform them about the findings and benefits arising from the MedProgramme interventions. To this end, three different functional levels (see page 32) and groups of audiences/ stakeholders have been identified to articulate the KM strategy.

- Technical practitioners are among the principal consumers of scientific reports and detailed assessments; therefore, each Child Project shall consider specific groups of technical practitioners in their stakeholder analysis to make sure that the KM strategy can incorporate these views at the programme level.

- The mapping of stakeholders and related engagement plan is crucial to ensure the impact of the KM strategy and of the MedProgramme as a whole. It is important to identify knowledge suppliers/ brokers, knowledge recipients/ beneficiaries and potential change agents at the project level (to be done during the inception phase) and then make sure that these are involved and engaged at the Programme level (see more page 25).

- During the Project Preparation Grant (PPG) phase (June-September 2018) details on activities, stakeholders, outputs and indicators of every Child Project were not available due to the staggered timeframes in preparing the individual project documents. However, through the survey (and several bilateral consultations) it was possible to collect enough insights into the planning of each CP to suggest appropriate solutions and frameworks to manage knowledge holistically across the MedProgramme portfolio.

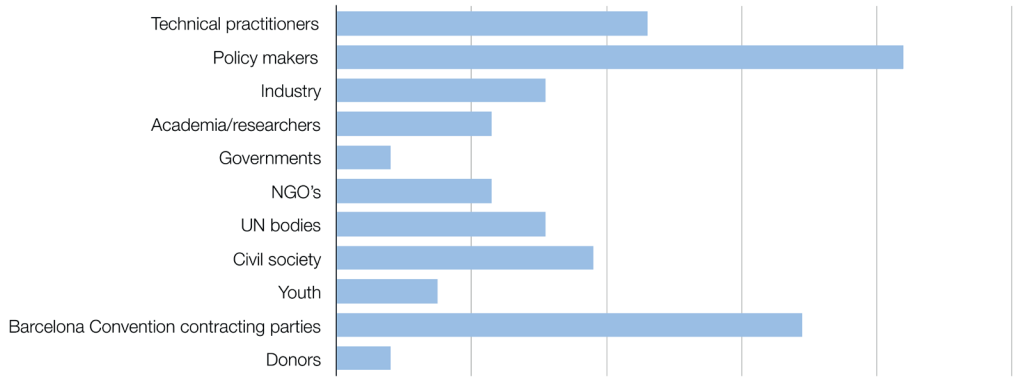
[12] Ref. The preparation of the survey benefitted from the expert and kind advice of staff from UN Environment, Plan Bleu and PAP/RAC. The full questionnaire, which was shared through Google Forms, is annexed in .pdf

Target audiences

[Q2] Who will the primary target audience for your project results be?

The respondents identify as their principle target audience policy makers and the parties to the Barcelona Convention, followed by technical practitioners and civil society. Other relevant audiences are: industry, academia and other UN bodies are: industry, academia and other UN bodies.

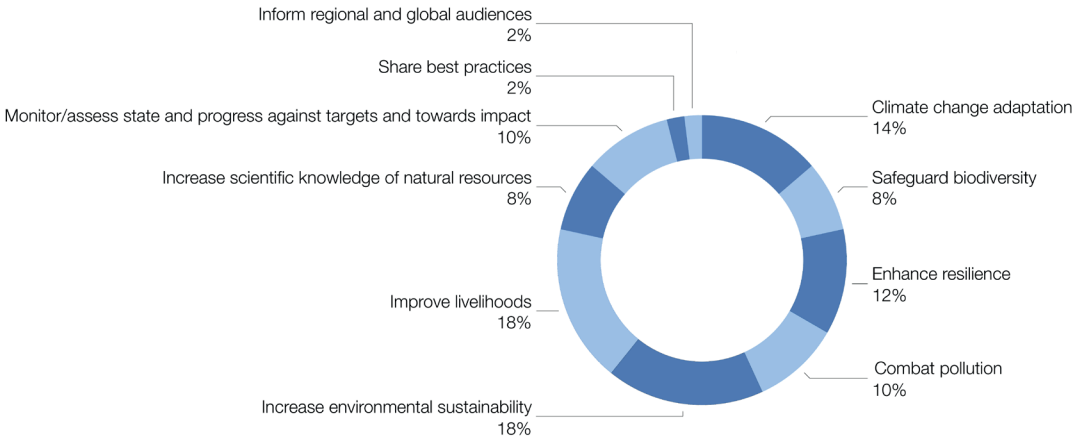
Chart 1



[Q4] Why is your data important?

The data produced will have different objectives, including the priorities to enhance environmental sustainability, increase livelihoods, and adapt to climate change.

Chart 2

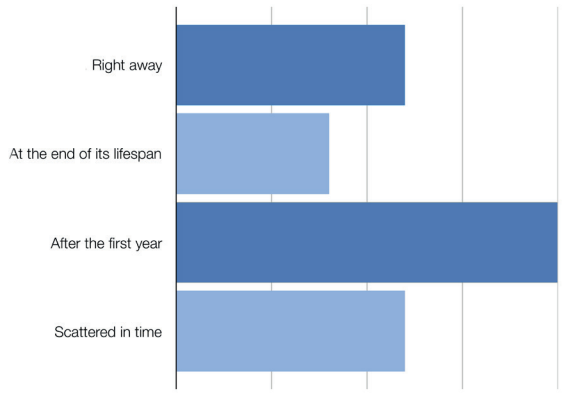


Project/Programme management

[Q3] When will your project start to produce data/results?

Three projects will start producing data right away while other projects will produce data at different times.

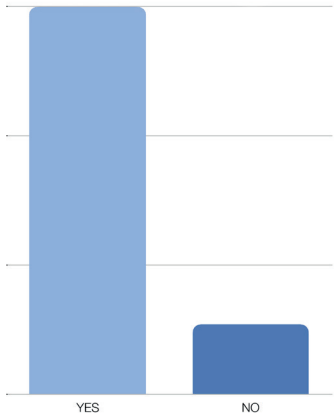
Chart 3



[Q7] Will you and your collaborators be willing to adopt the selected project management tool?

85% of respondents are willing to adopt a web-based project management tool with initial training provided.

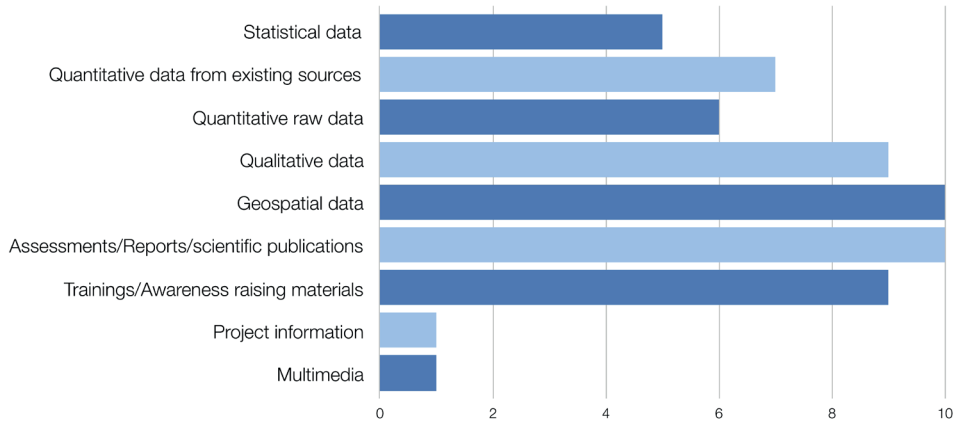
Chart 4



Managing and Visualizing the Data

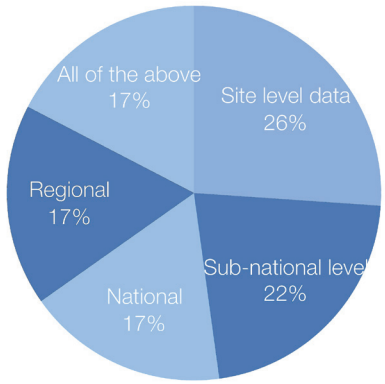
[Q10] What type of data will you collect and manage as part of your project?

Chart 5



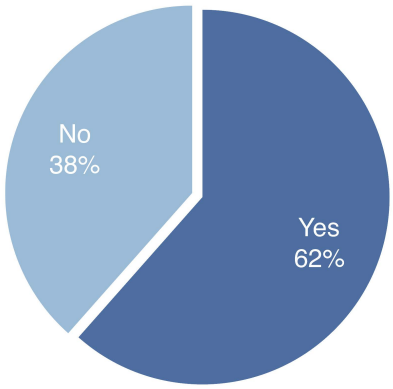
[Q11] If your project works with geospatial data, what scale do you work at?

Chart 6



[Q13] Does your project include the collection and management of time series data?

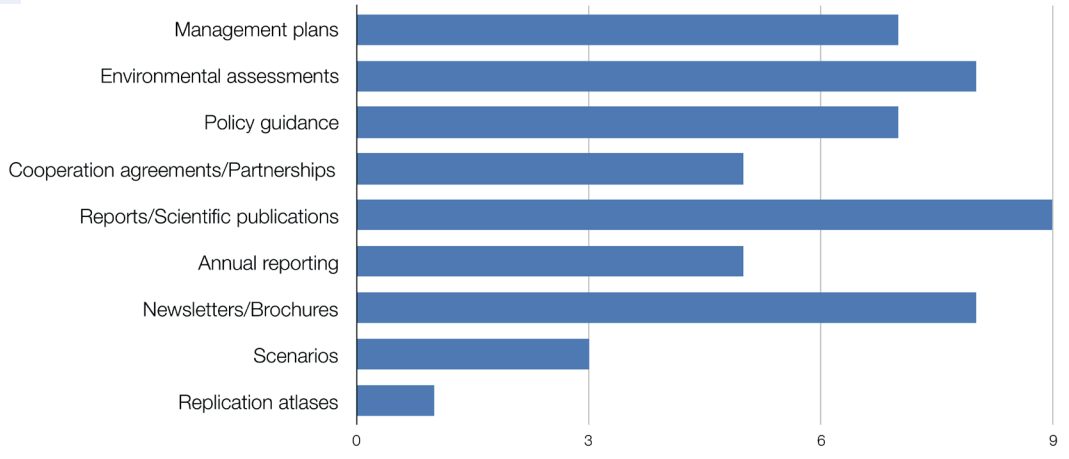
Chart 7



[Q10,11,13,14] Six of the CPs will produce geospatial data from site to regional levels, five will produce qualitative data (see also [16], data from surveys), four will use existing data from external sources, and three will generate new raw data, some of which will be in the form of time series with varying update frequency.

Chart 8 [Q12] If your project produces qualitative data, what kind is it?

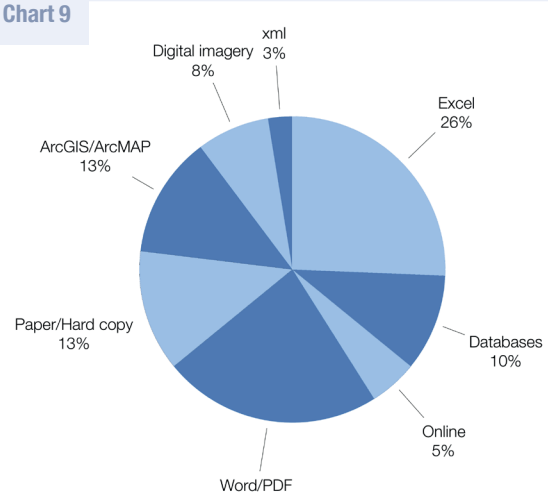
Chart 8



[Q16] What format will you prepare your data in?

A majority of respondents will use Excel to manage their data. Four will use MS Access or similar. Most projects will also manage (qualitative) data in Word, xml and even hard copies (e.g. from questionnaires and surveys). Five projects will manage ArcGIS or ArcMap files and three expect to generate digital images.

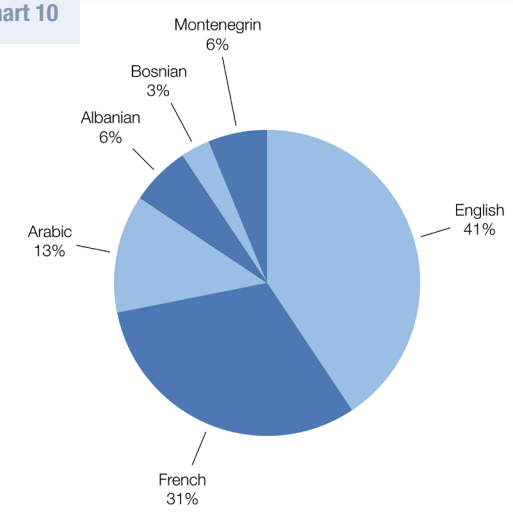
Chart 9



[Q5] What language(s) will your data be produced in?

Data will be produced in six different languages, with the vast majority producing data in English (41%) and/or French (31%) and Arabic.

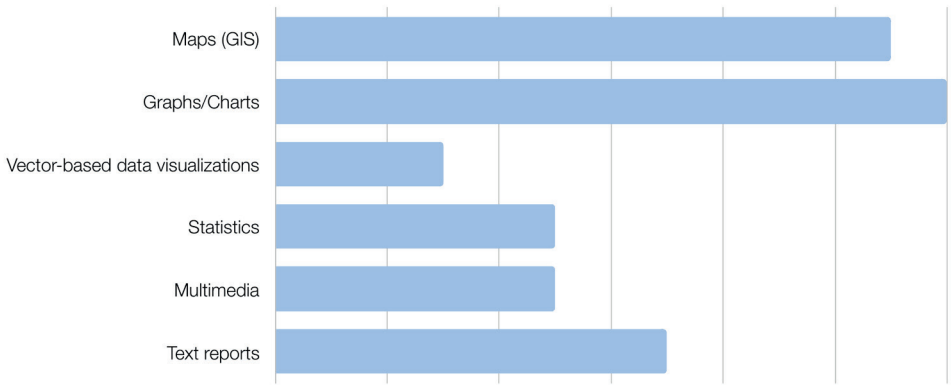
Chart 10



[Q17] Within your Organization/Institution, what type of online visualization tools have you been using so far (if any)?

Most respondents have used charts/graphs and GIS to visualize their data in the past while a smaller number use reports, multimedia and statistics.

Chart 11

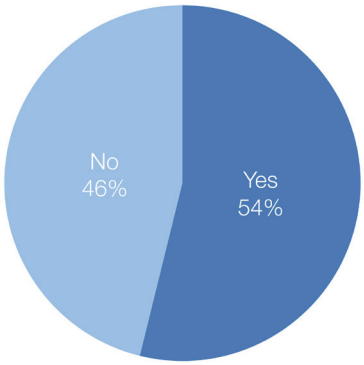


Information and Knowledge Management

[Q8] Have you ever used a Knowledge and Information Management platform?

About half of the respondents have used information and knowledge management platforms before.

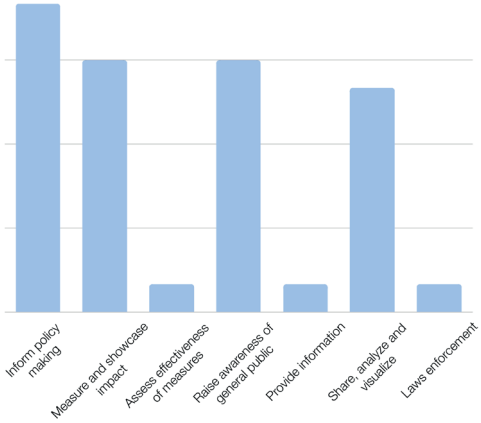
Chart 12



[Q23] What is your key objective for an online (geospatial) platform?

Respondents' expectations in relation to the platform are multiple and include an internal dimension related to data management and information/knowledge sharing among projects, and a public dimension related to showcasing impact, raising awareness and informing policy making in a transparent way. The platform should also help gather the elements that will be needed to tell engaging stories over the lifespan of the programme.

Chart 13



[Q26] What is your key objective for an online (geospatial) platform?

To this open question, respondents illustrated a variety of needs including:

- Engage partners from the beginning so they know they have a channel to promote their work (addressed at the 3 functional levels);
- Help track progress towards set goals (addressed at the portfolio level);
- Improve the internal work between executing partners and the way to communicate (addressed at the portfolio level);
- Facilitate reporting to the GEF (e.g. by timely gathering relevant information from executing partners) (addressed at the portfolio and policy levels);
- Effectively manage documents collaboratively among the co-executing partners (addressed at the portfolio level);
- Provide a roster of environmental experts (addressed at the portfolio level and policy levels);
- Provide a solid and centralized structure as well as cost-effective tools to collect, assess and share data and information (addressed at the portfolio level);
- The strategy should be designed in a way to primarily serve the governments of the contracting parties who have the executive powers to manage the environment, coast, biodiversity, natural resources (addressed at the policy level);
- The strategy should timely inform partners about expectations regarding their contributions to the communication strategy and the amount of work expected (addressed at the portfolio level); and
- The KM strategy should become a best practice for other programmatic approaches and projects.

2.3 MedProgramme Stakeholders

Stakeholder participation is an inherent part of the structure of MAP and the Barcelona Convention where all countries (represented by the MAP focal points) form the Contracting Parties to the Barcelona Convention. In addition, about 100 NGOs and Intergovernmental Organizations (IGOs), termed "partners" are participants to the meetings of the Barcelona Convention. It should also be stressed that stakeholders participated in the formulation of the TDA-MED, SAP-MED, SAP-BIO and the NAPs of the countries, on which the MedProgramme is based. In summary, the key stakeholders that CP 4.1 will strive to involve at national level include:

- Public Sector: ministries responsible for water resources; environment; spatial and development planning; transport; tourism; fisheries; industry; maritime affairs; health; fire-fighting; community development; education; culture and local government authorities.

- Private Sector: national and regional organizations representing: farmers; fisher folk; manufacturers/ industrialists; tourism and aquaculture sector; banks; insurers.

- Non-governmental Organizations (NGOs): national trusts; conservation associations; women's organizations; community-based organizations (CBOs);

- Scientific community: researchers; sociologists; environmental managers; engineers (water, civil, environmental); environmental economists; biologists; climatologists, geographers, oceanographers; teachers; curriculum specialists; media practitioners;

- General public such as the entire coastal population of the Mediterranean Basin (in particular those living in identified hotspots and sensitive areas) and the 176 million tourists visiting the Mediterranean annually.;

At a regional and global level, the stakeholders will be the various signatories to the relevant Multilateral Environmental Agreements (e.g. Barcelona Convention and its Protocols, Convention on Biological Diversity, Basel Convention, United Nations Convention to Combat Desertification, Rotterdam Convention, Stockholm Convention) and all individuals and organizations associated with the achievement of the 2030 Sustainable Development Goals.

The Terminal Evaluation of MedPartnership observed that in spite of the wide stakeholder engagement during implementation of the MedPartnership, the involvement of NGOs, private sector, and Mediterranean countries that are not eligible for GEF funding could have been greater. In the implementation of MedProgramme and its Child Projects, the Lead Implementation and Executing Agencies will foster opportunities to more closely involve NGOs and the private sector in project activities and to engage more closely with non-GEF eligible countries that share the Large Marine Ecosystem (LME) of the Mediterranean Sea. Child Project 4.1 will play an important role in this effort by broadly disseminating information on, and the progress and results of the MedProgramme, stimulating all other Child Projects to design and implement effective stakeholder participation strategies, and promoting involvement in the project's milestone events of relevant NGOs, of the private sector (in particular the tourism industry), and of all non-beneficiary Mediterranean countries.

As regards to specific stakeholders, each Child Project shall undertake its own research and analysis based on respective project objectives to identify partners, target groups and beneficiaries. This analysis is essential to understand who the different players are, their expectations and interest, their characteristics, commitment and constraints, their influence over others, etc. The MedProgramme KM Strategy will support the jump-start and continuous engagement of these groups at the programme level with targeted actions and outreach tools.

Box 2 Glossary: Stakeholders, Beneficiaries, Target groups, Partners

Stakeholders: groups that have a role and interest in the objectives and implementation of a programme or project; they include target groups, direct beneficiaries, those responsible for ensuring that the results are produced as planned, and those that are accountable for the resources that they provide to that programme or project.

Target groups: the main stakeholders of a programme or project that are expected to gain from the results of that programme or project; sectors of the population that a programme or project aims to reach in order to address their needs based on gender considerations and their socio- economic characteristics. When the target group is not sufficiently differentiated, the problem analysis tends to be superficial or too broad and does not allow the effect of the core problem within the various subgroups to be captured.

Direct beneficiaries: usually institutions and/or individuals who are the direct recipients of technical cooperation aimed at strengthening their capacity to undertake development tasks that are directed at specific target groups. In micro-level interventions, the direct beneficiaries and the target groups are the same.

Ultimate (or indirect) Beneficiaries: This is the target group that is expected to be better off as result of the project. The project may provide services directly to this group or more commonly target this group through the strengthening of institutions and organizations (i.e., the direct recipients), which support, increase awareness, or advocate on behalf of the ultimate beneficiaries. The distinction between direct recipients and ultimate beneficiaries is particularly important for donor-funded technical cooperation projects, where donors are primarily concerned with the impact of the project on the latter group. As a result, the project proposal should spell out the intended results of the project beyond just the direct recipients.

Partners: The individuals and/or organizations that collaborate to achieve mutually agreed upon objectives. Note: The concept of partnership connotes shared goals, common responsibility for outcomes, distinct accountabilities and reciprocal obligations. Partners may include governments, civil society, non-governmental organizations, universities, professional and business associations, multi- lateral organizations, private companies, etc.

Source: adapted from UNDP and ILO

2.4 Contributing to the Programme-wide KM

Each Child Project is expected to participate in the common knowledge management (KM) strategy to maximize efficien , ensure good governance of the programme and achieve greater impact at the diffe ent functional levels identified (portfolio level, general public level and po icy- making level).

While specific needs related to the diverse outputs of the individual projects will be analyzed on a case-by-case basis, all CPs are evenly contributing to the various activities illustrated in this document. A standard text included in each Child Project document reflects this approach and is aimed at harmonizing individual contributions. The synergetic approach is also reflected in the allocation of evenly distributed budget under each CP that will be used to support KM activities, production of knowledge and data. CP 4.1 will cover for example the costs of developing the KM platform (including the project management tool), organizing activities and events and producing communications material. Each CP will use the dedicated allocation of funds to, for instance, feed the platform with processed data, produce specific information for the preparation of advocacy material, etc.

3. Why a KM strategy?

> *Much of knowledge management is common sense, but not common practice.* –Unknown

3.1 KM in the literature

Since the early 1990s there has been growing attention to the process of managing knowledge within organizations and businesses, mostly with the objective of improving performance and capitalizing on lessons learned. Pioneering professors Ikujiro Nonaka and Hirotaka Takeuchi, were among the first to investigate the benefits of Knowledge Management in organizations and popularize the concepts of "tacit" and "explicit" knowledge. In their 1991 groundbreaking article "The Knowledge-Creating Company", they affirm that: "In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge". Through the work of dedicated scholars, knowledge management (KM) has gained a consolidated reputation leading to its establishment as a recognized discipline. KM is now viewed as an organization's most valuable and strategic asset deserving to be treated accordingly.

There are many definitions of KM (see Box. 2) but it can be commonly described as the "systematic process to identify, capture, structure, value, leverage, and share an organization's intellectual assets to enhance its performance and competitiveness through a multidisciplinary approach".

Box 3 Definitions

Knowledge Management (KM): the systematic processes, or range of practices, used by organizations to identify, capture, store, create, update, represent, and distribute knowledge for use, awareness and learning across and beyond the organization.

Knowledge Management Systems (KMS): any kind of IT system that stores and retrieves knowledge, improves collaboration, locates knowledge sources, mines repositories for hidden knowledge, captures and uses knowledge, or enhances the KM process.

Knowledge Products and Services: these refer to outputs such as databases, publications, visual material, maps (knowledge products) and outcomes such as awareness raising, information sharing, and capacity building (knowledge services).

Knowledge Assets: are the accumulated intellectual resources of an organization in the form of information, ideas, learning, understanding, memory, insights, cognitive and technical skills, and capabilities.

Source: Stocking, M. et al. 2018. Managing knowledge for a sustainable global future. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC.

Knowledge Sharing: A subset of knowledge management encompassing the exchange of knowledge (information, skills, experiences, or expertise) within and across organizations. Although it can be one- directional, knowledge sharing in most cases is a two-way or multilateral exchange in which the parties learn from each other. Knowledge sharing is more than mere communication because much knowledge in organizations is hard to articulate. In development work, some knowledge sharing has a regional aspect. For example, South-South knowledge sharing refers to exchanges among partners and peers across developing countries.

Source: Steffen Soulejman Janus. 2016. Becoming a Knowledge-Sharing Organization: A Handbook for Scaling Up Solutions through Knowledge Capturing and Sharing. Washington, DC: World Bank. doi:10.1596/978-1-4648-0943-9. License: Creative Commons Attribution CC BY 3.0 IGO

KM is based on two critical activities:

1. the capture and documentation of explicit (technical and codified information) and tacit knowledge (intangible assets intended as human and intellectual capital);

2. their dissemination amongst the intended audiences and stakeholders.

There are two key challenges: knowledge is difficult to assemble, and it is difficult to encourage its use. Many managers see it as a time-consuming distraction from their core role. However, proper knowledge management can reduce risks and increase efficiency through the re-use of proven approaches and avoidance of known pitfalls. It can also produce a virtuous circle as individuals and teams see their contributions recognised and re-used, thus encouraging further participation in the process. Accurate knowledge management is a powerful enabler of organizational learning and an indispensable ally for strengthening the science-policy interface. Writing a report or producing scientific data is only a part of the broader effort to promote environmental sustainability, because without effective sharing of information (in terms of language, tools, channels, etc) and dialogue among all stakeholders involved, the impact of the knowledge produced remains very limited. Considerable progress in raising awareness and improving scientific dissemination has been achieved in recent decades, but the urgency posed by challenges worldwide calls for accelerated and renewed efforts to raise the awareness of policy makers and the public at large about the measures needed to achieve sustainable development and the protection of natural resources.

3.2 KM under GEF programmatic approaches

The policy recommendations emanating from the GEF-7 replenishment[13] clearly refer to knowledge as a "critical asset of the GEF Partnership" and commend "the steps taken to build the GEF's knowledge management systems and practices in GEF-6, as well as the increasing attention to learning and knowledge exchange in GEF projects and programs, notably the integrated approach pilot programs, and in outreach to recipient countries".
The call for more investments in knowledge management systems and practices also stems from recent GEF OPS (Overall Performance Studies) which have found that "the relevance of knowledge management to the GEF mandate has been increasingly recognized, and efforts to improve knowledge management in the partnership have been made on several fronts". The GEF2020 Strategy emphasizes "strategically generating knowledge" as a priority. In 2014, the policy recommendations in the GEF-6 Replenishment Document similarly emphasized "the importance of developing a knowledge management (KM) system that aims to improve the GEF partnership's ability to learn by doing and thereby enhance its impact over time".[14]

At the same time, the GEF-7 Programming Directions commend programmatic approaches (see Box 3) to tackle environmental degradation, making the case for better performance and higher impact of projects within a program. It is noted that "Child projects generally performed better than stand-alone projects on all rating dimensions, especially on execution quality, sustainability and M&E design. Child projects have also improved in design and are now better linked to the overall program in terms of objectives, result based

[13] Ref. GEF-7 Replenishment, Policy Recommendations, Fourth Meeting for the Seventh Replenishment of the GEF Trust Fund, GEF/R.7/18, p.9,www.thegef.org/council-meeting-documents/gef-7-policy-recommendations

[14] Ref. Global Environment Facility Independent Evaluation Office (GEF IEO), OPS6 Final Report: The GEF in the Changing Environmental Finance Landscape. Washington, DC: GEF IEO, 2018, p. 147 www.thegef.org/sites/default/files/council-meeting-documents/GEF.A6.07_OPS6_0.pdf

management and M&E."[15] In addition, OPS6 reports that "multi-focal area projects are better at achieving global environmental and socio- economic outcomes at completion compared to single-focal area projects"[16]. A recent IEO brief[17] further noted that country stakeholders cite "improved knowledge sharing and synergies with other GEF projects among the incentives for joining a program.

Box 4 GEF Programmatic approaches

Programmatic approaches, formalized in 2008[18], are particularly relevant to the Global Environment Facility (GEF), given the long-term nature of the environmental problems the GEF addresses. The GEF-7 Replenishment Programming Directions[19] reaffirms this approach noting that "more complex programs and sets of child projects will tend to offer more entries for development links due to multi-sectoral approach, multi-stakeholder engagements and platforms, and potential for delivering socio-economic co-benefits, along with enhancing the sustainability of the associated investments."

Managing knowledge holistically within programs is a key undertaking, posing additional challenges due to the extra complexity and number of partners and stakeholders involved. The STAP[20] notes that "as the GEF moves further towards integrated approaches, multi-focal projects and impact programs, it is increasingly important to facilitate acquisition of formal and tacit knowledge, organize knowledge assets from complex situations and make them available to inform future investments. The Integrated Approach Pilot (IAP) programs and Impact Programs impose greater needs for connections between 'child' projects and program objectives. KM is the obvious means to tie these connections together, to collect evidence-based learning, and to achieve sustained impact that deliver benefits far into the futu e."[21]

This emphasis from the GEF on both integrated knowledge management systems and holistic multi-focal area programmes, clearly sets the ground for a purposeful, concrete and action- orientated KM strategy for the MedProgramme. During its execution, the MedPCU will make sure that actions are closely aligned with GEF KM-related guidelines[22].

[15] Ref. GEF-7 Replenishment, Programming Directions, Fourth Meeting for the Seventh Replenishment of the GEF Trust Fund, GEF/R.7/19, p.6, https://www.thegef.org/council-meeting-documents/gef-7-programming-directions

[16] Ibid

[17] Evaluation of Programmatic Approaches in the GEF, IEO Brief, The Independent Evaluation Office (IEO) of the GEF, 2017. Full brief at: http://www.gefieo.org/sites/default/files/ieo/signposts/files/programmatic-approaches-2016- brief.pdf

[18] "Programs have been part of the GEF since its establishment. [...] In 2008, the Council endorsed the objectives and principles for programmatic approaches. For the first time, detailed procedures for designing pro- grams were approved, including the introduction of the program framework document (PFD). This resulted in an increase in the submission of programs to the Council and a change in their nature from phased to clustered ones. Importantly, a stimulus to program ownership was introduced by defining programs as "a more strategic level interaction with the GEF" for countries. [...] Until GEF-5, Council discussions about programs centered more on administrative than technical matters. This changed in 2014, when the Council approved a re- vised modality based on program scope: (1) thematic—the program addresses an emerging issue (e.g., a driver of environmental degradation), and (2) geographic— the program focuses on a particular geography. In GEF-6, the GEF introduced the IAPs, which focus on drivers of environmental degradation through supporting broad stakeholder coalitions and scalable activities." IEO BRIEF, Evaluation of Programmatic Approaches in the GEF, January 2018

[19] The full document of the GEF-7 Replenishment Programming Directions is available at: https://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20Programming%20Directions%20- %20GEF_R.7_19.pdf

[20] STAP stands for the Scientific and Technical Advisory Panel of the Global Environment Facility. More info: http://www.stapgef.org

[21] Stocking, M. et al. 2018. Managing knowledge for a sustainable global future. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC. p. 3

[22] At the time of the PPG phase (June-September 2018) final GEF guidelines on KM were not yet available. However, due consideration of provisions contained in the GEF Knowledge Management Approach Paper (2015, https://www.thegef.org/sites/default/files/council-meeting- documents/EN_GEF.C.48.07.Rev_.01_KM_Approach_Paper.pdf) and other relevant documents was taken into account when preparing this strategy.

4. Getting there: a modular architecture

> *Knowledge is the new capital, but it's worthless unless it's accessible, communicated, and enhanced.*
> –Hamilton Beazley

In order to achieve the objectives of the KM strategy, three interconnected functional levels have been identified to structure actions, activities and tools:

1. at the **PORTFOLIO LEVEL**;
2. at the **GENERAL PUBLIC LEVEL**;
3. at the **POLICY** and **DECISION-MAKING LEVEL**

Each level is articulated along different objectives. Activities and tools contribute to one or more KM levels and to the two Components of Child Project 4.1 (see Table 3, page 32). They are presented associated with objectives (such as "Monitoring progress towards impact"), but in most cases they are meant to respond to the needs of more than one KM level.

Table 3 Contribution of activities and tools to KM levels and CP 4.1 Components

Activity/Tools	Portfolio Level	General Public Level	Policy Level	CP 4.1 Component 1 Knowledge Sharing and Dissemination	CP 4.1 Component 2 Coordination and Synergies
Project/Program Management Tool	X				X
Database and Visualization tools	X	X	X	X	X
Public portal		X	X	X	
Annual Stocktaking Meetings	X	X	X	X	X
Replication Atlases		X	X	X	X
Trainings for portfolio	X				X
MedProgramme identity	X	X		X	
Med Bulletin/Newsletter	X	X	X	X	X
Storytelling (movies, graphic novels, podcasts, infographics, ...)		X	X	X	
Social media		X	X	X	
Technical reports and scientific publications, IW:LEARN Experience Notes		X	X	X	
MedProgramme Launching event and Final Conference	X	X	X	X	X
IW:LEARN IWC and twinnings, GEF events	X		X	X	X
Global campaigns and processes		X	X	X	
Engagement with testimonials		X		X	
Partnerships	X	X	X	X	

4.1 Portfolio Level

The work of project managers and executing partners is supported through provision of project management tools, monitoring frameworks, trainings and knowledge exchanges. A series of IT- based solutions and knowledge-mining and -sharing techniques are used to capture codified information as well as intangible assets.

4.1.1 Supporting efficient project management

4.1.1.1 Project Management Tool

A multilingual online project management tool[23] (integrated in the KM platform) can respond to the need of supporting efficien project (and programme) management by facilitating communication and information exchange among key actors of the Programme; promote knowledge sharing and peer-to-peer learning; facilitate tracking and monitoring of progress; and meet reporting requirements. A review of options currently available on the market (such as Asana, Freedcamp, Wrike, Slack, Microsoft Project, Basecamp, among others) has been carried out in the preparatory phase of the MedProgramme with a view to inform the selection of the most suitable tool to serve the needs of the portfolio. The final selection and adoption of the tool will occur during the inception phase of CP 4.1.

This decision-support system employs effective data-mining techniques and can be customized to suit the programme's needs, and project managers (and designated project collaborators) will receive specific training on its use and adoption to ensure portfolio-wide consonance.

Key features for such a tool include (but are not limited to): automated reporting, shared calendars, live editing/ collaboration on document development, workflow and task monitoring, Gantt–Chart, time tracking, file management and cloud repository, encrypted security, back-ups, integration with email and other products, mobile apps, and role-based access control and discussion boards.

The majority of respondents to the online survey on projects needs welcomed the idea of utilizing a PMT (and benefitting from ad hoc training). Previous experience from MedPartnership showed little use of a similar tool, however since then these online tools have greatly improved their features and levels of customization, and have been adopted widely to manage complex, multi- partner and multi-lingual projects.

4.1.2 Sharing knowledge and building capacity

One of the objectives of the MedProgramme is to improve the capacity of key regional stakeholders and build socio-economic resilience of impacted communities. To this end, a series of knowledge exchanges will take place at diffe ent levels taking inspiration and practical lessons learned from the GEF Partnership (reflecting the wealth of experience and examples from projects and programs around the world) and other relevant Organizations involved. A milestone activity in this sense is represented by the series of MedProgramme Annual Stocktaking Meetings (see next section).

[23] Project management tools (PMT) are aids to assist an individual or team to effectively organize work and manage projects and tasks. PMTs can either be desktop software, web-based and as a mobile app. Most of the tools are web- based only with a few providing also desktop and mobile based versions, regardless of the kind of version all the work is updated instantly across all devices and accounts.

4.1.2.1 Knowledge Exchanges

At the portfolio level, the MedPCU will capacitate Child Project teams with knowledge and training that can help them to deliver better project results and achieve greater impact. The identification of topics and modalities of exchange (face-to-face, virtual meetings, Communities of Practice, Expert visits, Study Tours, manuals, among others[24]) will be defined at the beginning of the Programme implementation. Preliminary topics could include:

1. Gender mainstreaming and stakeholders' engagement;
2. Scientific communication: bridging the gap between scientists/technical practitioners and media specialists;
3. Lessons learned from the MedPartnership and the ClimVar and ICZM projects.

It is expected that these knowledge exchanges will further empower project stakeholders, enhance cooperation, strengthen the institutions they represent and ultimately influence policies and norms for better management of natural resources in coastal areas.

Additionally, Child Projects will participate in learning exchanges by twinning with other relevant GEF IW projects as facilitated by the GEF IW:LEARN Project (see more at page 44).

Moreover, the MedPCU will support specific capacity building activities foreseen by each Child Project by taking stock and amplifying results through the programme-wide outreach.

4.1.3 Monitoring progress towards impact

4.1.3.1 Annual Stocktaking Meetings (ASM)

The Annual Stocktaking Meetings (ASM)[25] are one of the milestone activities of the MedProgramme. They are major regional events aiming to establish synergistic interactions among Child Projects and with other relevant initiatives and stakeholders, including with all other Mediterranean countries not participating in the MedProgramme.

ASMs hold a two-fold objective: 1) provide a forum for peer-to-peer learning among the Programme portfolio, and 2) catalyze regional and global attention on the progress made towards impact in the entire Mediterranean region.

The ASMs will be an occasion for face-to-face knowledge exchanges, south-south and north- south learning, and promotion of the broader adoption of MedProgramme approaches and solutions. Project managers, stakeholders and beneficiaries will have the opportunity to learn from each other, tap into respective tacit knowledge, and at the same time benefit from experiences and expertise generated by GEF and non-GEF projects and other relevant experts in diffe ent disciplines with diverse backgrounds. Moreover, Child Projects will have the chance to showcase their implementation advancement, discuss problems encountered, and engage with a broad audience of peers and stakeholders. The participation of regional and global media

[24] Useful guidance can be found in the following publications: ""The Art of Knowledge Exchange. A Results-Focused Planning Guide for the GEF Partnership" 2015 (https://www.thegef.org/sites/default/files/publications/GEF_WB_AoKE_English.pdf); "Becoming a Knowledge-Sharing Organization"2016 (http://documents.worldbank.org/curated/en/306761478498267644/pdf/109809-PUB- Box396311B-PUBLIC-DOCDATE-11-2-16.pdf); and

[25] The importance of, and need for stocktaking meetings emerged during the execution of the Strategic Partnership for the Danube and Black Sea Basin, the first GEF experiment in multi-project programs.

will raise public awareness across the Mediterranean countries and beyond. These knowledge exchanges will further enhance cooperation, strengthen the institutions they represent and ultimately influence policies and norms for better management of natural resources in coastal areas. The meetings will involve: all Child Projects and Governments of the participating countries, the MedProgramme's implementing and executing agencies, the GEF Secretariat and Independent Offic of Evaluation (IOE), Convention Secretariats, the UN Environment Global Program of Action (GPA), as well as major regional and global NGOs, representatives of those Mediterranean countries not participating in the MedProgramme; bilateral and multi-lateral donors, IFIs, the UfM, other regional intergovernmental organizations (OSS, etc.), and major private sector coastal area actors, water users, tourism associations and the shipping industry. Representatives of faith- based leaders, women's organizations, youth organizations, fashion/art/sport testimonials, media specialists, among other relevant groups will also be invited to participate in these events, following a dedicated stakeholders' analysis.

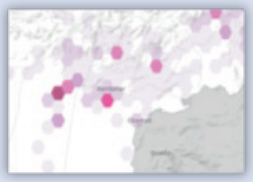
All project partners are expected to attend, and meaningfully participate in, the ASMs. They will be organized by the MedPCU in cooperation with all CPs and country representatives and will take place on a rotation basis in diffe ent project countries.

The ASM design, objectives and architecture will be defined during the first year of MedProgramme operation and approved at the CP 4.1 Steering Committee level. The first ASM will be held during the second year of MedProgramme operation.

4.1.3.2 Data visualization

Data visualization tools effectively support monitoring and reporting through easy visualization of selected data thus taking stock of progress. The table below illustrates possible types of visualization for geospatial and other types of data[26].

Table 5 Visualization examples for geospatial data and other types of data

GEOSPATIAL DATA		
Type of visualization	**Type of data example**	**Visual example**
Pin, symbol (with or without color or icon coding)	Coastal contamination hotspots, industrial wastewater treatment plants, etc.	
Polygon (with or without color coding, with or without color following a scale)	Number of water system clients connected to modern wastewater facilities, Coastal contamination hotspots, Concentration of mercury in coastal waters, Landscape and seascape under improved management, etc.	
Proportional symbol (color and/or size follow a scale)	Amounts of POPs disposed of /recycled on-site, Amounts of Mercury/ disposed of recycled on-site, Volume of industrial wastewater receiving secondary treatment, Volume of treated industrial wastewater reused, etc.	

GEOSPATIAL DATA		
Type of visualization	**Type of data example**	**Visual example**
Heatmap	Concentration of POPs in coastal waters, etc.	
Choropleth maps	Countries implementing comprehensive Integrated Coastal Zone Management, Countries implementing sustainable consumption and production (SCP) approaches, Countries having completed inventories of submarine groundwater discharges, etc.	

OTHER TYPES OF DATA		
Type of visualization	**Type of data example**	**Visual example**
Animated gauge	Real-time progress towards target of 3,250 tonnes reduction in POPs contamination, progress towards target of 50 tonnes reduction in mercury contamination, etc.	
Pie chart	Training distribution by type of training and by gender, etc.	

Note: For each geospatial visualization above, more information could be displayed in overlays (which appear when hovering the mouse).

4.1.3.3 Measuring Knowledge Management impact

> *Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted.* –Albert Einstein

Unlike other activities that can be justified in terms of explicit and measurable monetary savings, the added value of knowledge management is more difficult to quantify. Knowledge management benefits are both far reaching and hard to measure as they relate primarily to preventing the waste of money, time and human resources. It is difficult to quantify the expense – in terms of time and money – of finding the right information or reproducing knowledge that already exists, or of using obsolete rather than up-to-date information. The prevention of errors and the savings that are often achieved through better use and reuse of existing knowledge are practically invisible in accounting terms[27].

Nevertheless, it is important to assess the performance of KM efforts and measure the impact of the KM strategy. Measurement, benchmarking and incentives are essential to accelerate the learning process and to drive cultural change. When distilling recommendations to improve the systematic treatment of the need for KM, the STAP recommends that "knowledge management progress indicators should be included in the GEF Results-Based Management system"[28] .

A menu of indicators (both quantitative and qualitative) will be considered by the MedPCU in order to monitor knowledge-related activities (Table 5). Once indicators are discussed and approved during the inception phase of the MedProgramme, related targets can be developed to measure the achievement of the objectives.

Table 6 Possible KM Indicators

What to measure	Indicators	Means of verification
How often are internal users I) accessing, II) contributing to, or III) using the knowledge assets and sharing processes at their disposal?	• Number of connections per day/week/month • Number of knowledge assets downloaded • Number of discussions or messages shared, etc.	Usage data will be provided by the MedProgramme portal analytics
What is the level of internal user satisfaction with the MedProgramme project management tools and how is it impacting their work?	• User friendliness of the tool from 1 to 5 (e.g. interface, design, navigation, etc.) • Technical quality of the tool from 1 to 5 (features, speed, etc.) • Overall level of satisfaction from 1 to 5 • Has facilitated collaboration within your CP from 1 to 5 • Has facilitated collaboration with other CPs from 1 to 5 • Has helped you save time by giving your access to resources from 1 to 5	This can be measured through internal satisfaction surveys that will also provide a venue for users to suggest improvements, (virtual) meetings, etc. Stakeholders should be engaged in a structured manner, for example through interviews, focus groups, or peer learning activities.

[27] Steffen Soulejman Janus. 2016. Becoming a Knowledge-Sharing Organization: A Handbook for Scaling Up Solutions through Knowledge Capturing and Sharing. Washington, DC: World Bank. doi:10.1596/978-1-4648-0943-9. License: Creative Commons Attribution CC BY 3.0 IGO

[28] Stocking, M. et al. 2018. Managing knowledge for a sustainable global future. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC. p. 5

What to measure	Indicators	Means of verification
How often are public users IV) accessing the MedProgramme portal, and V) accessing the knowledge assets?	• Number of visits, • Average time spent • Number of downloads • Pages visited • Number of recipients opening the newsletter • Ease of finding knowledge esources on the portal from 1 to 5, etc.	Usage data will be provided by the MedProgramme portal analytics. A feedback form can also be available at all time on the portal.
Is MedProgramme producing quality knowledge assets?	• Level of satisfaction of stakeholders with knowledge asset • Are stakeholders using knowledge assets in their work	This can be measured through a stakeholder survey.
Is MedProgramme contributing to the GEF knowledge base?	• Knowledge assets shared on other GEF platforms (IW:LEARN and others)	This will be monitored by the MedPCU.
Is MedProgramme building the capacity of key regional stakeholders?	• Key regional stakeholders have been identifie • Number of knowledge exchange activities implemented • Number of participants at the Annual Stocktaking meetings	This will be monitored by the MedPCU.
Is MedProgramme participating / contributing to global and regional campaigns, events and processes?	• Number of regional and global events with MedProgramme participation (as presenter) • Number of #MedProgramme mentions on SDG social media channels	This will be monitored by the MedPCU.
Is MedProgramme getting the attention of the media?	• Number of media hits in target languages / countries • Number of media hits in first tier media outlet • Number of Op-eds placed, etc.	This can be monitored by a media agency for a fee or with free tools such as Google Alerts.
Are Parties to the Barcelona, Stockholm, Minamata, and Basel Conventions VI) aware of the MedProgramme outputs / outcomes? VII) using the MedProgrammes outputs?	Number of briefing o ganized with Parties to the Barcelona Convention Number of countries attending the briefin Number of countries using MedProgramme outputs	This will be monitored by the MedPCU and country representatives can be surveyed through face-to-face interviews, etc.

4.2 General Public Level

Civil society, media, and representatives of non-scientific community are informed about MedProgramme's results and engaged in knowledge sharing activities both as brokers and beneficiaries

4.2.1 Communicating progress and results

The KM strategy foresees a large component on communications and outreach aimed at ensuring that results are properly shared with the intended audiences to maximize, replicate and scale up best practices and lessons learned.
A number of traditional communications activities (such as newsletters, brochures, etc.) will be blended with innovative and creative approaches (graphic novels, documentaries, podcasts, etc). to ensure visibility of the Programme.

4.2.1.1 Knowledge Management Platform

The engine of the KM strategy is enshrined in a powerful web-based knowledge hub comprised of a

data and information management system (with both public and restricted access) and a combination of visualization tools to serve the portfolio's needs.

The platform will serve as central repository of all the data generated by the Child Projects and will be designed with a view to the following strategic knowledge management objectives:

- Facilitate information sharing and promotion of the Programme achievements among the partners and the regional stakeholders.
- Reflect the indicators of all Child Projects in the establishment of the relevant tools and frameworks, and seek coherence with efforts underway in the GEF's Chemicals and Waste Focal Area to create a platform to assist countries in meeting the reporting requirements of the Stockholm and Basel Conventions.
- Support policy development through its data collection and management tools.
- Strengthen the science-policy interface, incorporating relevant data already generated by the countries, with the clear understanding that no data would be disseminated without the permission of its owner.
- In the long term, become a tool of the Contracting Parties of the Barcelona Convention.
- Assist countries in meeting their IMAP reporting requirements.
- Ensure that the highly valuable legacy of the MedPartnership, which produced a substantial volume of knowledge and information as well as a number of tools and guidelines, lessons, and experiences, is carefully preserved and easily accessible, including translations of key documents.

Such an integrated platform should host: 1) a project management tool; 2) a public/outward-facing portal, including sub-webpages for each CP; 3) visualization tool(s) to display a digitalized representation of data through GIS and other suitable means; and 4) a database for raw/primary data.

1. The project management tool was described previously (page 33)
2. The outward-facing MedProgramme portal will be populated with key information showcasing progress towards impact and the contribution of the MedProgramme to global and regional environmental goals. The portal will serve as a gateway for information related to international waters, coastal zones, biodiversity and climate resilience in the Mediterranean sea basin, bringing together information from GEF and non-GEF projects (for example results from the MedPartnership project will be made available and possibly re-packaged in new material) for broad dissemination and cross-fertilization (several platforms identified in the Baseline can be cross-referenced from the MedProgramme platform to reach out to vaster audience and stakeholders). It will closely dialogue with the GEF's new portal (corporate database for projects, reports, and documentation) and the IW:LEARN website. The MedProgramme portal will feature a highly user-friendly interface including effective search functions, filters (such as drop-down menus) and analytical capabilities. Each Child Project will have dedicated sub-pages about their specific activities. CPs are expected to provide regular information (in diffe ent multimedia formats) to generate content for their respective project sub-pages and the overall programme portal. The MedPCU will be responsible for curating the information provided and packaging them for the intended audiences.

3. Visualization tools[29] will be used to display spatial and non-spatial data (be they quantitative or qualitative) generated by the projects. Data need to be stored and mined in a way that makes them readily available not only to track progress but also to support decision making by the diffe ent stakeholders. GIS (geographic information system[30]) will be largely used as well as textual information, photos, story maps, pie charts, graph charts, infographics, map dashboards, trend line charts, among others (see examples in Table 5). Users can build a query based on specific criteria such as geographic area, data layer or specific indicators. Alternatively, users can simply browse for information using the icons provided. There are a number of visualization software tools available both as open source and commercial options. A number of products (with license or open access) could be suitable for integration in the MedProgramme knowledge platform, such as Esri ArcMap and ArcGis, Geonode, QGIS, MapX[31] and Google Earth Outreach[32] . The final selection will be made during the inception phase.

4. Raw/primary data will be stored in a database with flexible restricted/public access. A shared data model/protocol should be agreed at the beginning of the Programme to ensure that projects will compile relevant data with a standardized approach and enable a harmonized data entry system (the INSPIRE directive[33] could be taken as reference to harmonize the process). Issues related to open data, ownership, quality and review of data will be addressed in this exercise; a mapping of voluntary standards can help to evaluate feasible options. Contributors of data are all stakeholders of the MedProgramme, including the Executing Partners. Child Projects are responsible for producing their own data.

4.2.1.2 MedProgramme identity

In terms of visibility, the MedProgramme will be presented in a holistic and coherent way through the development of clear vision statement and positioning, visual identity, logo design, etc. showing consistency and integration across the portfolio. At the same time, each Child Project will be granted individual identities within the overall MedProgramme-branding in order to promote specific activities and benefit from ad hoc services. This will entail the design of consistent logos for each CP, creation of sub-websites within the Programme platform, organization of tailor-made trainings, preparation of specific publications, social media services, among others.

The MedPCU will develop a proposal[34] in close consultation with project teams and, once adopted at the Steering Committee level, Child Projects are expected to use it consistently.

[29] Data visualization is the presentation of data in a pictorial or graphical format, and a data visualization tool is the software that generates this presentation. Data visualization provides users with intuitive means to interactively explore and analyse data, enabling them to effectively identify interesting patterns, infer correlations and causalities, and supports sense-making activities.

[30] The information about location associated with observation and statistical analysis is called geographic information.

[31] MapX was developed by UN Environment, the World Bank and the Global Resource Information Database (GRID-Geneva) to capitalize on the use of new digital technologies and cloud computing in the sustainable management of natural resources. More info: www.mapx.org

[32] A recent partnership has been established between UN Environment and Google.

[33] The INSPIRE Directive aims to create a European Union spatial data infrastructure for the purposes of EU environmental policies and policies or activities which may have an impact on the environment. This European Spatial Data Infrastructure will enable the sharing of environmental spatial information among public sector organisations, facilitate public access to spatial information across Europe and assist in policy-making across boundaries. INSPIRE is based on the infrastructures for spatial information established and operated by the Member States of the European Union. The Directive addresses 34 spatial data themes needed for environmental applications. The Directive came into force on 15 May 2007 and will be implemented in various stages, with full implementation required by 2021. More info: https://inspire.ec.europa.eu

[34] In line with both UN Environment and GEF policies on branding and use of logos.

4.2.1.3 Newsletters (Med Bulletin)

Periodic MedProgramme Bulletins will be published (every six months or on a quarterly basis) to showcase progress of the Programme as a whole and of individual Child Projects, including highlights of results, success stories and project events, and relevant global, regional and national relevant meetings and events. It will be one of the primary tools for tracking achievement of targets and milestones for all Child Projects, based upon the corresponding results frameworks. Bulletins will feature a "journalistic" style making the content appealing for a wide range of audiences. Therefore, all CPs are expected to contribute to these Bulletins with diffe ent types of inputs in order to document their activities and progress, such as high-quality pictures, articles, statistics, quotes, interviews, footage, among others.

4.2.1.4 Storytelling for advocacy

A number of traditional storytelling instruments will be blended with innovative and creative approaches to increase dissemination and advocacy efforts. Particular emphasis will be given to the preparation of high-quality short movies, animations and documentaries, graphic novels[35], documentaries, podcasts[36]/ radio programmes, infographics, art exhibitions, digital interactive stories/articles/interviews, professional photos, microblogging, e-books, art exhibits, among others. The MedPCU will collect diffe ent multimedia material from the CPs necessary to prepare these products. Translations of key communications outputs will be carried out in English, French and Arabic to ensure ample dissemination in the participating countries. Specific translations in other national languages will be sought pending budget constraints and upon due consideration of stakeholders' needs.

4.2.1.5 Social Media

Facebook, Instagram, YouTube and Twitter are four social media tools suggested for use by the MedProgramme. Development of timely and appropriate content and material to populate these channels is indispensable to achieve the desired impact. CPs will be prompted to contribute with relevant and ad-hoc information, pictures, statistics and other data to enrich the social media campaign.

The use of hashtags will be coordinated with the GEF IAs and EAs and project and country representatives of the Programme in support also of other related initiatives and campaigns.

The registration on the above-mentioned channels (or a selection of them) will take place at the beginning of the Programme and content population will start as soon as data and information from the projects becomes available.

4.2.1.6 Participation to global campaigns, events and processes

Experiences and lessons learned from the MedProgramme will be of relevance for a number of global processes shaping polices related to the sustainable management of natural resources in coastal areas. In turn, global processes are important for the MedProgramme to align with national, regional and global priorities and be receptive to new "waves" (policies, socio-economic trends, tech advances, etc). MedProgramme activities in this sense will build on existing successful campaigns, for example the "ICZM Mediterranean awareness-raising Strategy (MARS)". Contribution to these events will take diffe ent forms, ranging from physical attendance, production of specific products, content and multimedia material to be packaged in suitable products, among others. Examples of processes and events that could be relevant for the MedProgramme include the Agenda 2030 and SDGs conferences, the United Nations Environment Assembly (UNEA), Mediterranean-wide policy-dialogues, the UN Environment campaigns against chemical and plastic pollution, the EU Development Days

[35] Graphic novel or graphic journalism" is an increasingly popular literary genre that uses comics and poignant texts to explain complex matters. It is a compelling way of storytelling for scientific dissemination.

[36] A mix of radio and audiobooks, podcasts are a very incisive and entertaining way of sending messages across and inform and spark debate on pressing issues. They are easy to share and can reach a vast and varied audience.

and other key gatherings at the EU level, International Days (such as Coast Day, Environment Day, World Water Day, Health Day, etc), among others.

4.2.1.7 Engagement with media and testimonials

The MedPCU will reach out to a diffe ent number of media outlets and journalists with a view to establish long-lasting collaborations. To this end, CPs will be asked to liaise with national and local media of the project countries (for instance, by providing the MedPCU with a list of relevant contacts). A series of direct interactions with communications specialists, media experts and social media influencers is foreseen throughout the duration of the Programme to increase mutual understanding and flow of information. The MedPCU will also reach out to renowned personalities from diffe ent realms (such as art, sports, entertainment or fashion) to invite them to serve as ambassadors for the Programme and raise awareness about the main environmental challenges (and solutions) in the coastal areas of the Mediterranean. CPs will be prompted to suggest names, and facilitate contacts when possible, of suitable and potential "goodwill ambassadors" of relevance in the region.

4.2.1.8 Launching/Closing events of the MedProgramme

The design and practical details of these events will be planned during the inception phase of the MedProgramme. Considering the staggered initiation timeframes of the diffe ent Child Projects, a launching event of the MedProgramme could be organized in the form of a press conference to coincide with the kick-o` of the Support Child Project 4.1. Basic communications material about the objectives of the MedProgramme (such as visual identity, slogan, mission statement, description of Child Projects, informative brochure, short promo video, basic online pages, etc) should be prepared prior to the launching event. Participation to these events will not necessarily be open to the large public, however the information and messages emanating by these two occurrences will be relevant for a general audience as well.

4.2.2 Forging and nurturing Partnerships

> *If you want to go fast, go alone. If you want to go far, go together.* –African Proverb

Opportunities to enlarge the existing partnership of the MedProgramme should not only be welcomed, but actively sought. By reaching out to diffe ent stakeholders – individuals, organizations or companies – and engaging them directly in selected MedProgramme activities, a series of distinct advantages will be produced. These include:

- Contributing to transformational change: groups that are likely to evade the radar of "usual suspects" mapping (intended as classic stakeholders for environmental projects) will be intentionally targeted, moving away from the old-fashioned top-down view of passive beneficiaries of knowledge to a new vision in which conscious citizens are regarded as source of knowledge and potential allies in the strive against environmental degradation. For example, a collaboration with Faith-Based Organizations[37] to prepare a workshop or joint statements disseminated through their networks would tremendously increase the chances to inform and influence a large portion of general public that is not reached by traditional channels. Another possibility is a partnership with a fashion magazine to sensitize readers about sustainable business in coastal areas.

[37] Faith-Based Organizations could be a very important stakeholder group to engage in environmental decision-making. "Religion plays a significant role in the understanding and shaping of attitudes, opinions and behaviours including for management and use of the environment and natural resources". UN Environment Foresight Brief 008, April 2018.

- Facilitating a more rapid achievement of the Programme results: for example, a partnership with tourism institutions in the diffe ent participating countries could accelerate the adoption of more sustainable touristic habits to reduce pollution load into water bodies and increase the acceptance and reuse of treated freshwater for human consumption.

- Raising the profile of the GEF investments in the Mediterranean and of the countries and partners participating to the effort. A partnership with National Geographic for instance, or with national TVs and radio stations, could enhance the dissemination of knowledge and results generated by the MedProgramme as well as by related initiatives and policy-frameworks, like the Barcelona Convention.

- Further stimulating a sense of ownership and contributing to the sustainability of Programme results: making tight connections for example with the Bibliotheca Alexandrina to host a permanent or temporary exhibition about the MedProgramme, which could then travel around museums of the entire Mediterranean basin (starting with participating countries), and thus ensure that the legacy of the MedProgramme will continue to inspire people even after the programme closure.

- Providing additional means to further expand Programme activities: by adding ad hoc co-financing (cash or in-kind) to produce, for example, through a publication or a short movie for the general public, the MedProgramme could gain positive returns in terms of resources and reputation. Bringing together renown artists from project countries and the private sector to jointly produce a graphic novel on the MedProgramme, for instance, could be rewarding in many regards.

The MedProgramme holds the possibility to create a fertile hub for diffe ent partners to come together and share experiences and solutions to common challenges related to environmental degradation and pollution of freshwater/marine waters in the region. The private sector is a prime stakeholder in this effort and should be always engaged to cross-fertilize the MedProgramme's interventions. As emphasized in the GEF 2020 strategy: "Coordination failures abound in environmental management, in part because of the prevalence of 'tragedy of the commons' issues. Moreover, the complexity of environmental challenges requires that actions be taken simultaneously by many diffe ent stakeholders to be effective; [...] Partnerships with the private sector, civil society, research groups, and indigenous and local communities are vital in this regard."[38]

The importance of tightening relations with the private sector is again stressed in the GEF 2020 strategy: "The IAPs (Integrated Approach Pilots) will give special attention to engaging the private sector and improving evidence-based design and implementation to enhance learning and the effectiveness of the IAP interventions."[39]

Furthermore, in strengthening collaboration with a vast and diverse, yet relevant, groups of stakeholders, the MedProgramme will contribute to the vision encapsulated in the Sustainable Development Goal 17: "A successful sustainable development agenda requires partnerships between governments, the private sector and civil society. These inclusive partnerships built upon principles and values, a shared vision, and shared goals that place people and the planet at the centre, are needed at the global, regional, national and local level."

[38] 2020 Strategy for the GEF, April 2015. p.27 Full document: https://www.thegef.org/sites/default/files/publications/GEF-2020Strategies-March2015_CRA_WEB_2.pdf

[39] 2020 Strategy for the GEF, April 2015. p.22 Full document: https://www.thegef.org/sites/default/files/publications/GEF-2020Strategies-March2015_CRA_WEB_2.pdf

4.3 Policy and Decision-Making Level

The Contracting Parties of the Barcelona Convention, relevant decision makers in the region, technical practitioners as well as GEF Implementing and Executing Agencies are supported in their work through contributions to relevant regional policy processes and related GEF initiatives (particularly through the IW:LEARN project).

4.3.1 Strengthening the Science-Policy Interface (SPI) and Influencing Decision-Making

4.3.1.1 Replication Atlases

A number of highly informative National Replication Atlases, translated in relevant languages, will be produced to stimulate replication of successful practices demonstrated by the Programme and encourage regional and global dialogue. Broader adoption and replication of the successful policies, practices and technologies implemented under the Programme will be promoted through these means, highlighting areas and situations where replication of the Programme's demonstrations should preferentially occur.

Relevant results of Child Projects will be featured in the Atlases and the MedPCU will inform about the participatory process to collect and present the inputs.

4.3.1.2 Agenda 2030 and the Sustainable Development Goals

The MedProgramme will produce regional environmental benefits contributing to the Sustainable Development Goals, in particular the goals on responsible consumption and production (SDG 12), climate action (SDG 13), life below water (SDG 14), and life on land (SDG 15), which reflect to a large extent the GEF's core mission. By fighting environmental degradation in coastal areas and improving livelihoods, the MedProgramme is supporting beneficiary countries, and all populations living in the Mediterranean basin, to increase their capacity to build climate resilience, reduce pollution from nutrients and persistent toxic substances (POPs and Mercury), sustainably manage coastal freshwater and marine resources, protect biodiversity, and restore coastal ecosystems. Moreover, its focus on improving freshwater quality and quantity will directly contribute to SDG 6 on water and sanitation, while a dedicated gender strategy will ensure compliance with the SDG 5 on gender equality and women's empowerment.

4.3.1.3 Supporting countries to implement IMAP

Since the 2005 Mediterranean TDA, the situation in the Mediterranean in terms of transboundary issues in the marine and coastal areas has evolved. In terms of monitoring, the adoption in 2008 of the EU Marine Strategic Framework Directive (MSFD) led to the development in EU countries of national monitoring plans based on a set of detailed common criteria and indicators. UN Environment/MAP initiated the Ecosystem Approach in 2008, which led to the adoption of 11 Ecological Objectives, 61 indicators and definition of GES and targets in 2012 at the COP17of the Barcelona Convention. This led to the Integrated Monitoring and Assessment Programme (IMAP) for the Mediterranean, which was adopted in 2016 at the Barcelona Convention COP19. IMAP is the best available common set of tools for informing the science-policy interface (SPI) which is critical to achieve meaningful progress on stress reduction. Now the challenge is for countries, especially the non-EU countries, to redesign their national monitoring programs in line with IMAP and the 23 common indicators covering also the areas beyond national jurisdiction. Regarding monitoring of pollution, countries will build upon their MED POL monitoring program and database that has been in existence since 1999, with agreed parameters and stations in key hotspots and coastal areas. However, very few data exist for the majority of the common indicators, other than some contaminants, nutrients and chlorophyll data, particularly in the GEF eligible countries of the Mediterranean.

4.3.2 Contributing to the GEF knowledge base

The results produced by the MedProgramme (hot spots of coastal/marine pollution and habitat degradation, implementing ICZM and nexus planning, conjunctive surface water and groundwater management, protecting coastal groundwater-related ecosystems and coastal/marine biodiversity) will substantially contribute to the GEF knowledge base and to relevant GEF process, events and activities involving the four focal areas of International Waters, Chemicals and Waste, Biodiversity, Climate Change. Technical practitioners and scientists are also addressed as direct consumers of technical reports and assessments, and they are key agents to strengthen the science-policy interface.

4.3.2.1 Technical reports and scientific publications

The MedPCU will ensure that relevant scientific reports and scientific peer-reviewed publications are prepared by the various CPs providing technical information about the achievements of the Programme.

4.3.2.2 Synergies with the GEF IW:LEARN and LME:LEARN Projects

The MedProgramme will closely collaborate with the GEF International Waters Learning and Resource Exchange Network (IW:LEARN) Project[40] to facilitate uptake of lessons learned and knowledge exchange from/to the MedProgramme portfolio.

Cooperation in the following activities will be particularly addressed:

- Participation to the GEF International Waters Conferences (landmark biannual events of the IW portfolio). The first MedP ogramme contribution is expected for the 10th edition of the IWC in 2020.
- Production of Experience Notes (short case studies) produced by Child Projects to showcase worthy results and disseminated through IW:LEARN channels and the MedProgramme KM platform. The format of Experience Notes is standard (https://iwlearn.net/documents/experience-notes)
- Participation to IW:LEARN Twinnings with other GEF relevant projects and programs.
- Contribution to IW:LEARN.net with specific content (i.e. data visualization).
- Contribution to social media, news, events, etc.
- Participation to GEF Communities of Practice (CoPs) on IW, CW, when relevant.

4.4 Governance

Both the strategy and its implementation are critical to successful exploitation of knowledge. Many KM strategies fail not because there is something intrinsically wrong with them, but because they are not well implemented.
There must be a good strategy, but also appropriate organizational structure, systems, resources and the right people to execute it.
It is crucial to create teams that are centers of excellence for their specific knowledge skills and experience. Also, the appropriate technical equipment (hardware and software) and adequate expertise are key ingredients to ensure expected results. The GEF STAP concurs with the need for adequate resources noting that “KM delivers cost-efficiencie and savings, for example, reduced failure of projects, and it needs up-front resourcing to cover for additional time, specific tools and database needs. [...] KM professionals are essential in applying the discipline, including creating tools and products that help establish KM as a standard practice throughout the organization[41]” .

[40] More info at www.iwlearn.net

The KM strategy of the MedProgramme will require diffe ent sets of expertise for its execution. It is anticipated that the following professional profiles will be required throughout the duration of the programme (either full-time and/or part-time):

- Knowledge Management Specialist (to coordinate the implementation of the KM strategy)
- Communications assistant (to support the execution of the communications plan)
- Data Analyst (to help harmonize data produced by Child Projects and maintain the database)
- Web Developer (to develop the KM platform)
- IT Specialist (to administer the IT-based platform and systems)
- Experts in copy-editing, video-making, graphic design, translations, etc. to be contracted as needed.

These and other services will be provided by the staff of the MedPCU, consultants hired to carry out specific tasks and by outsourcing the work to companies (such as for the project management tool, hosting providers, licenses, etc).

"Knowledge-sharing is at the crossroads of core and support functions"[42] . Knowledge-sharing tasks and responsibilities should be as much as possible integrated in the jobs descriptions and terms of reference of projects' executing teams.

As efforts leading to an effective knowledge management system can be seen as time-consuming and not immediately benefitting the project outputs, there must be a good system in place to incentivize project teams to dedicate time and resources to KM. As noted by the GEF Strategic Technical Advisory Panel (STAP[43]): "there needs to be better recognition for KM inputs, achievements and publicity. Rewarding projects at mid-term, for example, for demonstrating the use of knowledge to improve and/or adapt the project to meet project objectives may be an effective incentive". The form of these rewards can vary, but in the case of the MedProgramme they can range for instance from prizes announced at the Annual Stocktaking Meetings, to public recognition mentions (internally or externally the portfolio, such as in the Med Bulletins), among others.

[41] Stocking, M. et al. 2018. Managing knowledge for a sustainable global future. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC. p. 9

[42] Steffen Soulejman Janus. 2016. Becoming a Knowledge-Sharing Organization: A Handbook for Scaling Up Solutions through Knowledge Capturing and Sharing. Washington, DC: World Bank. doi:10.1596/978-1-4648-0943-9. License: Creative Commons Attribution CC BY 3.0 IGO, p. 24.

[43] Stocking, M. et al. 2018. Managing knowledge for a sustainable global future. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC. p. 9

5. Legacy and Sustainability

> *Share your knowledge. It is a way to achieve immortality.* –Dalai Lama XIV

The benefits arising from managing knowledge properly are both far reaching and hard to measure. This strategy represents one of the first attempts to manage knowledge holistically within a GEF-financed program with multi-focal areas Child Projects, and the role played by the Support Child Project 4.1 in implementing the programme-wide KM strategy is innovative yet challenging. The envisaged result is to effectively support portfolio coordination, provide beneficiary countries with long-lasting capacity and tools to improve national and transboundary coastal ecosystems, and enrich the GEF Partnership with replicable solutions and lessons learned for future interventions in the Mediterranean region. Its success will be determined by the commitment and ownership of all executing partners and stakeholders, in addition to adequate resources and means in place. Its sustainability will translate into reinforced capacity (information, expertise, awareness...) of MedProgramme stakeholders to address environmental challenges making use of a modular knowledge hub which will continue to evolve after the programme ending.

The contracting parties of the Barcelona Convention will be the custodians of the KM structure implemented for the MedProgramme and will carry forward the legacy of the MedProgramme by supporting informed decision-making, paving the way for more investments and interventions, and encouraging broader adoption and knowledge transfer to improve environmental security in the coastal areas of the Mediterranean.

GEF/UN Environment "Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security" GEF ID 9607

Implementing Agencies

UN environment

European Bank for Reconstruction and Development

Leading Executing Agency

UN environment
United Nations Environment Programme

MAP
Mediterranean Action Plan
Barcelona Convention

Executing Partners

UNESCO
United Nations Educational, Scientific and Cultural Organization

International Hydrological Programme

European Investment Bank

IUCN

WWF

Global Water Partnership Mediterranean

PAP/RAC

Regional Activity Centre for Sustainable Consumption and Production

Plan Bleu

SPA/RAC