Reducing Pollution from Harmful Chemicals and Wastes in Mediterranean Hot Spots and Measuring Progress to Impacts

Part I: Project Information

Name of Parent Program

Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security

GEF ID

9684

Project Type

FSP

Type of Trust Fund

GET

Project Title

Reducing Pollution from Harmful Chemicals and Wastes in Mediterranean Hot Spots and Measuring Progress to Impacts

Countries

Regional, Albania, Libya, Montenegro, Morocco, Tunisia, Bosnia-Herzegovina, Egypt, Lebanon, Algeria, Turkey

Agency(ies)

UNEP

Other Executing Partner(s):

UNEP Mediterranean Action Plan (MAP), Plan Bleu, Regional Activity Centre for Sustainable Consumption and Production (SCP / RAC)

Executing Partner Type

Others

GEF Focal Area

Multi Focal Area

Taxonomy

Focal Areas, Chemicals and Waste, International Waters, Influencing models, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Stakeholders, Private Sector, Gender Equality, Gender results areas, Gender Mainstreaming, Capacity, Knowledge and Research, Capacity Development, Knowledge Generation, Knowledge Exchange, Sustainable Development Goals, Climate Change, Transboundary Diagnostic Analysis, Persistent Organic Pollutants, New Persistent Organic Pollutants, Polychlorinated Biphenyls, Mercury, Best Available Technology / Best Environmental Practices, Disposal, Convene multi-stakeholder alliances, Large corporations, SMEs, Communications, Awareness Raising, Knowledge Generation and Exchange, Sex-disaggregated indicators, Gender-sensitive indicators, Innovation

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 1

Duration

72In Months

Agency Fee($)

1,282,500

A. Focal Area Strategy Framework and Program

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CW-2_P3	3.1 Quantifiable and verifiable tons of POPs eliminated or reduced.	GET	6,250,000	21,852,048
CW-2_P4	4.1 Mercury is reduced	GET	5,000,000	21,852,049
IW-2_P3	3.1 Improved governance of shared water bodies, including conjunctive management of surface and groundwater through regional institutions and frameworks for cooperation lead to increased environmental and socio-economic benefits.	GET	3,000,000	9,442,630
		Total Project Cost($)	**14,250,000**	**53,146,727**

B. Project description summary

Project Objective

To achieve measurable reductions in levels of POPs and mercury in priority Mediterranean coastal hot spots and catchment areas.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1: Chemicals and Waste	Technical Assistance	Reduction of wastes and hazardous chemicals (POPs and mercury) in coastal hotspots	1.1 Management and disposal of 2,000 tonnes of POPs 1.2 Management and safe storage of 50 tonnes of mercury wastes 1.3 New POPs reduction and alternatives pilot activities completed 1.4 Mercury reduction through pilot activities on mercury alternatives	GET	10,337,000	43,704,097

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2: International Waters	Technical Assistance	Littoral countries enabled to identify trends and progress to impacts.	2.1: Updated Transboundary Diagnostic Assessment including gender assessment 2.2: Report on progress to impacts 2.3: Offshore monitoring strategy and identification of 20 locations for the offshore monitoring stations 2.4: Data sharing policy for the Mediterranean	GET	2,600,000	8,577,120
Component 3: Monitoring and Evaluation and information dissemination	Technical Assistance	Project results and knowledge are effectively disseminated and used to adaptively manage the project	3.1 Knowledge Management strategy shares knowledge from Child Project 1.1 3.2 Regular monitoring and evaluation of project progress and results	GET	636,000	
			Sub Total ($)		**13,573,000**	**52,281,217**
Project Management Cost (PMC)						
				GET	677,000	865,510

Project Management Cost (PMC)			
	Sub Total($)	**677,000**	**865,510**
	Total Project Cost($)	**14,250,000**	**53,146,727**

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount($)
Government	Algeria MoE	In-kind	22,352,977
Government	Ministry of Environment - Lebanon	In-kind	15,000,000
Government	Environment General Authority - Libya	In-kind	1,300,000
Government	Ministry of Environment – Morocco	In-kind	8,000,000
Government	Ministry of Local Affairs and Environment – Tunisia	In-kind	1,490,000
Others	Plan Bleu	In-kind	542,000
Others	Sustainable Consumption and Production Regional Activity Centre (SCPRAC)	In-kind	4,075,718
Others	UNEP Mediterranean Action Plan	In-kind	386,032
		Total Co-Financing($)	**53,146,727**

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	NGI	Amount($)	Fee($)
UNEP	GET	Regional	Chemicals and Waste	POPs	No	6,250,000	562,500
UNEP	GET	Regional	Chemicals and Waste	Mercury	No	5,000,000	450,000
UNEP	GET	Regional	International Waters		No	3,000,000	270,000
					Total Grant Resources($)	**14,250,000**	**1,282,500**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Amount ($)
300,000

PPG Agency Fee ($)
27,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	NGI	Amount($)	Fee($)
UNEP	GET	Regional	Chemicals and Waste	POPs	No	228,000	20,520
UNEP	GET	Regional	International Waters		No	72,000	6,480
					Total Project Costs($)	**300,000**	**27,000**

Core Indicators

Indicator 7 Number of shared water ecosystems (fresh or marine) under new or improved cooperative management

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Shared water Ecosystem		Mediterranean Sea		
Count	0	1	0	0

Indicator 7.1 Level of Transboundary Diagonostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Mediterranean Sea		4		
Select SWE				

Indicator 7.2 Level of Regional Legal Agreements and Regional management institution(s) (RMI) to support its implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Mediterranean Sea		4		
Select SWE				

Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministeral Committees (IMC; scale 1 to 4; See Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Select SWE		1		

Indicator 7.4 Level of engagement in IWLEARN throgh participation and delivery of key products(scale 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Select SWE		1		

Indicator 9 Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
0.00	2,050.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)	
Select Polychlorinated biphenyls (PCB)		1,350.00			
Select Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride		20.00			
Select Hexabromocyclododecane (HBCDD)		630.00			

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
	50.00		

Indicator 9.3 Hydrochloroflurocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
	3		

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
	3		

Indicator 9.6 Quantity of POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
	300.00		

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		2,000		
Male		2,000		
Total	0	4000	0	0

PART II: Project JUSTIFICATION

1. Project Description

A1.1.1 Changes in Alignment with Original PIF Design

Two major changes have emerged to the design of the project at PFD stage.

a) Child project structure of Chemicals and Waste funding

An important change from the Programme Framework Document (PFD) relates to the breakdown of activities and subsequent disposal targets between the original Chemicals and Wastes child projects under the MedProgramme, namely the current Child Project 1.1 and Child Project 1.2 (Mediterranean Pollution Hot Spots Investment Project. Both child projects are Implemented by UNEP.

At PFD stage, it was envisaged that Child Project 1.2 would reduce 20 tonnes of mercury through investment activities by the European Investment Bank (EIB) in former Chlor Alkali manufacturing plants in Kasserine (Tunisia), and the closure of the operational Chlor Alkali plant owned by Coelma (Morocco). Feasibility assessment activities led by the EIB under Child 1.2 concluded that foreseen investment activities were not viable. As such Child 1.2 will proceed with the International Waters investment activities only. To ensure the Programme meets its overall mercury reduction target, the Chemicals and Wastes budget from Child 1.2, together with the 20 tonnes reduction of mercury target, has been transferred to this Child Project 1.1. The Programme Framework Document was approved under GEF 6, when the Minamata Convention was not yet in force. Therefore the participating countries identified in the PFD for this Child Project are all eligible for mercury funding even if they are not yet Parties to the Convention at the time of submission of the CEO Endorsement Request. Baseline research indicated it may not be possible to reach the combined target of 50 t of metallic mercury in the countries that have signed/ ratified Minamata Convention; so the scope has broadened to include mercury contaminated wastes, and two countries which are as yet not Party to the Minamata Convention but are anticipated to become Parties during the course of the project.

Table 1: Summary of changes to original chemicals and wastes child projects

	Global Environmental Benefit Target (CW only)	GEF funds allocation (CW only)
Original project structure:		

PFD Child Project 1.1	POPs: 2,000 tonnes Mercury: 30 tonnes	POPs: USD 6,250,000 Mercury: USD 3,000,000
PFD Child Project 1.2	Mercury: 20 tonnes	Mercury: USD 2,000,000
PFD Child Project 1.3	POPs: 1,250 tonnes	POPs: USD 3,750,000
Total PFD:	**POPs: 3,250 tonnes** **Mercury: 50 tonnes**	**POPs: USD 10,000,000** **Mercury: USD 5,000,000**
Revised project structure:		
Revised Child Project 1.1	POPs: 2,000 tonnes Mercury: 50 tonnes	POPs: USD 6,250,000 Mercury: USD 5,000,000
Revised Child Project 1.2	-	-
Revised Child Project 1.3	POPs: 1,250 tonnes	POPs: USD 3,750,000
Total revised:	**POPs: 3,250 tonnes** **Mercury: 50 tonnes**	**POPs: USD 10,000,000** **Mercury: USD 5,000,000**

b) Participating countries

The outline of this project included in the PFD noted that this child project would focus on national activities in five countries: Albania, Libya, Montenegro, Morocco, Tunisia. The remaining Med countries would be involved through regional activities. Since the PFD was endorsed several changes have occurred in relation to focus countries as follows:

· Algeria endorsed the Programme after approval, and are now included in the project. Turkey endorsed the Chemicals and Waste child project and have also been included.

· Egypt, Lebanon and Bosnia and Herzegovina (which had already endorsed the entire Programme) were also added to the countries with national level activities under Child Project 1.1 following expression of countries' interest[1][1] during PPG Regional Consultation Meetings (see Annex P) to take part in the national activities on POPs/ PCBs and mercury elimination.

· Libya has been removed from the project because the Stockholm Convention National Implementation Plan (NIP) has not been completed. This means that for Chemicals and Waste, there is no baseline data on POPs, meaning that priority chemicals issues of concern could not be confirmed, and rendering Libya ineligible for GEF support on POPs.

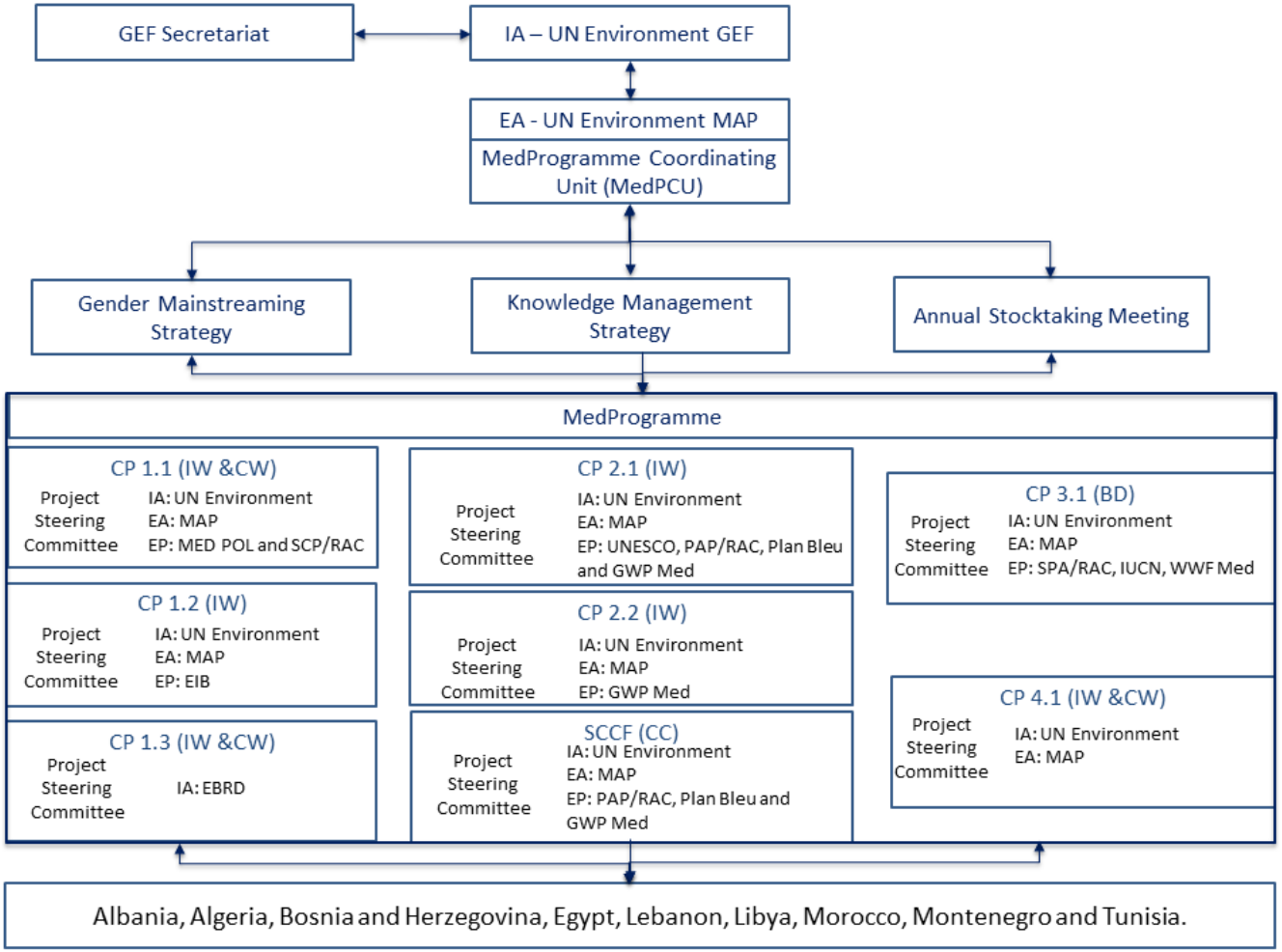
The project design as presented in this document therefore focuses on national level activities in Albania, Algeria, Bosnia and Herzegovina, Egypt, Lebanon, Montenegro, Morocco, Tunisia and Turkey.

A1.1.2 Overview of the MedProgramme and context of the Child Project 1.1

The GEF/UN Environment "Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security" (2019-2024)[2][2] represents the first GEF programmatic multi-focal area initiative in the Mediterranean Sea. It will 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 will be implemented in ten beneficiary countries sharing the Mediterranean basin: Albania, Algeria, Bosnia and Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco, Tunisia and Turkey. Its eight Child Projects[3][3] cut across four different Focal Areas of the Global Environment Facility Biodiversity [BD], Chemicals and Waste [CW], Climate Change Adaptation [CCA] and International Waters [IW])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 including Regional Activity Centers and Basel and Stockholm Regional Centers. It builds on the MedPartnership and ClimVar & Integrated Coastal Zone Management (ICZM)[4][4] GEF projects (GEF IDs 2600 and 3990) 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, 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 eight Child Projects (CP) of the MedProgramme (Table 1 and Fig 1) are expected to deliver a set of complementary results embracing three categories of priorities identified by the Transboundary Diagnostic Assessment (TDA) for the Mediterranean Sea which are translated into three components of the programme: 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.

Figure 1 : MedProgramme Structure



The fourth component (Knowledge Management and Programme Coordination) is comprised of 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. The Support Project functions as 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.

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 and CW
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 Large Marine Ecosystem Environment and Climate Regional Support Project”	IW and CW

It is in this context that Child Project 1.1 will contribute to the MedProgramme Component i): *Reduction of Land-Based Pollution in Priority Coastal Hotspots and measuring progress to impacts*. The project will focus on land-based sources of hazardous chemicals pollution, namely Persistent Organic Pollutants (POPs) banned under the Stockholm Convention, and mercury banned under the Minamata Convention. This work will complement actions by partners under Child Projects 1.2 and 1.3 which will focus on waste water as a source of excess nutrient pollution to the Mediterranean.

The continuing degradation of the Mediterranean coastal zone and marine environments, coupled with the urgent growing impacts of climate variability, the loss of livelihoods and dramatic deterioration of social conditions along critical sections of the Southern and Eastern Mediterranean shores, prompted the development of the Mediterranean Sea Programme: Enhancing Environmental Security (MedProgramme).

The Mediterranean Sea - the largest semi-enclosed sea in the world - is shared by 21 countries with a coastline of 46,000 km. Its coastal areas are undergoing a dramatic process of development. The populations of coastal states have grown from 95 million in 1979 to 143 million in 2000 and expected to reach 174 million in 2025[5][5]. Population density in coastal areas ranges from double to ten times the national average due to the more favorable climatic and socioeconomic conditions. Population load is shifting towards the southern and eastern Mediterranean and about 60% of that lives within 100 km of the coast. In addition the Mediterranean region hosts one third of world tourism. Traditional ways of using natural resources and ecosystem services of the Mediterranean (for maritime transport and fishing, for example) have diversified and include more recently developed/ expanding activities such as offshore energy generation, marine resources mining and others – all exacerbating pressures on vulnerable and in some cases scarce resources in the Mediterranean. As a result of the increased demand for space, water and natural resources, the stress on coastal ecosystems and the infringement on natural and agricultural land is continuously increasing.

The coastal populace of the Mediterranean show significant diversity in terms of socioeconomic and gender aspects, leading to different population subgroups showing varying susceptibilities and vulnerabilities. Risks arising from pollutants and hazardous substances often work as threat multipliers, meaning although chemical pollution and hazardous substances have blanket exposure on general populations, the ramifications and long-term effects of these conditions vary. Threat multipliers exacerbate present conditions of poverty and lack of economic capital, lack of health equity and access, and gender and sociocultural differences, leading to different coping capacities of population subgroups. Section A.4, and the Gender Assessment and Action Plan (Annex I[6][6]) explores these nuances further.

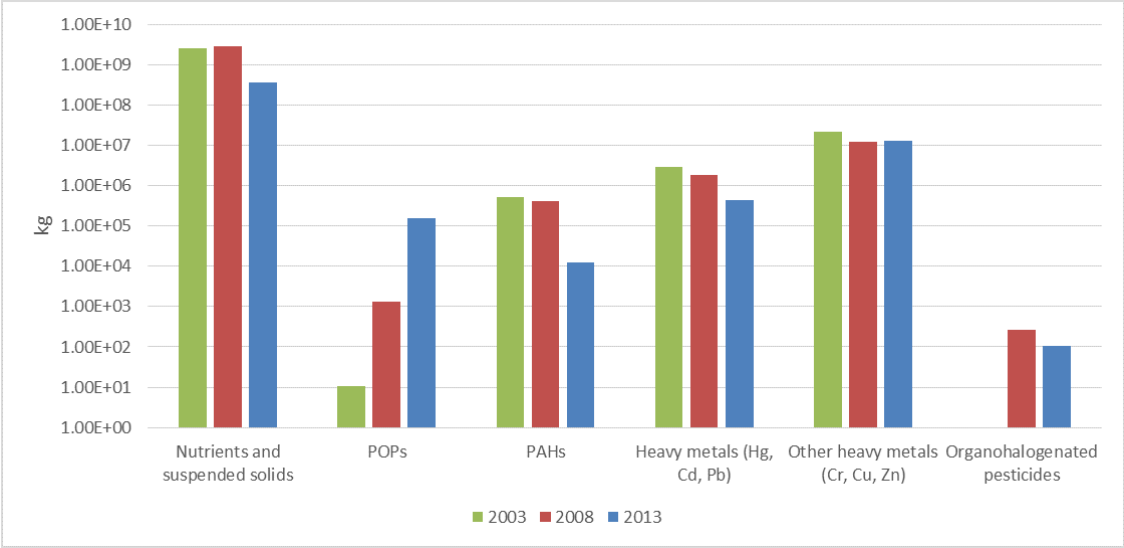
The region is characterized by a unique and rich yet fragile biodiversity, hosted by many diverse ecosystems which together form an invaluable natural capital on which populations and economies depend. It is estimated that between 10,000 and 12,000 marine species thrive in the Mediterranean Sea, and that around 20–30% of these species are endemic. A range of human activities threatens many of these species. Pollution from land-based sources, such as discharges of excess nutrients and hazardous substances, marine litter, and degradation of critical habitats, are among the key factors responsible for this biodiversity loss. This also jeopardizes the economy and livelihoods of those who depend on its resources.

Climate change and variability are adding another layer of complexity to the nature – economy – society interdependencies, and so do the development disparities and instabilities typical for the region. Despite evident successes in addressing major environmental concerns, a number of recent assessments concluded the attainment of Good Environmental Status (GES) by 2020 was unlikely, and that the lack of regional or EU coordination potentially led to a fragmented and ineffective approach to tackling the pressures[7][7]. This merits increased attention of all the regional partners and of the Mediterranean countries and calls for better understanding of the state of the Mediterranean environment. Better instruments to assess linkages between drivers of environmental change and their impacts, and to measure progress in achieving the set goals are also needed, most notably in the framework of implementing Sustainable Development Goal (SDG) 14 to conserve and sustainably use the oceans, seas and marine resources, and other relevant SDGs.

Eighty per cent of the pollution load of the Mediterranean Sea originates from land-based sources, mainly in the form of untreated discharges of urban waste (which includes microbiological, nutrient and chemical contaminants) reaching the sea from coastal sources, rivers and submarine groundwater discharges. Lack of sewage collection, treatment and

disposal infrastructure is still the greatest problem in many Mediterranean countries. Beyond municipal waste water, 66 million m3 of untreated industrial wastewater is discharged to the Mediterranean each year. The "National Baseline Budget" (NBB) is based on a Pollutant Release and Transfer Register approach, to monitor pollution loads over 30 sectors according to the Land Based Sources of Pollution (LBS) protocol of the Barcelona Convention. NBB data is available for 2003/2008/2013, and data for 2018 under preparation. The data indicates that loads of PCB/PCT, Hexachlorobenzene, Lindane, PCDD/PCDDF, Cadmium and Copper being discharged into the Mediterranean Sea are increasing, but other heavy metals loads including mercury are decreasing (Fig 2).

Figure 2*: Relative levels of different pollutants from land-based sources*



A.1. *Project Description. Elaborate on: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal* ***area[8]***[8] *strategies, with a brief description of expected outcomes and components of the project, 4) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, CBIT and co-financing; 5) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 6) innovativeness, sustainability and potential for scaling up.*

A1.1.3: Global environmental problems (chemicals and waste)

•The following paragraphs highlight particular environmental problems associated with each of the types of chemicals to be addressed by the Chemicals and Waste component of this project, namely PCB and mercury wastes, new industrial POPs, and mercury in health settings.

Scientific research continues to show the impact of PCB on marine wildlife. In 2018 a study showed PCB-mediated effects on reproduction and immune function threaten the long-term viability of >50% of the world's killer whale populations[9][9] and concluded that a population in the Straits of Gibraltar faced the highest risk of collapse in the next 100 years. Large stocks of PCBs in the region which have been historically poorly managed are a major source of pollution in hot spots identified in the updated Barcelona Convention NAPs[10][10] and are national priority contamination issues. Please refer to the detailed country baseline tables below for more information on stocks and contaminated sites prioritized in national plans under the Barcelona, Stockholm and Minamata Conventions.

While there is limited evidence of the impacts of new POPs specifically on the Mediterranean Sea, the confirmed use of three of the new POPs in the countries is a contributor to known global impacts of these new POPs.

- **PFOS:** The use of firefighting foam containing perfluorooctanesulfonic acid (PFOS) and other per- and polyfluorinated alkylated substances (PFAS) has resulted in the contamination of ground water, drinking water and surface water in many countries including the Southern Mediterranean Sea, which are considered to be particularly vulnerable to water stresses and shortages under current climate change scenarios. Climate stresses are also predicted to increase the frequency and weather-driven danger of fires in the Mediterranean region[11][11], resulting in increased need and extent of application of firefighting foams. PFOS is added in firefighting foam concentrates at levels between 1 to 10%, and then further diluted in water to produce the foam, such that 1 tonne of PFOS will generate between 16 to 33 tonnes of POPs waste foam with concentrations of PFOS above the low POPs limit of 50ppm. In addition to disposing of waste foams, the Stockholm Convention guidance also recommends that the wastewater from fire-fighting be gathered and managed in an environmentally sound manner[12][12]. Failure to treat firefighting water has led to contamination of drinking water sources in Germany and the US. USEPA found that the drinking water of at least 6 million citizens has PFOS/PFOA levels above the health advisory level[13][13]; while in Germany, remediation of PFOS contamination at Dusseldorf Airport, including drinking water sources and a nearby lake, is estimated to cost 100m euro to remediate[14][14].

- **HBCD**: Hexabromocyclododecane (HBCD) is a category of brominated flame-retardants, used in the Mediterranean in expanded polystyrene foam (EPS) and extruded polystyrene foam (XPS) in building insulation, and leading to exposure from products and dust at home and the workplace. HBCD is used at concentrations between 0.5 to 2.5%[15][15], such that 1 tonne of HBCD results in the contamination of 100 to 200 tonnes of EPS/XPS. Egypt alone uses 120,000 tonnes of polystyrene a year, although there is no data on how much of this is treated with flame retardants.
- **SCCP**: Listed under Annex A of the Stockholm Convention in May 2017, SCCP production and use must be eliminated by 2024. SCCPs are used as fat-liquoring in leather; plasticizers in sealants, flexible polyvinyl chloride, additives in rubber, waterproofing and fire-retardant paints; industrial oil in metal processing and lubricant.

Large quantities of mercury and mercury contaminated wastes are found in the project countries, at sites of operational and decommissioned chlor-alkali plants in Algeria, Bosnia and Herzegovina, Morocco and Tunisia. Under the Barcelona Convention Regional Plan on reduction of mercury, countries have committed to phase out chlor-alkali plants using mercury cells by 2020, yet much remains to be done to ensure full implementation, including of the provision that prohibits mercury re-entry to the market. In some cases, actions have been implemented to sort and properly store contaminated wastes, but the capacities for ESM of mercury wastes are generally insufficient to address the scope and magnitude of the problem. In some cases, the extent of contamination is not fully known and further assessments and studies are needed.

Mercury is used in medical measuring devices, especially thermometers which are intensively used in hospitals with high levels of replacement reported, either due to breakage or loss (e.g. taken home by patients). In either case the mercury contained within them can be assumed to eventually be released into the environment, since most countries do not have adequate hazardous waste collection and treatment for municipal waste. Estimates of the quantities of mercury thermometers have been assessed through a literature review and PPG studies, as follows:

- **Lebanon**: At an minimum 4.7-5.6kg pure mercury or 90kg of mercury containing waste thermometers are generated per year in the 28 hospitals that are targeted for the pilot project (2,387 beds) [16][16]. In total there are 138 private hospitals, 29 public hospitals, 216 primary health care centres and 516 laboratories in Lebanon, offering significant scale-up opportunities for the pilot.
- **Tunisia:** The Ministry of Health reports the emitted mercury waste per year is 5,6 Kg for smaller hospitals (300-500 beds) up to 16 Kg (>500 beds). For the 25 hospitals targeted by the project this is estimated as 140 - 400 Kg of mercury-containing equipment per year.

Additional amounts of mercury containing devices were not quantified during the PPG as the priority expressed by the partners was for thermometers, however the WHO guidance and approach to be adopted will also address other types of equipment particularly sphygmomanometers.

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A1.1.4: Root causes (chemicals and waste)

The above land-based practices have led to the current situation whereby POPs are mercury are released into the Mediterranean environment. As part of project preparation a common problem tree was developed by the two Chemicals and Waste focal area projects (Child Project 1.1 implemented by UN Environment, and Child Project 1.3 implemented by the European Bank for Reconstruction and Development), to analyze the root causes and barriers to addressing the central problem of current practices leading to the release of POPs and mercury into the Mediterranean environment. The problem tree and Theory of Change included in Annex B sets out the generic root causes and barriers, addressing POPs pesticides, PCBs, new POPs and mercury releases. Further details for each of these pollutant categories are described in the paragraphs below.

Two root causes lead to contamination of the Mediterranean by PCBs:

a. in-use electrical equipment including transformers and capacitors contain PCB contaminated oil, and this oil contaminates other equipment and oils due to current top-up practices; and

b. owners of decommissioned equipment containing PCB contaminated oil (power generation, transmission and distribution companies, industries, public sector institutions) store waste equipment without appropriate safety or environmental management measures, at risk of being disposed of with municipal waste or sold into local markets instead of being disposed of in an environmentally sound manner;

The root causes of mercury pollution in the Mediterranean are that mercury use and related waste generation in chlor-alkali plants remains significant. In Tunisia and Bosnia Herzegovina, chlor-alkali plants have been decommissioned, but both elemental mercury and mercury containing construction waste remain. In Morocco the COELMA chlor-alkali plant continues to operate, using significant volumes of mercury and contaminating the surrounding environment. In Algeria there are several operational chlor-alkali plants in the country's coastal regions; decommissioning of chlor-alkali technology is identified as a priority under the country's Barcelona Convention NAP and has already taken place in the facilities operated by GIPEC company (now operating with membrane technology) based in Baba Ali near Algiers.

The root cause of continued use of new POPs in products in Mediterranean countries is the continued import either as POPs containing products, or as ingredients to formulate POPs containing products.

The cause of the continued use of mercury containing medical measuring devices in Mediterranean countries is the continued import of these products at low prices.

A1.1.5: Barriers (chemicals and waste)

a) Barriers to addressing PCBs

Key barriers to the sound environmental management of PCB contaminated equipment include respectively: the high capital cost and lack of incentives or financial mechanisms to replace in-use transformers; and the high cost and lack of local infrastructure for environmentally sound disposal of the wastes. Detailed inventories for all the equipment suspected of PCBs contamination are being progressively developed (in the course of NIP updates or as a part of specific projects) but are not yet available in all the project countries.

b) Barriers to addressing mercury wastes

Key barriers to the environmentally sound management of mercury include the lack of safe mercury containment options in project countries; and the lack of effective regulatory controls on mercury, despite the commitment of governments to prevent mercury use in chlor-alkali plants by 2020.

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c) Barriers to phasing out new POPs

The major barriers to phasing in safe alternatives to new POPs are common to both PFOS and HBCD, namely:

i. **Awareness**: many users of new POPs are simply not aware that their products contain these chemicals, and are not aware of the need to replace them (for both health/ environmental reasons, but also in order to comply with relevant regulations). In the case of PFOS/PFOA, foam manufacturers may claim their foams are fluorine-free or only containing traces but this needs to be confirmed. Users of fluorinated foams may not be aware of the reliability and effectiveness of alternatives, although international experience from developed countries is that they are as effective.

ii. **Price, performance and availability**: fluorine free foams (3F) are more expensive than PFOS[17][17], while very cheap firefighting foams may be available in local markets with lower performance, outcompeting the higher priced and more effective foams. International firefighting foam performance standards were written in the early 1960's, based on performance of fluorine surfactant technology. Since then, only the International Civil Aviation Organization (ICAO) Level B standard for aviation has been updated, which has facilitated all major airports in Australia and the UK using this standard to now operate with fluorine free foams. Where governments have not adopted such updated standards, fluorine free foams may be unable to meet requirements where they are unfairly challenged. Alternatives to HBCD are more expensive, for example butadiene-styrene brominated copolymer ("BLUEDGETM Polymeric FRTM trademark") costs 5% more than HBCD. Other alternative products include non-flame retarded EPS and XPS insulation foams, polyurethane foam (PUR/PIR); mineral wool/ rockwool/ stone wool/ glass wool insulation or wood fibre insulation board. Alternatives that may exist may not be available on the market in the Mediterranean project countries, creating barriers for users to access them at a competitive price. For SCCP, the price of one alternative 'DINCH' is approximately 2-3 times higher in the region, but prices in the region may be inflated as prices are similar from international sources (Alibaba).

iii. **Regulations**: lack of legislation to restrict the use of new POPs in countries, which could potentially range for inclusion in lists of restricted substances which could affect import; strict water quality standards limiting levels of PFOS-PFAS in water sources; or Extended Producer Responsibility (EPR) for building products and related waste, requiring companies that produce building products to take back HBCD-contaminated products.

iv. **Procurement**: For PFOS, fire-fighting foams are procured via a public tender process which does not adequately address sustainability criteria and particularly potential impacts on water. Informal feedback also suggests corruption might play a key role to maintain fluorinated foams as "dominants" in the market and the traditional choice for the region., particularly for high value public procurement such as for Civil Protection.

v. **Technology**: For HBCD there is a need to adjust technical procedures, develop and test new formulas, to produce EPS and XPS with a POPs-free alternative flame retardant (e.g. butadiene-styrene brominated copolymer) For PVC production with SCCP, DINCH and other alternative chemicals can substitute SCCP additives. Whilst the "injection molding" process needs to be modified to use alternatives, it is not necessary to upgrade or acquire new equipment.

d) Barriers to switching to alternatives to mercury measuring devices

The major barriers to phasing in safe alternatives to mercury containing devices are:

i. **Regulations**: lack of legislation and/or enforcement to restrict or prohibit the use of mercury containing devices in countries, either as restriction of mercury-containing products or Extended Producer Responsibility (EPR) requiring producers to take back the generated mercury waste and health services and institutions to properly treat mercury waste as hazardous waste according to local legislation and international standards.

ii. **Awareness**: most users of mercury containing devices, particularly hospital personnel and laboratories, are perfectly aware of the health implications of mercury exposure but they are not as aware of the environmental implications and impacts of these products at its end-of-life if not properly managed (normally ending up in landfills), neither the need to replace them by safe alternatives.

iii. **Price and availability:** Mercury-measuring devices initially appear more affordable - for example digital thermometers are about 2-5 times more expensive than mercury thermometers. However hospitals applying full cost accounting (considering calibration, batteries, mercury waste management costs, product lifetime, device specifications, number of purchased devices, location of purchase etc.) in Mexico, Argentina and the Philippines reported overall savings when switching to digital thermometers[18][18]. In the case of sphygmomanometers, the cost of mercury sphygmomanometers and the alternative (aneroid sphygmomanometers) is about the same .

iv. **Procurement**: Measuring devices might be procured via a public tender (in the case of public hospitals, laboratories or other public entities) which does not satisfactorily address sustainability criteria and particularly potential impacts of mercury waste on health and the environment and the true cost of the environmentally sound management and recycling of mercury waste.

A1.1.6: Global environmental problems (international waters)

•Analysis of the environmental problems and status of the Mediterranean Sea was first provided in the Mediterranean Transboundary Diagnostic Analysis (TDA) in 1997. Since then, several key assessments have been undertaken by UN Environment/ MAP, EC, EEA and other partners, which are presented below and describe the main environmental problems that the MedProgramme has been designed to address.

The 2005 Mediterranean TDA identified and analyzed major environmental concerns in the Mediterranean Sea, including declines in biodiversity, seawater quality, human health risks and degradation of coastal ecosystems. It identified three overarching environmental quality objectives to address major environmental concerns: 1) reduce the impacts of land-based pollution sources on Mediterranean marine environment and human health; 2) sustainable productivity from fisheries; and 3) conserve the marine biodiversity and ecosystem.

In the years following the TDA, other reviews and analyses include the State of Environment and Development Report (2009); the initial integrated assessment of the Mediterranean Sea (2011); the State of the Mediterranean Marine and Coastal Environment (2012); the EEA/ UNEP/MAP report on the implementation of Horizon 2020 (H2020) initiative to depollute the Mediterranean by 2020 (2014). These documents confirmed the conclusions of the 2005 Mediterranean TDA with the addition of adaptation to climate change.

The 2014 Intergovernmental Panel on Climate Change (IPCC) Report identified the Mediterranean region as a climate change hotspot that "*will suffer multiple stresses and systemic failures due to climate changes*". In 2015, the impacts of climate change and variability and of coastal aquifers degradation were analyzed and elaborated in the two TDA supplements developed through ClimVar & ICZM Project[19][19] (2015) and MedPartnership (2015). The results of these projects added new perspectives to the overall diagnostic of the current state of the Mediterranean Sea and its coastal areas, creating a basis to guide future remedial and adaptation actions. This expanded understanding was translated into two Sub-regional Action Plans on Coastal Aquifers, and in specific recommendations for climate change adaptation priorities and measures.

In 2016, Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas (Decision IG.22/6) was adopted by the Barcelona Convention Contracting Parties, setting four strategic objectives referring to: 1) institutional and policy frameworks, awareness and stakeholder engagement, and capacity building and cooperation; 2) development of best practices for effective and sustainable adaptation; 3) access to existing and emerging finance mechanisms; and 4) better informed decision-making through research and scientific cooperation. The need for development of a monitoring and evaluation framework for the implementation of adaptation policies and plans at national and regional levels is emphasized as one of the priorities (to include objectives, benchmarks, indicators and timescales).

In the context of implementing the EcAp Roadmap adopted by the Barcelona Convention Contracting Parties in 2008, the MAP system has delivered the 2017 Mediterranean Quality Status Report (MED QSR) as the first assessment product based on the MAP Ecological Objectives (EOs) and Integrated Monitoring and Assessment Programme (IMAP) Common Indicators. The assessment builds upon existing data and is complemented with inputs from numerous diverse sources where appropriate. Despite the challenges met, given the limited availability of data and the fact that the IMAP implementation is still in an early phase, the 2017 MED QSR allowed for important conclusions and highlighted gaps that need to be overcome for successive assessments:

- Assessment of the quality of the Mediterranean coastal and marine environment for pollution-related EOs (on eutrophication, contaminates and marine litter) indicated mixed results were achieved with the implementation of pollution reduction and prevention measures, with some successes but also with some negative trends. Eutrophication is caused by both regional sources such as urban effluents, industrial discharges, and aquaculture activities as well as transboundary components such as agricultural runoffs, riverine outflows, and airborne nutrient deposition. The main coastal areas in the Mediterranean which are historically known to be influenced by natural and/ or anthropogenic inputs of nutrients are the Alboran Sea, the Gulf of Lions, the Gulf of Gabès, the Adriatic, Northern Aegean and the South-east Mediterranean (Nile–Levantine).
- Pollution assessment against environmental assessment criteria (EACs) was carried out for the first time in the framework of 2017 QSR for concentration of key harmful contaminants measured in the relevant matrix (biota, sediment, seawater). Notwithstanding certain shortcomings (including the need to further improve and fine-tune assessment metrics and to consider sub-regional differences), the assessment indicated generally acceptable levels of heavy metals assessed from bivalves and fish, with lead having values above threshold for 10% of stations. Accidents rates, the extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances) and their impact on biota have gone down regionally, suggesting international regulatory framework and technical cooperation at regional level (especially as far as prevention of accidental pollution is

concerned) have yielded positive effects. Recent studies on the percentage of intestinal enterococci concentration, show that the implementation of measures (e.g. sewage treatment plants) to reduce, among others, the faecal pollution in coastal waters, has been a story-of-success in the Mediterranean Sea. In the period 2004 – 2010 alone, the share of Mediterranean coastal cities served with wastewater treatment plants (WWTPs) increased significantly: from 68% to 75% for the cities with population of 10,000 – 100,000, and from 74% to 82% for the cities with population above 100,000[20][20].

- Information on beach marine litter exists but the picture is still fragmented and is geographically restricted to the northern part of the Mediterranean. Plastics are the major components and cigarette butts, food wrappers and plastic bags comprise the top marine litter items. Information on the distribution, quantities and identification of beach marine litter sources needs to be further advanced. The abundance of floating litter in Mediterranean waters has been reported at quantities measuring over 2 cm range from 0 to over 600 items per square kilometre. The 2015 UN Environment/ MAP Marine Litter Assessment report states that approximately 0.5 billion litter items are currently lying on the Mediterranean seafloor. Data on floating and seafloor marine litter are inconsistent and geographically restricted in only few areas of the Mediterranean Sea. The legally binding regional action plan on marine litter sets a target for reduction of 20% beach litter by 2020.
- For the third cluster of EOs assessed for the 2017 MED QSR on hydrography and coastal ecosystems and landscapes, the monitoring programme is at the early stages of development. The national monitoring related to hydrography (EO7) has not been initiated yet (except for the Contracting Parties that are EU Member States) or is in the inception phase. There is a need for more rigorous monitoring as to be able to undertake regional and sub-regional assessments. Similarly, the length of coastline subject to physical disturbance due to the influence of man-made structures (EO8 on coastal ecosystems and landscapes) is not systematically monitored (except for a few countries where monitoring is in place or under development). This despite the fact that Mediterranean coastal areas are threatened by intensive construction that can impact landscapes, habitats and biodiversity. The national reporting on state and evolution of coastal zones is required under the ICZM Protocol.
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- Some of the key QSR messages on biodiversity and ecosystems, non-indigenous species and fisheries related EOs are presented in Table 3.

Table 3: 2017 MED Quality Status Report: the key findings

Biodiversity and ecosystems	●The existing studies regarding habitat distributional range and condition of the habitat's typical species and communities indicate a large proportion of habitats are to some degree threatened, although much of the Mediterranean remains un-sampled. ●Species distributional range, population abundance and population demographic characteristics were assessed for marine mammals, seabirds and marine reptiles based on available studies. Major gaps in data and studies were noted overall, and therefore an overall regional assessment was not possible. ●The Mediterranean monk seal and the 11 cetacean species face several threats, due to heavy anthropogenic pressures throughout the entire Mediterranean basin.

○ **Non-indigenous species (NIS)**	●Corridors are the most important pathways of new introductions in the Mediterranean, followed by shipping and aquaculture. Introductions of new non-indigenous species have an upward trend. ●Progress has been made in creating national and regional inventories of non-indigenous species and assessing their pathways and impacts. ●Evidence for most of the reported impacts of alien species is weak, mostly based on expert judgement; a need for stronger inference is needed based on experiments or ecological modelling. · There is a need for better coordination at national and sub-regional level on NIS monitoring.
Fisheries	●Most of Mediterranean stocks (~85%) are subject to overfishing. Mediterranean catches are stagnant, with current yields at around 800,000 tons, below the maximum yield of around 1 million tons in the mid-90's. ●Data expressed through Spawning Stock Biomass indicates that up to 42% of the stocks assessed in the Mediterranean show a low biomass in comparison with the existing time series, and only for 22% of the stocks the biomass is considered as relatively high in relation to the time series. However, the level of information differs between species and geographical areas, with information concentrating on a few stocks. ●The correct estimation of total landings requires a precise knowledge of the fishing activities carried out by the active fishing fleet operating in the Mediterranean. The specificities of the Mediterranean fleet, composed by a large majority of small scale polyvalent vessels, as well as the existing variety of landing sites, and the different capacity of Mediterranean riparian states to accurately monitor the landings in such sites, hamper an accurate estimation of landings in the region. Furthermore, Illegal, Unregulated or Unreported (IUU) fishing activities in the area also affects the estimates.

Source: 2017 MED QSR

The 2017 WWF report - Reviving Economy of the Mediterranean Sea concludes that the health of the Mediterranean Sea is declining sharply after decades of excessive and often unregulated economic activity. Ecosystems and the services they provide have been degraded rapidly. At the same time, ocean-related activities in the Mediterranean Sea have been assessed to generate an annual economic value of US$ 450 billion. This makes the 'Mediterranean economy' one of the largest in the region, ranking fifth among the regional GDPs (after France, Italy, Spain and Turkey). The value represents about 20% of the world's annual gross marine product[21][21] and is generated in an area which makes up only 1% of the world's ocean. Economic assets of the Mediterranean Sea are conservatively valued at astounding US$ 5.6 trillion.

Strategic priorities to achieve a sustainable economic model in the Mediterranean (all of which build upon SDGs) are formulated based on the WWF 2017 report analysis and include implementation of integrated and ecosystem-based ocean planning and management, adoption of blue economy approach, development of climate resilient and carbon-neutral economies as well as development of sustainable tourism and fisheries.

WWF MedTrends 2015 Report (Blue Growth in the Mediterranean Sea: The Challenge of Good Environmental Status) concludes that apart from professional fisheries, all traditional sectors of Mediterranean maritime economy such as tourism, shipping, aquaculture and offshore oil and gas are expected to keep growing in the period until 2030. Details on the assessment of future trends are presented in the Table 4. For several sectors, the estimations are predominantly based on the data for the EU Member States.

Table 4: Assessment of trends for various maritime economy sectors

Sector	Expected development trend	Estimations
Oil and gas exploration and extraction	↗	· Offshore oil production could increase by 60% between 2010 and 2020 at the Mediterranean level. · Offshore gas production could increase five-fold from 2010 to 2030, from 55 to 250 Mtoe/ year.
Maritime transport and ports	↗	4% per annum growth rate in global trade over the next decade can be anticipated; this will affect international maritime traffic routes in the Mediterranean regional level (Suez-Gibraltar axis, Aegean Sea, Adriatic Sea, and to a lesser extent the north-western Mediterranean)
Professional fishing	↘	A downward trend is expected at an uncertain rate at the Mediterranean regional level.
Recreational fishing	↗	An upward trend is expected at an uncertain rate in the Mediterranean countries of the EU.
Marine aquaculture	↗	Forecast of fish aquaculture production in the Mediterranean countries of the EU anticipates a 112% increase between 2010 and 2030; production could reach 600,000 t.
Tourism (coastal tourism, cruise tourism, recreational boating)	↗	International tourist arrivals in the Mediterranean should increase by 60% between 2015 and 2030 to reach 500 million arrivals in 2030. France, Italy and Spain will remain the three biggest destinations.
Renewable energy	↗	While no marine renewable energy was produced in 2014, predicted production of electricity by offshore wind farms could reach 12 gigawatts (GW) in 2030 in the Mediterranean countries of the EU.
Marine mining	↗	An upward trend is expected at an uncertain rate in the mid-term, mainly in the Mediterranean countries of the EU.
Coastal development	↗	5,000 km of additional coastline will be artificialized by 2025 as compared to the 2005 situation at the Mediterranean regional level.
Land-based pollution sources	↗ ↘	In the Mediterranean countries of the EU: · Pollution from wastewater is expected to keep decreasing · over the next 15 years. · Persistent Organic Pollutants (POPs) are expected to slowly decline. · An upward trend in heavy metal pollution can be observed for mercury and lead. · Nutrient discharges are expected to increase slightly over the next 15 years.

Source: WWF MedTrends 2015

Despite difficulties in determining the whole range of interactions between these activities and the cumulative impacts of their pressures on the state of marine ecosystems, growth in the maritime economy is likely to represent an additional threat to the health of already-stressed Mediterranean ecosystems. It is likely that some pressures and, more importantly, cumulative impacts will grow at a faster rate than the solutions developed and implemented to mitigate them. The 2015 MedTrend report emphasizes there is consequently a high risk of failing to achieve GES in the Mediterranean Sea by 2020 for 7 out of 11 of the descriptors of the MSFD. Attainment of Aichi target 11 by 2020 is also questionable, notwithstanding the fact the MPA coverage grew from 1.08% in 2012 to 3.27% of the total surface in 2015.

A1.1.7: Root causes and barriers (international waters)

•Table 5 summarizes the findings of the causal chain analyses conducted in the process of the TDA development including Supplement on Coastal Aquifers. These causes of the major environmental concerns are underpinned by the need to improve the evidence and scientific basis for policy making in the region. Irrespective of the progress with development of monitoring systems, indicators and data management, several major issues remain unresolved, in particular as regards GEF eligible countries of the Mediterranean. These are:

- A need to further elaborate a set of common indicators, including ecosystem approach-based indicators to assess drivers, pressures and responses in a framework of revised TDA coupled with 2019 State of the Environment and Development Report.
- Countries have strongly requested financial and technical support in the development and implementation of revised monitoring programmes, for the marine and coastal environment, including offshore monitoring, climate change and emerging priority issues. Current data availability in the majority of countries is scarce and scattered.
- There is a strong need to integrate existing national and regional databases, not towards the creation of new platforms but to look towards systems of sharing data, and making it publicly available, through for example Spatial Data Infrastructure (SDI). Barriers include many national databases that are in the national language and need translation, the need for data agreements endorsed by all participating countries, and potentially also a data sharing decision to be adopted by the Barcelona Convention Contracting Parties.

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Table 5: Causal chain analysis from 2005 TDA and Coastal Aquifers Supplement

Mediterranean Sea Large Marine Ecosystem (LME) – 2005 Transboundary Diagnostic Analysis			**2015 Coastal Aquifers Supplement**	
Major Environmental Concerns	**Statement of the causes**	**Main Issues of Transboundary Concern**	**Contribution of coastal aquifers degradation to issues of transboundary concern**	**Causes of degradation**
Decline of Biodiversity	Pollution (sewage, oil, nutrients, etc.), invasive species, introduced species, land reclamation, river damming and flow modification, over-fishing, by-catch, and adverse effects of fishing gear and uses on marine habitats (e.g. bottom trawling), solid waste disposal at sea, uncontrolled tourist presence in ecologically sensitive areas, as well as inadequate public and stakeholder awareness, and inadequate or non-existent legislation and available enforcement means.	Land Based Pollution Degradation and Conversion of Critical Habitats: Sea Grass Meadows; Coastal Wetlands and Lagoons. Overexploitation of Marine Living Resources Alien Species Introduction	Submarine discharges of contaminated groundwater polluting coastal waters Impaired aquifer function in sustaining coastal lagoons and wetlands and the services they provide due to pollution, over-exploitation, seawater intrusion and/or reduced natural recharge. Modifications of near-shore habitats due to sea water intrusion or to reduced submarine discharges of groundwater	Domestic, agricultural and industrial solid and liquid wastes contaminating shallow unconfined coastal aquifers Lack of adequate coastal zone land-use planning tools (coastal aquifer comprehensive vulnerability mapping) and policies Weak enforcement of existing laws and regulations, and of sanitary groundwater protection zones Lack of, or weak, monitoring capacity and protocols Land use practices causing growing impermeability of land surface Climate variability and change reducing natural recharge rates

Decline in Sea Water Quality	Land based sources of marine pollution, both point and non-point, determine increasing trends in eutrophication and its related oxygen deficiency and bloom of nuisance species; presence of hot spots of pollution (125 identified by TDA) leading to decline in overall water quality, loss of coastal habitats and biodiversity, and human health problems.	Land Based Pollution: (i) point sources (excess nutrients, toxics and persistent toxic substances). (ii) non-point sources (mostly nutrients from agriculture, and sediments).	Submarine discharges of contaminated groundwater polluting shallow coastal waters	Domestic, agricultural and industrial wastes contaminating shallow unconfined coastal aquifers Lack of adequate coastal zone land-use planning tools (coastal aquifer comprehensive vulnerability mapping) and policies Weak enforcement of existing laws and regulations, and of sanitary groundwater protection zones Lack of, or weak, monitoring capacity and protocols
		Anthropogenic Pressures on Coastal Zones	Reduced submarine discharges of high-quality groundwater	Over-exploitation of coastal groundwater Loss of permeability of the land surface – deforestation, urban, touristic and industrial developments – causing reduced rainwater infiltration

Human Health Risks	Pollutants that degrade the ecosystem also present risks to human health, including heavy metals, organochlorines, pesticides, hydrocarbons, and the like, but also microbial and viral pollution. In addition, the response of the ecosystem to stress may induce toxicity, such as toxic dinoflagellates that arise from eutrophic conditions in some instances. This may affect human health in the region. Primary pathways for human health risks include ingestion of water or seafood products, contact with contaminated seawater (or in some cases beaches), and perhaps contact with contaminated sea food (for marine products workers).	Land Based Pollution Anthropogenic Pressures on Coastal Zones	Submarine discharges of contaminated groundwater polluting shallow coastal waters Loss of coastal ecosystem services Coastal aquifer salinization High human dependency on coastal groundwater for domestic purposes	Domestic, agricultural and industrial wastes contaminating shallow unconfined coastal aquifers Lack of adequate coastal zone land-use planning tools (coastal aquifer comprehensive vulnerability mapping) and policies Weak enforcement of existing laws and regulations, and of sanitary groundwater protection zones Lack of, or weak, monitoring capacity and protocols Impaired aquifer function in sustaining coastal lagoons and wetlands Over-extraction of groundwater Lack of alternative high-quality sources
Degradation and loss of coastal freshwater resources, and of coastal ecosystem services.	Growing population and unregulated coastal development interfere with coastal processes, cause groundwater salinization, and degradation of coastal ecosystems	Anthropogenic pressure on Coastal Zones		

Sources: Transboundary Diagnostic Analysis for the Mediterranean Sea, 2005; Management of Coastal Aquifers and Groundwater, 2015

A1.2. Baseline scenario or any associated baseline projects

A1.2.1 Chemicals and Waste baseline scenario and associated projects

UN Environment Mediterranean Action Plan (MAP) – Barcelona Convention Secretariat coordinated development of an elaborate legal and policy framework to address pollution from land-based sources in the Mediterranean, including:

· the Convention itself and Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol);

· Mediterranean Strategy for Sustainable Development 2016-2025;

· Strategic Action Programme to combat Pollution from Land Based Sources (SAP MED);

· 10 Regional Plans on Persistent Organic Pollutants (POPs), mercury, wastewater treatment and marine litter;

· Bathing water quality criteria;

· LBS Protocol National Action Plans (NAPs), including the updated NAPs with operational targets and measures to implement the SAP MED and achieve GES over the period 2015-2025;

· Regional Action Plan on Sustainable Consumption and Production in the Mediterranean;

· Guidelines on Best Environmental Practices (BEP) for the Environmental Sound Management

· (ESM) of mercury contaminated sites;

· Integrated Monitoring and Assessment Program (IMAP) adopted by the 19th Meeting of the Contracting Parties to the Barcelona Convention (COP 19), comprising three pollution related ecological objectives (on eutrophication, contaminants and marine litter).

SAP MED contains 33 regional pollution reduction targets addressing a range of substances (including those that are toxic, persistent and liable to bioaccumulate) and sectors in accordance with the LBS Protocol. The Mediterranean countries translated the SAP priorities into their National Action Plans. Moreover, the regional plans on POPs and mercury set time-bound targets to phase-out/ eliminate POPs, and reduce inputs of mercury. The leaders of the Union for the Mediterranean (UfM) countries agreed to increase efforts to substantially reduce the pollution of the Mediterranean by 2020 at the 10th Anniversary Euro-Mediterranean Summit in Barcelona in 2005. The Horizon 2020 Initiative tackles the sources of pollution that are said to account for around 80% of the overall pollution of the Mediterranean Sea, namely municipal waste, urban waste water and industrial pollution, among them POPs and Mercury. The EC established several specific programmes to support the H2020 Initiative, such as the Mediterranean Hot Spots Investment Programme (MeHSIP), which aims to support the Horizon 2020 Investments for Pollution Reduction and Prevention component. This is mainly being achieved through providing project

development support to infrastructure investment projects associated with the "hotspots" identified under the updated NAPs[22][22] and can support the reduction and disposal of POPs and Mercury. MEHSIP is fully integrated with the MedProgramme through the participation of the European Investment Bank in the component 1 of the programme.

H2020 is also supporting several regional projects such as SWITCH-Med which aims to assist 10 countries of the southern Mediterranean to develop and implement policies to SWITCH to sustainable pattern of consumption and production (SCP) promoting it among consumers, small and medium-sized enterprises and Mediterranean policy-makers. SWITCH-Med is being implemented through collaborative efforts by the EU, UNIDO, UNEP/MAP-Sustainable Consumption and Production Centre (SCP/RAC) and UN Environment's Economy Division.

Med Partnership (GEF ID 2600) was implemented in the period 2009 – 2015. The project included a component on ESM of equipment, stocks and wastes containing or contaminated by PCBs in national electricity companies of the Mediterranean countries, addressing NAPs and NIPs priorities and building up on existing initiatives in some of the participating countries. It was executed by MED POL and SCP/RAC, and consisted of five activities, including upgrade of legal and institutional frameworks for PCBs management and awareness raising. More than 300 individuals from the four participating countries (Albania, Bosnia and Herzegovina, Egypt and Turkey) were trained on collection, packaging, and shipment of PCBs, and increased technical expertise and awareness on the environmentally sound management of PCBs.. A short guide was developed for preliminary identification of PCBs and four PCB analyzers were provided. More than 150 national experts were trained on how to use the analyzers and prepare inventories. 1,100 tonnes of PCBs were inventoried in 42 utilities in Turkey, Bosnia and Herzegovina, and Egypt and 930t were eliminated (764t exported for disposal to France and Spain and 166t liquid PCBs incinerated in Turkey).

PCB disposal projects have been done in the region, demonstrating commitment of governments to meeting their obligations for environmentally sound management of PCB wastes under the Stockholm Convention. These are further described in the National Baseline Tables in the baseline section (Table 7).

The Barcelona Convention Contracting Parties adopted the Regional Plan on Mercury in 2012[23][23], which includes the following measures:

1. The Parties shall prohibit the installation of new chlor-alkali plants using mercury cells with immediate effect.

2. The Parties shall prohibit the installation of vinyl chloride monomer production plants using mercury as a catalyst with immediate effect.

3. The Parties shall ensure that the releases of mercury from the activity of chlor-alkali plants shall cease by 2020 at the latest and i) that the environmentally sound management of metallic mercury from the decommissioned plants is achieved, including the prohibition of its re-entry into the market; ii) that the total releases of mercury (to the air, the water and to the products) from existing chlor-alkali plants are progressively reduced until their final cessation with the view not to exceed 1.0g per metric tons of installed chlorine production capacity in each plant. In doing so, the air emissions should not exceed 0.9g per metric tons of installed chlorine production capacity in each plant.

4. The Parties shall take the appropriate measures to isolate and contain the mercury containing wastes to avoid potential contamination of air, soil or water.

5. The Parties shall identify existing sites which have been historically contaminated with mercury including at least the old mines and decommissioned chlor-alkali plants, and take, with regard to these sites, environmentally sound management measures such as safety works, use restrictions or decontamination, as appropriate.

6. The Parties shall ensure that their competent authorities or appropriate bodies monitor releases of Mercury into water, air and soil to verify compliance with the requirements of the above table.

7. The Parties shall take the necessary steps to enforce the above measures.

In terms of new industrial POPs prevention projects, there are very few baseline initiatives. Some countries have conducted very initial inventories as part of their Stockholm Convention NIP update projects (see detailed national baseline Tables 7 below). The UN Environment Global Monitoring Programme set of projects (GEF ID 4886 in Africa) has initiated methodological and analytical work to facilitate the analysis of new POPs for which there may be limited laboratory capacity in the region. Among others, the regular interlaboratory assessment process[24][24] has compared laboratories to identify those that meet international standards and use harmonized approaches acceptable for international requirements. In Turkey, there will be a UNIDO implemented GEF project on prevention of HBCDD in XPS and EPS Sector, and any further work on new POPs prevention in other sectors (see proposed alternative scenario) will be delivered in coordination with that project.

The WHO programme on the Minamata Convention has developed a number of guidance documents on mercury in the health sector, and undertook a series of Regional Meetings for Ministries of Health, in 2016 for the Eastern Mediterranean region which includes the project countries. Participants highlighted that '*safe practices for the collection and disposal of mercury-containing hospital waste need to be established and mercury replacement strategies developed*'[25][25].

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Table 6*: Ratification Status of project countries to chemicals and wastes conventions*

Country	Conventions, status of ratification (a – accession; S – signed) and year				
	Barcelona	**Basel**	**Minamata**	**Rotterdam**	**Stockholm**
Albania	1990 (a); 2001	1999 (a)	2014 (S)	2010 (a)	2004
Algeria	1981 (a); 2004	1998 (a)	-	-	2006
Bosnia and Herzegovina	1994 (succession)	2001 (a)	-	2007 (a)	2010
Lebanon	1977 (a); 2009	1994	2017 (a)	2006 (a)	2003
Montenegro	2007 (a); 2007	2006 (s)	2014 (S)	2011 (a)	2011
Morocco	1980 (R); 2004	1995 (a)	2014 (S)	2011 (a)	2004
Tunisia	1977 (R); 2004	1995 (a)	2013 (S)	2016	2004

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National baselines

The follow set of country-by-country baseline tables provide a snapshot of current and past activities and concerns on POPs pesticides, PCBs, and mercury in each of the project countries. Each table highlights key NAP and NIP priorities and concerns in relation to POPs and mercury, as well as current national (government and donor-led) activities and baseline projects on these issues. Finally, each table outlines the quantities of POPs pesticides, PCBs, and mercury identified in the project preparatory phase.

For new POPs, the countries which didn't yet benefit from the MedPartnership project and which have completed NIP updates for PFOS, HBCD and SCCP were Lebanon, Morocco and Tunisia, which are summarized below.

Table 7: National baseline tables

	Albania
PPG Review type	Desktop only
NAP (2015)	Rehabilitation of six hotspots with historic pollution was proposed under the NAP 2015, including: - Metallurgic Plant Elbasan (priority hot spot A): Heavy metals and other hazardous chemicals - Ferrochrome Smelter Elbasan (hot spot A): Wastes from production of Fe-Cr - Battery Enterprise Berat (hot spot A): Highly toxic chemicals, batteries containing Pb (lead) - Textile Enterprise Berat (hot spot A): 32 tons ammonium - Former pesticide storehouse Lushnje (hot spot A): expired pesticides, pesticide human risk - Former Plastic Factory Lushnje (hot spot A): 1,700 tons of toxic chemicals
NIP (2017)	NIP concludes there are no stocks of POPs pesticides, and strongly recommends including the POPs pesticides monitoring, especially in contaminated sites. NIP lacks comprehensive assessment of PCBs but prioritizes transformer and contaminated site assessment. Of the total 12,789 transformers inventoried, 6,000 transformers date from before 1990 and are suspected to contain PCB
Minamata status	Signed (2014); yet to ratify. MIA is under preparation (UNDP/ GEF project ID 9122)
Significant previous chemicals/clean up projects	2006- 2012: Projects to remediate the area of the closed Vlora chlor-alkali plant, including MoE/ WB, UNDP, and a EUR2.6 Million EU funded project titled "Environmental clean-up and disposal of hazardous waste in the Chlor-Alkali plant in Vlore, Albania" providing for site's clean-up and landfilling mercury contaminated waste into a confined disposal facility at the site. 2006: "Repackaging and removal of pesticides and chemicals from Albania, Bishti i Pallës," Dutch Government funded. Removed DDT, HCH and Lindane stocks, and the former central area of Lindane production (Porto Romano, near Durres) was surrounded and encapsulated (cemented).
POPs pesticides stocks identified	No POPs stockpiles. Several POPs contaminated sites: Durrës (former chemical plant in Porto Romano), Vlora (former PVC), in Elbasan (former coke plant), in Lushnjë (former PVC processing factory) and Shkodra (Bajza railway station).
Mercury stocks identified	No
Total PCB contaminated oils and transformers identified	12,789, not yet tested; presence of PCBs suspected for 47% of the total number (about 6,000 units). The bulk owned by the distribution company OEED (Operator of Electricity Energy Distribution)
National capacity for POPs analysis	No

	Algeria
PPG Review type	Desktop and country missions focusing on POPs/ PCBs disposal and identification of locations with mercury wastes stocks for potential disposal in February and September 2018
NAP (2016)	Seven coastal regions categorized as pollution hot spots: Tlemcen, Oran, Chlef, Alger, Béjaïa, Skikda, and Annaba. These spread along 65% of the national coastline, account for 45% of the country's population, and 86% of industrial activities. Over 1,000,000 tons of mercury contaminated wastes, primarily in the former mercury mining region of Skikda, but also as a result of operation of several chlor-alkali plants in the coastal zone. NAP mercury related priorities include: Gradual reduction of total releases of mercury from chlor-alkali plants, decommissioning/ change of technological process by 2020 (Soachlore, Mostaganem; Baba Ali, Algiers; and CPAK, Skikda); Surveys for establishment of a temporary storage area for containment of highly polluted materials and treatment of mercury contaminated waste; and introduction of tax incentives for mercury waste collection.
NIP (2017)[26][26]	NIP update based on 5 inventories: on PCBs/old POPs (identifying *inter alia* 1,968 t of PCB contaminated equipment in the coastal regions), and on four new POPs. NIP priorities are to: eliminate remaining quantities of POPs; prevent emissions of new POPs; and remediate contaminated sites
Minamata status	Neither signed, nor ratified, although the GoA states that the ratification instrument is under preparation and has been submitted to the Ministry of Foreign Affairs. No National Action Plan or MIA has been initiated.
Significant previous chemicals/clean up projects	2005-2006: Algerian company (NewTech - permitted for hazardous waste management) in cooperation with French partners collected, transported and exported 2,000 t of PCBs wastes including: 831 transformers, the equivalent weight of 972 t; 439 t of oil; 604 t of contaminated soil; and 33 t of other PCBs contaminated waste with funding from the Ministry of Environment emergency environmental fund.
POPs pesticides stocks identified	According to the Algeria NAP 2016, obsolete pesticides (both POPs and non-POPs) are located in the regions of Tlemcen, Algiers, Skikda and Mostaganem. A quantity of 191 tons of DDT is recorded, 94% of which is stored at Mostaganem. The inventory update and a feasibility study for elimination of obsolete pesticides was carried out in 2012. The results showed that 2,360 tons of obsolete pesticides were spread over 500 sites in 42 regions, of which 639 tons were classified as highly toxic; the metropolis area of Algiers alone stores 34% of the total quantity.
Mercury stocks identified	17 t of metallic mercury stored at GIPEC company chlor-alkali plant located in Baba Ali, Algiers 1.5 kg metallic mercury identified in the WWTP in Tizi Ouzu
Total PCB contaminated oils and transformers identified	A total of 313.574 t of PCBs and PCB contaminated equipment verified in the project preparation phase, is centralized and available for immediate removal.. GoA requested assistance with disposal of additional approx. 1,650 t of oils and equipment from coastal regions, including 500 t from public institutions on a priority basis. Further investigation (including lab analyses) of the stocks is needed.

National capacity for PCB analysis	National Centre for Clean Production Technologies that acts as the regional centre of the Stockholm Convention for North Africa, and the NewTech company (permitted for hazardous waste management) with previous experience in collection and removal of PCBs (no known capacity for analysis).

	Bosnia and Herzegovina
PPG Review type	Desktop review and country missions focusing on mercury wastes stocks and contaminated sites in October 2018
NAP (2015)	NAP identified hot spots in Mostar, Neum, Capljina and Trebinje, with key pollution pressures linked to inadequate urban wastewater and solid waste management. No industrial sources of mercury and POPs related pollution were identified in the area covered by the NAP.
NIP (2015)	Targeted MedPartnership inventory reported in the NIP indicated 250 t of equipment (transformers, capacitors, switches) and oil with confirmed and/ or suspected presence of PCBs
Minamata status	Neither signed, nor ratified. Completed MIA with UNDP (2018).
Significant previous chemicals/clean up projects	2008- 2013: 2,500 tons of PCB potentially contaminated waste exported. 2015: GEF-funded MedPartnership project (GEF ID: 2600) supported a partial PCB inventory, and 104 t PCB contaminated equipment was exported under the project.
POPs pesticides stocks identified	No.
Mercury stocks identified	3 t of metallic mercury in a steel container and an estimated 15.3 t of mercury wastes (in 110 plastic containers, 60 l volume) verified at former chlor-alkali plant (HAK I) in the industrial area in Tuzla; estimated content of pure mercury is 0.725-1.61 t.
Total PCB contaminated oils and transformers identified	At least 146t, but a nationwide inventory has not been undertaken and most of the 146t are likely to be in-use.
National capacity for PCB analysis	Yes: Laboratory of the Hydro-Engineering Institute of Civil Engineering Faculty at the University of Sarajevo; Laboratory of the Faculty of Pharmacy at the University of Sarajevo; and Laboratory of the Institute of Protection, Ecology and Informatics in Banja Luka.

	Lebanon
PPG Review type	Desktop review and country mission in December 2017
NAP (2015)	NAP identified two hot spots with PCB contamination problems: Baouchrieh (transformers repair and storage site); and Zouk (power plant). NAP sets the goal of ensuring safe storage and containment of mercury waste produced by healthcare sector by 2025.
NIP (2017)	Lindane and Hexachlorocyclohexane, one ton was imported in 2009, and 250 kilograms in 2014. The NIP notes there are no POPs stockpiles nor empty pesticide containers. The NIP update includes three new POPs, with inventories for PFOS and HBCD and SCCP highlighted as a priority in the Action Plan. The PFOS inventory confirmed no use of PFOS in the surface treatment or paper production sectors, but identified nine retailers and extinguisher refilling companies for firefighting forms, which are imported by three suppliers.
Minamata status	Party.
Significant previous chemicals/clean up projects	2015 –2019 (ongoing): PCB Management in the Power Sector Project (World Bank/GEF), export of 230t of PCB contaminated equipment. 2016: Sectoral Assessment of POPs Pesticides in Lebanon, updated the pesticides inventory. No stockpiles or empty containers identified. 2011: PCBs Inventory Update and Project Preparation Study
POPs pesticides stocks identified	No. And Lebanon says POPs pesticides are not a priority.
Mercury stocks identified	No. But assistance requested on mercury prevention activities, as well as on mercury waste in the health sector.
Total PCB contaminated oils and transformers identified	A full inventory (including lab analyses) for the power sector and military transformers completed in June 2018 under the World Bank/ GEF project (GEF ID 4108). A quantity of 272 tonnes of PCB-contaminated stockpile is centralized and verified as available for immediate removal. Additional 780 t of PCB contaminated (above 50 ppm) oils and equipment owned by EDL and various concession holders is also identified. Assistance is also requested for mobile dechlorination for 126 t of oil (confirmed contamination above 50 ppm) from large transmission transformers.
National capacity for POPs analysis	Yes PFOS available from lab which sends samples abroad (Qatar and UAE)
New POPs status as determined during PPG phase	Visits to 4 suppliers /importers estimated total import of foams/ extinguishers is 6 tonnes in 2016 and 32 tonnes in 2017. Stockpile of 5,000-15,000 litres of foams held by Issa Petrol Trade Oil & Gas. POPs legislation and standards: - Lebanese Standard Institution (Libnor) Standards (NL: 161:2016) for water quality (drinking water) sets non-obligatory limit of 200mg/l; Decision 8/1/2001 (Standards for Environmental Quality) sets Environmental Limit Values (ELVs) for wastewater but not limits are specified for any POP. - No restrictions on PFOS in either import/export regulations. Law 432 dated 08/08/2002 which transposed the Stockholm Convention but National Decrees have not yet been passed to extend the obligations to the new POPs. - National standards on firefighting equipment (but not on foams) are set by Libnor. Suppliers of foams use different international standards Procurement: Civil defense purchase firefighting foams every around 2 years from the local suppliers through a public tender. Such tenders have never specified that the firefighting foam should be PFOS free. Contaminated sites: no national standards for POPs, however the following fire incident sites may be contaminated with PFOS: Ashrafieh, Beirut Port, Jnah, Zokak Belat (2010), Koraytem, Zarif, Zokak Belat (2012), Karantina, Talet Khayat, Biel.

	Montenegro
PPG Review type	Desktop
NAP (2015)	NAP classified Shipyard Bijela as hot spot B, with elevated concentrations of heavy metals, PAHs and PCBs in the sea sediment (caused by shipyard activities). Seawater pollution was recorded in the immediate vicinity, including PCBs and POPs concentrations in mussels in the breeding locations near the shipyard. The NAP set a 70% reduction target in hazardous substances emissions from Bijela shipyard by 2020, and remediation of polluted sediments.
NIP (2013)	Based on the preliminary inventory of the PCBs and PCBs contaminated equipment provided in the 2013 NIP, the overall quantities in the country estimated at 145 t stocks and 455 t in use. NIP Update status - drafted and is undergoing public consultation process (as of September 2018); adoption by Government is planned for the end 2018
Minamata status	Signed 2014. Not yet ratified. MIA completed in 2017 (with support of UNDP/ GEF project ID 9198)
Significant previous/ongoing chemicals/clean up projects	2017-2021 (ongoing): UNDP (GEF ID 9045) Comprehensive Environmentally Sound Management (ESM) of PCBs. Project includes legislative improvements, national PCBs inventory, and specialized capacity building for stakeholders in public and private sectors on ESM for pure and low-concentrated PCBs and associated waste material, supported by general awareness raising on hazardous waste handling. Disposal or decontamination of at least 700 t of PCBs contaminated equipment and 200 t of PCBs contaminated soil is planned with the budget (for disposal/ decontamination activities) of USD 2.5 million (the overall project budget is USD 3.5 million). At the project preparation phase stage the amount of 517.686 tons of PCB contaminated equipment and waste was identified. 2014-2019 (ongoing): Industrial waste management and clean-up project World Bank project for hot spots remediation will address Bijela shipyard estimated 60,000 tons of contaminated grit stored in big bags (under project's Component 1 – Remediation of Selected Legacy Industrial Waste Disposal Sites). The in situ contaminated sediments are expected to remain. 2007 – 2009: Export of around 210 t of PCBs contaminated equipment and wastes from aluminum and steel industries
POPs pesticides stocks identified	No.
Mercury stocks identified	No.
Total PCB contaminated oils and transformers identified	Unknown how many PCB contaminated transformers will be left after UNDP project; it is estimated (based on the spring 2018 UNDP project inventory for the APP - Aluminum Plant Podgorica - site) around 40 currently in use transformers may remain at the APP (up to 200 t total weight).
National capacity for POPs analysis	Yes, Centre for Eco-toxicological Research

	Morocco
PPG Review type	Desktop and EIB mercury related field assessment (including visit to COELMA site)
NAP (2016)	NAP hot spots include Tanger and Tetouan, the latter being location where COELMA chlor-alkali plant – potential mercury disposal site - is operating. NAP prioritizes reduction and control of mercury related pollution, by *inter alia*: 20% annual reduction of mercury discharges from COELMA; decontamination of sites polluted by Hg beginning with highly contaminated sites (by 2020); and collection of 30% of mercury waste. NAP also proposes replacement of the mercury electrolysis production process used by COELMA with membrane electrolysis.
NIP (2017)	The NIP prioritizes continued removal of identified stocks of PCBs and POPs pesticides. It identifies: heptachlor (9600 kg), stored at FERTIMA de Oued Zem; and 21,294 kg of HCH stored as obsolete pesticides mainly in Tiznit. The 2017 NIP refers to a 2010 inventory: 20 Kg of chlordane located at the Salé SPV; 181Kg of Dieldrin at Marrakech SPV (106 kg) and the remaining 75 kg is in the Séfrou experimental area; 790Kg of lindane split between El Kelaa Des Sraghna and El Hajeb; and 733Kg endosulfan at various sites (including 171 Kg at Kelaa des Seraghna and 148Kg at Chtouka Ait Baha). Equipment containing/ contaminated with PCBs (based on inventory from February 2016) included: 8 t with pure PCBs; 198 t with contamination levels above 5,000 ppm; 468 t with contamination levels below 5,000 ppm. The new POPs addressed in the NIP Update are PBDE, HBCD and PFOS. PFOS: inventory estimates 13 tonnes per year in the coatings sector (paper, carpets, leather and furnishing fabrics); no estimate of imports of firefighting foams. HBCD: 7,174 tonnes each of XPS and EPS imported into the country over 15 years (data from 1998-2013), totaling 14,348 tonnes, equivalent to up to 229 tonnes of pure HBCD. No information is provided on imports of either the polystyrene pellets or HBCD. HBCD was also calculated at up to 229 tonnes in textiles in vehicles (in service, imported, or at end of life, again for the reference date of 2013).
Minamata status	Signed in Minamata 2014. MIA is underway, with support of UNDP (GEF ID 9343)
Significant previous/current chemicals/clean up projects	2018- 2021 (GEF ID 9916, UNIDO): Making PCB and elimination sustainable in Morocco (USD 1,826,484). Under Component 3 of the project (*PCBs elimination and promotion of Africa's first PCB decontamination platform*), the following outputs are planned: 613 tons of PCBs-contaminated equipment and 2.4 tons of pure PCBs oil are sent abroad for safe elimination; 1,740 transformers with 541 tons of dielectric oils are locally decontaminated. 2009- 2014: Safe PCB Management Programme in Morocco, *Pillar II* (GEF ID 3883), the cleaning and treatment of contaminated oil started in February 2016 and continued until March 2017 resulting in the treatment of 450 transformers, with 110 t of contaminated oil (US$2,437,600). By April 2017, 371 pieces of equipment were processed, with 88.57 tonnes of oils and 500 tonnes of solid mass being decontaminated. 2008 – 2013: Safe Management and Disposal of PCBs (GEF ID 3082), *Pillar I*: over 1,080 tons of PCBs-contaminated equipment and wastes containing PCBs were exported to France for elimination (at TREDI facility) (US$2,198,000);
POPs pesticide stocks identified	2010 inventory (described above) includes over 30t of POPs stocks.
Mercury stocks identified	Unconfirmed stocks of mercury in storeroom (from 2017 EIB report) 65 bottles of 34.5 kg of mercury (total 2.2 tonnes) are stored in the plant's facilities. It is not clear if this privately operated facility would agree to the project disposing of these stocks (they may be used for ongoing activities).
Total PCB contaminated oils and transformers	Equipment containing/ contaminated with PCBs (based on inventory from February 2016) included: 8 t with pure PCBs; 198 t with contamination levels above 5,000 ppm; 468 t with contamination levels below 5,000 ppm. Ongoing PCB project with UNIDO (GEF ID 9916) to dispose of contaminated equipment.

National capacity for POPs analysis	Yes, Laboratoire OKSA-Maroc. PFOS analysis at National Laboratory for Pollution Studies and Monitoring and Public Testing and Study Laboratory (LPEE)
New POPs status as determined during PPG phase	About 10 companies identified as potential users of HBCD in EPS XPS production. Training on new industrial POPs planned for October 2018. Legislation: - Polluter Pays Principle: Law 36-15 on water established fundamental principles (right to water, decentralized management of resources) and establishes a water police with a judicial function to monitor compliance, exercised under the authority of the public prosecutor by sworn agents coming from the various services of the State. - No PFOS limits in water legislation. Institutions responsible for updating these water quality standards are: the Moroccan Institute for Standardization (IMANOR), National Office of Electricity and Drinking Water (ONEE), Ministry of Health. - The import and export of products is governed by Law No. 91-14 on foreign trade in goods and services. However, there is no specific regulation or performance standards for fire-fighting foams. - Extended Producer Responsibility is established under Framework Law 99-12 on the National Charter for the Environment and Sustainable Development; and will be included in an ongoing revision of the Law 28-00 on the management and elimination of waste. EPR is being applied in several sectors in Morocco such as used batteries, tires, etc. Procurement: There is no criteria - laws to avoid PFOS foams on Public procurement. For the procurement of equipment, public institutions launch a tender in accordance with Decree No. 2-12-349 of 20-03-2013 relating to public procurement. There are no criteria on the supply of PFOS free foams. Contaminated sites: draft Bill for the protection of the soils including instruments related to land use, soil pollution, rehabilitation of sites and responsibility for land degradation.

	Tunisia
PPG Review type	Desktop review and country missions focusing on POPs/ PCBs, (Feb 2018) and site visit to Kasserine/ SNCPA site for mercury wastes assessment (Apr 2018)
NAP (2015)	The NAP identified: Golfe de Tunis – with four specific sub-locations (administrative units) that were categorized either as priority hot spots (category A) or critical locations (hot spot category B): Bizerte (B); Ariana (A); Tunis (B); Ben Arous (B); and Nabeul (B); and Golfe de Gabes – with two specific sub-locations (administrative units) that were categorized as follows: Sfax (B) and Gabes (B). No specific impact of POPs/mercury pollution mentioned in relation to identified hot spots.
NIP (2017)	There are 6 sites where stocks of POP pesticides, including Lindane, Hexachlorocyclohexane (HCH) and DDT, are found. Quantities are estimated at 68.6 t. The NIP includes initial inventories for PFOS and HBCD. HBCD: estimates annual sales are about 85 tonnes (equivalent to 3,400 – 17,000 tonnes of EPS/XPS) PFOS: Four sectors prioritized (industrial, manufacturing, chemical especially fire-fighting foams, and waste, especially stocks and contaminated sites), inventory estimates quantities from 18 -160 tonnes / year.
Minamata status	Signed.
Significant previous/current chemicals/clean up projects	2017-2018: Tunisian Government funded programme on management of mercury wastes at National Society of Cellulose and Paper Alfa (SNCPA) site in Kasserine resulted in repackaging and storing on the site of: 0.65 t metallic mercury; 25 t of sand and gravel (1,000-3,900 ppm); 0.78 t carbide waste (25,000-39,000 ppm); 15 t scrap metal (27-160 ppm): and 6 t activated carbon (19,000-40,000 ppm). Estimated mercury content in these wastes is 0.16-0.37 t 2015-2018: Improve Mercury Management (GEF ID 8000, UNIDO). The 2017 UNIDO study[27] estimated around 30 t of mercury (15 t in the cells, 15 t in the decomposers) were abandoned on the site in 1998 when chlor-alkali technology was phased out. 2010-2017: Demonstrating and Promoting Best Techniques and Practices for Managing Healthcare Waste and PCBs, (GEF ID 2995), GEF-funded project (implemented by the World Bank) addressing health care wastes and PCBs management that was completed in May 2017. 1,100 tonnes of PCBs/ PCB contaminated equipment were exported to Belgium for destruction/ decontamination. The project supported a range of other activities including development of PCBs dynamic inventory, identification of contaminated sites and others. Activities were implemented in the period 2013 – 2017 (the budget for the PCBs component of the project was USD 2.4 million).
POPs pesticide stocks identified	Lindane, Hexachlorocyclohexane (HCH) and DDT, are found. Quantities are estimated at 68.6 t.
Mercury stocks identified	SNCPA plant, Kasserine: 0.65 tonnes metallic mercury stored in 5 x 150L stainless steel containers; >30 t of highly contaminated wastes (1,000 – 40,000 ppm) (stored in 300 x 1-1.5t bags)
Total PCB contaminated oils and transformers	Remaining quantity of PCBs is 1,380 t, including 200 t in stocks (the rest is in use). In total, 28 sites contaminated with PCBs are identified, and the quantity of contaminated soil at these sites is estimated at around 300 t. The PCBs stock (cca 200 t) is spread across more than ten Governorates.
National capacity for POPs analysis	Yes, Tunis International Centre for Environmental Technologies (CITET) and other laboratories

New POPs status as determined during PPG phase	The National Office of Civil Protection (ONPC) reports to the Ministry of Environment, on use of 70 tonnes of fire-fighting foam per year; and the Civil Aviation and Airports Authority (OACA) reports use of 15 tonnes of powder and liquid foams per year. A list of seven companies were identified that are potentially using HBCD in EPS XPS production. Legislation and standards: national drinking water standard does not limit PFOS. Standards can be amended by ministries of Health or Environment, and by INNORPI (National Institute for Standards). No information was available on fire fighting performance or import regulations or standards.

	Turkey
PPG Review type	Desktop review
NIP (201x)	The NIP was updated in 2016, with detailed inventories of new POPs included (see below)
Minamata status	Signatory as of 24/09/2014. Not yet ratified.
Significant previous chemicals/clean-up projects	MedPartnership project with UNEP MAP disposed of 634 tons out of 1080 tonnes pure PCB inventoried. Current project 'POPs Legacy Elimination and POPs Release Reduction Project' (GEF ID 4601 with UNDP, until 2019) aims to dispose of a further 280 tons of PCB.
POPs pesticides stocks identified	Current GEF project disposing of approximately 2000 tonnes of lindane; however up to 500 tonnes may remain at the end of the project due to budget limitations.
Total PCB contaminated oils and transformers identified	Based on the NIP and current disposal operations, there will remain 166 tons of PCB waste. In addition there is an estimated 150 tons of pure or high concentration PCB equipment in use in the network, with a more detailed analysis of 8000 transformers ongoing under the current project, which is anticipated to increase the total amount of PCB for management
National capacity for POPs analysis and destruction	Current GEF project determined the status of public and private labs for POPs analysis. Based on this, currently, most of the public and private labs were accredited for POPs analysis including new POPs. However, it is necessary to have some background analysis study for POPs and Mercury in Turkey in order to have a baseline exposure situation of the country. Turkey has three licenced hazardous waste incineration/pyrolysis plants with capacity of 35.000 t/y for IZAYDAŞ (Incineration), 17.000 t/y for PETKİM (Incineration) and 100.000 t/y for ITC Turkey (Pyrolysis). Within the Current GEF project, a capacity building and test burn trial was completed for IZAYDAS plant and it is proved that IZAYDAS facility is compliant with criteria set out in Stockholm and Basel Conventions.
New POPs status as determined during PPG phase	Inventories of new POPs were done in the NIP update and estimate the following total amounts: - C-PentaBDE in vehicles as at 2012: 59 tonnes in use vehicles; 303 tonnes in end-of-life vehicles - HexaBDE and heptaBDE in stocks of CRT computer monitors in 2013: 168 tonnes, including 80 tonnes in recycled polymers. In addition, the Customs Office reports import of 547 tonnes of diphenyl ether and 177 tonnes of penta/tetra bromodiphenyether imported between 1996 – 2013 (17 years). - HBCD: The national Chemicals Registration System has reported 3500 tonnes of HBCD placed on the market for XPS and EPS sectors between 2009 – 2011. As of 2019, companies will be required to report stockpiles to the government under the POPs by-law. Authorities estimate stocks of approx. 100 tonnes of pure HBCD and 200 tonnes of HBCD containing articles will be notified over the MedProgramme project period.

Concurrently with baselining work the participating countries confirmed national priorities from among the total stocks of wastes identified. This consultation process included presentations at regional consultation events (MED POL focal point meeting in May 2017; first MedProgramme Regional consultation meeting in Athens in March 2018 and second meeting in Paris in September 2018), as well as numerous bilateral consultations and communications requesting MED POL and SCP RAC focal points to confirm interest in participating in the regional project, to send estimates of POPs, PCBs and mercury stockpiles, and to discuss and confirm the priorities set out below (Table 8). The table confirms that the total PCB and POPs wastes prioritized by the nine participating governments and potentially available for Phase 2 disposal under the project is in excess of 2000 tonnes, in addition to the 586 tonnes already verified for immediate disposal.

Table 8*:* Participating country priorities

COUNTY	COUNTRY EXPRESSED PREFERENCE/PRIORITY	PRIORITY STATED
ALBANIA	1. Complete inventory for transformers suspected for PCBs contamination (est 6,000 transformers) 2. Disposal of 200 t of PCBs contaminated equipment and oil	1 and 2: Direct consultation with Albania MED POL Focal Point, May – Sept 2018
ALGERIA	1. PCBs disposal –1,968 t from coastal regions, including: 316 t (ready for disposal); 500 t high priority from public institutions (requiring verification); 1,152 t lower priority (requiring verification). 2. Disposal of mercury wastes from GIPEC company, Baba Ali, Algiers (17 t verified); and 1.5kg from Tizi Ouzu WWTP	1 and 2: Country mission February and September 2018, and subsequent direct consultations (communication with the Ministry of Environment April – September 2018) and MedProgramme Regional Consultation Meetings (March and September 2018)
BOSNIA AND HERZE-GOVINA	1. Verification and disposal of mercury wastes from HAK Tuzla site (3 t metallic mercury and 15.3t of wastes verified in 110 drums, 60 l volume)	1: Direct consultation with BiH MAP and MED POL Focal Points, August 2017 and MedProgramme Regional consultation meeting (March 2018, Athens)
LEBANON	1. PCBs disposal – a total of t 1,052 including: a. 272 t Phase 1 b. 780 t Phase 2 2. Dechlorination - 126 t of PCB contaminated oil from transmission (in-use) transformers 3. Priority remediation measures for Baouchrieh hot spot (PCBs contaminated transformer maintenance and storage site) 4. Prevention of New POPs: PFOS-PFAS (fire-fighting sector); and SCCP (in PVC sector).	1 – 3: Country mission December 2017 and direct consultations (with the Ministry of Environment) February – Sept 2018 4. SCPRAC country Mission April 2018, consultation with the Ministry of Environment and Ministry of Industry.
MONTE-NEGRO	1. Disposal of up to 200 t PCBs contaminated equipment that may remain after completion of UNDP (GEF ID 9045) project (to be completed 2021) 2. Assessment study for remediation of contaminated sea sediments at Bijela hot spot (shipyard)	1 and 2: MedProgramme Regional consultation meeting (March 2018, Athens and Sept 2018, Paris)

MOROCCO	1. Inventory and disposal of 32 tonnes of POPs wastes (including pesticides) 2. Prevention of New POPs: PFOS-PFAS - (fire-fighting sector); HBCD (in EPS-XPS Sector) and SCCP (PVC sector)	1: Consultation with Morocco MED POL Focal Point, June – August 2017, confirmed no priority POPs/PCBs for disposal. 2. SCPRAC country mission May 2018, confirmed with the Ministry of Environment.
TUNISIA	1. Disposal of 68 t of POPs pesticides 2. Disposal of 200 t of PCBs contaminated equipment 3. Disposal of mercury wastes from SNCPA plant, Kasserine (0.65 t metallic and up to 47 t of highly contaminated wastes). Assessment of former electrolysis cells to identify pockets with elemental mercury 4. Prevention of New POPs: PFOS-PFAS (fire-fighting sector); and HBCD (EPS-XPS Sector).	1 – 3: Country missions February and April 2018 and direct consultations (communication with the Ministry of Environment) March – Sept 2018 4. SCPRAC Country mission May 2018, consultation with Ministry of Environment, Ministry of Industry, Ministry of Energy, Tunisian National Office of Civil Protection (ONPC) and Civil Aviation and Airports Authority (OACA)..
TURKEY	Disposal of 300 tonnes of PCB Prevention of use of HBCD in various sectors (est 1000 tonnes per year) and disposal of est 100 tonnes pure HBCD and 200 tonnes of HBCD containing articles. Collection and disposal of 100 tonnes of PBDE from established electronics and end-of-life-vehicles recycling/dismantling facilities.	Country consultation November 2018 at Minamata CoP Submission received from Ministry of Environment January 2019

A1.2.2 International Waters baseline scenario

Over the last 20 years the GEF has provided significant support for regional efforts aimed at identifying and accelerating key reforms and investments in the region. The GEF IW projects with a total budget of over USD 21 million were implemented by UN Environment/ Mediterranean Action Plan (MAP) assisting the Mediterranean countries with identification of priority actions, Strategic Action Programmes (SAP) elaboration and implementation, and with development of tolls and mechanisms to address climate variability .

The landmark developments of relevance for monitoring in the Mediterranean to identify trends and monitor progress to impacts include the adoption of the EU MSFD in 2008[28][28] and a parallel effort of the MAP – Barcelona Convention system to put in place an ecosystem-based approach to managing and monitoring the state of coastal and marine environment. Adoption of SDGs represents another key development.

In addition to IMAP and Common Indicators Development, work under the MAP system and related initiatives (e.g Horizon 2020 initiative to depollute the Mediterranean by 2020) resulted in the adoption of an elaborate set of indicators to monitor, among other things, implementation of the Mediterranean Strategy on Sustainable Development (MSSD), NAPs (developed under the LBS Protocol, containing measures and timetables to implement SAP MED and achieve GES), Regional Action Plan on Sustainable Consumption and

Production (SCP) in the Mediterranean, Regional Strategy for Prevention of and Response to Marine Pollution from Ships 2016-2021 and other policies and plans at regional and national levels. The set of indictors used in the MAP – Barcelona Convention system is being increasingly aligned with the relevant SDGs.

Important steps in the implementation of the EcAp Roadmap by MAP/ Barcelona Convention were adoption of 11 Ecological Objectives, 61 indicators and definition of GES and targets in 2012, followed by the IMAP Decision (IG.22/7) in 2016 on the Integrated Monitoring and Assessment Programme in the Mediterranean that comprises 23 (state and impacts) Common Indicators addressing marine pollution, biodiversity, fisheries, coastal issues and marine litter. These posed several challenges for the Barcelona Convention Contracting Parties to redesign their national monitoring programmes in line with IMAP and its 23 Common Indicators also covering the offshore areas beyond coastal or territorial waters. For pollution monitoring, countries are expected to build upon their MED POL monitoring programmes and database[29][29] (covering agreed parameters and stations in key hotspots and coastal areas). Very little data exists for majority of the Common Indicators, particularly in the GEF eligible countries of the Mediterranean; exceptions refer to some contaminants, nutrients and chlorophyll data.

Several databases and data platforms that are relevant for the Mediterranean exist in Europe, the main ones include Copernicus (Marine Environment Monitoring Service)[30][30], the European Marine Observation and Data Network EMODnet[31][31], and THE MEDLEM (MEDiterranean Large Elasmobranchs Monitoring) PROGRAM and database application[32][32]. The above consist of indicators assessing the state and impact of the marine environment and are populated mainly with relevant data from the EU Member States.

The main UN Environment/ MAP portals include the MED POL Info-system, a Mediterranean Integrated Geographical Information System on Marine Pollution Risk Assessment and Response[33][33], the SPA/RAC[34][34] Mediterranean Database of Cetacean Stranding (MEDACES)[35][35], its Mediterranean Invasive Alien Species (MAMIAS) database and MedPAN database on Marine Protected Areas[36][36], Mediterranean portal on Climate Adaptation and ICZM[37][37] and the Pegaso Geoportal on ICZM[38][38]. MAP's Regional Activity Centre for Information and Communication (INFO-RAC) is coordinating efforts on the establishment of an umbrella Info-MAP[39][39] System.

Moreover, the Mediterranean countries are in the process of developing their national SDG indicators. At the regional level, work is ongoing under the MAP/ Barcelona Convention to develop and populate a dashboard of indicators to assess the MSSD implementation (in addition to the work on the development of a number of SCP, LBS NAPs implementation and other relevant indicators).

As regards the climate change monitoring, the IMAP Guidance[40][40] recommends the following should be duly considered in designing the IMAP and defining GES:

· Climate change is influencing the characteristics of the marine environment and can be expected to affect hydrological conditions (e.g. sea level, wave action from increased storminess, water temperature, water circulation patterns), water chemistry (increased acidification) and biodiversity (e.g. species range changes due to sea temperature changes).
· It is relevant to determine GES in a way which takes account of changes in species composition and range due to the dynamics of the marine and coastal ecosystems, some of which may be affected by climate-induced effects.
· Monitoring the effects of climate change-induced pressures is important. It is important to be able to distinguish wider climate-change effects (e.g. temperature, acidification, biodiversity) from more local effects caused by other anthropogenic pressures, as these latter cases are the most practical to address within the context of the IMAP.

The 2017 MED QSR formulated a set of recommendations to address monitoring and data related gaps and needs, including general (applicable to all Common Indicators) and recommendations relevant for different clusters (e.g. biodiversity, coast and hydrography, pollution and litter) of Common Indicators; selected recommendations are presented in Box 1.

Box 1: Addressing monitoring and data related gaps and needs in IMAP implementation

General recommendations
- Harmonize and standardize monitoring and assessment methods. - Improve availability and ensure long time series of quality assured data to monitor the trends in the status of the marine environment. - Improve availability of the synchronized datasets for marine environment state assessment, including use of data stored in other databases were some of the Mediterranean countries regularly contribute. - Improve data accessibility with the view to improve knowledge on the Mediterranean marine environment and ensure that Info-MAP System is operational and continuously upgraded, to accommodate data submissions for all the IMAP Common Indicators.
Pollution and Litter

- Further develop harmonized monitoring protocols, risk-based approaches, analytical testing and assessment methodologies for monitoring levels of the contaminants in commonly consumed sea food.
- Test new research-proved tools for monitoring toxic effects.
- Develop region-wide harmonized criteria for reference condition and threshold/boundaries values for key nutrients in water column, taking account of available standards for coastal waters.
- Continue the work on underwater noise and its impact on marine fauna, in close collaboration with the relevant bodies, especially ACCOBAMS.
- Improve knowledge on Emerging Chemicals.
- Ensure testing of the Background Assessment Criteria (BACs) and Environmental Assessment Criteria (EACs) and thresholds application on a trial basis in interested countries and regional and sub-regional level.
- Follow up development of harmonized and standardized monitoring and assessment methods for marine litter and its impacts, including through active participation of MAP in relevant processes such as the ongoing work of MSFD Technical Group on Marine Litter.

Source: 2017 MED QSR

The MAP – Barcelona Convention information system is undergoing significant changes. The alignment of the MED POL IV Monitoring Programme with the requirements of the IMAP highlighted a set of new challenges for the Contracting Parties in the process towards setting up of a fully-fledged and operational Info-MAP System. These are mainly linked to the following: i) improved availability of long time series of quality-assured data to monitor the trends of the status of the marine environment; ii) revised temporal and spatial scale of monitoring programmes (e.g. eutrophication becomes integral part of monitoring programme, whereas it was previously implemented through pilot approaches; temporal trends of selected contaminants at the designated hot spot sites in the coastal marine environment and coastal reference stations to be extended as appropriate to the offshore area, etc.), and iii) enhanced data quality assurance and control.

Monitoring programmes typically cover various stratums of coastal and marine waters. Box 2 provides information on the sequence of the main maritime zones (including internal and territorial waters, contiguous and exclusive economic zone, and high seas) based on the UN Convention on the Law of the Sea (UNCLOS) definitions.

Box 2: Main maritime zones

Based on the UN Convention on the Law of the Sea (UNCLOS), the following five main maritime zones can be singled out:

- Internal waters: littoral areas such as ports, rivers, inlets and other marine spaces landward of the baseline (low-water line);
- Territorial waters: extending 12 nautical miles from the baseline;
- Contiguous zone: an intermediary zone extending to a maximum of 24 nautical miles from baseline;
- Exclusive economic zone (EEZ): another intermediary zone, lying between the territorial and the high seas to the maximum extent of 200 nautical miles;
- High seas: areas beyond 200 nautical miles from shore i.e. beyond national jurisdictions.

Source: adapted from the UN Convention on the Law of the Sea

The coastal waters zone – commonly defined as an area extending one nautical mile on the seaward side from the baseline – is also important for monitoring purposes. Recent reviews (e.g. 2015 Mediterranean Regional Report by Milieu Ltd) of the monitoring programmes in the EU Member States showed coastal waters were the most covered zone while the scope and frequency of monitoring reduced in the successive maritime zones. The current pollution monitoring programme established in the framework of MAP – Barcelona Convention focuses on coastal areas close to land-based pollution sources[41][41], while the scope of IMAP is wider and is meant to cover areas beyond coastal or territorial waters. The IMAP implementation will thus require revisions of the spatial scale and extension of the networks of monitoring stations to the offshore areas. To this end, the need has been established to support the GEF eligible countries of the Mediterranean with IMAP implementation to also cover the areas that are not directly impacted by the land-based sources.

A1.2.3 International waters baseline projects and activities

Following the 2005 TDA, a Strategic Action Programme for land-based pollution (SAP MED) was elaborated through the UN Environment MAP/ GEF project and adopted by the Barcelona Convention Contracting Parties covering the period to 2025. Strategic Action Programme for the conservation of Biological Diversity (SAP BIO) was adopted in 2003, also in the framework of the MAP – Barcelona Convention system and supported by GEF; SAP BIO underwent an update on climate change issues in 2009. Other important processes that have set regional priorities include projects, studies and coordination mechanisms implemented under Horizon 2020 initiative to depollute the Mediterranean by 2020, hot spots identification (for different marine regions/ sub-regions), adoption of legally binding instruments (Regional Plans) under the Barcelona Convention Land-based Sources (LBS) Protocol, preparation of the State of the Environment reports, and others. National-level priority setting has taken place through preparation of national actions plans for the implementation of relevant regional strategies (e.g. SAP MED, SAP BIO), Conventions (e.g. Barcelona, Stockholm), Protocols and Regional Plans, as well as through inventories of hot spots/ sensitive areas and loads of pollutants discharged into the Mediterranean.

Moreover, evaluation of the Barcelona Convention SAPs and NAPs (National Action Plans) implementation, as well as the revision of the NAPs have all contributed to strengthening of the knowledge base on the state of the environment in the Mediterranean and on the key drivers of environmental change. Over 100 technical reports were produced during the lifespan of the MedPartnership project on various issues including pollution, aquifers, MPA's and fisheries. In addition, a significant number of marine related research projects has been supported by the EC and other actors in the last decade, with many projects in recent years also attempting to bring together science and policymaking.

The main projects of relevance for the TDA update that are currently under way or being conceptualized include preparation of State of the Environment and Development Report (SoED) 2019, MED 2050 Foresight Study on the Environment and Development in the Mediterranean, and 2023 Mediterranean QSR.

The SoED 2019 is designed as a comprehensive and up-to-date assessment of the environmental status and sustainability issues related to the environment and development in the Mediterranean, in the context of the mandate of the MAP/ Barcelona Convention. By applying an integrated, systemic and holistic approach, the SoED 2019 is expected to increase awareness and understanding of environmental and development status and trends in the Mediterranean, their driving forces and impacts. It is designed to provide an up-to-date foundation for improved decision-making at all levels and to enhance the delivery of the 2030 Agenda, the achievement of its SDGs, and the implementation of the MSSD. The report is being developed by Plan Bleu with the support of all MAP components (UNEP/ MED IG. 447/3).

Plan Bleu is also leading preparation (over 2018 – 2021 period) of the MED 2050 Foresight Study, in line with COP 20 Decision (Annex 2, Decision IG.23/4). The MED 2050 is conceived as an original science-policy interface that will involve decision-makers and stakeholders in a participatory approach and help generate contrasted visions across the Mediterranean. It will capitalize on previous and on-going works, including the SoED 2019, while reinforcing dissemination, communication and capacity building. MED 2050 will also build on existing and on-going foresight studies and fill critical gaps identified in the benchmark study of 35 foresight exercises conducted in the Mediterranean region over the last 15 years. (Annex 4, Information Document UNEP/MED WG.447/Inf.4)

Preparation of the 2023 QSR has been initiated by the MAP, in line with the Decision IG.23/6 on the 2017 MED QSR. Based on the gaps underlined in the 2017 report, the focus in the coming period will be on the harmonisation and standardisation of monitoring and assessment methods, improvements in data availability, better use of existing datasets and improved accessibility of data, all of which are expected to lead to a more comprehensive and precise assessment of the status of the Mediterranean coastal and marine environment by 2023.

The EU funded EcAp MED II and Marine Litter MED projects are supporting IMAP implementation in conjunction with the assistance extended from the MAP core funds/ Mediterranean Trust Fund (MTF). The key activities include country-specific and sub-regional capacity building, and technical assistance. EcAp MED II project comprises several components such as support for IMAP implementation, strengthening of sub-regional cooperation, strengthening of science-policy interface, EcAp related data and information management, and mobilization of resources for IMAP implementation.

During the initial phase of IMAP implementation (2016-2018), significant progress has been made by all the Barcelona Convention Contracting Parties. The biodiversity and non-indigenous species (NIS) parts of national IMAP-based monitoring were developed for all Southern Mediterranean countries with the technical support of SPA/RAC under EcAp MED II Project. The assistance has also been extended to a number of countries (Egypt, Israel, Lebanon, Libya and Morocco) with the aim to: i) support ongoing implementation of the MED POL IV Monitoring Programme, avoiding any discontinuity in submitting and assessing data related to marine pollution; ii) ensure gradual transition to new IMAP-based monitoring of marine environment, as well as to iii) support implementation of some pilot projects which include marine litter monitoring. Data standards and data dictionaries for pollution and marine litter Common Indicators are being finalized. By mid-2018, the countries were in the process of verifying the final drafts of the coast and hydrography monitoring programmes (or finalizing their drafts).

On the regional level, progress is noted with regards to the update of the pollution assessment criteria and thresholds. Twenty-four new/ updated pollution assessment criteria were approved by the COP 20 with the aim to encourage the Contracting Parties and the MAP to test them for indicative purposes in the different contexts that exist in the Mediterranean.

INFO-RAC is developing Info-MAP platform and platform for the implementation of IMAP, connected to MAP Components' information systems and other relevant regional knowledge platforms. For example, efforts are underway to ensure MED POL online database (developed in 2012) is made available to all Contracting Parties to report their monitoring data and to view their past reports. MED POL data collected since 2000 are being re-uploaded by INFO-RAC into the system to ensure availability of MED POL online

database for inclusion into IMAP compatible Info-system. The IMAP Info-system is expected to enable IMAP-related reporting as of May 2019 for 10 IMAP Common Indicators. Conceptual model for the development of the pilot Info-system is shown in Figure 3.

Science-policy interface (SPI) in IMAP implementation has been addressed through a set of activities led by Plan Bleu aiming to promote and encourage exchanges between scientists and environmental decision makers. Considering that only a small fraction of relevant marine scientific knowledge is actually used for management and implementation of marine policies, five regional SPI workshops took place between December 2015 and April 2017 gathering scientists and decision makers to discuss pre-determined issues, mainly the gaps in scientific knowledge compromising the full implementation of the IMAP.

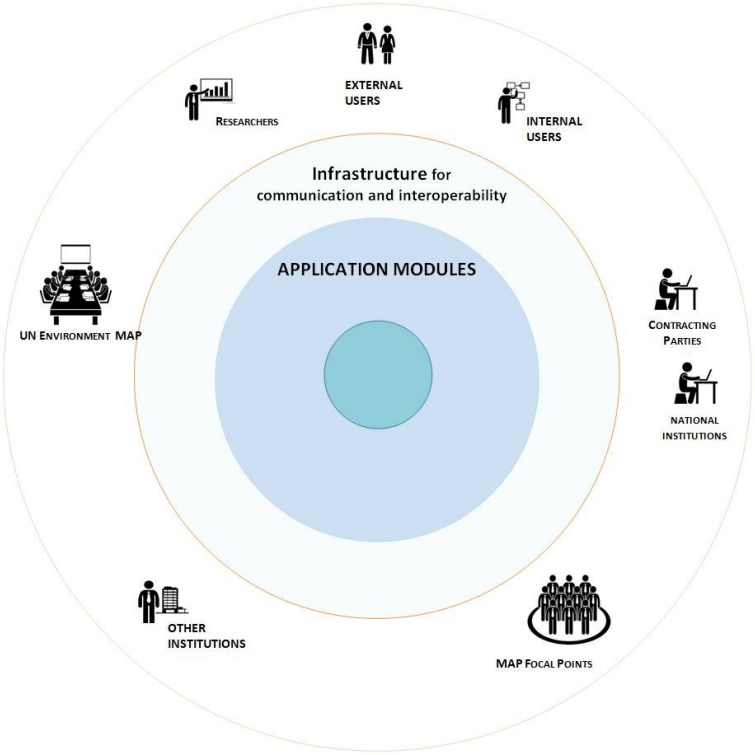
Figure 3: IMAP pilot Info-system

General characteristics of the pilot Info-system

… presentation and operation in a highly integrated way, guaranteeing data sharing in line with agreed policy;

… a central core represented by a common database, by a set of autonomous application modules (software components) and by an infrastructure for communication and interoperability with other systems;

… the system allows the hierarchical distribution of users (external circle) according to Contracting Parties' needs.



Source: UNEP(DEPI)/MED WG.444/Inf.15

The EU funded ENI SEIS II South Support Mechanism 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. The overarching principles guiding the development of SEIS are presented in Box 3.

Box 3: SEIS principles

The seven principles of the Shared Environmental Information System

1) Information should be managed as close as possible to its source;
2) Information should be collected once, and shared with others for many purposes;
3) Information should be readily available to public authorities and enable them to easily fulfil their legal reporting obligations
4) Information should be readily accessible to end-users, primarily public authorities at all levels, to enable them to assess in a timely fashion the state of the environment and the effectiveness of their policies, and to design new policy;
5) Information should also be accessible to enable end-users, both public authorities and citizens, to make comparisons at the appropriate geographical scale (e.g. countries, cities, catchments areas) and to participate meaningfully in the development and implementation of environmental policy;
6) Information should be fully available to the general public, after due consideration of the appropriate level of aggregation and subject to appropriate confidentiality constraints, and at national level in the relevant national language(s); and
7) Information sharing and processing should be supported through common, free open source software tools.

Source: Adapted from SEIS Communication, COM(2008) 46 final[42][42]

The ENI SEIS II (2016 – 2020) builds upon results of the preceding project Towards a Shared Environmental Information System in the European Neighborhoods[43][43] aiming to improve the availability and access to relevant environmental information to the benefit of effective and knowledge-based policy-making in the ENP South region[44][44]. The project is implemented by the European Environment Agency (EEA) in partnership with UN Environment/ MAP. The project inter alia supports further development of H2020 indicators to measure progress in achieving H2020 objectives as well as in complying with Barcelona Convention commitments (including, for example, implementation of the NAPs). Within the project component dedicated to development of indictors, an expanded set of NAP/ Horizon 2020 monitoring indicators has been agreed upon in April 2018.

ENI SEIS II is also supporting in-country processes for sharing the H2020 indicators data sets, use of existing data infrastructure, establishment and maintenance of national and regional environmental information systems and data sharing in line with SEIS principles, and preparation of indicator-based assessments. Specific activities are implemented to improve efficiency of existing data flows (in particular for PRTRs – Pollution Release and Transfer Registers), enhance synergies with the existing MED POL information system (NBB – national baseline budgets of pollutants) as part of the Info-MAP platform, and to support the creation of new data flows and quality assurance/ control procedures for the expanded set of NAP/ H2020 indicators. The project will also support preparation of the 2nd H2020 assessment report in 2019, covering all the Mediterranean countries and linking the EcAp and MSFD processes.

General Fisheries Commission for the Mediterranean (GFCM) initiated preparation of assessment reports for fisheries related Common Indicators (7 – 12); FAO assessments of the deeps sea fisheries are also relevant source of data.

GEF ID 9545 project Implementation of Ecosystem Approach in the Adriatic Sea through Marine Spatial Planning (2016 – 2018) is aiming to restore the ecological balance of the Adriatic Sea through implementation of the ecosystem approach and improve sub-regional management capacity through Marine Spatial Planning.

The main objective of the GEF ID 9670 project Enhancing regional climate change adaptation in the Mediterranean Marine and Coastal Areas (associated to MedProgramme) is to enhance capacities of countries in the Mediterranean region to adapt to climate change with a view to influencing wider development processes in the region.

A1.3. Proposed alternative scenario

- The objective of this project is to achieve measurable reductions in levels of POPs and mercury in priority Mediterranean coastal hot spots and catchment areas.

This objective will be achieved through a multi-focal area collaboration between the GEF Chemicals and Waste and International Waters focal areas, with two project Components aiming to a) reduce land based sources of pollution (Chemicals and Waste component) and b) improve monitoring capacity in order to be able to measure these and future reductions in pollution levels (International Waters component).

Component 1: Chemicals and Waste, aims to improve human health and coastal habitats, through reduction of wastes and harmful chemicals (POPs and mercury) in coastal hotspots and catchment areas.

Based on the problem and objective analysis (Annex B) the component has been designed around: engaging with participating country governments on the provision of disposal options (for POPs) and long-term containment (for mercury); and raising awareness on new POPs in products and mercury in the healthcare sector, through targeted pilot activities to introduce alternatives. It is envisaged these activities will lead to the safe containment of mercury and mercury waste; the environmentally sounds management and disposal of PCB containing waste; and decreases in use of new POPs and mercury via a transition to environmentally sound alternatives in the region. Ultimately project activities should lead to a tangible reduction of land-based pollutants in Mediterranean countries, through the disposal of over 2,000t of POPs and over 50t of Mercury waste, in line with the Chemicals and Waste Focal Area objective CW2 to "*reduce the prevalence of harmful chemicals and waste and support the implementation of clean alternative technologies/substances*". The project will contribute to Programs 3 (Reduction and Elimination of POPs); and Program 4 (Reduction or elimination of anthropogenic emissions and releases of mercury to the environment).

The national baseline tables confirm the presence of potentially available wastes at higher levels than the project GEB targets:

Table 9: Quantified summary table of potential GEB by country

Country	PCB and POPs disposal	Total potential - disposal	Total potential - prevention
Albania	Testing of est 6,000 untested transformers and potential disposal of 200 t PCB	200 t (PCB)	
Algeria	314 t (PCB contaminated oil and equipment confirmed for Phase 1 Disposal of est 1,654 t PCB including high priority 500t from public institutions 17 t metallic mercury from former chlor-alkali plants, GIPEC Baba Ali, Algiers; 1.5 kg from Tizi Ouzu WWTP	314 t (Phase 1) 1,654 t (PCBs) 17 t mercury	
Bosnia and Herzegovina	Disposal of 3 t metallic mercury and 15.3 t mercury contaminated wastes from former chlor-alkali plant HAK I Tuzla	18.3t (mercury)	
Lebanon	272t PCB contaminated oil and equipment confirmed for Phase 1 Up to 780t (PCB contaminated oil and equipment) Mobile dichlorination (decontamination) for 126 t of oil from large transmission transformers	272 t (Phase 1) 780 t (PCBs) 126 t (PCB in use)	
	Up to 22 tonnes foams in 2017 (Civil Defense, ports and others). Up to 3 tonnes HBCD imported per year/ est 600 tonnes XPS/EPS Medical wastes to be prevented in hospitals (tbc)		22 tonnes PFOS /yr 3 tonnes HBCD/ yr 600 tonnes products
Montenegro	Potential disposal of 200 t of PCB contaminated oil and equipment (if left after UNDP project)	200 t (PCB)	NA
Morocco	30 t of POPs waste to be inventoried, safeguarded and disposed of 2t of Mercury stored in COLEMA	30t (POPs) 2.2t (mercury)	
	Up to 15 tonnes of pure HBCD used per year / 1,000 tonnes EPS/XPS per year. PFOS estimate not available Medical wastes to be prevented in hospitals (tbc)		15 tonnes HBCD/ yr 1000 tonnes products
Tunisia	200 t of PCB contaminated oil and equipment 68 t of POPs waste to be inventoried, safeguarded and disposed of 0.65 t of metallic mercury at Kasserine site 47.7t of mercury contaminated wastes	200t (PCBs 68t (POPs waste 0.65t (mercury) 47.7t (mercury wastes)	
	Up to 85 tonnes of pure HBCD imported per year/ up to 20,400 tonnes EPS/XPS per year. From 18-160 tonnes PFOS foams per year Medical wastes to be prevented in hospitals (tbc)		85 tonnes HBCD/ yr 20,400 products From 18 tonnes PFOS/ yr

Turkey	166 tonnes PCB stockpiles remaining after current disposal project. 150 tonnes of in-use contaminated equipment. Up to 500 tonnes of lindane and pesticide wastes left after current disposal project.	166 tonnes PCB 150 tonnes PCB in use 500 tonnes POPs pesticides	
	ELV and WEEE facilities in Turkey can yield at least 100 tonnes of PBDE-contaminated wastes for disposal 3500 tonnes of HBCD used in XPS/EPS between 2009-2011. Est 300 tonnes of waste to arise for disposal during project.	100 tonnes PBDE wastes 300 tonnes HBCD wastes	1,166 tonnes HBCD/ yr
Potential disposal POPs		Confirmed PCB for Phase 1: 586t Total potential PCB and POPs for Phase 2: 4,424t	**Total Potential POPs: 5,010 t**
Potential disposal mercury		Metallic mercury: 22.85 t Mercury contaminated wastes: 63 t	**Total mercury: 85.85 tonnes**
Possible prevention POPs		Pure HBCD used per year: 1,269 t PFOS foams used per year: 40 t Products containing POPs per year: 22,000 t	**Total POPs used: 1,309 t per year**

The proposed remediation actions from Activity 1.1.4 (see below) would yield additional tonnes of GEB which cannot be quantified until initial reviews are completed.

The expected outcome will be achieved through activities under four outputs, structured so as to allow distinct reporting and financial management of the GEF funds being allocated under the POPs and mercury programs respectively:

Output 1.1: Management and disposal of POPs

Output 1.2: Management and safe storage of mercury

Output 1.3: Long term POPs reduction through pilot activities on new POPs alternatives

Output 1.4: Mercury reduction through pilot activities on mercury alternatives

-

Output 1.1 Management and disposal of 2,000 tonnes of POPs

Output 1 will be delivered in two phases, with a first phase of collection to secure, export, and dispose of 586 tonnes of PCB that were verified during the PPG phase as being ready for disposal. An additional 3000+ potential tonnes have been identified (see Table 9 above), however additional work is required to verify these stocks and to determine the highest priorities.

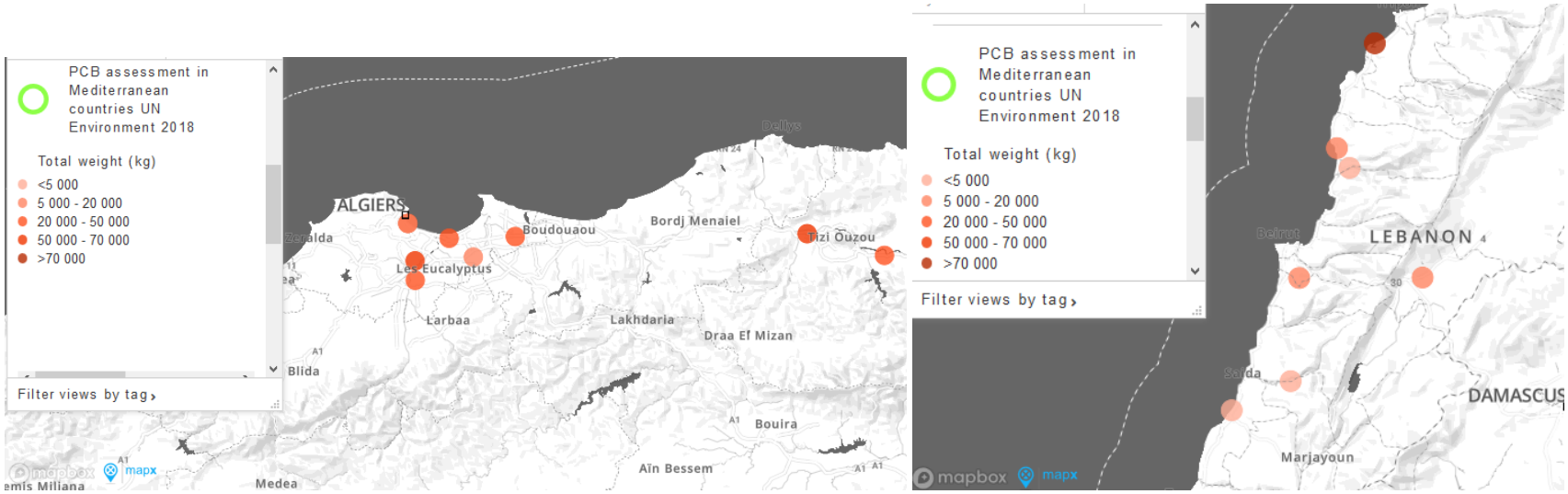
Activity 1.1.1: Phase 1 POPs disposal

The criteria for determining quantities of POPs and mercury to be included in **Phase 1** were as follows:

- fully inventoried on a per piece basis (i.e. individual transformers and other equipment are indicated in detail);
- confirmed as contaminated and, in the case of PCB contaminated oil, oil has been tested and PCB concentrations verified, or presence of pure PCBs established;
- declared by their owners to be available and ready for immediate disposal by the project, with adequate security measures in place to prevent stocks from being accessed and/or removed prior to project initiation.

This process defined 586 tonnes of Phase 1 stocks at 17 sites in Algeria and Lebanon, for which detailed Environmental Management Plans (EMP) were completed during the PPG (Annex J). The project proposes to initiate the disposal tender for these wastes immediately upon project launch, using the detailed inventory lists and Environmental Management Plans that were developed during the project preparation phase. Disposal of these wastes should be complete by the end of Year 2.

Figure 4: Maps of Phase 1 stocks ready for immediate elimination



Activity 1.1.2: Phase 2 POPs inventory and prioritization

Estimates made during the project preparation phase indicate there are greater volumes of POPs wastes present in project countries than can be accommodated in the project budget. The existing estimates summarized in the baseline section above (see Table 7) were gathered through consultations on NIP priorities, analysis of available inventories (such as project inventories from Lebanon and site-specific assessment of an Aluminium Plant Podgorica in Montenegro) and desk research, but did not meet the criteria for **Phase 1**. As such, the project will invest in a more detailed inventory where comprehensive equipment lists are not available, to be able to prioritize which stocks can be addressed by the project. For inclusion in **Phase 2,** once the different priority wastes are characterized, a transparent and objective analysis will be made of the stocks based on the following criteria:

· Immediate risk to human health and environment; this will be assessed following an approach developed by FAO[45][45] based on a chemical risk factor and an environment/ exposure risk factor;

· Cost effectiveness and feasibility within the timescale of the project, including the priority expressed by governments and existence of political will and cofinance to address wastes;

· Balance between disposal of legacy accumulations of wastes, and contemporary accumulations, in support of prevention pilots;

· Equitable regional distribution of project activities across project countries.

Activities under this Output include:

· Field inventory of wastes in the project countries including training of national teams and use of an innovative mobile data collection app currently under development and allowing direct upload into GIS (MapX);

· Laboratory testing of oil from equipment to confirm contamination levels. As the number of samples are large a screening step will precede laboratory analysis to limit the number of samples analysed and contain costs.

· Upload, visualisation and environmental risk assessment of inventoried stockpiles in MapX, using a combination of waste data collected during inventory and GIS datasets to calculate the risk to health and environment (first criterion for prioritization above).

· Consultation with countries at Regional Steering Committee to confirm the prioritization and the wastes to be disposed in Phase 2.

Activity 1.1.3: Phase 2 POPs disposal

Following confirmation of stocks and prioritization of those stocks and/or contaminated sites for priority management and elimination, the same process will be followed as for Phase 1, namely:

· Development of regional disposal plan and budget for the prioritized wastes, including consideration of cost, number and types of procurement processes; different destruction options including export in line with Basel Convention requirements and in-situ options (e.g. mobile dichlorination) where economies of scale permit and are cost effective; and diverse funding basis including cofinance from countries and potential for investment for long term regional capacity development.

· Development of site-specific EMPs and tendering for repackaging and disposal services. Guided by experience from Phase 1, the project will seek to maximise the roles for national waste management and/or POPs-owning partners to ensure national capacity is built in both public and private sectors that can continue to address remaining stocks in the future.

· Training for management of disposal operations and supervision thereof by national Environmental Inspection services in the Ministries of Environment.

· Export and destruction of PCB and other POPs wastes in an environmentally sound manner.

Activity 1.1.4: POPs remediation and assessment

Remediation actions and assessments proposed by project countries, including potential support to address POPs/ PCBs contamination at NAP hot spots (Baouchrieh, Lebanon and Bijela, Montenegro) and mercury contamination at Kasserine, Tunisia, would render additional GEB. Priority remediation actions identified:

· Baouchrieh site include drainage system improvement, pumping out the content of the site's well and disposal of the pumped oil/ sludge (estimated at around 100 t, highly contaminated).

· Assessment for Bijela site would look into options to remediate contaminated sea sediments

· Kasserine assessment would help identify pockets of metallic mercury at former electrolysis cells and propose an overall management plan for the contaminated site

Output 1.2: Management and safe storage of 50 tonnes of mercury

The project preparation phase has identified a combination of liquid mercury and highly contaminated mercury wastes which will be treated in an environmentally sound manner according to international standards on long term containment of mercury. The key activities for the elimination of mercury stocks are:

Activity 1.2.1: Confirmation of mercury stocks for disposal
The stocks of mercury for disposal that were identified in the PPG phase will be confirmed, including:
· Verification through site inspection and analysis where relevant.
· Support to countries in the process of ratification of the Minamata Convention where relevant and upon request by the countries (e.g. Algeria and Bosnia and Herzegovina, other countries as needed),
· Consultations with waste owners to confirm the availability of wastes for removal, and to arrange interim secure storage to ensure wastes do not leak or get diverted elsewhere (in the case of liquid mercury). This will also include any stockpiled mercury-containing devices identified in the national stock-take of the health sector and hospitals in Output 1.4 (see below).

Activity 1.2.2: Planning and disposal of mercury
· Detailed Environmental Management Plans will be developed for the safe management of the verified wastes, including centralization, transport, and disposal options.
· Tendering and disposal of wastes in line with the agreed Environmental Management Plans.

Output 1.3: New POPs reduction and alternatives pilot activities completed

Outputs 1.3 and 1.4 both seek to demonstrate the practical replacement of mercury and new POPs through adoption of environmentally sound alternatives in Mediterranean countries.

Prevention of the new POPs identified in the country NIPs will be focused on the following chemicals and sectors:

- **PFOS** will target Civil Defence and public firefighting organizations, as these are the single largest users of PFOS foams; and also due to the direct application of large volumes of foams directly onto soil and surface waters. While the gas & oil, and restaurant extinguishers sectors also import large volumes of PFOS, and may discharge unused foams directly to sewers, these are more dispersed among multiple users and not cost effective for a first pilot project to address.
- **HBCD** will target importers of EPS / XPS pellet and manufacturers of EPS / XPS insulation panels and architects, engineers, financiers and standard setting and procurement bodies who may have a role in setting specifications for building developments. Users in the building sector were prioritized over textiles in vehicles, which reported similar volumes in the NIP of Morocco, because of a more limited number of users in the building sector, compared to textiles that are in every imported-in service vehicles, trucks, etc.
- **SCCP** will target the whole sector of PVC production in Lebanon, which is known to use large quantities of chlorinated paraffins, while data is scarce for other SCCP priority sectors such as paints and sealants, metal working fluids, lubricants and rubber. Secondly, the Ministry prioritizes this sector due to the high potential health impact for food-and water contact and medical applications such as PVC containers, PVC piping and PVC medical devices due to exposure to CPs.

Specific partners for each country have been identified during the PPG and are listed in the table in the 'Stakeholders' section of this document.

Activity 1.3.1: Pilot demonstration projects in three countries

The selection of countries and chemicals for the demonstration pilots was driven by eligibility considerations (that the country had included the new POP in its NIP update) and by feasibility considerations (e.g. political support and commitment from government and industries), which are provided in more detail in Table 10. In most cases NIP update inventories do not provide quantitative information, making it impossible for the project to estimate quantities of new POPs that could potentially be reduced in the pilot projects. However, these criteria resulted in the selection of the three potential demonstration pilots as summarized in the feasibility assessment table below.

The proposed mechanisms to effect change and change practices toward substitution of new POPs are similar for the three different chemicals/ sectors, and explicitly address the four main barriers identified earlier. Each pilot project will differ the details (e.g. products, users) and relevance of activities (not all activities will be needed in all pilots). These individual pilot distinctions are summarized in the feasibility assessment summary below. The common intervention points are the following:

a. **Accurate inventory and database**: a partial inventory for the priority sectors identified and database of current user and quantities of use of new POPs. The existing NIP update inventories will be confirmed and quantified using product sampling to confirm the presence of POPs; and by environmental sampling to confirm presence and impacts in priority endpoints (soil, surface water).

o For PFOS, the inventory will cover import and use of PFAS, PFOA, and/or PFHxS and other PFAS chemicals. Sampling of PFOS in soil/ groundwater in key fire incident sites (Lebanon, see Table 10)

o For HBCD, companies importing or using EPS/ XPS pellets, including sampling of pellets to confirm and quantify HBCD presence and concentration;

o For SCCP, companies importing chlorinated paraffins for PVC production (see list of companies in the Stakeholder section A.3), and sampling of these to confirm SCCP content and concentrations (e.g. as pure SCCP or at significant levels in medium chain chlorinated paraffins (MCCP);

b. **Legal support** and a coordinated awareness campaign for technical staff and political decision makers and officials, aiming to support updated legislation with mandatory provisions to restrict the import, export and use of PFOS-PFOA fire fighting foams based on the Stockholm Convention requirements.

o For PFOS, updating water quality standard to include mandatory PFOS limits; new regulation to restrict import and use of PFOS foams. Furthermore for PFOS, international performance standards exist for firefighting foams, e.g. US, France, Australia, UK. However only some of these allow/favour the use of fluorine free (F3) and solvent free foams (Australian, UK) so adoption of these can support phase-out of PFOS

o For HBCD and SCCP the main legislation or provisions to be targeted are bans on import and use of these new POPs; and potential use of EPR legislation (where available) to oblige producers to manage wastes, thus providing incentives for adoption of alternatives

c. **Technical assistance** for testing and training in adoption of environmentally sound alternatives. This assistance will be provided directly to users and producers of new POPs and related products, and seek to unlock particular barriers include technical/ process barriers as well as procurement and financial barriers.

o For PFOS, current tenders of firefighting foams in the public sector do not include any sustainability criteria, such as specifying PFOS free option. The pilots will support adoption of such sustainability criteria in the procurement of firefighting foams. Secondly, the project will cover the cost difference of environmentally sound alternatives (Fluorine and solvent free foams) to substitute PFOS firefighting foams in several facilities.

o For HBCD, Technical assistance and training with key importers, retailers and producers of HBCD to promote environmentally sound alternatives and support testing and technology shifts to enable the substitution of HBCD in production processes. This may include supply of alternatives e.g. butadiene-styrene brominated copolymer to substitute HBCD in the EPS/ XPS construction sector.

o For SCCP, working with PVC producers to promote environmentally sound alternatives and support and co-finance testing and technology shifts to enable the substitution of SCCP (or MCCP with SCCP content above legal limits) in production processes.

Table 10: POPs prevention Pilot project country summary

	Lebanon	**Tunisia**	**Morocco**	**Turkey**
PFOS	*1. Inventory/database*: in civil defense, airports, ports and/or Oil & gas facilities. Sampling at fire sites: Ashrafieh, Beirut Port, Jnah, Zokak Belat, Koraytem, Zarif, Zokak Belat, Karantina, Talet Khayat, Biel *2. Legal support:* 2a. Product standards of the Lebanese Standards Institution (LIBNOR) adapted to reflect PFOS free performance. 2b. Current water quality standards with 'informative' PFOS limit of 200 mg/l to be made mandatory. 2c. New legislation drafted and adopted restricting import, export and use of PFOS-PFOA foams. 2d. Promotion of adoption of Extended Producer Responsibility (EPR) of products and waste. There is no law on EPR in Lebanon. *3. Technical support*: 3a. Supply of fluorine and solvent free firefighting foams at several facilities. 3b. Sustainability criteria introduced in procurement of firefighting foams.	*1. Inventory/database:* in civil defense and airports. *2. Legal support:* 2a. Product standards of the National Institute for Standards (INNORPI) adapted to reflect PFOS free performance. 2b. National water quality legislation was updated in 2018 but it does not contain PFOS limits. The revision of this regulation can be amended by the Ministry of Environment, Ministry of Health and the National Institute for Standards (INNORPI). 2c. New legislation drafted and adopted restricting import, export and use of PFOS-PFOA foams. *3. Technical support:* 3a. Supply of fluorine and solvent free firefighting foams at several facilities 3b. Sustainability criteria introduced in procurement of firefighting foams.	*1. Inventory and database* - civil defense and airports. *2. Legal support*: 2a. Product standards of the Moroccan Institute for Standardization (IMANOR adapted to reflect PFOS free performance. 2b. Amendment of no. 03.7.001 on human food including water quality by the Moroccan Institute for Standardization (IMANOR), National Office of Electricity and Drinking Water (ONEE) and Ministry of Health, to include PFOS limits. 2c. Amendment of legislation on import and export of products (Law No. 91-14 on foreign trade in goods and services) to restrict import, export and use of PFOS-PFOA foams. *3. Technical support*: 3a. Supply of fluorine and solvent free firefighting foams at several facilities 3b. Sustainability criteria in procurement of firefighting foams introduced under Decree No. 2-12-349 of 20-03-2013 on public procurement as needed	1. Inventory and database - civil defense and airports.

HBCD	*1. Inventory/database*: EPS/XPS users in the construction sector. Testing of pellets. *2. Legal support:* 2a. Product standards adapted to reflect use of HBCD free EPS/XPS, HBCD limit, ecolabelling and ESM. *3. Technical support*: 3a. Supply of alternative flame retardants (e.g. butadiene-styrene brominated copolymer)	*1. Inventory/database*: EPS/XPS users in the construction sector. Testing of pellets. *2. Legal support:* 2a. Product standards adapted to reflect use of HBCD free EPS/XPS, HBCD limit, ecolabelling and ESM. *3. Technical support*: Green procurement and management by companies on HBCD use.	*1. Inventory/database*: EPS/XPS users in the construction sector. Testing of pellets. *2. Legal support:* 2a. Product standards adapted to reflect use of HBCD free EPS/XPS, HBCD limit, ecolabelling and ESM. *3. Technical support*: 3a. Supply of alternative flame retardants (e.g. butadiene-styrene brominated copolymer)	1. Implementation of National regulation on HBCD stockpile reporting and replacement in manufacture of XPS/EPS. 2. Technical support to construction and plastic industry to extract POPs from waste for ESM and Prevention
PBDE				Technical support to existing ELV and WEEE handling facilities to extract POPs from waste for ESM and Prevention
SCCP	1. Accurate inventory and database of current industrial use of SCCP and SCCP content in MCCP in PVC production. 2. Legal compliance of the Stockholm Convention on the import, export and use of SCCP and MCCP with SCCP content and green procurement and management by companies on SCCP use.	Not identified as a country priority at the time	Not identified as a country priority at the time	1. Accurate inventory and database of current industrial use of SCCP and SCCP content in MCCP in PVC production.

In the first phase, the pilots will be prioritized based on country readiness and potential for impact. In this phase funds have been allocated independently of the possible contribution to GEB targets. Once initial results are confirmed for example quantifying potential tonnes to be prevented in different sectors/ countries, and obtaining commitments for cofinance and for cooperation from countries and stakeholders (e.g. on updating of legislation or procurement processes), project funds will be allocated on the basis of the number of tonnes that can realistically be prevented.

Activity 1.3.2: Replication and expansion of prevention pilot projects
In the second half of the project each of the pilot demonstration projects will provide case studies which will be actively disseminated to other countries through the MedProgramme Knowledge Management system (Child Project 4.1) in varied formats (possibly including publications, Experience Notes, video documentaries for example). Targeted training will be rolled out on successful approaches and potential expansion of pilot projects to additional countries, allowing reduction of new POPs to contribute to project GEB targets.

Output 1.4: Mercury reduction through pilot activities on mercury alternatives

The pilot project on prevention of mercury in health sector, in particular mercury containing measuring devices, will involve top-down and bottom-up approaches in Lebanon and Tunisia based on the approach developed by WHO. They will target and involve key public servants from the Ministry of Health, Ministry of Environment and Customs as well as managers, maintenance and procurement staff from 28 public hospitals in Lebanon, and 25 in Tunisia, who may have a role in acquiring medical measurement equipment and managing current mercury containing devices and mercury waste.

Activities are based on the WHO guidance, and will include:

· Activity 1.4.1: Identification/ verification of national institutions and hospitals using mercury-containing measuring devices and detailed stock-take of mercury containing wastes in the hospitals in the country;

· Activity 1.4.2: Development of awareness (politicians, high level officials, etc.) and training activities on mercury containing devices management and mercury waste (technical);

· Activity 1.4.3: Update legislation/ provisions on mercury in articles (product standards) and phase-out;

· Activity 1.4.4: Substitution of mercury devices in hospitals by alternatives including technical assistance, substitution, testing, procurement, monitoring, solutions to collection and disposal, etc.

Component 2: International Waters

Under Component 2, regional cooperation frameworks will be used and strengthened through the project interventions to identify priorities and actions that will lead to increased environmental and socioeconomic benefits in the Mediterranean. Activities will be performed to assist the Mediterranean countries to update the 2005 baseline regarding transboundary issues that affect the state of their marine and coastal environments, analyze causes and impacts of identified/ prioritized issues, and recommend areas where adequate responses are needed to ensure attainment of GES. The update will include a gender assessment and strengthen the knowledge base on several pertinent topics (such as impact of climate change on natural and socio-economic systems, impact of pollution on marine ecosystems, potential for blue economy development, etc.), looking also at trends and future scenarios. Capacities to monitor and report (referring to national, regional and global scales) will be enhanced, enabling (in conjunction with other MedProgramme projects and components) the assessment of progress towards stress reduction impacts and achievement of relevant SDG targets.

Existing knowledge will be used, synergies will be created with related assessments and data collection processes, and the countries will be assisted to upgrade their national monitoring programmes in line with IMAP requirements to also cover the offshore areas beyond coastal or territorial waters and address topics not sufficiently covered under the existing monitoring (primarily for pollution and litter). Capacities to assess different elements (including linkages between drivers, pressures and impacts; cumulative impacts; etc.) of the complex Mediterranean LME will be enhanced and inputs provided to ensure better availability and accessibility of pertinent data.

The expected outcome of the Component 2 is: “Littoral countries enabled to identify trends and progress to impacts” (MedProgramme PFD). This outcome will be achieved through activities to be implemented under the following four outputs:

Output 2.1: Updated TDA including gender assessment
Output 2.2: Report on progress to impacts
Output 2.3: Offshore monitoring strategy and identification of 20 locations for the offshore monitoring stations
Output 2.4: Data sharing policy for the Mediterranean

Output 2.1: Updated TDA including gender assessment
Under this output, the TDA update process will be undertaken and the TDA document will be elaborated, reviewed by the key stakeholders and ultimately adopted (by the Project Steering Committee). The updated TDA will include recommendations on areas of critical importance to be considered for future priority action setting processes.

TDA update represents an opportunity to take into account significant changes in the policy and cooperation frameworks in the region that have happened since 2005 (including implementation of the Barcelona Convention Ecosystem Approach), to address areas not sufficiently covered under the so far and forthcoming Mediterranean assessments (such as gender, climate change impacts on ecosystem services and socio-economic activities, impact of pollution on marine biodiversity and similar), as well as to capture the most recent available data and assess trends. In this context, TDA will also benefit from related assessments to explore potential for systemic and transformational change by 2050 through cross-sectoral foresight scenarios, all with a view to SDGs implementation.

To respond to the changed context and gaps, the updated TDA needs to address issues that have emerged and/ or gained importance during the past decade, such as climate change related vulnerabilities and risks, marine litter and microplastics, costs of degradation of the coastal and marine ecosystems, and potential for blue economy development. Other topics that merit special attention for the updated TDA include impact of marine pollution and litter on biodiversity, with due attention to maritime traffic and offshore activities as important drivers of pollution. Experiences from the GEF/ UNDP West Indian Ocean SAPPHIRE project (GEF ID: 5513) will be considered during project inception. The SAPPHIRE project has worked closely with the World Ocean Council with the purpose of involving the shipping industry in the monitoring of ocean health. Gender assessment will represent another new element compared to previous TDAs, to be implemented in response to the need to identify and develop appropriate gender mainstreaming actions. Building on the existing prospective studies and work on the development of the MED 2050 report, the TDA will also look into a longer-term perspective through the application of foresight scenarios for the

2050 time horizon. The development of TDA indicators will take into account changes introduced through the implementation of the Barcelona Convention IMAP, establishing at the same time links to relevant SDGs (primarily SDG 14 and SDG 5).

The purpose of the TDA update will be to identify pressures of transboundary nature and set a basis for integrated and effective approaches in addressing them through strengthened regional cooperation in the framework of the MAP – BC system and in close cooperation with other regional policy frameworks (including GFCM, Union for the Mediterranean, and others) and partners. The ultimate goal is to improve state of coastal and marine ecosystems in the Mediterranean thus contributing to the attainment of GES and implementation of relevant SDGs (primarily SDG 14, in synergy with SDG 5 – Gender Equality – and SDG 13 – Target 13.B – special focus on climate change and environment in the context of gender equality).

TDA update will be carried out in such a way as to:

· Identify & prioritize the transboundary problems;

· Gather and interpret information on the environmental impacts and socio-economic consequences of each problem (including on the economic value of ecosystems services and functions);

· Analyze the immediate, underlying, and root causes for each problem, and in particular identify specific practices, sources, locations, and human activity sectors from which environmental degradation arises or threatens to arise[46][46].

The updated TDA will provide a factual basis for expected follow-up activities towards formulation of the next SAP for the Mediterranean that will (through strategic planning and negotiations) set priorities for the time horizon beyond 2025 to resolve the priority transboundary problems identified in the TDA. While the primary purpose of the updated TDA is to respond to the need for a new up-to-date baseline (while identifying indicators for monitoring progress to impacts achieved through MedProgramme and other complementary ongoing efforts), it will also provide a list of preliminary recommendations for the SAP development, alongside with identification of leverage points i.e. places where a small shift at one point can produce large changes elsewhere in the complex system (such as the Mediterranean LME).

TDA update will be carried out through a consultative and collaborative process involving all the Barcelona Convention Contracting Parties, utilizing regional advisory and governance frameworks in addition to project supported consultation mechanisms and meetings. TDA team will be established to carry out the update, ensuring balanced representation of all the interested countries and stakeholders. It will be a multidisciplinary team comprising natural and social scientists, economists, legal and policy experts. Team leader will be appointed to ensure overall coordination and integration of the technical aspects of the work.

The analysis of a baseline situation (including 2005 TDA and recent Mediterranean assessment) clearly highlighted the need for the updated TDA to be data driven and to rely on a DPSIR (drivers, pressures, state, impact, response) set of indicators. A starting point in identifying the set of indicators to be used in the TDA process was stocktaking of all the indicators used in the MAP – Barcelona Convention system and linking them to the relevant SDGs. Drivers indictors referring to the four key economic sectors in the Mediterranean – tourism, fisheries, maritime transport and energy – were added to the set of MAP indicators and considered in the subsequent steps, which included identification of indicators most relevant for the TDA update and selection/ proposal of a short list of indicators to be used in the TDA and SAP (as set out in Annex K).

In addition to the proposed set (short list) of TDA indicators, preparatory activities established the need for more detailed coverage of climate change and gender indicators. For the former, the indicators already used within MAP system mainly refer to climate change related processes, and there is a need (within the TDA process) to develop additional indicators to (in particular) assess effects of climate change and threats to natural and man-made resources in the Mediterranean, as well as to monitor implementation of adaptation policies. For gender, relevant SDG indicators (not used in the MAP system) as well as findings of the gender assessment to be conducted within the TDA update process will be used to determine the appropriate set of indicators of relevance for TDA and SAP. In designing and carrying out the TDA gender assessment, GEF[47][47] and UN Environment[48][48] gender strategies will be used as the reference framework, and the same applies to the United Nations World Water Assessment Programme of UNESCO (WWAP) methodology for the collection of sex-disaggregated water data and indicators, promoted through GEF IW:LEARN[49][49].

In addition to governance, stakeholders, and gender assessments that will be a constituent parts of the TDA update process, other thematic assessments[50][50] will be carried out to address areas where the currently available information is not sufficient to design adequate responses and for informed decision-making.

Available data and recent reports on the state of marine environment in the Mediterranean clearly indicate the need for a comprehensive assessment of the impacts of marine pollution/ litter on biodiversity. Impacts of maritime traffic pollution (covering chronic sources – illicit discharges – and accidental pollution, oil and hazardous and noxious substances) on marine ecosystems[51][51], as well as impacts of operational releases of oil and other contaminants from offshore activities merit special attention and should be considered as potential stand-alone assessments or as a part of a broader study addressing all pollution sources and how they affect Mediterranean ecosystems and biodiversity. This type of information is not likely to be available through the national monitoring systems in the near future, yet it is very important in the transboundary context. The similar applies to the assessment of impacts of marine litter. Other potential thematic assessments to be carried out in the course of TDA update include costs of degradation of the Mediterranean coastal and marine ecosystems with the assessment of blue economy potential, and ecosystem and socio-economic vulnerabilities related to climate variability and change. Proposed Table of Contents for the updated TDA (including proposed thematic assessments) is laid out in Annex N.

A gender assessment will be conducted to examine how differences in gender norms, roles, power structures, activities, needs, opportunities and rights affect men, women, girls and boys in the context of changing environmental and socioeconomic situation in the Mediterranean. To this end, collection and analysis of sex-disaggregated data and gender information to understand gender differences and gaps, and determine gender differentiated impacts and risks will be conducted. An action plan will be also produced to identify measures to avoid adverse gender impacts, and to uncover and act on opportunities to address gender gaps and inequalities.

The key activities to be implemented under output 2.1 are:

- Establishment of TDA team, work plan and budget preparation;
- Knowledge pooling with relevant MAP (SoED 2019, QSR 2023, MED 2050) and other assessments and data collection processes;
- Organisation of relevant meetings (for training, analytical and review/ consultative purposes);
- Identification and prioritisation of transboundary issues, determination of impacts, causal chain analysis;

· Carrying out thematic assessments, preparation of thematic reports and their review and analysis;

· Synthesising analytical work, TDA drafting and identification of linkages with the SAP process;

· Assisting countries to develop more elaborate indicators to assess effects of climate change and monitor implementation of adaptation policies, and/ or to integrate climate change considerations into IMAP implementation;

· Assisting countries to build capacities for socio-economic assessments, including gender.

The activities planned under the output 2.1 will be delivered through technical assistance, capacity building, conducting technical studies and assessments, sharing of good practices and regional consultations.

Output 2.2: Report on progress to impacts

Under this output, information compiled through the knowledge management MedProgramme activities (Child Project 4.1) will be analysed together with information generated through the Child Project 1.1 Component 1 and with the updated TDA to identify key areas of project's impacts on/ contribution to the overall programme objectives, and to substantiate findings with quantitate and qualitative data. Based on the set of TDA indicators and their linkages with SDGs, as well as by utilizing national data and reports on SDGs implementation, progress with the implementation of SDGs in the Mediterranean will be assessed and an attempt made to discern project's contribution to the overall environmental and socio-economic improvements. The report will be prepared by consultants hired under CP1.1 with support of the MAP, MED POL and MedPCU.

Key activities to be implemented:

· Utilisation of Programme's knowledge management tools and data to assess progress;

· Combining MAP/ Mediterranean and SGDs reporting to assess progress and identify project's impacts;

· Preparation of the report.

Output 2.3: Offshore monitoring strategy and identification of 20 locations for the offshore monitoring stations, *and* Output 2.4: Data sharing policy for the Mediterranean

Activities to be conducted under outputs 2.3 and 2.4 will address the existing shortcomings and limitations, including the fact that assessments and policy making in the Mediterranean still face (irrespective of comprehensive and developing knowledge base) difficulties with adequacy, availability and comparability of data, as well as with data accessibility.

Strengthening of monitoring and assessment tools is essential for better understanding of interlinkages between activities/ drivers, pressures and impacts, for assessing the state of marine environment as well as for identification of adequate responses and attainment of GES in the long run. Without a strong and quality assured monitoring programme in the Mediterranean coastal and offshore waters, it is not possible to measure the impact and changes resulting from the implementation of policy and technical measures, projects, policy reforms, capacity building initiatives and investments, including those that will be implemented under the MedProgramme.

Progress report on the implementation of Decision IG.22/7 on IMAP implementation (UNEP/MED WG.450/3) provided an elaborate set of recommendations on the actions needed to support effective implementation of IMAP at national level. The report emphasizes the need for (among other things) implementation of tailored capacity-building activities to fill the identified gaps, including those related to technical capacities, software, monitoring protocols, human resources etc. Moreover, the report calls for provision of specific support to Contracting Parties on new areas of monitoring (i.e. biodiversity, Non-Indigenous Species – NIS, coast and hydrography, pollution/ marine litter) from 2019. The following areas were identified as highly significant to further enhance implementation of IMAP on the national level:

1. Further development of the risk-based approaches, analytical testing and assessment methodologies, assessment criteria for integrated chemical and biological assessment methods and testing of new research-proved tools for monitoring the toxic effects, as well as improvement of knowledge on emerging chemicals;
2. Testing of the Background Assessment Criteria (BACs) and Environmental Assessment Criteria (EACs) and thresholds application on a trial basis and at regional and sub-regional levels.
3. Enhancing identification and evaluation of marine litter accumulation (stranding fluxes, loads and linkage with specific sources) and hotspots using GIS and mapping systems and modelling tools, including better understanding of transport dynamics and accumulation zones.

In terms of harmonization of monitoring protocols and improved availability and accessibility of quality assured monitoring data, the following recommendations stand out: 1) harmonisation and standardisation of monitoring and assessment methods; 2) improvement of availability and ensuring of long time series of quality assured data to monitor the trends in the status of the marine environment; 3) improvement of availability of the synchronised datasets for marine environment state assessments, including use of data stored in other databases where some of the Mediterranean countries regularly contribute; and 4) improvement of data accessibility with the view to improving knowledge on the Mediterranean marine environment and ensuring that Info-MAP system is operational and continuously upgraded, to accommodate data submissions for all the IMAP Common Indicators.

In the first phase of IMAP implementation (2016-2018), significant progress was achieved with the development of national IMAP-based monitoring in the GEF-eligible Barcelona Convention Contracting Parties for the three clusters of Common Indicators – biodiversity and NIS, pollution and litter, and coast and hydrography. In addition to national efforts, technical assistance extended through MAP and various projects (most notably EcAp MED II and Marine Litter MED) contributed to the achieved progress. The work focused on coastal waters.

The other Contracting Parties are developing national IMAPs based on the overall MAP technical guidance. For the EU Member States, the analysis showed that between 50 and 70% of the MSFD descriptor categories were to be monitored as of 2018. Analysis of the spatial coverage of the MSs monitoring programmes showed predominant share (68%) of monitoring takes place in coastal waters. A high proportion also occurs in territorial waters (57%) and in the EEZ (51%), while the lowest proportion (6%) takes place in continental waters beyond the EEZ. As regards regional coherence and coordination, the analysis pointed out MSs in the Mediterranean Sea region need to develop more consistent monitoring through regional efforts for a number of descriptors.

The output 2.3 activities will build upon progress achieved across the region, working specifically on the IMAP extension in offshore areas for pollution and litter Common Indicators (for GEF eligible countries) while utilizing the existing knowledge in the region and strengthening regional cooperation. Other Child Projects, in particular those implemented under MedProgramme Component 2, will contribute to IMAP implementation for coast and hydrography Common Indicators.

Activities to be implemented under output 2.3 are developed having in mind the above needs and recommendations for provision of effective support with implementation of IMAP at national level pertinent to the extension of monitoring to marine areas beyond the coastal or territorial waters. Three groups of activities are envisaged:

1. Definition of the offshore monitoring strategy;

2. Identification of at least 20 sites for offshore monitoring stations; and

3. Piloting IMAP implementation for selected indicators at up to 5 offshore stations.

The offshore monitoring strategy will be developed based on the assessment of comparative experiences with offshore monitoring in the Mediterranean and the needs of the GEF eligible countries, laying out rational and methodology for selection of offshore monitoring stations. The agreed methodology will then be applied to assist participating countries to expand their national IMAPs to the marine areas not directly impacted by land-based sources. Finally, the project will support up to 5 pilots to put in place IMAP for selected indictors in offshore areas. For the selection of pilots, offshore monitoring stations identified/ agreed upon two or more countries will be prioritised. The selection of relevant IMAP indicators in pilot cases will be based on respective pressures and ecosystem values, accumulation and integration of impacts on marine environment.

In developing the offshore monitoring strategy, an assessment of the existing approaches in integrating coastal and offshore monitoring will be undertaken to:

a. Review the scope of national monitoring programmes that will be in place by the beginning of the project;
b. Identify gaps to be addressed in the context of IMAP implementation in beneficiary countries in offshore areas; and
c. Examine spatial and temporal scope of national monitoring programmes in offshore areas to ensure their alignment with IMAP requirements.

Moreover, preparation of the offshore monitoring strategy and IMAP extension to offshore areas will be accompanied with a governance and financial analysis that will inform and enable development of a long-term funding scheme, taking into account ongoing efforts on the development of resource mobilization strategy for IMAP implementation and by utilizing, as appropriate, the MAP core funds/ MTF .

The strategy will propose appropriate methodology for establishment of national monitoring stations in offshore areas to ensure harmonized approach and establishment of consistent sub-regional networks capable of supporting collection of data of relevance for application of Nested approach for future regional assessment products. The strategy will also include deliberations/ recommendations on the following:

a. The need for update or development of new monitoring protocols to specifically address offshore monitoring needs;
b. Proposal of the procedures for data sampling and processing,
c. Proposal of statistical interpretation of field surveys data, specifically on trend analysis assessment for the Mediterranean;
d. Proposal for an update/ development of the assessment criteria to be applied in offshore areas;
e. Proposal of quality control scheme;
f. Proposal for data standards and procedures for data reporting;
g. Proposal of the methodology for integrated monitoring and assessment in offshore waters, including scales of monitoring and assessment;

The project will support implementation of the strategy by providing for consultations and technical guidance to the countries to determine 20 suitable locations (for single or joint monitoring) and establish offshore monitoring stations, including reference ones.

Up to 5 pilots planned under output 2.3 will deliver necessary assistance to countries to ensure implementation of selected IMAP indicators at newly established offshore monitoring stations, prioritizing stations of sub-regional relevance (i.e. those identified through agreements between two or more countries where joint monitoring will be established), taking into account balanced regional distribution and using the risk-based approach. The activities are designed and will be executed with a view to support preparation of the thematic

assessments related to pollution and biodiversity (including potential TDA assessments on the impacts of maritime traffic and of operational releases of oil and other contaminants from offshore activities on marine biodiversity). The pilot activities will entail provision of basic equipment to support synchronized and standardized collection of data in offshore areas within national monitoring programmes.

The activities planned under the output 2.3 will be delivered through technical assistance, capacity building work (including provision of necessary equipment), sharing of good practices and regional consultations.

To address some of the gaps and recommendations related to data availability and accessibility (as identified in the Progress report on the implementation of Decision IG.22/7 on IMAP implementation), and to propose a data sharing policy for consideration by the Barcelona Convention Contracting Parties, the following set of activities will be implemented under output 2.4:

- The existing regional databases, governance mechanisms and data sharing approaches will be assessed to identify possible gaps and issues;
- Structure, functions and content of national databases/ IT platforms will be reviewed to identify what is needed to make them fully compatible with Info-MAP System;
- Design of the IT model (node) to connect national platforms in a regional network/ platform will be recommended to facilitate functional exchange of data between national systems while allowing their functional connectivity with IMAP regional platform. The recommendations on the design of IT model will include technical elements that support spatial visualization of quality assured monitoring data in the form of assessment maps.
- Based on the above and taking into account work on the development of Info-MAP platform (providing for connection of national platforms with MAP Components' information systems and other relevant regional knowledge platforms), regional data sharing policy will be developed based on SEIS principles to facilitate reporting and use of IMAP data collected by the Barcelona Convention Contracting Parties
- Regional cooperation and exchange of best practices will be promoted to strengthen SPI by facilitating information exchange between scientists and policy makers on priority topics (e.g. on scales of monitoring and assessment).

The activities planned under the output 2.4 will be delivered through technical assistance, sharing of good practices and regional consultations.

Component 3 Monitoring and Evaluation and information dissemination disseminates project results and knowledge and uses these to adaptively manage the project.

Component 3 cuts across both the Chemicals and Waste and International Waters components of the project. It will be delivered in close coordination with the Child Project 4.1 and the MedPCU (Programme Coordination Unit, see section A.6 on institutional arrangements).

Output 3.1: Knowledge Management strategy shares knowledge from Child Project 1.1

This output will generate the specific knowledge products and monitoring tools for the Child Project 1.1 and ensure they are compiled and packaged for integration and dissemination through the Programme-wide Knowledge Management tools and channels (see section A.8 below). Specific knowledge products will include at least:

- Activity 3.1.1 Interactive visualizations of chemicals inventories across the 8 countries using interface provided by MapX;
- Activity 3.1.2 Case studies in different formats including video for the prevention pilots;

· Activity 3.1.3 Data sharing protocol, analysis and management (IW)

Output 3.2: Regular monitoring and evaluation of project progress and results

This output will ensure the regular monitoring of project results and delivery, including quarterly progress and financial reports to the Implementing Agency, annual reports to GEF and effective documentation of project lessons learnt. It will also include periodic independent evaluation of project results and achievement of intended outcomes, through external reviews at project midterm and completion.

· Activity 3.2.1: Quarterly financial reports and annual progress reports monitoring status of project execution

· Activity 3.2.2: Midterm and Terminal evaluations of project impacts completed in Years 3 and at the end of the project in order to provide an independent assessment of the project results and, in the case of the mid-term review, to provide an assessment of progress and propose any corrective actions for the project.

A1.4. Incremental/additional cost reasoning

Without GEF assistance, activities to reduce pollution from harmful chemicals and wastes in the Mediterranean are likely to remain uncoordinated and incoherent. GEF assistance will ensure UN Environment can provide guidance and leadership on these issues in a coordinated manner, through both the Chemical and Wastes and International Waters Focal Areas. The delivery of the project via the Secretariat of the Barcelona Convention allows for sustainability of regional activities, building on existing networks on pollution in the Mediterranean.

Component 1 on Chemicals and Waste builds on the significant regional work of MEDPOL in providing support to countries across the region through the Med Partnership. The first phase project included a component on ESM of equipment, stocks and wastes containing or contaminated by PCBs in national electricity companies of the Mediterranean countries, including training on ESM of PCBs equipment for more than 300 individuals from four countries (Albania, Bosnia and Herzegovina, Egypt and Turkey). Training was provided to the national PCB teams on collection, packaging, and shipment of PCBs, and increased technical expertise and awareness on the environmentally sound management of PCBs. This project extends the work of the Med Partnership through focusing on countries with significant PCB stocks that did not benefit from disposal under the MED Partnership.

The project will further develop close linkages between the Barcelona, Stockholm and Minamata Conventions and their delivery mechanisms at national and regional level will allow capacity on chemicals and waste to be linked across thematic and sectoral boundaries.

Component 2 similarly builds on significant existing initiatives by MEDPOL baseline projects and forthcoming assessments (including EcAp MED II, Marine Litter MED and ENI SEIS II South projects, as well as preparation of reports and assessments such as SoED 2019 report, 2023 Mediterranean QSR and MED 2050 Foresight Study) are expected to contribute significantly to improved data availability and knowledge on the processes in the Mediterranean LME to inform and facilitate TDA development and tracking of progress with environmental and socioeconomic improvements. The Barcelona Convention processes and its governance mechanisms represent a framework for the regional cooperation that

will underpin Component 2, and enable smooth delivery of project outputs. GEF incremental funding will allow to consolidate all the information derived from the plethora of relevant albeit fragmented efforts being implemented in the Mediterranean, and produce a new comprehensive and coherent diagnostic focused on transboundary issues of concern.

A1.5. Global environmental benefits

Humans and ecosystems are simultaneously exposed to multiple combinations of chemicals, multiplying uncertainty around impacts of exposure to individual chemicals. Many chemicals may feature in one or more categories. In this context, the expected outcome under Component 1 of Child Project 1.1 is to achieve measurable reduction of wastes and hazardous chemicals (POPs, Mercury) impacting human health and coastal habitats, through innovative practices, techniques and regulatory approaches. The adoption of a gender-responsive approach mainstreamed within the project's activities, such as: (i) conducting small-scale surveys in site-specific contexts to understand the exposure risks determined by socioeconomic factors, and (ii) awareness-raising and capacity-building efforts, will facilitate Child Project 1.1 to pioneer an understanding of gender mainstreaming and chemicals in the region. These outcomes will contribute to the desired overall programmatic impact of enhanced environmental security in the Mediterranean.

In terms of global environmental benefits the project will dispose of over 2,000 tons or POPs, preventing their future release into the environment. The project will also contain, repackage, and dispose of over 50 tonnes of mercury and mercury contaminated waste, preventing future release into the environment. Any stocks of obsolete PFOS/ HBCD identified through the pilot projects will be assessed as part of the Phase 2 disposal operation under Output 1.1 and may be disposed along with the other POPs wastes, thus counting toward the GEB target.

The lack of quantitative inventories on new POPs prevents the project team in setting quantitative targets for new POPs and mercury reduction at project design. Furthermore, there is no guidance or accepted methodology from the convention and GEF on calculating the contribution of prevention of POPs and mercury toward global targets, especially considering the fact that the amounts of these contaminated products/ wastes are orders of magnitude more than established GEF global targets. The PPG phase has therefore focused on identifying enough wastes to potentially meet the entire Global Environmental Benefit targets through disposal (outputs 1.1 and 1.2). During phase 2, once inventories of new POPs are available, it may be possible to quantify and document the contribution of prevention activities toward the GEB target.

There is a need to improve formulation and implementation of integrated, coordinated and effective approaches to tackle certain transboundary pressures that negatively affect the state of the Mediterranean environment and its resources, and undermine the prospects for the attainment of GES. At the same time, it is recognized that better instruments are needed to assess linkages between drivers of environmental change and their impacts, and to measure progress in achieving the set goals, in particular in the framework of SDGs implementation. According to recent assessments, a conservative estimate of the value of economic assets of the Mediterranean Sea is around US$ 5.6 trillion.

By improving the knowledge base for coordinated responses to address identified pressures and their root causes, Component 2 of the project will make a significant contribution to preservation of the unique Mediterranean ecosystems and of their economic assets, directly contributing to the achievement of GEBs, SDGs, the enhancement of environmental security, and the further strengthening of transboundary cooperation.

A1.6. Innovativeness, sustainability and potential for scaling up

The disposal activities for the Chemicals and Waste component have been designed in a two-phased approach which will allow the project to achieve quick wins (expenditures and achievement of part of the GEB targets), while rapidly reducing the risk of further environmental degradation of the Mediterranean Sea from coastal hot-spots. This approach also supports efficient scaling up of the disposal in the remaining countries, as the tools and methods (including Environmental Management Plans, country delivery mechanisms and tendering processes) will have been completed once and lessons learnt for Phase 2.

The POPs prevention pilots are highly innovative, since the PPG research was unable to identify any examples of such pilots on phasing out new POPs in developing countries. The process of selecting pilot interventions has been guided by the priorities expressed by governments, and through a systematic assessment of the feasibility and likelihood of impact of different approaches. As this is the first time that new POPs are being addressed, the project is deliberately trying diverse approaches, spanning across legal mechanisms (import restrictions, water quality standards) and technical support (demonstration of alternatives, support to modifying production processes), using procurement as a lever for change. The budgeting for the demonstration of alternatives has been done in a two-phase approach, in order for the results of initial pilots to be demonstrated and the most successful approaches replicated in the region and other countries. The pioneering gender focus will bolster the fledgling attention paid to the crosscutting nature of socioeconomic and gender factors within the larger chemicals and waste arenas. Certainly, the generation of relevant information and data in an otherwise overlooked interlinkage will not only make this project proactively GEF-7 ready, but as well provide direction to future interventions.

Component 2 innovative elements are linked to implementation of project activities that will go beyond prevailing assessment and monitoring practices to include foresight scenarios, improving the assessments of climate change impacts and vulnerabilities, promoting the value of ecosystem services and potential for blue economy development, upgrading knowledge on the impacts of pollution on marine biodiversity, gender equality conditions, refining and improving IMAP implementation and availability and usability of data at national and regional levels, and similar. New approaches will be tested through integration of coastal and offshore monitoring and efforts will be made to ensure coherent, coordinated and comparable monitoring systems, aligned with the SDGs and the needs of future assessments and state of environment reports.

Replication and scaling up potential on the regional level is primarily identified through sharing of best practices with IMAP implementation and management and sharing of data. Sustainability of project interventions will be ensured through extensive work on upgrading the assessment capacities across the region. Moreover, strengthening of science policy interface represents an opportunity to ensure results of the existing (and forthcoming) scientific projects are integrated in policy making, thus contributing to sustainability

[1] Countries expressed interest during the first and second Regional Consultation meetings in Athens and Paris in 2017 and 2018

[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.

[5]https://www.eea.europa.eu/soer-2015/countries/mediterranean

[6] Annex I, the Gender Assessment and Action Plan, was jointly developed across all the Child Projects of the MedProgramme and is referenced in other CP documents as Annex P.

[7] Report from the Commission to the European Parliament and the Council assessing Member States' programmes of measures under the Marine Strategy Framework Directive, COM (2018) 562 final

[8] For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which Aichi Target(s) the project will directly contribute to achieving..

[9] Desforges et al (2018) Predicting global killer whale population collapse from PCB pollution, Science 361, 1373–1376

[10] National Action Plan (NAPs) prepared under the Barcelona Convention Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol).

[11] Rigo, D., Libertà, G., Houston Durrant, T., Artés Vivancos, T., San-Miguel-Ayanz, J., Forest fire danger extremes in Europe under climate change: variability and uncertainty, EUR 28926 EN, Publications Office of the European Union, Luxembourg, 2017http://publications.jrc.ec.europa.eu/repository/bitstream/JRC108974/jrc108974_final.pdf

[12] UN Environment (2016) Guidance on best available techniques and best environmental practices for the use of perfluorooctane sulfonic acid (PFOS) and related chemicals listed under the Stockholm Convention on Persistent Organic Pollutants. December 2016.

[13] Hu et al. (2016) Detection of Poly- and Perfluoroalkyl Substances (PFASs) in U.S. Drinking Water Linked to Industrial Sites, Military Fire Training Areas, and Wastewater Treatment Plants, Environ. Sci. Technol. Lett., DOI:10.1021/acs.estlett.6b00260; August 9, 2016

[14] Der Westen (2013) PFT bringt Flughafen Düsseldorf in Turbulenzen. 20.09.2013; https://www.derwesten.de/staedte/duesseldorf/pft-bringt-flughafen-duesseldorf-in-turbulenzen-id8466138.html

Access 30.06.2017.

[15]Stockholm Convention (2017) Draft guidance on preparing inventories of hexachlorobutadiene (HCBD). UNEP/POPS/COP.8/INF/18.

[16] UNDP (2013) Demonstrating and Promoting Best Techniques and Practices for Reducing Health-Care Waste to Avoid Environmental Releases of Dioxins and Mercury Final Report. The quantity is a minimum as it refers only to broken thermometers not other equipment such as sphygmomanometers

[17] Introduction of environmentally safe foams to North African markets, Gary McDowall, 3F company www.3fff.co.uk.

[18] WHO (2015) Developing national strategies for phasing out mercury-containing thermometers and sphygmomanometers in health care, including in the context of the Minamata Convention on Mercury, Key Considerations And Step-By-Step Guidance

[19] Full title of the project: Integration of climatic variability and change into national strategies to implement the ICZM Protocol in the Mediterranean.

[20] EEA/ UNEP MAP (2015) joint report Horizon 2020 Mediterranean report: toward shared environmental information systems.

[21] The concept of 'gross marine product' is used in the WWF report in a comparable manner to the use of gross domestic product (GDP) as a measure of the size of national economics.

[22] Updated NAPs contain programmes of measures and timetables required to achieve GES and the Regional Plans objectives in the framework of the Strategic Action Programme to address pollution from land-based activities (SAP MED) and Barcelona Convention LBS Protocol.

[23] Decision IG.20/8.1: Regional Plan on the reduction of inputs of Mercury in the framework of the implementation of Article 15 of the LBS Protocol

[24] https://www.unenvironment.org/explore-topics/chemicals-waste/what-we-do/persistent-organic-pollutants/pops-interlaboratory

[25] WHO (2018) Health sector involvement in the Minamata Convention on mercury: Outcomes of WHO regional workshops for ministries of health

[26] This draft NIP was not available for review. The project team were provided a summary during consultations.

[27] UNIDO (2016) Synthèse des travaux sur la contamination Hg du site du complexe SNCPA et ses environs à Kasserine

[28] Requiring the EU Member States to develop monitoring plans based on a set of detailed common criteria and indicators.

[29] Developed since 1999; in 2006, MED POL IV Monitoring Programme was initiated.

[30] http://marine.copernicus.eu

[31] http://www.emodnet.eu

[32] http://www.arpat.toscana.it/temi-ambientali/acqua/acque-marine-e-costiere/medlem/pr_medlem_en.html

[33] http://medgismar.rempec.org

[34] MAP's Regional Activity Centre for Specially Protected Areas

[35] http://medaces.uv.es/home_eng.htm

[36] http://www.mapamed.org

[37] http://medicip.grid.unep.ch

[38] http://pegasosdi.uab.es/geoportal

[39] Info-MAP is a node for the collection and sharing of monitoring data and the implementation of IMAP indicators.

[40] Draft Integrated Monitoring and Assessment Guidance, UNEP(DEPI)/MED WG.420/4

[41] In line with Article 12 of the Barcelona Convention and Article 8 of the LBS Protocol which, among other things, require the Contracting Parties to assess, as far as possible, the levels of pollution along their coasts, in particular with regard to the sectors of activity and categories of substances listed in the annex I of the Protocol.

[42] Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - Towards a Shared Environmental Information System

[43] The project (completed in 2015) provided support to environmental and statistical authorities in 16 partner countries in the East and South European Neighborhood regions in promoting SEIS principles.

[44] Project beneficiary countries are Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia.

[45] The risk factors proposed by the FAO methodology include consideration of multiple factors for each item of POPs waste (amount and type of waste; conditions of storage and possible leakage; store conditions and location with respect to sensitive populations or habitats or access to emergency services in the event of an accident). FAO (2009) Environmental Management Tool Kit for Obsolete Pesticides Volume 1 http://www.fao.org/tempref/docrep/fao/011/i0473e/i0473e.pdf

[46] The TDA/SAP Guidance Manual updated by GEF IW:LEARN in 2018

[47] See here for the latest GEF Gender Mainstreaming guide (EN). GEF. (2017) (publication)
[48] *Gender Equality and the Environment: Policy and Strategy.* UN Environment. (2015)
[49] See http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/water-and-gender/ and https://iwlearn.net/events/engendering-international-waters

[50] Final decision on the TDA thematic assessment is to be made by the TDA team and Project Steering Committee.

[51] In conjunction with this, an assessment focusing on introduction of Non-Indigenous (NIS) and related harmful impacts on marine biodiversity, fish stocks and health of marine ecosystem could be conducted.

A.2. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

The project is a child project under the GEF/UN Environment multi-focal area “Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security”. Please refer to the introduction section for a description of the Programme and its eight constituent child projects. The MedProgramme is structured into three components: 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.

Child Project 1.1 will contribute to the MedProgramme Component i): Reduction of Land-Based Pollution in Priority Coastal Hotspots and measuring progress to impacts. The project will focus on land-based sources of hazardous chemicals pollution, namely Persistent Organic Pollutants (POPs) banned under the Stockholm Convention, and mercury banned under the Minamata Convention. It covers national activities in up to eight countries, as well regional activities to share lessons learned. The Child Project will remove over 3,000 tonnes of POPs and mercury wastes from the coastal zones of the project countries, directly removing the land-based sources of chemical pollution and breaking the source-pathway-receptor linkages to the Mediterranean Sea ecosystem and inhabitants. The Component will contribute to the overall Gender Mainstreaming Strategy of the MedProgramme by incorporating strategic and tailored gender actions within the overall results framework (see Annex I[1]) thus contributing to address the dearth of information on gender and chemicals, as well as pioneering a regional effort.

Component 2 of the CP 1.1 will contribute to the Programme objectives and impacts primarily by providing an up-to-date, comprehensive and coherent baseline for monitoring progress to impact in a harmonised Mediterranean-wide way, and by identifying key issues of transboundary concern for future priority setting.

The outputs and activities planned under Component 2 will help with consolidation of existing data and development of capacities to monitor and report, to enable (in synergy with other MedProgramme and complementary efforts) the assessment of progress with relevant processes, stress reduction and environmental status in the Mediterranean. Based on the set of TDA indicators and their linkages with SDGs, as well as by utilizing national data and reports on SDGs implementation, progress with the implementation of SDGs in the Mediterranean will be also evaluated. The gender assessment to be carried out in the framework of TDA update is expected to allow for a better understanding and addressing the crosscutting issues of gender, water, and environmental security, and to provide an important and proactive input for the overall MedProgramme gender agenda. Another important contribution of the Component 2 to the overall Programme objectives will be through the assistance to GEF eligible countries of the Mediterranean to upgrade their national monitoring programmes in line with IMAP requirements to also cover the offshore areas, and to ensure better availability and accessibility of monitoring data.

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[1] Annex I, the Gender Mainstreaming Strategy, was jointly developed across all the Child Projects of the MedProgramme and is referenced in other CP documents as Annex T.

A.3. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Chemicals and Waste stakeholders

STAKEHOLDER	Engagement in project preparation	Proposed engagement in project execution
International		
MEDPOL	Coordinated consultations, data collection and research on disposal activities; developed pertinent activities	Executing Agency for the Child Project
SCPRAC	Coordinated the research and consultations on new POPs.	Coordination and technical support to new POPs prevention pilots.

National - Albania		
Ministry of Environment	Overall support for and coordination of the national preparatory activities; provision of data and of guidance on national priorities	Coordination of Phase 2 inventory, prioritization and potential disposal of PCB and other POPs wastes
National - Algeria		
Ministry of Environment	Support for, and coordination of, national preparatory activities; provision of data and of guidance on national priorities	Supervision of repackaging and disposal of Phase 1 PCB stocks. Support to disposal, including issuance of Basel export permits
Regional Environmental Administration – Tizi Ouzu	Provision of detailed information on the main environmental issues (including PCBs management) on the regional level	
CNTPP (Centre National des Technologies de Production Plus Propre)	Collection of data on the equipment and sites, verification of PCBs stocks, facilitation on missions	Coordination of Phase 1 PCB disposal. Coordination of Phase 2 inventory, prioritization and potential disposal of PCB
Representatives of owners of PCBs equipment in Algiers and Tizi Ouzu[1]	Facilitation of site visits, provision of information on stocks of PCBs contaminated equipment kept at each site, description of procedures	Will support process for the safeguarding of Phase 1 and Phase 2 PCB stocks, including potentially providing technicians as team members for field operations.
National Bosnia and Herzegovina		
Ministry of Environment	Provision of data and of guidance on national priorities for mercury wastes	Support to disposal, including supervision of mercury disposal and issuance of Basel export permits
Owner of mercury waste site (ORGANICA)	Provision of data on site	Safeguard the wastes and facilitate packaging and removal
National - Lebanon		

Ministry of Environment	Support for, and coordination of, national preparatory activities; provision of data and of guidance on national priorities Supplied information on use of New POPs, consulted on project.	Coordination and supervision of disposal operations under Phase 1 including issuance of Basel export permits Coordination of Phase 2 inventory, prioritization and potential disposal of PCB and other POPs wastes, including issuance of Basel export permits. Coordination and support for new POPs projects on PFOS HBCD and SCCP, including development of legislation
PCB stock owners - Electricite du Liban and concession holders (Qadisha, Jbeil, Aley, others)	Provision of data on sites and equipment, facilitation of site visits	Will support process for the disposal of Phase 1 PCB stocks, including potentially providing technicians as team members for field operations.
Lebanese Standards Institution	Consulted on product standards and quality standards	Beneficiaries of the project, will receive support to update relevant standards on new POPs
Ministry of Industry	Supplied information on use of New POPs, consulted on project	Coordination and support for new POPs projects on PFOS HBCD and SCCP.
Ministry of Health	Supplied information on use of mercury in hospitals.	Coordination and support jointly with the Ministry of Environment for audit, management and substitution of mercury devices in hospitals.
Syndicate of security & safety professionals in Lebanon	Supplied information on use of fire fighting foams, consulted on project.	Technical support to delivery of PFOS pilot project including liaison and involvement of suppliers of alternatives
Users of new POPs[2]	Supplied information on import and use of new POPs (PFOS in firefighting; and SCCP in PVC production)	Beneficiary of pilot project, will be supported to change procurement criteria for firefighting foams
National- Montenegro		
Ministry of Environment	Provision of data and of guidance on national priorities	Coordination and support for disposal in Phase 2, including inventory and stock verification and issuance of Basel export permits. Supervision of potential PCBs disposal, coordination of prioritization activities’

UNDP Montenegro	Provision of data/ detailed inventory for PCBs containing equipment at Aluminum Plant Podgorica	Coordination, provision of data on stocks not addressed under the project they are implementing
National - Morocco		
Ministry Of Environment	Supply of information on use of New POPs, consulted on project preparation.	Coordination and support for disposal in Phase 2, including inventory and stock verification and issuance of Basel export permits
Protection Civil (PC) – Inspection Generale PC – service approvisionnement	Provided information on use of New POPs	Beneficiary of pilot project, will be supported to change procurement criteria for firefighting foams
Users of new POPs[3]	Provided information on use of New POPs	Beneficiary of pilot project, will be supported to change procurement criteria for firefighting foams; and supported to test modifications to technology and production processes to accommodate HBCD-alternatives.
National - Tunisia		
Ministry of Environment	Coordination of the national preparatory activities; provision of data and of guidance on national priorities; facilitation of site visit Supplied information on use of New POPs, consulted on project	Coordination and support for disposal in Phase 2, including inventory and stock verification and issuance of Basel export permits Coordination and support for new POPs projects on PFOS and HBCD
ANPE (National Environmental Protection Agency) and OTEDDD (Tunisian Observatory of the Environment and Sustainable Development)	Provision of data on stockpiles and wastes	Supervision of mercury disposal and of potential PCBs/ POPs disposal Assistance with permits/ approvals, prioritization of Phase 2 stocks and similar
ANGed (National Waste Management Agency)	Provision of data on PCBs management and results of PCBs inventory	supervision of mercury disposal and of potential PCBs/ POPs disposal Assistance with permits/ approvals, prioritization of Phase 2 stocks and similar

CITET (Tunis International Centre for Environmental Technologies)	Provision of data	coordination of potential inventory for POPs wastes
SNCPA plant, Kasserine	Provision of data on the mercury site and waste quantities; facilitation of MEDPOL site visit	Collaboration in execution of project activities, disposal of mercury wastes
Ministry of Health	Supplied information on use of mercury in hospitals.	Coordination and support jointly with the Ministry of Environment for audit, management and substitution of mercury devices in hospitals.
Ministry of Industry	Supplied information on use of New POPs, consulted on project	Coordination and support for new POPs projects on PFOS and HBCD
Users of new POPs[4]	Supplied information on Fire-fighting foams, consulted on project	Beneficiary of pilot project, will be supported to change procurement criteria for firefighting foams; and supported to test modifications to technology and production processes to accommodate HBCD-alternatives.
National - Turkey		
Ministry of Environment and Urbanization	Coordination of the national preparatory activities; provision of data and of guidance on national priorities; facilitation of site visit Supplied information on use of New POPs, consulted on project	Coordination and support for disposal in Phase 2, including inventory and stock verification and issuance of Basel export permits Coordination and support for new POPs projects on PFOS and HBCD
IZODER (Heat, Water, Sound and Fire Insulators Association)	Not consulted but are affected by regulations on new POPs	Beneficiary of investment in new POPs pilot projects

International Water stakeholders

The Project preparation for Component 2 was coordinated by UN Environment/MAP, MED POL and Plan Bleu. The MedProgramme Regional Consultation Meetings held in March and September 2018 were used to solicit opinions and gather information needed for the project design. Moreover, various meetings organized in the framework of

Barcelona Convention – MAP system (for example 2018 meetings on IMAP and SEIS implementation), were also used as additional consultation forums for specific topics such as TDA indicators, extension of IMAP to offshore areas, and similar.

The key regional and national stakeholders and their roles in project implementation are described in the table below, followed by a more comprehensive list of identified stakeholders at the Mediterranean level and in the project beneficiary countries.

Stakeholder	Role/ responsibility in project implementation
Regional level	
Barcelona Conventions governance and advisory bodies including Ecosystem Approach Correspondence Groups (on biodiversity, pollution, marine litter and coast and hydrography)	Overall guidance and support towards delivery of updated TDA, extension of monitoring to offshore areas, Barcelona Convention data sharing policy and report on progress to impacts
UN Environment MAP	Overall coordination, consultations through the MAP Focal Points; MedPCU to coordinate preparation of the report on progress to impacts
MED POL	Coordinate and support project activities (TDA, offshore monitoring, data sharing policy); provision of data and expertise, support to TDA team/ working groups, consultations through the MED POL Focal Points
Plan Bleu	Support TDA update, coordinate/ conduct preparation of selected thematic assessments (in particular for socio-economic topics); foresight scenarios; contribute to identification and prioritisation of issues, causal chain analysis for TDA
Other MAP components (primarily INFO/RAC, REMPEC)	Provision of data and expertise, support to development of data sharing policy; contribute to identification and prioritisation of issues, causal chain analysis for TDA
MAP partners, including think-tanks, NGOs, research organization	Provision of data, contribution to TDA preparation, consultations
Marine Litter Regional Collaboration Platform	Provision of data on marine litter, consultations
GEF IW:LEARN, UN Environment	Support TDA preparation through advices and training
MCSD Steering Committee	Overall guidance and support towards TDA preparation with a view to implementation of SDGs
General Fisheries Commission for the Mediterranean	Provision of data on fisheries, consultations
National – Albania	
Ministry of Tourism and Environment (including national environmental, coastal and protected areas agencies)	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
Agency for the Management of Water Resources (and river basin agencies)	Provision of national data/ inputs for relevant TDA assessments
Ministry of Social Welfare and Youth	Provision of national data/ inputs for gender assessment
National - Algeria	

Ministry of Water Resources and Environment	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
National Office for the Environment and Sustainable Development	Provision of national data/ inputs for relevant TDA assessments
National Agency for Integrated Water resources management	Provision of national data/ inputs for relevant TDA assessments
National Agency for Climate Change	Provision of national data/ inputs for relevant TDA assessments
Ministry of National Solidarity, Family Affairs and Status of Women	Provision of national data/ inputs for gender assessment
National – Bosnia and Herzegovina	
Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina – Environmental Protection Department	Overall national level guidance on TDA update
Hydro Engineering Institute	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
Agency for Gender Equality of Bosnia and Herzegovina	Provision of national data/ inputs for gender assessment
National – Egypt	
Egyptian Environmental Affairs Agency	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
Ministry of Water Resources and Irrigation	Provision of national data/ inputs for relevant TDA assessments
National Committee to follow up on the implementation of the SDGs	Provision of national data/ inputs on SDGs implementation
National Council for Climate Change	Provision of national data/ inputs for relevant TDA assessments
National Council for Women	Provision of national data/ inputs for gender assessment
National – Lebanon	
Ministry of Environment	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
Ministry of Energy and Water	Provision of national data/ inputs for relevant TDA assessments
National Commission for Lebanese Women	Provision of national data/ inputs for gender assessment
National – Libya	
Environment General Authority	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
General Water Authority	Provision of national data/ inputs for relevant TDA assessments
National – Montenegro	
Ministry of Sustainable Development and Tourism (including Environmental and Nature Protection Agency)	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
National Council for Sustainable Development, Climate Change and Integrated Coastal Zone Management	Overall national level guidance on TDA update

Department of Gender Equality Affairs	Provision of national data/ inputs for gender assessment
National – Morocco	
State Secretariat in charge of Sustainable Development, Ministry of Energy, Mining and Sustainable Development	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
State Secretariat in charge of Water, Ministry of Equipment, Transport, Logistics, and Water	Provision of national data/ inputs for relevant TDA assessments
Ministry of Family, Solidarity, Equality and Social Development	Provision of national data/ inputs for gender assessment
National Observatory of the Environment (ONEM)	Provision of national data/ inputs for relevant TDA assessments
National – Tunisia	
Ministry of Local Affairs and Environment	Coordination and provision of national inputs for TDA update, provision of inputs for offshore monitoring and data sharing policy; participation in TDA working groups, national level consultations
National Environmental Protection Agency (ANPE)	Provision of national data/ inputs for relevant TDA assessments
Tunisian Association of Climate Change and Sustainable Development	Provision of national data/ inputs for relevant TDA assessments
National Council of Peers for Equality and Equal Opportunities between Women and Men	Provision of national data/ inputs for gender assessment

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[1] Cabel, SNVI, ENIEM, EATIT, SAFEX, ENNA, Sonelgaz, EDIEL

[2] PFOS – Civil Defense, airports (Beirut), Issa Petrol Trade Oil & Gas Company; and ports (jieh, Zouk Terminal).

SCCP – Rockyplast, Sevenplast, Advanced Plastic Industries (API), The United Lebanese Plastic Industries sal (ULPI) and M C Line.

HBCD: Kilzi, Kappa Systems, Joseph Hajjar Est, Genial Sarl, Meric, Cmc, Mic Co Sarl, Sodamco Sal, Hintraco

[3] PFOS - Office National des Aeroports (ONA) – Service pompiers ; Casablanca Airport. Service de L´incendie et de Sauvetage des Avions. Direction ONDA. Aeroport Med V, Nouasser; Agence Nationale des Ports (ANP).Mohamedia Port and / or Tanger Med Port. SNEP in Mohamedia

HBCD: EPS / XPS importers, retailers and producers - Soprema Maroc, Sonefi; Panax; Sodiflex; Razana; Intreprise Chérifienne D'isolation; Gama Etanche; Les Matériaux Nouveaux; Interfer and BASF – Maroc.

[4] PFOS - Tunisian National Office of Civil Protection (ONPC); Tunisian Civil Aviation and Airports Authority (OACA); VIVO Energy (SHELL Licensee in Africa); SOTULUB (Lubricants); Military and the Tunisian Ports Authority.

HBCD: EPS / XPS importers, retailers and producers such as Le Record; Polycoq; Polyjumbo: Structura; Polymed SA; Polybat; and Afroflex.

Documents

Title	Submitted

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

See section above on stakeholders..

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor; Yes

Other (Please explain)

A.4. Gender Equality and Women's Empowerment

Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

Despite the fact that land-based pollutants, hazardous substances, and chemicals and wastes reach and expose populations equally, factors such as: (i) poverty and socioeconomic status, (ii) gender-based and customary norms, (iii) health access and equity, and (iv) overall representation in decision-making processes and management policies relating to chemicals and waste, determine the extent of repercussions and ramifications of these on population subgroups. Socioeconomic landscapes and gender relations in the Mediterranean region form a kaleidoscope of overlapping social, economic and cultural roles, spread across a diverse multitude of countries and communities. The northern-coast Mediterranean countries have distinct social patterns and gender norms, which differ from the Middle East and North Africa (MENA) Mediterranean countries, for example. Additionally, the varying political situations in the region also determine how women and men are able to access and leverage sustainable development opportunities to be able to cope with environmental degradation, pollution, chemicals and waste hazards, and pressures on natural resources and coastal and marine ecosystems.

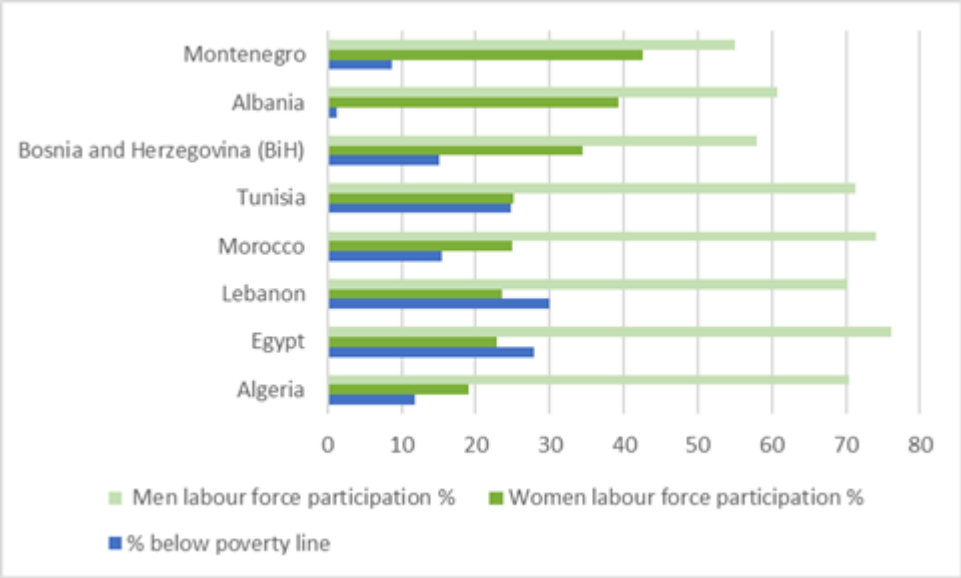
Epidemiological studies of differential health effects of certain chemicals on female and male biology are known in the scientific arena. Despite mounting evidence of severe and irreversible health effects of specific hazardous chemicals on different population subgroups, there is a lack of action to minimize and address these by policymakers, governments and researchers. Of particular concern is that the socioeconomic perspectives on crosscutting issues of gender and chemicals remains under-researched, and this Child Project will strive to use this as an entry point towards gender mainstreaming. Some examples of such a perspective applied to research on chemicals and waste impacts are:

· Poverty status and access to financial resources: These are among the important determinants of coping capacities to external shocks such as health risks arising from chemicals and waste, such that women (and other marginalized groups, including ethnic minorities such as Romas) are more likely to be unable to afford care but also prevent future exposures by accessing protective equipment or knowledge.

· 'Time poverty': relates to the time required for non-productive or unpaid labour that limit people's opportunities to participate in remunerative economic activities. This may be the burden of care work of those exhibiting health effects of exposure to hazardous substances, as often women are expected to fulfill roles of unpaid domestic work, and this can add to the existing and entrenched time poverty.

The 'double disadvantage' of the situation, thus, has to be reckoned with: due to lack of viable economic capital or socioeconomic rights, vulnerable groups are often excluded from, and limited by their lack of representation and agency, in chemicals and waste management policies– increasing the possibilities of exposure to the threats looming in the Mediterranean region. Women, as a general trend, face institutionalized exclusion from civil society and political spheres. Decision-making power within the household and the polity is limited, reducing women's capacities to engage in the public sphere and gear development opportunities to safeguard their interests. In recent years, however, women have been capitalizing on opportunities presented by pluralistic interpretations of traditional gender norms, and entering both the work force and the public space in the Mediterranean region (particularly the MENA countries, Fig 5). The table in Annex I provides a general overview of the socioeconomic and gender baseline in the beneficiary countries, including ratings under the Human Development Index, Gender Inequality Index and Gender Development Index.

Figure 5: Socioeconomic and gender baseline in project countries



Given the project's focus, a gender lens is both necessary and relevant for the project to achieve its primary objective of reducing hazardous chemicals in the Mediterranean, improving human and ecosystem health, and managing land-based pollutants. As elucidated in the Gender Action Plan in Annex I, efforts will be made to improve upon the socioeconomic and gender baseline presented above, through: (i) by awareness-raising among and capacity-building of personnel working to improve/devise disposal and prevention plans, (ii) by creating the impetus (through small-scale surveys) towards collection of gender-relevant data and information where possible, and (iii) by engaging stakeholders (such as local women's groups, NGOs, CSOs, where possible) on gender and socioeconomic aspects within policy solutions. By adopting this pioneering gender focus, the project will ensure both environmental and social co-benefits through its results framework. Both the GEF and UN Environment have prioritized delivering inclusive and gender-responsive environmental results, and mitigation solutions towards pollution risks, chemical hazards, and ecosystems degradation – Child Project 1.1 will continue this conversation, and bolster these efforts.

Contextualizing gender action in TDA process

The Mediterranean Basin covers a vast geographical expanse of complex cultural and social landscapes, which need to be understood to be able to develop tailored gender action in the region for transboundary waters.

Labour market statistics in the northern Mediterranean countries, for example, show a significant gender gap: women's employment rates (especially for marginalized communities such as Romas) are lower, exacerbated further by a wage gap. Since economic capital is among important determinants of coping capacities to external shocks, emerging threats and potential risks (in this case, arising from lack of gender-sensitive water management policies, or disregard for mounting transboundary issues by regional players), women (and other marginalized groups, including ethnic minorities) are more likely to be vulnerable.

To illustrate further, women in MENA Mediterranean countries face greater institutionalized exclusion from civil society and political spheres than typical of the entire region. In recent years, however, women have been capitalizing on opportunities presented by pluralistic interpretations of traditional gender norms, and entering both the work force and the public space. Nevertheless, the gains achieved through social change in this region may not keep pace with the growing threats of water stress, climate change and environmental degradation, and as with the northern Mediterranean countries, burdens of emerging risks and threats may fall on the vulnerable groups.

Component 2 of Child Project 1.1 envisaging gender mainstreaming actions through a dedicated Gender Assessment in the course of TDA update is thus timely. At the outset, it will help in establishing a baseline, showing the differences in gender norms, roles, power structures, activities, needs, opportunities, and rights, which affect men, women, girls and boys in the context of changing environmental and socio-economic situation in the Mediterranean.

Further, this assessment will pioneer a gender perspective within the TDA, reiterating the importance of the collection of sex-disaggregated indicators for water assessment, that could further develop into gender-sensitive water monitoring, piloting projects on the field to test out these indicators and validating results, followed by dissemination.[1] In doing so, it could address data capacity gaps in programmatic approaches of transboundary water resource management, as well as knowledge and implementation gaps.

Gender mainstreaming at the GEF, UN Environment and the MedProgramme

Employing a strong mandate of gender mainstreaming and promoting women's empowerment as well as contributing to the international conversation on gender mainstreaming, both the GEF and UN Environment – and, accordingly the MedProgramme – have prioritized delivering inclusive and gender-responsive environmental results and mitigation solutions.

Having launched its initial gender policy in 2011, the GEF approved a reinforced policy in November 2017[2] shifting the focus from a 'gender-aware, do no harm' approach to a 'gender-responsive, do good' approach. This requires robust standards in the design, implementation and evaluation of GEF activities, and introducing measures that will allow the GEF, over time, to better leverage strategic opportunities to address gender gaps critical to the achievement of global environment benefits.[3] The GEF-7 Programming Directions further clarify the GEF's evolving and progressive gender strategy and lay out clear gender standards for each domain under the GEF. For CP 1.1 Component 2 – gender directives of the International Waters focal area (such as: gender assessments and social analysis during project preparation, differentiated reporting of output indicators, and additional measures based on the GEF's Gender Action Plan) are particularly relevant and will be incorporated as action points for the operationalization for the TDA Update Gender Assessment.

UN Environment recognizes the role of gender equality as a 'driver of sustainable environment development'[4], particularly to enhance environmental security and climate resilience; to assuage the stresses on natural resources and dependent communities, including unsustainable management of coastal resources; and to preserve the health of large marine ecosystems (like the Mediterranean Basin) which provide vital environmental and economic services to coastal populaces.

The MedProgramme has also developed a Gender Mainstreaming Strategy (Annex I), focused on bringing cohesive gender-responsive action throughout its diverse portfolio. The Strategy provisions for Child Projects to develop their unique gender action plans to address project objective-specific gender and socioeconomic dimension, and pioneers a pan-Mediterranean effort towards greater gender equality and environmental security among beneficiary countries.

Component 2 focus on developing an exclusive gender assessment to inform the TDA update will represent an important and proactive input for the overall MedProgramme gender agenda. In tandem, this gender mainstreaming activity will contribute to the fulfillment of mandates adopted by the GEF and UN Environment (as described above) and contribute to the global effort for better understanding and addressing the crosscutting issues of gender, water, and environmental security.

[1] Seager, Joni & Greco, Francesca. *Sex-disaggregated indicators for water assessment, monitoring and reporting*, United Nations Educational, Scientific and Cultural Organization (UNESCO). (2015)

[2] See here for the latest GEF Gender Mainstreaming guide (EN). GEF. (2017) (publication)

[3] "A new Policy on Gender Equality for the GEF". GEF official website. (2017) (news update)

[4] *Gender Equality and the Environment: Policy and Strategy.* UN Environment. (2015)

Documents

Title	Submitted

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

If yes, please upload document or equivalent here

The MedProgramme represents a pioneering effort, being the first GEF programmatic multi-focal initiative in the Mediterranean region, aiming to operationalize agreed-upon priority actions to reduce major transboundary environmental stresses in its coastal areas,
while strengthening climate resilience and water security, as well as improving the health and livelihoods of coastal populations. The MedProgramme will be implemented in nine beneficiary countries sharing the Mediterranean basin: Albania, Algeria, Bosnia and
Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco and Tunisia. The Lead GEF Agency is UN Environment. Its eight Child Projects12 cut across four different Focal Areas of the GEF (Biodiversity, Chemicals and Waste, Climate Change, and International Waters),
and involve a wide spectrum of developmental and societal sectors, ranging from banking institutions, the private sector, government and non-government bodies, industry, research, media, and various other organizations. Seeking to maintain funding agency (GEF) and lead agency (UN Environment) organizational priorities outlined above, as well as preparing for a proactive GEF-7 ready portfolio, this Gender Mainstreaming Strategy, developed in the Project Preparation Grant (PPG – between June to September, finalized in October) phase, will: provide tailored action points to improve the gender status quo in the countries; place gender-responsive activities and gender-aware policy-making at the core of the MedProgramme agenda; and partake as well as further the existing efforts on gender equality, to leverage opportunities for inclusive and accessible environmental and social co-benefits.

If possible, indicate in which results area(s) the project is expected to contribute to gender equality:

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

Find attached project's results framework.

A.5. Risks

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being, achieved, and, if possible, the proposedmeasures that address these risks at the time of project implementation.

1.

Risk	Risk ranking	Mitigation measures
Operational / delivery risks		
Security in Algeria renders project activities unimplementable	Medium	A review of UN Security Procedures during project preparation indicated that one-week advance notice is provided to evaluate risk and issue clearance for activities. This clearance procedure and timeframe will be accounted for the project workplan.
PCB contaminated equipment identified in inventories is no longer available for removal during project	Medium	When long intervals separate inventory work from actual disposal, it is common to find that transformers with a high resale value for scrap metal, may disappear from the store they were inventoried from. The project addresses this risk through a) an immediate disposal Phase 1 planned for year 1, minimizing the interval between inventory and disposal; and b) by coordinating with baseline projects in many countries (e.g. Lebanon, Montenegro) where detailed inventories and partial disposal is being completed. The national focal points are already connected with equipment owners and have raised their awareness of the POPs risk and need for secure storage of wastes until their disposal.
Sale of metallic mercury in advance of project activities	Medium	There is widespread global demand for metallic mercury and anecdotal evidence gleaned during project preparation indicated that metallic mercury is at real risk of being sold. Owners of stocks identified during the PPG in Tunisia and Algeria were committed to securing these stocks, and regular monitoring of the security of these sites will begin in Phase 1 pending their final disposal during Phase 2.

Basel permits take too long to process, exceeding project work plan	Medium	In most cases project countries are familiar with the process, having already administered exports in the past (Lebanon, Algeria, Tunisia, Bosnia..). For the Phase 2 countries information exchanges will be established with the Phase 1 countries in order to familiarize countries with the process in advance of the planned export timings.
Prevention of new POPs is not measurable in tonnes	Medium	The new POPs pilot projects are designed in two phases, with a first phase confirming and completing baseline data collected to establish realistic targets in terms of tonnes to be prevented. Funds for full prevention activities, based on a budget per tonne reduced, will be allocated only after this feasibility confirmation, by the Project Steering Committee or midterm review. Such funds will be diverted to disposal if prevention is deemed not feasible, to meet the GEB targets.
Labs with technical capacity to provide reliable analysis of new POPs not available in the region	High	Laboratory facilities to analyse the presence and concentration of new POPs, particularly PFOS, is limited in the region. Close cooperation between this project and the Africa regional Global Monitoring Programme (GEF ID: 4886) will ensure access to labs in other regions as necessary.
Impacts of climate change on the project	High	The Mediterranean Sea region has been identified as one of the main climate change global hotspots (i.e. the areas most responsive to climate change). The recent IPCC Fifth Assessment Report (2013-2014), considers the Region as "*highly vulnerable to climate change*"[1], and predict it "*will suffer multiple stresses and systemic failures due to climate changes*". Physical changes in the Mediterranean climate have been widely observed and such trends are projected to continue in the future. Major changes are related to an exceptionally high temperature increase compared to the European and global average, in the range of 2 to 6.5 °C by the end of the century. This is expected to be accompanied by a particularly large decrease in annual mean precipitation especially in summer and an increase in evaporation
Lack of sustained political commitment of beneficiary countries	Low	Strong involvement of beneficiary countries in project execution. The project benefits from the commitment of beneficiary countries to processes and activities of the Barcelona Convention including regular meetings where project issues can also be discussed on a more regular basis than the project-specific and funded meetings.
Data gaps continue to affect quality and applicability of assessments, ability to track progress and formulate adequate responses	Medium	Strengthening of regional cooperation and exchanges between technical, scientific and policy stakeholders through the TDA update and BC governance mechanisms Targeted assessments to improve knowledge
Lack of monitoring and reporting capacities; reluctance with provision/ sharing of data	Low	Countries assisted with monitoring and information systems upgrade, and with reporting to the regional level
Social and environmental safeguard risks *(see also ESERN checklist, Annex L)*		
Accident or spill during the field waste operations	Low	The environmental and social risk management framework of the project is well established and sets out a relevant risk assessment and initial environmental management plan (EMP) for each site where operations will be conducted. Health and environmental management capacity is a criterion for the selection of the international contractor who will be appointed to manage the operations. Finally, the contractor is required to produce a Health and Safety Plan for each site, detailing the precautionary and emergency measures to be in place before operations begin, including ongoing monitoring of worker exposure, air quality, and other relevant measures depending on the specific wastes being handled.

Wastes collected for temporary storage are not disposed for some reason and remain at the project end	Low	The project has been designed with two Phases of disposal, so that immediately ready stocks are disposed of quickly after project start up. A detailed planning phase is envisaged before any Phase 2 operations begin, to ensure that a) inventories are fully confirmed and verified and b) funds and human and technical resources are in place to fully address any centralized stocks in an environmentally sound manner.

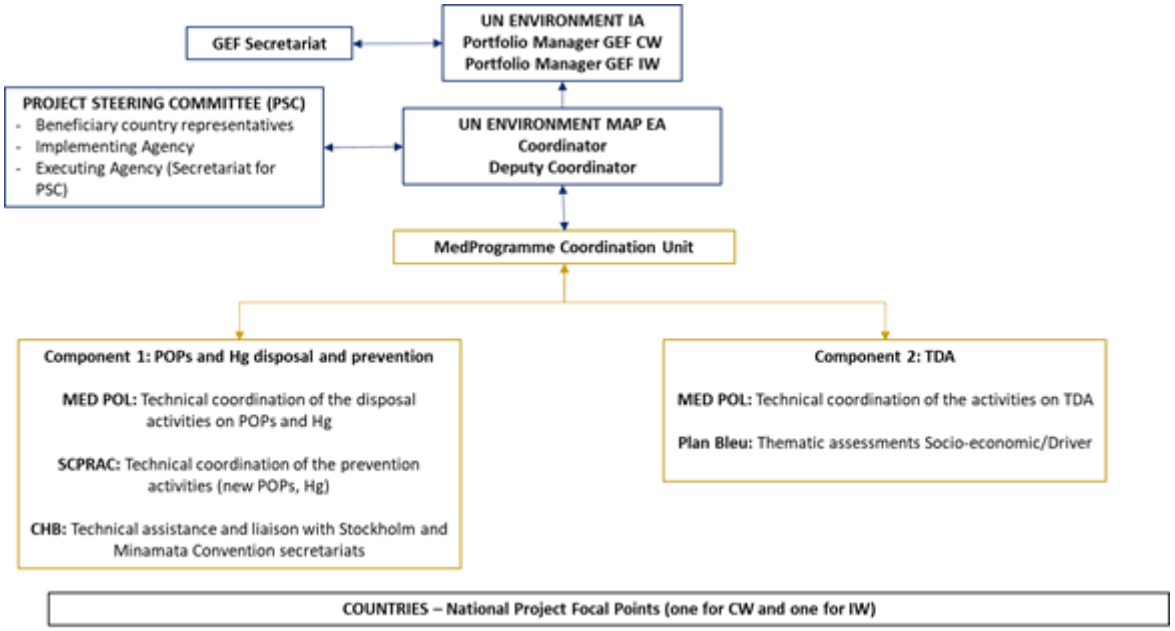
[1] IPCC, Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Chapter 21.5.1.2. Hotspots

A.6. Institutional Arrangement and Coordination

Describe the Institutional arrangementfor project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

The organizational structure for the coordination and management of the Child Project 1.1 is illustrated in Figure 6.

Figure 6: Institution Arrangements and Coordination of Child Project 1.1



Implementing Agency (IA): The GEF Units in the Ecosystems and Economy Divisions of UN Environment will serve as Implementing Agency (IA) for Child Project 2.1. The IA will be responsible for overall supervision of the project and will oversee its progress through the monitoring and evaluation of activities and through progress reports. The IA will report on the project implementation progress to the GEF and will take part in the Project Steering Committee (PSC). The IA will provide guidance and oversight of project execution by the Executing Agency (EA) including through the review and approval of work plans, budget allocations and budget revisions proposed by the Executing Agency.

Project Steering Committee (PSC): The PSC will be established and will carry out the function of a Project Board. The PSC will consist of: 1) beneficiary countries, the IA and the Executing Agency (EA) representatives; and 2) the MedProgramme Coordinating Unit (MedPCU) acting as Secretariat for the PSC. These are the Members of the PSC. Countries will be represented at the PSC at a technical, decision making level, e.g. national focal points for conventions (Stockholm, Minamata or Barcelona) and/or technical focal points (MED POL focal point). Following the model of the PPG Regional Consultation Meetings, the PSC meetings will bring together both Chemicals and Waste and International Water stakeholders, with parallel technical working sessions combined with plenary discussion and approval of workplans to maximize transparency and joint working across the two Focal Areas.

It is anticipated that to ensure an efficient use of the resources, PSC of different Child Projects of the MedProgramme will be organized back to back. These meetings will dedicate one session to inform the countries about the progress made by the entire MedProgramme followed by several sessions dedicated to specific decisions to be made by the countries for each Child Project.

The Executing Partners (EP) will intervene at the PSC to present the progress made and support the Secretariat for the PSC by providing background information on substantive and technical issues, as well as on modification to the Project Document and its annexes presented to the PSC by the MedPCU. The role of the PSC is to:

- Oversee the project;
- Provide overall guidance and ensure coordination among all parties;
- Provide overall supervision for project implementation;
- Approve the annual work plan and budget;
- Oversee the implementation of corrective actions;
- Enhance synergy between the project and other ongoing initiatives related to the GEF International Waters Focal Area;
- Ensure full coordination of the project with the entire MedProgramme.

Additional stakeholder representatives from private sector, academia, CSOs, NGOs, etc. can be invited to join the PSC during the project execution as observers. At all times, the PSC and its activities will comply with the policies, conditions and regulations of the UN and the GEF.

Executing Agency (EA): The UN Environment/Mediterranean Action Plan (UN Environment/MAP) will serve as the Executing Agency (EA) for the project. The EA will report on the project implementation progress to the IA (including those activities executed by the Executing Partners), and will organize and act as Secretariat to the PSC. The EA will be responsible for, inter alia, the following required activities to achieve the project objectives, outputs and outcomes:

- Establishing, hosting and supervising the MedProgramme Coordinating Unit (MedPCU);
- Acting as Secretariat for the Project Steering Committee (PSC);
- Ensuring that the project is executed according to the agreed work plan and budget;
- Review and submit required reporting obligations to the IA, including quarterly expenditure reports and annual Project Implementation report (PIR);
- Ensuring all procurement is done in compliance with Agency standards;
- Communicating with and disseminating information to the Executing Partners (EP) and other stakeholders.

The EA will ensure that all activities, including procurement of goods and services, are carried out in strict compliance with the rules and procedures of UN Environment and GEF. The EA will be responsible for the establishment, adequate staffing and uninterrupted functioning, throughout the project's life span, of the MedPCU.

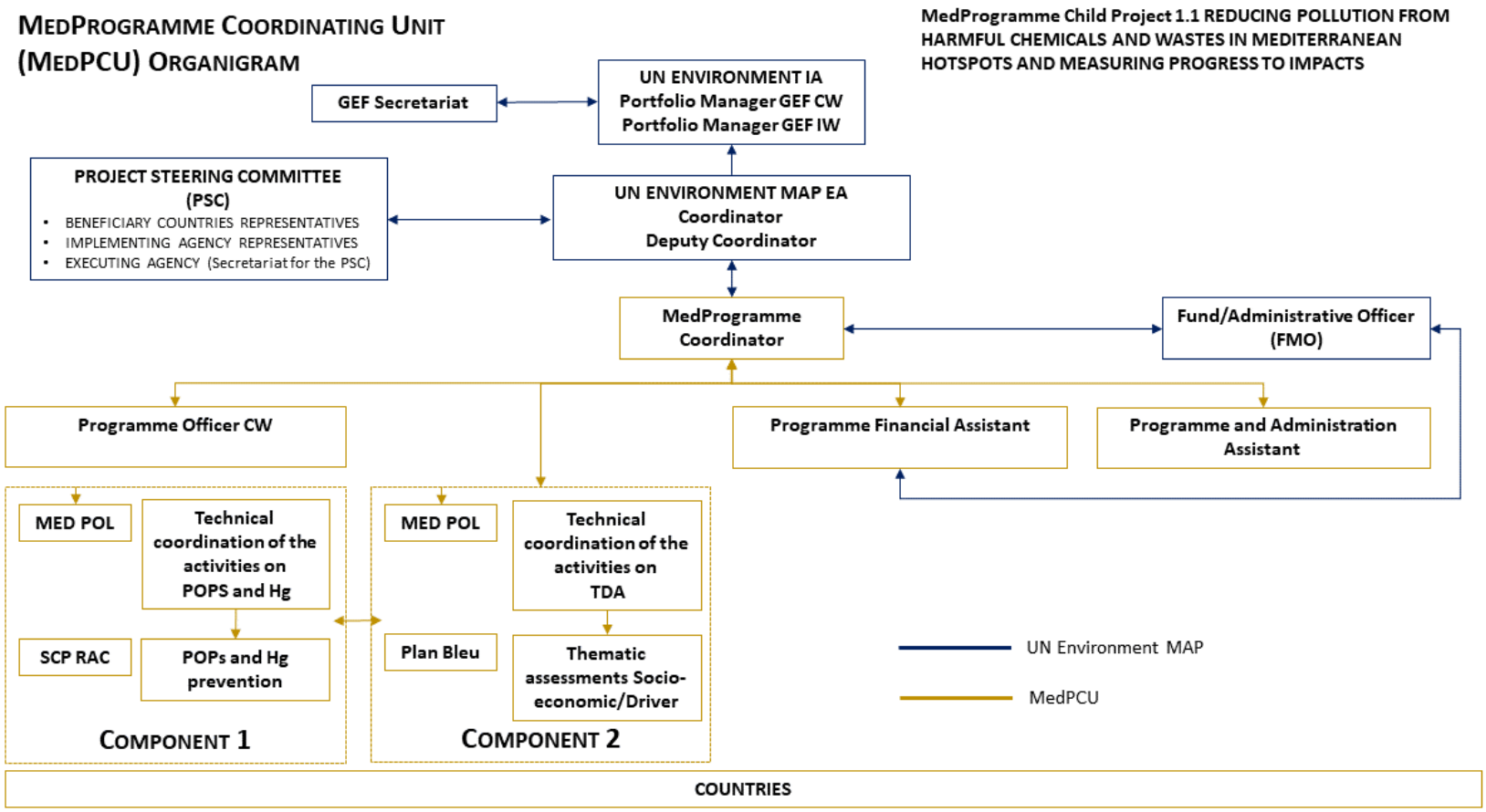
MedProgramme Coordinating Unit (MedPCU):

During the project development phase of the Child Projects under the MedProgramme particular attention was given to setting up a MedProgramme Coordinating Unit (MedPCU). The MedPCU was designed taking into consideration the high complexity of the MedProgramme. The staff under the MedPCU will deliver cross-cutting functions across the Child Projects of the Programme. Moreover cost efficiency will be maximized by centralizing the overall Programme management into a single unit, thus avoiding duplication of project management units, functions, task and deliverables. This choice will also ensure timely and consistent execution of the Child projects of the MedProgramme, allowing at the same time transfer of lessons learned and cross-fertilization. It is anticipated that the MedPCU will be staffed with the following core positions:

-
    1. MedProgramme Coordinator (P4)
    2. Programme Officer CW (P3)
    3. Programme Financial Assistant (G5)
    4. Programme and Administration Assistant (G5)

In addition to this, the MedPCU operations will be supported during specific periods of the lifespan of the Child Project 1.1, by one Gender Specialist and one Knowledge Management Specialist to be engaged through out-sourced contracts. The proposed organigram for the PCU is:

FIGURE 7: ORGANIGRAM OF THE MEDPROGRAMME COORDINATING UNIT



The MedPCU will be established, hosted and supervised by UN Environment/MAP (Barcelona Convention). The MedPCU will ensure coordination across the entire MedProgramme and the consistent execution of the seven Child Projects implemented by UN Environment and executed by MAP (Barcelona Convention), as well as the Child Project implemented by EBRD. In terms of MedProgramme coordination, the MedPCU will provide management functions to the Child Projects implemented by UN Environment and executed by UN Environment/MAP and EBRD.

The Unit will be responsible for, inter alia, the following tasks:

Project management services:

1. Manage the flow of information from the field and produce periodic monitoring reports, namely quarterly financial expenditure reports; annual expenditure forecasts and procurement plans; half-yearly narrative reports of progress including the annual Project Implementation Review; annual cofinance report;
2. Initiate, validate, sign and implement legal instruments with all bilateral partners including executing partners and countries where appropriate;
3. Organize travel and payment of DSA for staff and consultants as needed;
4. Coordinate and support the project activities of MED POL and SCP/RAC (Component 1), and MED POL and Plan Bleu (Component 2);
5. Organize the meetings of the Project Steering Committee (PSC) and serve as its Secretariat;
6. Ensure the Project governance and oversight of the financial resources from the GEF investment and the co-financing delivered by the Project stakeholders.

• *Programmatic coordination:*

1. Ensure that the execution of the entire MedProgramme is aligned and integrated with the priorities of the Contracting Parties to the Barcelona Convention, its 2016-2021 MidTerm Strategy and biennial Programmes of Work;
2. Ensure that the execution of the MedProgramme Gender and Knowledge Management Strategies is consistent across the entire Programme and adequately support and include the Child Project 1.1.
3. Record-keeping and facilitation of the delivery of the Programme monitoring and evaluation plan to allow reporting of progress towards the objectives of the MedProgramme as a whole by the Executing and Implementing Agencies.

MedProgramme Visibility:

1. Represent the MedProgramme in global events and initiatives;
2. Ensure that the Programme Annual Stocktaking Meeting is organized in a coordinated manner to efficiently serve the countries, IA, EA and stakeholders;
3. Share the Project achievements, products/outputs with the Project and MedProgramme's stakeholders;

Technical support, execution of technical tasks

•Refer to detailed deliverables in Table 15 below.

•

The cost of the MedPCU will be covered by PMC, cash co-financing provided by the Barcelona Convention and to a minor extent, by the projects budget as detailed in Table 14. The latter, will be allocated specifically for Child Project 1.1 to run technical and substantive tasks as described in Table 15 below.

TABLE 14: DETAILS OF THE BUDGET ALLOCATED FOR THE MEDPCU

MedProgramme Coordinating Unit (MedPCU)		Budget Allocated for the MedPCU US$		Total US$
	GEF Grants	PMC[1]	Technical Tasks[2]	PMC+Technical Tasks
Child Project 1.1 (GEF ID 9684)[3]	14,250,000	677,000	760,000	1,437,000
Child Project1.2 (GEF ID 9717)	*5,000,000*	90,000	-	90,000
Child Project 2.1 (GEF ID 9687)	7,000,000	333,000	90,000	423,000
Child Project 2.2 (GEF ID 9685)	*3,500,000*	166,000	84,000	250,000
Child Project 3.1 (GEF ID 10158)	*1,376,147*	65,500	58,500	124,000
Child Project 4.1 (GEF ID 9686)	*2,500,000*	119,000	95,000	214,000
SCCF Project (GEF ID 9670)	*1,000,000*	80,000	5,000	85,000
Total GEF Grants	33,626,147	1,530,500	1,092,500	2,623,000
Staffing costs as %		5%	3%	8%

1: Including travel costs of the MedPCU's staff.
2: Details of the technical tasks executed by the MedPCU's staff are provided under the sections A.6 og the GEF CEO Endorsement Request Template and in Annexes E (Annex O for CP1.1 - 9684), of each child project submission package.
3: Breakdown of the 760,000 allocated for Techcnial Tasks: 485,000 US$ from CW grants for the Programme Officer CW and 275,000 US$ from IW grants for the technical support on TDA of the Med POL Officer.

Table 15: Deliverables and costing of PCU technical support

Position Titles	$ /Person Month, Est Person Month	Tasks to Be Performed /Deliverables	Related workplan activity
MedPCU Technical support			
Chemical and Waste			
P3 Chemicals and Waste Programme Officer	12,000 / 3 months	· Provision of technical inputs for tender preparation related to Phase 1 Disposal of POPs in Algeria and Lebanon, based on UNEP C&W IA team formats. · Provision of input for the technical evaluation of submitted bids by contractors in coordination with UN procurement service. · Review of contract documents and related specifications. · Following up on work progress in the field, validating completed works, and reporting on percentage achievements for payment purposes to the contractor.	1.1.1: Phase 1 POPs disposal
	12,000 / 5	· Provision of technical inputs for tender related to Phase 2 POPs Inventory and · Prioritization, based on UNEP C&W IA team formats. · Provision of input for the technical evaluation of submitted bids by contractors in coordination with UN procurement service. · Review of contract documents and related specifications. · Following up on work progress in the field, validating completed works, and reporting on percentage achievements for payment purposes to the contractor with regards to the following deliverables: o National POPs inventory teams. o National site assessment and remediation studies. o Laboratory services for POPs and mercury analysis. o MapX platform. o Environmental Management Plans for stockpiles.	1.1.2: Phase 2 POPs inventory and prioritization
	12,000 / 4	· Provision of technical inputs for tender related to Phase 2 Disposal of POPs, based on UNEP C&W IA team formats. · Provision of input for the technical evaluation of submitted bids by contractors in coordination with UN procurement service. · Review of contract documents and related specifications. · Following up on work progress in the field, validating completed works, and reporting on percentage achievements for payment purposes to the contractor.	1.1.3: Phase 2 POPs disposal

Execution at National Level: The Beneficiaries Countries will designate a National Project Focal Point (NPFP) during the inception phase. The NPFP will act as the liaising person between the government, the EA and EP. The NPFP will be fully involved in the selection of the national consultants and experts which will support the execution of activities on ground under Components 1 and 2 of the Project. The NPFP will also facilitate collaboration with other country offices, as well as the MedProgramme Coordinating Unit (MedPCU). Moreover, special attention will be given in all countries to overcoming fragmentation across sectors in decision making related to project's goals and activities.

Executing Partners (EP): The MED POL Programme for the Assessment and Control of Marine Pollution in the Mediterranean (MED POL) of UN Environment/MAP will execute technical activities under Component 1 and Component 2 of the project. Additional EPs will execute activities of the project that fall within their core areas of expertise, based on cooperation agreements, including for the engagement of national partners as identified to manage and deliver project activities as per the Stakeholder Table in section A.3 above (e.g. Centre National des Technologies de Production Plus Propre in Algeria). These arrangements will be established with full consideration of the applicable UN Environment and GEF principles and procedures, including cost-efficiency and effectiveness.

The technical work on disposal of POPs and mercury (Component 1) will be executed in full coordination with the UN Environment Chemicals and Health Branch dealing with the Stockholm and Minamata conventions. For technical work on prevention of POPs and mercury, MED POL will work in coordination with MAP's Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) identified on the basis of its mandate and broadly recognized role and comparative advantages and with WHO on prevention of mercury in hospitals.

Component 2 will be entirely executed by MED POL in coordination with the Plan Bleu and 22 Contracting parties of the Barcelona Convention which indicated the development of an updated TDA as a priority for the region.

The responsibilities and roles of each of the Executing Partners is described in the current document and linked to specific actions, outcome and outputs.

The EPs will report on the project implementation progress to the EA and will take part in and contribute to the PSC as observers. The main roles of Executing Partners are to:

- Provide technical advice and engage with the countries for all aspects of the execution of activities under the relevant Components of the Child Project 1.1;
- Provide staff time and expertise in guiding their respective project activities;
- Supervise experts hired to ensure on time, high-quality deliverables;
- Manage the flow of financial resources earmarked for the implementation of activities;
- Review technical and substantive inputs by partners and countries on workplans etc.;
- Support the MedPCU and provide inputs for the preparation of the CP1.1 workplans, budgets, reports and other documents as relevant;
- Review the technical quality of the Child Project 1.1 outputs in coordination with the MedPCU.

The EP will meet periodically with the MedPCU to: 1) discuss emerging issues and challenges in rode to prepare timely contingency plans and measures; 2) update the MedPCU and the other EP on the progress made in the execution of their respective activities; 3) to prepare the working and information documents for the PSC and key events of the Project and the MedProgramme; and 5) to ensure effective coordination during the execution of the activities.

Additional Information not well elaborated at PIF Stage:

A.7. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels. How do these benefits translate in supporting the achievement of global environement benefits (GEF Trust Fund) or adaptaion benefits (LDCF/SCCF)?

The project design includes disposal activities in Algeria, Lebanon, Morocco, and Tunisia and allows for potential activities to be carried out (based on the PSC decision in the implementation phase, and in close coordination with Child Project 1.3) in Albania, Bosnia and Herzegovina, Egypt and Montenegro and Turkey. In these countries, local communities around activities sites will be recipients of both health and environmental benefits, as POPs pesticides, PCBs, Mercury and new POPs will be removed, and therefore mitigating any further risk of exposure to humans and ecosystems. The project will also improve regulatory controls on new POPs and mercury which are still used in key sectors, including health care. More broadly, these activities will have national and regional socioeconomic benefits through decreased pollutant loads being released into the Mediterranean watershed.

Under Component 1, the project will remove sources of land based pollution, thus directly improving both health and the local environment. Given the reliance of the region on tourism, a cleaner littoral and marine environment will bring socio-economic benefits to local populations who will be less exposed to harmful pollutants and will also benefit from improved perception of the location for tourism and investment.

The project will also support industries in the region, including small and medium sized and local enterprises, to adopt alternatives to industrial POPs that are either already banned or will be banned in the future. By investing now the MedProgramme will support current users of POPs to shift their production and procurement practices in coordination with regulators, thus reducing costs of inaction and potential future regulatory action. The replacement of industrial POPs in middle and low income countries is lagging, with many users continuing to use these ingredients, so the project will allow the beneficiary countries to become leaders and be widely promoted through case studies, thus increasing their visibility and reputation in the region and beyond.

Under Component 2 (International Waters), MED POL will work with Plan Bleu to support a set of inter-related activities in all the GEF-eligible Mediterranean countries to enable them to better monitor and assess the state of marine and coastal environment, analyse causes of environmental degradation, and to prioritise issues necessitating actions. The TDA update in particular will include a gender assessment and strengthen the knowledge base in areas such as impacts of climate change on natural and socio-economic systems, impact of pollution on marine ecosystems, potential for blue economy development, etc. Capacities to identify trends and measure progress will be enhanced, including progress with the achievement of GES and SDGs on regional and national levels. This will in turn lead to increased environmental and socioeconomic benefits in the region where a large share of population depends (directly or indirectly) on the economic activities related to the sea.

The annual economic value of sea-related economic activities in the Mediterranean has been assessed at US$ 450 billion, characterising the 'Mediterranean economy' as one of the largest in the region (following national GDPs of France, Italy, Spain and Turkey). According to available estimates, international tourist arrivals in the Mediterranean are expected to reach 500 million in 2030 . Current level of benefits and potential for future growth are directly dependent on the health and integrity of marine and coastal ecosystems, to which the project activities will contribute through the TDA update, preparation of report on progress to impact, upgrade of IMAP to also cover offshore areas, and development/ implementation of data sharing policy in the region.

By improving the information and knowledge base for coordinated responses to priority pressures and their root causes, Component 2 activities will contribute significantly to preservation of the unique ecosystems and economic assets on the regional and national levels, contributing at the same time to the achievement of SDGs. Regional cooperation will be strengthened and further developed to ensure synergies and maximise efficiency. Improved availability and accessibility of data will enable stronger stakeholder participation and engagement on both national and regional levels, thus strengthening governance mechanisms. Economic benefits for the coastal populations of GEF-eligible Mediterranean countries will be secured through the project's contribution to preservation of resource base and ecosystems value, referring also to the long term. Moreover, the project will create conditions for better management of priority transboundary pressures which is expected to generate health benefits for the affected populations. Gender assessment to be conducted within the TDA update process is expected to contribute to MedProgramme gender mainstreaming overall, as well as to generate direct benefits on the local level by providing data and forums for better understanding and addressing the crosscutting issues of gender, water and environmental security.

A.8. Knowledge Management

Elaborate on the Knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives (e.g. participate in trainings. conferences, stakeholder exchanges, virtual networks, project twinning) and plans for the project to assess and document ina user- friendly form (e.g. lessons learned briefs, engaging websites, guidebooks based on experience) and share these experiences and expertise (e.g. participate in community of practices, organize seminars, trainings and conferences) with relevant stakeholders.

Child Project 1.1 will be managed under the umbrella of the MedProgramme, which is composed of eight child projects addressing the GEF focal areas of International Waters, Chemicals and Waste, and Biodiversity. Effective knowledge management (KM) is a core leveraging mechanism of the MedProgramme to achieve up scaling of approaches, policies and technologies promoted by the Programme at multiple scales. The Knowledge Management Strategy (Annex H[1]) will be implemented under Child Project 4.1 and will support the KM activities of all Child Projects, maximizing their effectiveness in providing opportunities for south-south learning, fostering intergovernmental cooperation, using monitoring and evaluation (M&E) tools and geospatial services, applying best practices and developing portfolio-wide training and communication strategies.

The results achieved through this project will be highly relevant for policy-making in the region, directly supporting the contracting parties of the Barcelona, Minamata, Basel and Stockholm Conventions. Ensuring and strengthening the science-policy interface (SPI) is of paramount importance in this project: it will require that technical and scientific findings are properly digested and shared with relevant decision-makers and that a two-way dialogue is reinforced to ensure that interventions are fittingly contributing to national priorities. The MedProgramme KM system implemented through the Support Child Project 4.1 will support this objective by facilitating sharing of information among project countries and showcasing progress towards impact regionally.

The data and information produced under Component 1 of the project will be translated and shared in a variety of means according to the intended recipients. For example, visualization tools (GIS and story maps) will be used to timely and effectively illustrate progress and achievements on pollution reduction in hot spots . Successful case studies will be published on the MedProgramme platform and shared widely through the identified communication channels. Messages and recommendations emanating from results of phase I and II of the project will be disseminated to support informed policy-making and encourage broader adoption of replicable innovative practices for wastes and hazardous chemicals reduction.

The outputs foreseen by Component 2 of the project will provide invaluable policy instruments to environmental decision-makers to identify pressures of transboundary nature and set a basis for integrated and effective solutions through strengthened regional cooperation. Updating the Transboundary Diagnostic Analysis of the Mediterranean (first done in 2005) will improve the state of coastal and marine ecosystems in the Mediterranean. A targeted strategy to disseminate its findings will be supported by Child Project 4.1 to make sure that each direct and indirect stakeholder group will be engaged and informed. The process to prepare a proposal for a Data sharing policy for the Mediterranean, thus enhancing the implementation of IMAP at national level, will be supported at all levels of the KM strategy. Moreover, the KM tools implemented through Child Project 4.1 will be used to assess progress and provide inputs for reporting.

The above-mentioned specific activities supported by Child Project 4.1 are not exhaustive and a more detailed plan will be agreed during the inception phase of the MedProgramme.

The stakeholders identified by the analysis in section A.3 will be considered as both knowledge providers and knowledge beneficiaries, and they will be engaged in all relevant activities at the MedProgramme level. These groups could be further enriched during project execution with potential new partners at the international and national level. The legacy of the project will also be ensured through the KM system which will provide a permanent repository for the project in the MedProgramme platform and the active dissemination of its findings beyond the project life (the Barcelona Convention Secretariat will bring forward the results of the MedPogramme and promote its contribution to enhanced environmental security in the region).

A centralized system coordinated by the MedProgramme Coordination Unit (Med PCU) is designed to capture, digest and share the vast amount of information and knowledge generated across the MedProgramme portfolio with its intended audiences and stakeholders. Each Child Project participates in the common knowledge management (KM) strategy in order to maximize efficiency, ensure good governance of the portfolio and achieve greater impact at the different functional levels identified (portfolio level, general public level and policy- and decision-making level). While specific needs related to the diverse outputs of the individual projects will be analyzed on a case-by-case basis, all Child Projects are expected to contribute to the overall MedProgramme KM activities as described in the following text (included in the project documents of each Child Projects).

KM Platform

A 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 will be implemented by the MedPCU in close consultation with all Child Projects. The integrated platform will host: (1) a project management/coordination tool; (2) a public portal including sub-webpages for each Child Project; (3) visualization tool(s) to display digitalized representation of data through GIS and other suitable means; and (4) a database for raw/primary data.

Child Projects are expected to contribute to each of these components as follows:

1. Upon initiation of the MedProgramme, every Child Project will receive specific training on how to use the project management tool selected by the Med PCU. Features powered by this tool include (but are not limited to): automated reporting, task monitoring, calendars, live editing, Gantt–Charts, time tracking, encrypted security, back-ups, file management and cloud repository, integration with other products, role-based access control, mobile apps, email integrations, and discussion boards. Project managers (and designated project collaborators) are expected to use the tool to facilitate communication and information exchange throughout the MedProgramme, promote knowledge sharing and peer-to-peer learning, ensure tracking and monitoring of progress, and meet their reporting requirements for the Med PCU.

2. The outward-facing portal will be populated with key information showcasing progress towards impact and the contribution of the MedProgramme to global and regional environmental goals. In addition to the umbrella portal, each Child Project will have dedicated sub-pages for their specific projects. The Child Projects are expected to provide regular information (in different multimedia formats) to generate content for their respective project sub-pages and the overall programme portal. The Med PCU will be responsible for curating the information provided and packaging them for the intended audiences.

3. One or more visualization tools will be used to display information generated by each project. Different types of data (be them quantitative, normative or qualitative) are best visualized through a variety of ways, such as GIS, story maps, map dashboards, infographics, trend line charts, etc. Child Projects will be prompted to submit their inputs on a rolling basis to make sure that every result/achievement is captured through one or more of these tools.

4. A shared data model/protocol will be agreed at the beginning of the MedProgramme to ensure that projects will compile relevant data with a standardized approach and enable a harmonized data entry system. Issues related to open data, ownership, quality and review of data will be addressed in this exercise; a mapping of voluntary standards will help to evaluate feasible options. Raw/primary data will be stored in a database with flexible restricted/public access.

Milestone Events

· *Annual Stocktaking Meetings*: All project partners are expected to attend, and meaningfully participate in, the Annual Stocktaking Meetings of the MedProgramme. These are major regional events organized by the Med PCU in cooperation with all Child Projects and country representatives and will take place on a rotation basis in different project countries. The meeting will involve: all Child Projects and Governments of the participating countries, the MedProgramme's implementing and executing agencies, the GEF Secretariat and Independent Office 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 (Sahara and Sahel Observatory, 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.
These meetings aim 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. The Annual Stocktaking Meetings will provide an opportunity to all Child Projects to showcase their implementation advancement, progress towards impacts and problems encountered, and to engage with a broad audience of peers and stakeholders sharing similar objectives within the overarching goal of achieving environmental security in the Mediterranean Basin. The Annual Stocktaking Meetings 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. The participation of regional and global media will raise public awareness across the Mediterranean countries and beyond. The design, objectives and architecture of the Annual Stocktaking Meetings will be defined during the first year of MedProgramme operation and approved at the Child Project 4.1 Steering Committee level. Child Projects will be informed about modalities for their contributions in detail. The first Annual Stocktaking Meeting will be held during the second year of MedProgramme execution.

· *GEF events*: The MedProgramme will be featured in all relevant GEF events and activities involving the four focal areas addressed by the Programme (International Waters, Chemical and Waste, Biodiversity and Climate Change). For the IW focal area see "Synergies with IW:LEARN".

· *Global events*: 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. Participation in selected global and regional events, as well as in significant ongoing awareness raising campaigns, will be evaluated by the Med PCU according to relevance and impact criteria. Child Projects will contribute to these events in different forms, ranging from physical attendance, production of specific products, content and multimedia material to be packaged in suitable products.

· *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 different Child Projects, a launching event of the MedProgramme could be organized in the form of a press conference to coincide with the kick-off 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. Project managers will be timely informed about practical details of these events and modalities for contribution.

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 different 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. 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) 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 below). 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.

Communication, outreach and awareness raising

· *MedProgramme identity:* In terms of visibility, the MedProgramme will be presented in a holistic and coherent way (i.e. 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 Child Project, creation of sub-websites within the MedProgramme web-portal, organization of tailor-made trainings, preparation of specific publications, social media services, among others. To this end, the med PCU will develop, in close consultation with project managers of all Child Projects, a proposal and, once adopted, all Child Projects are encouraged to use it consistently.

· *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 different types of inputs in order to document their activities and progress, such as high-quality pictures, articles, statistics, quotes, interviews, footage, among others. The Med PCU will inform all Child Projects about the format of these bulletins and the corresponding timelines for submission.

· *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 and animations, graphic novels, documentaries, podcasts/radio programmes, infographics, digital interactive stories/articles/interviews, microblogging, e-books, art exhibits, among others. The Med PCU will inform Child Projects about the type of multimedia material that will be necessary to collect for the preparation of 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 considered in light of budget constraints and upon due evaluation of stakeholders' needs.

· *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.

· *Engagement with media and testimonials*: To maximize impact of the MedProgramme and share its findings and results with the widest possible audience, the Med PCU aims to reach out to a different number of media outlets and journalists with a view to establish long-lasting collaborations. To this end, Child Projects will be asked to facilitate contacts with national and local media of the countries where the activities are implemented (for instance, by providing the Med PCU with a list of relevant contacts). A series of direct interactions with communications specialists, media experts and social media influencers is foreseen by the KM Strategy throughout the duration of the Programme to increase mutual understanding and flow of information.

· *Goodwill ambassadors*: The Med PCU also aims to reach out to renowned personalities from different realms (such as art, sports, entertainment or fashion) to act as ambassadors for the MedProgramme and raise awareness about the main environmental challenges (and solutions) in the coastal areas of the Mediterranean. The Child Projects will be prompted to suggest names, and facilitate contacts when possible, of suitable and potential "goodwill ambassadors" of relevance in the region.

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[2] 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 MedProgramme 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.

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

· *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.

· *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.

Specific guidance on how to concretely contribute (format, frequency, purpose, etc.) to each of the aforementioned activities will be provided during the initial phase of the MedProgramme as a result of targeted consultations carried out by the MedPCU.

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[1] Annex H, the Knowledge Management strategy, was jointly developed across all the Child Projects of the MedProgramme and is referenced in other CP documents as Annex P.

[2] More info at www.iwlearn.net

B. Description of the consistency of the project with:

B.1. Consistency with National Priorities

Describe the consistency of the project with nation strategies and plans or reports and assessements under relevant conventions such as NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

Country	Stockholm Convention NIP Priority	Mediterranean Action Plan NAP Priority
Albania	Improving national capacities for management, treatment, monitoring, removal and disposal of oil and equipment contaminated with PCBs Inventory and disposal of PCBs contaminated equipment and oil	Rehabilitation of six hotspots with historic pollution (in Elbasam, Berat and Lushnje) Pollution reduction and control, in particular for the areas assessed as priority hot spots (Erzeni Ishmi river basin and Seman river basin).
Algeria	Elimination of remaining POPs quantities in the country; Preventing emissions of new POPs; Remediation of contaminated sites.	Reducing pollution affecting hot spots (seven coastal regions assessed as hot spots: Tlemcen, Oran, Chlef, Alger, Béjaïa, Skikda, and Annaba). Gradual reduction of total releases of mercury from chlor alkali plants and their decommissioning/ change of technological process by 2020

Bosnia and Herzegovina	Improving legal framework, eliminating discrepancies between entities' regulations Improving data on equipment containing or contaminated with PCBs, as well as on contaminated sites Improving management of PCBs and of equipment containing PCBs	Reduction of pollution affecting hot spots, in particular from inadequate urban wastewater and solid waste management
Lebanon	Strengthening of legal framework for improved PCB management, capacity building and disposal of remaining quantities of PCBs; remediation of contaminated sites. Management of new POPs	Reduction of pollution affecting eight priority hot spots (all located along the coast), including sites with pronounced PCBs contamination (e.g. Baouchrieh transformers repair and storage site in Beirut) Safe storage and containment of mercury waste produced by healthcare sector by 2025
Montenegro	Development of capacities for environmentally safe use and disposal of PCBs containing equipment; preparation of plans on replacement of PCBs containing equipment and its disposal	Remediation of sediment contamination (heavy metals, PAHs and PCBs) at Bijela shipyard hot spot
Morocco	Improved POPs management, including new POPs; disposal of remining quantities of PCBs and utilization of PCBs decontamination platform	Reduction and control of mercury related pollution, including: Reduce mercury concentrations in the discharges of COELMA company by 20% annually; Decontamination of sites polluted with mercury; and Improve management of mercury containing waste
Tunisia	Elimination of remaining stocks of POPs (pesticides, PCBs) and remediation of contaminated sites. Management of new POPs	Elimination of POPs and elimination and rational management of mercury; remediation in hot spot areas (Golfe de Tunis and Golfe de Gabes)

Turkey	Inventory of emissions, releases, stockpiles and contaminated sites (for POPs of both Conventions) Reduction of releases of intentionally and unintentionally produced POPs and elimination of POPs stockpiles Capacity building in the regulating and permitting governmental sector and also in private sector (i.e. POPs management and BAT/BEP implementation in waste incineration, ship recycling, chemical industry, BFR producers and users, etc.)	Strengthening corporate/local capacities in terms of the management of POPs Description of present POP stocks and removing the ones, which are prohibited Updating the inventory related to equipment with PCB Performing 4 pilot studies to identify potential area contaminated by POPs and to clean these areas. Decrease of POPs pollution emissions by applying current best techniques in industry (MET) Determination of country status related to mercury

Two of the project countries have additionally completed their Minamata Initial Assessments (Bosnia and Herzegovina and Montenegro) which confirm the priorities expressed in the baseline tables above (Table 7). A further two MIAs are underway in Albania and Morocco.

Project interventions (Component 2) will directly support national priorities related to: improvements of environmental data and abilities to track and assess progress towards set goals; IMAP implementation; and national SDGs implementation, monitoring and reporting. Measures aimed at strengthening of national monitoring and reporting programmes are prioritized in the Barcelona Convention NAPs for all the GEF eligible Mediterranean countries, including identification of indictors to track progress towards fulfilment of NAP operational objectives. Moreover, the Mediterranean countries are developing national IMAP monitoring programmes in compliance with the Decision IG.22/7 of the Barcelona Convention Contracting Parities on IMAP implementation. National SDGs reporting is also being progressively developed across the region, in line with the Agenda 2030 and national sustainable development strategies.

C. Describe The Budgeted M & E Plan:

Project M&E will be conducted in accordance with established UNEP and GEF procedures and will be provided in the context of MedProgramme execution framework. The M&E plan includes inception report, annual review and final evaluations. It also includes provision for ongoing monitoring of the execution of gender-disaggregated monitoring by a Gender Specialist based in the Programme Coordination Unit at MAP. The project's M&E Plan will be presented and finalized in the Project's Inception Report following a collective fine-tuning of indicators, means of verification, etc. Please refer to Annex Q for further details of each proposed M&E activity.

Table 11: Monitoring and Evaluation Plan

M&E activity	Purpose	Responsible	Budget (US$)	Time-frame
Inception workshop and Annual Stocktaking meetings	Full 5-year workplans, budgets, procurement plans etc will be confirmed. Inception report to be finalized as key project document.	EA	20,000 for 1 Inception workshop and 80,000 for 3 Annual Stocktaking meetings (total 100,000)	Inception workshop within 8 months of project start. Annual Stocktaking meetings once a year starting from the 2nd year of execution.
Project Steering Committee	Annual review of project activities, outputs and intended outcomes; and detailed annual implementation and budget planning The first year's SC meeting is also the Inception Workshop where the	EA	125,000 for 5 meetings	At least annually Additional component-specific coordination/ advisory meetings will also be held to support preparation of recommendations to PSC.
Gender Specialist (MedPCU)	This activity will be ongoing on an as-needed basis, and will provide support to the development and implementation of gender-disaggregated M&E tools and reports	EA	Included in PMC and component budgets	Ongoing
Travel for project monitoring	Monitoring and support to the technical activities under Components 1 and 2)	EA and regional consultants	Included in component budgets	1-2 missions per year, depending on needs e.g. to unlock bottlenecks or support partners
Lessons sharing and KM	Knowledge management strategy implementation, including contribution to IW:LEARN and consumables	EA	191,000	Throughout implementation
Midterm Review	Reviews progress and draws lessons on execution issues and impact of project activities to midterm. Proposes corrective actions as required.	IA- Consultant	80,000	At the midterm of the project
Terminal report	Reviews effectiveness against implementation plan Highlights technical outputs Identifies lessons learned and likely design approaches for future projects, assesses likelihood of achieving design outcomes	EA	Included in EA fee	At the end of project implementation
Independent Terminal evaluation	Reviews effectiveness, efficiency and timeliness of project implementation, coordination mechanisms and outputs Identifies lessons learned and likely remedial actions for future projects Highlights technical achievements and assesses against prevailing benchmarks	UNEP Evaluation Office	140,000	At end of project implementation

Total indicative Monitoring &Evaluation cost	**636,000**	

PART III: Certification by GEF partner agency(ies)

A. GEF Agency(ies) certification

GEF Agency Coordinator	Date	Project Contact Person	Telephone	Email
Kelly West	3/26/2019	Kevin Helps	0207623140	kevin.helps@un.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Child Project 1.1. **Reducing pollution from harmful chemicals and wastes in Mediterranean hotspots and measuring progress to impacts[1]**

Project Objective/ Outcome	**Objective/Outcome level Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**UNEP MTS reference* and link to SDGs**
Project Objective: To achieve measurable reductions in levels of POPs and mercury in priority Mediterranean coastal hot spots and catchment areas.	Capacity in project countries to address land-based sources of pollution in Mediterranean catchments (POPs and mercury) and monitor pollution levels	Despite extensive regional and national activities in Mediterranean countries to safeguard, collect and dispose of PCBs, significant stock of PCB contaminated oil and equipment and mercury remain, and new POPs are widely used in the project countries.	Capacity of national authorities to eliminate PCB and POPs stockpiles Updated legislation and greater awareness of decision-makers on new POPs Updated assessment and monitoring arrangements	MapX – national stockpiles visualization Regulations and procurement procedures Monitoring station records	Stocks are confirmed during project inventory process, and made available to the project for removal Effective alternatives to new POPs are available in project countries	EA1 and EA2 SDG3.9 on deaths from hazardous chemicals[2] SDG 12.4 on sound management of chemicals and wastes[3]
Component 1: Chemicals and Waste						
Outcome 1. Reduction of harmful chemicals and waste (POPs and mercury) in coastal hotspots and catchment areas	-No. of tonnes of POPs waste and new POPs eliminated - No. of tonnes of POPs prevented	POPS = 3,346 tonnes inventoried during PPG (refer to Table 9 – Quantified summary table of potential GEB by country	Mid-Point Target: 586 t POPs removed End of project Target Disposal of 2000 tonnes of POPs, including estimated 650 metric tons of new POPs prevented t	Waste destruction/ disposal certificates	Export of wastes is effectively tendered and completed Results of pilot activities show alternatives to new POPs exist and are effective	EA1 and EA2

Project Objective/ Outcome	Objective/Outcome level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	UNEP MTS reference* and link to SDGs
	-No. of tonnes of Hg waste disposed of/safely stored - No. of tonnes of Hg prevented	Mercury wastes= 84.7 tonnes inventoried during PPG (refer to Table 9 – Quantified summary table of potential GEB by country	<u>End of project Target</u> Reduction and safe storage of 50 tonnes of mercury wastes 300 Tonne of Hg containing equipment prevented	Waste stabilisation and long term storage certificates	Owners of metallic mercury avail stocks to project for disposal	EA 1 and EA2
Output 1.1: Management and disposal of 2,000 tonnes of POPs	No. of national POPs inventories completed Number of Environment Management Plans approved for stockpiles and contaminated sites Number of tenders awarded for POPs management/ disposal	Project preparation activities verified 532 t of PCB contaminated oil and equipment in Algeria and Lebanon, ready for safeguarding, collection and disposal. Baseline research also identified 2,596 t of potentially PCB contaminated oil and equipment and POPs pesticides, which requires verification prior to safeguarding and disposal in Albania, Algeria, Tunisia, Morocco, and Lebanon.	<u>Mid-Point Target:</u> 1 tender awarded for disposal of Phase 1 stocks (from Algeria, Lebanon) 5 national Phase 2 inventories available EMPs drafted in at least 3 countries <u>End project Target:</u> 5 national EMPs approved Minimum 2 tenders awarded covering Total of 2000 tonnes of POPs	Tender documentation Inventory spreadsheets/ GIS EMPs publicly disclosed Tender documentation	Political stability required for collection, repackaging and disposal activity, especially for Algeria.	EA2 and EA3
Output 1.2: Management and safe storage of 50 tonnes of mercury wastes	Number of Environment Management Plans approved for stockpiles and contaminated sites	Baseline research shows 0.27t of elemental Hg in Tunisia, as well as 30t of mercury contaminated construction waste in Tunisia and 20t in Bosnia and Herzegovina. .	<u>Mid-Point Target:</u> 4 EMPs drafted for mercury waste removal <u>End project Target:</u> Assessment and management plan for Tunisia site	Inventory; Clean up report;	Owners of metallic mercury will be willing to make it available to the project for disposal	EA1 and EA2

Project Objective/ Outcome	Objective/Outcome level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	UNEP MTS reference* and link to SDGs
Output 1.3: New POPs reduction and alternatives pilot projects completed	No. of new POPS alternatives demonstrated through pilot projects No of trained staff applying new POPs approaches on regulation, procurement, and adoption of alternatives	TOTAL: Up to 1302 tonnes of New POPs used / imported per year in three countries (Lebanon, Morocco, Tunisia, see Table 10 in Proposed Alternative Scenario section).	Mid-Point Target: 3 new POPs inventories and databases completed End project Target: At least 30 trained individuals actively support pilot projects Three case studies published on pilot projects	Updated inventories and baseline included in the SoEr/TDA report	Users of new POPs able and willing to share data and commercial practices	EA1 and EA2
Output 1.4: Mercury reduction through pilot activities on mercury alternatives	No of detailed national mercury stock-takes at hospitals and health centres No. of pilot project approaches developed to replace mercury in health care	National inventories of mercury containing devices in use in hospitals and health centres does not exist. No disposal of mercury containing equipment in either country (Lebanon or Tunisia)	Mid-term target: 2 national inventories of mercury medical devices (Lebanon, Tunisia) Final target: 3 national inventories completed 3 national pilot projects completed	Inventories published Pilot project case studies	Ministries of Health and hospitals are willing to share data Wastes can be effectively treated at disposal facilities	EA1 and EA2
Component 2: International Waters (3 M USD, IW)						
Littoral countries enabled to identify trends and progress to impacts	Updated TDA including gender assessment	Changed context in the Mediterranean since previous TDA	TDA is updated by the end of the programme	Final TDA document Analyses and reports prepared in the course of TDA update	Cooperation between technical, scientific and policy stakeholders and TDA working groups is maintained	

Project Objective/ Outcome	Objective/Outcome level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	UNEP MTS reference* and link to SDGs
	Report on progress to impacts	Data gaps affect quality and applicability of assessments, ability to track progress and formulate adequate responses	Report on progress to impacts and on the achievement of relevant SDGs is prepared	Report on progress to impacts		
	Offshore monitoring strategy and identification of 20 locations for the offshore monitoring stations	Monitoring programs focused on areas close to coasts	Minimum 20 locations for offshore monitoring stations identified	Project Steering Committee meetings minutes PIRs, midterm and final evaluations	Commitment of key stakeholders to identify priorities and to strengthen regional responses towards achievement of GES and SDGs implementation is maintained and strengthened	
	Data sharing policy for the Mediterranean	Availability of synchronized datasets and accessibility of data need to be improved with the view to improve knowledge on the Mediterranean marine environment	Data sharing regional policy prepared for the deliberation of the Contracting Parties to the Barcelona Convention	Working documents and decisions of the Barcelona Convention governing bodies	Countries and data owners continue upgrading monitoring and information system and reporting to the regional level	

Project Objective/ Outcome	Objective/Outcome level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	UNEP MTS reference* and link to SDGs
Output 2.1: Updated TDA including gender assessment	Multi-disciplinary TDA team representing key stakeholders Thematic assessments (including gender) Meetings and capacity building workshops	Existing TDA from 2005 (with 2015 climate change related supplements) outdated Gender issues not addressed in the previous TDA Numerous assessments and data collection processes (completed and planned) available to support TDA update, nevertheless significant knowledge gaps remain	Transboundary issues prioritized, and causal chain analysis performed Thematic assessments completed Final TDA document approved by the Project Steering Committee	Final TDA document Analyses and reports prepared in the course of TDA update Project Steering Committee meetings minutes PIRs, midterm and final evaluations	Cooperation and coordination within TDA team and strong involvement of countries is maintained throughout the TDA process Countries/ data owners provide necessary data and information	
Output 2.2: Report on progress to impacts	Report on progress towards project's impacts and on the achievement of relevant SDGs	Capacities to track impacts of implemented policies, programmes and projects are insufficient SDGs reporting is at an early stage of development	By the end of the Programme, report on progress to impacts is prepared	Report on progress to impacts MedProgramme knowledge management products PIRs, midterm and final evaluations	Structured quantitative and qualitative data on the implementation of the project is available and enables identification of its impacts National SDGs reporting is strengthened	

Project Objective/ Outcome	Objective/Outcome level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	UNEP MTS reference* and link to SDGs
Output 2.3: Offshore monitoring strategy and identification of 20 locations for the offshore monitoring stations	Number of additional monitoring stations Offshore monitoring strategy outlining rational and methodology for selection of stations and providing guidance for IMAP compatible offshore monitoring Up to 5 pilots to support IMAP implementation (selected indicators) at offshore monitoring stations	Monitoring programs focused on areas close to coasts Gaps identified as regards national IMAP implementation	At least 20 offshore monitoring stations defined and guidance for IMAP compatible offshore monitoring prepared Countries assisted with IMAP implementation at selected offshore monitoring stations	PIRs, midterm and final evaluations Working documents and decisions of the Barcelona Convention governing bodies	Commitment to enhanced IMAP implementation is maintained Cooperation on sub-regional level is strengthened	
Output 2.4: Data sharing policy for the Mediterranean	Assessment of national and regional databases Recommendations on the design of the IT model to connect national with regional network/ platforms Proposal of a data sharing policy	SEIS principles not fully implemented across the region There is a need to integrate existing national and regional databases	Data sharing regional policy prepared as an input for the deliberation of the Contracting Parties to the Barcelona Convention	PIRs, midterm and final evaluations Working documents and decisions of the Barcelona Convention governing bodies	Willingness of Barcelona Convention Contracting Parties to accept and implement regional data sharing policy Commitment to achieve compatibility of national databases/ IT platforms with MAP Info-System	
Component 3: Monitoring and Evaluation and information dissemination (IW and CW)						

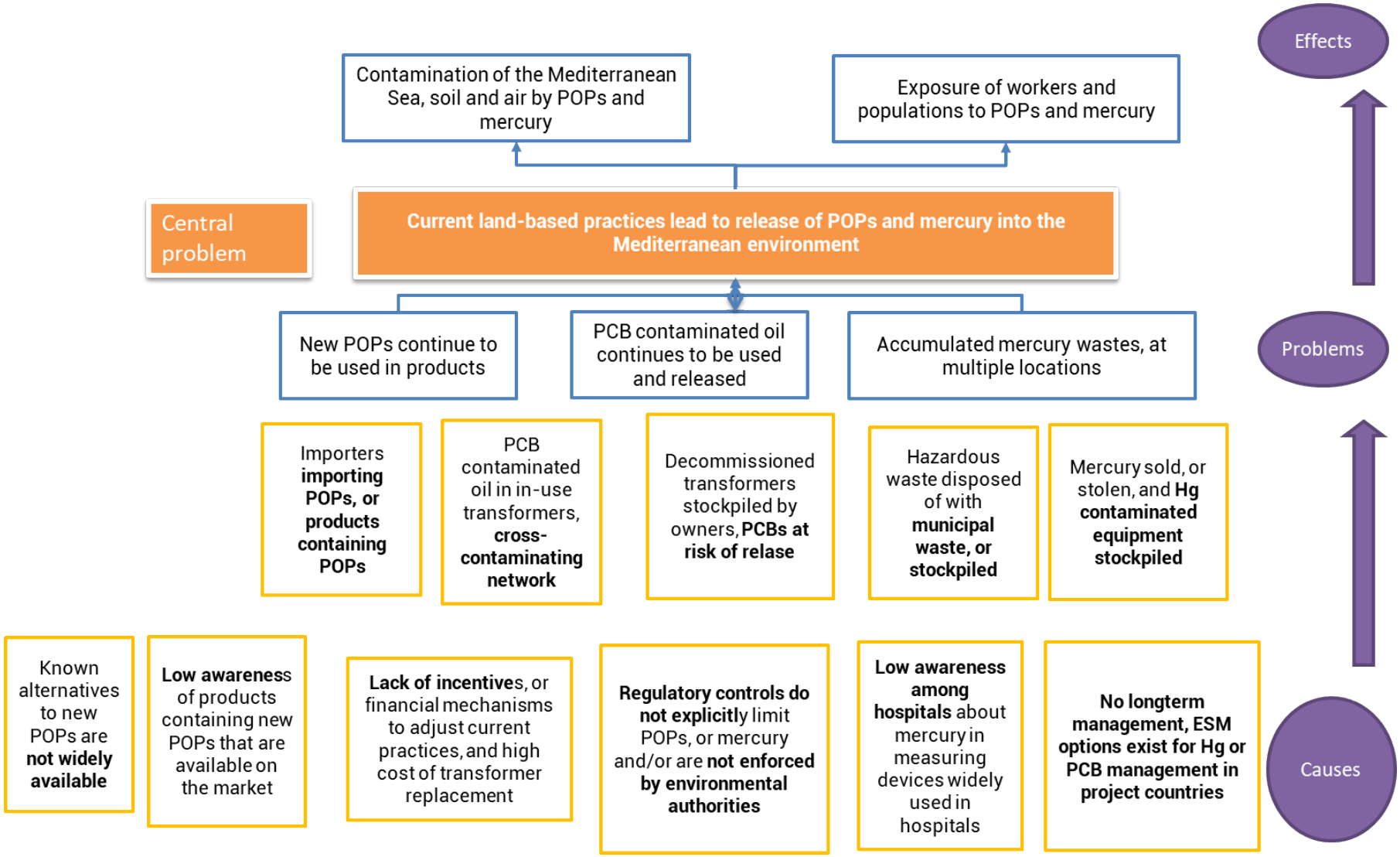
Project Objective/ Outcome	Objective/Outcome level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	UNEP MTS reference* and link to SDGs
Outcome 3 Project results and knowledge are effectively disseminated and used to adaptively manage the project	Project delivery is effective and responsive to beneficiary and stakeholder needs	N/A	Mid-term target: Mid-term review results endorsed by project partners End of project target: Terminal evaluation results endorsed by project partners	Project Steering Committee report (y3) Responses by IA and partners		
3.1 Knowledge Management strategy shares knowledge from Child Project 1.1	Number of knowledge products from CP 1.1 disseminated and used by stakeholders	GIS map of Phase 1 PCB stocks produced during PPG phase (Algeria and Lebanon) Knowledge management strategy developed for Programme	Mid-term target: National POPs and Hg inventories available on MapX End of project target: Pilot project case studies disseminated	MapX platform KM platform	Project results are achieved according to the workplan Countries agree for information to be shared via KM platforms	EA1 and EA2
3.2 Regular monitoring and evaluation of project progress and results	Quarterly reports on expenditure and progress Annual PIR submitted Evaluations done at mid-term and project end	N/A	Mid-term target: Quarterly and annual PIR reports Mid-term review complete End of project target: Terminal evaluation complete	MTR consultant report TE report	Project documentation and reporting managed by project management unit	EA1 and EA2

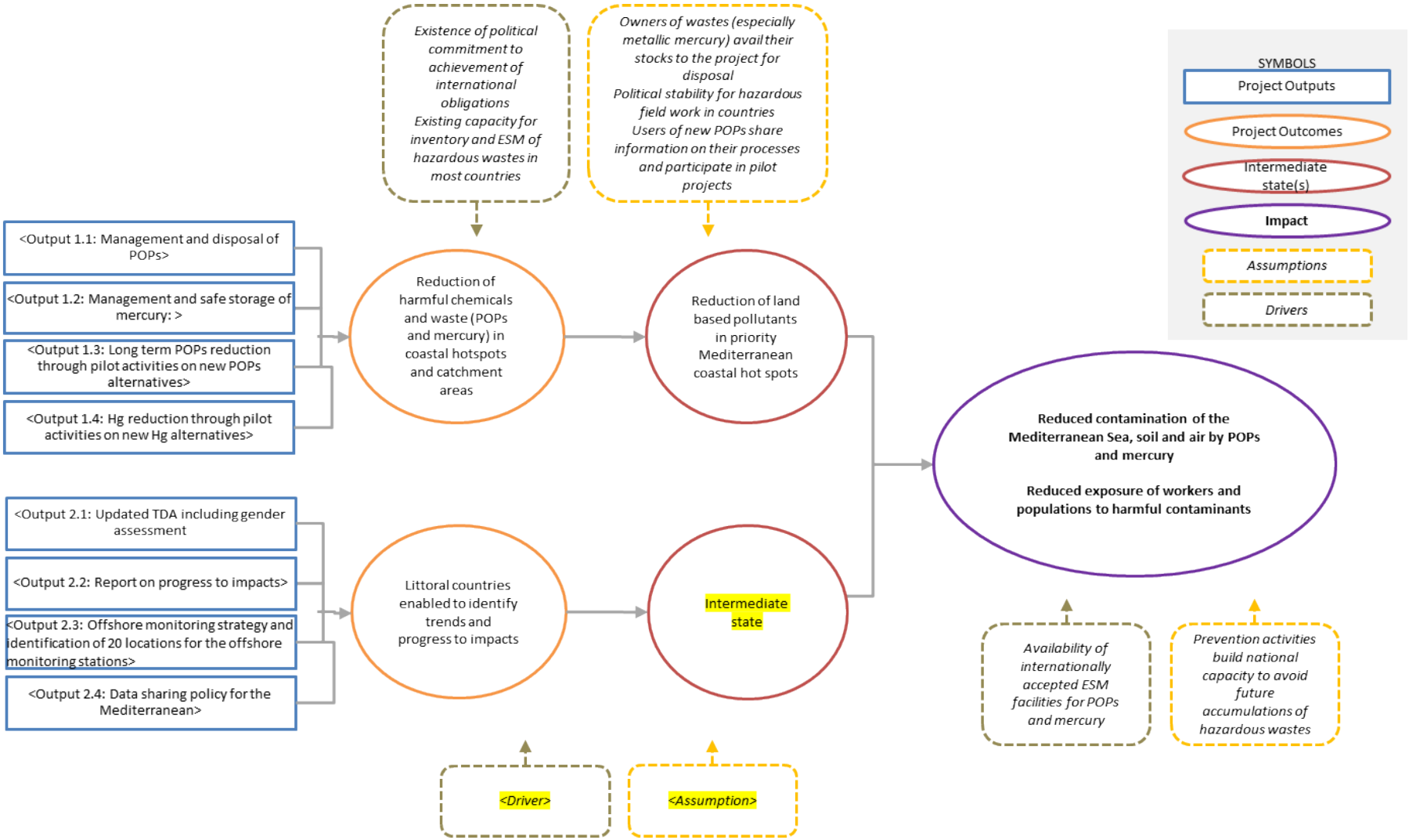
[1] Forms part of Component 1: Reduction of Land Based Pollution in Priority Coastal Hotspots, and Measuring Progress to Impacts (Child Project 1.1)

[2] By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

[3] By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

Additional information: Problem Tree and Theory of Change:


Effects
Contamination of the Mediterranean Sea, soil and air by POPs and mercury
Exposure of workers and populations to POPs and mercury
Central problem
Current land-based practices lead to release of POPs and mercury into the Mediterranean environment
Problems
New POPs continue to be used in products
PCB contaminated oil continues to be used and released
Accumulated mercury wastes, at multiple locations
Importers **importing POPs, or products containing POPs**
PCB contaminated oil in in-use transformers, **cross-contaminating network**
Decommissioned transformers stockpiled by owners, **PCBs at risk of relase**
Hazardous waste disposed of with **municipal waste, or stockpiled**
Mercury sold, or stolen, and **Hg contaminated equipment stockpiled**
Causes
Known alternatives to new POPs are **not widely available**
Low awareness of products containing new POPs that are available on the market
Lack of incentives, or financial mechanisms to adjust current practices, and high cost of transformer replacement
Regulatory controls do not explicitly limit POPs, or mercury and/or are **not enforced by environmental authorities**
Low awareness among hospitals about mercury in measuring devices widely used in hospitals
No longterm management, ESM options exist for Hg or PCB management in project countries


Existence of political commitment to achievement of international obligations
Existing capacity for inventory and ESM of hazardous wastes in most countries
Owners of wastes (especially metallic mercury) avail their stocks to the project for disposal
Political stability for hazardous field work in countries
Users of new POPs share information on their processes and participate in pilot projects
SYMBOLS
Project Outputs
Project Outcomes
Intermediate state(s)
Impact
Assumptions
Drivers
<Output 1.1: Management and disposal of POPs>
<Output 1.2: Management and safe storage of mercury: >
<Output 1.3: Long term POPs reduction through pilot activities on new POPs alternatives>
<Output 1.4: Hg reduction through pilot activities on new Hg alternatives>
Reduction of harmful chemicals and waste (POPs and mercury) in coastal hotspots and catchment areas
Reduction of land based pollutants in priority Mediterranean coastal hot spots
<Output 2.1: Updated TDA including gender assessment
<Output 2.2: Report on progress to impacts>
<Output 2.3: Offshore monitoring strategy and identification of 20 locations for the offshore monitoring stations>
<Output 2.4: Data sharing policy for the Mediterranean>
Littoral countries enabled to identify trends and progress to impacts
Intermediate state
Reduced contamination of the Mediterranean Sea, soil and air by POPs and mercury
Reduced exposure of workers and populations to harmful contaminants
Availability of internationally accepted ESM facilities for POPs and mercury
Prevention activities build national capacity to avoid future accumulations of hazardous wastes
<Driver>
<Assumption>

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Comments received during the Programme Framework Document (PFD) approval process are summarized in the following table.

Comment received	Response at CEO Endorsement
PFD Review Sheet	
The majority of comments received in the Review Sheet for the PFD were all addressed at that time and were recorded as 'Addressed' in the Review Sheet. Some comments that remained are summarized below:	
Please change the submission in the country section, where it is noted to be a GLOBAL project. The project is regional, with participating countries having included endorsement letters.	Done in the portal submission.
In regard to chemicals and waste, please provide a description of the baseline projects in relation to PCBs and POPs chemicals	Please refer to the National Baseline tables and Baseline sections in the CEO Endorsement Request
A detailed M&E plan should be presented at the time of CEO endorsement.	Please refer to Section C of the CEO Endorsement Request and budget.
STAP Review	
The need for the proposed Programme is understood by STAP to be a demand for a coordinating mechanism for the implementation of actions identified through the MedPartnership project.	The actions that will be addressed in the MedProgramme were defined by the Countries after a long and complex participatory TDA-SAP process leading to the National Action Plans where all the major stakeholders at national level were involved along with the major decision makers and political institutions. The MedPartnership was instrumental in supporting the final phase of this process in order to ensure that the NAPs were developed by the countries in a coordinated and efficient sound manner.
The updating of the TDA proposed in Child Project 1.1 should not be permitted to distract from the implementation of the two agreed SAPs and various NAPs.	It will not, activities which address the SAPs and NAPs will be mainly implemented under CP1.2, 1.3, 2.1, 2.2 and 3.1. The CP 1.1 will work on POP and Hg, moreover it will ensure to put in place all the diagnostic tools that can help us to measure the progress to impact; being the updated TDA one of those.

It is not clear from the PFD that the child projects proposed have been designed in a participatory manner with national and local stakeholders, particularly with civil society representatives and community groups. The PFD still reads as largely a top-down document and proponents need to address this deficit, regarding roles, responsibilities and accountabilities of stakeholders especially at sub-national level.	As stated in the STAP "the Programme followed the successful implementation of the MedPartnership". The MedProgramme has been developed by request fo the countries and with an approach that considers all the major stakeholders who will be instrumental to the implementation of the proposed activities. For example, for the investment component, both EIB and EBRD, will use the NAPs which has been endorsed at national level with a bottom-up approach involving a wide number of stakeholders at national and local level. The same applies to the conjunctive surface and groundwater management which will be implemented in those countries that recognized its importance through processes which involved (under the MedPartnership) the main stakeholders.
It is not clear from the PFD that the child projects proposed have been designed in a participatory manner with national and local stakeholders, particularly with civil society representatives and community groups. The PFD still reads as largely a top-down document and proponents need to address this deficit, regarding roles, responsibilities and accountabilities of stakeholders especially at sub-national level.	As stated in the STAP "the Programme followed the successful implementation of the MedPartnership". The MedProgramme has been developed by request of the countries and with an approach that considers all the major stakeholders who will be instrumental to the implementation of the proposed activities. For example, for the investment component, both EIB and EBRD, will use the NAPs which has been endorsed at national level with a bottom-up approach involving a wide number of stakeholders at national and local level. The same applies to the conjunctive surface and groundwater management which will be implemented in those countries that recognized its importance through processes which involved (under the MedPartnership) the main stakeholders.
Therefore, the entire Programme design should provide for sufficient flexibility and appropriate adaptive management strategies to counteract political instability and continuously changing circumstances of the countries in the Mediterranean region	The adaptive management strategy at the MedProgramme level relies on one major tool, the Annual Stocktaking Meetings, part of CP 4.1 (output 2.2). Through these major meetings all issues of concern related to changes in political will or instability in the recipient countries will become manifest and allow for timely adaptive management responses at both the Child Project and at the Program levels.
During the further preparation of the Programme and its individual projects, STAP strongly recommends using a common analytical approach using scenarios to explore possible futures and identify specific intervention points for most impactful programme/project interventions.	Done. In the selection of the many hot spots addressed by MedProgramme, a homogeneous approach has been adopted including future scenarios, whenever necessary.
Ecosystem-based adaptation solutions could be explored.	Done. Nature based solutions, and circular economy approaches inform a number of CPs, in Particular CP 1.2 and 2.1.
Recognizing the current regional security context, STAP recommends developing further cooperative and transboundary infrastructure to protect human security of refugees and migrants by e.g., supporting livelihoods diversification among human traffickers.	The implementing and executing partners of the MedProgramme fully recognize such much needed actions, however based on discussion with the GEF Secretariat during the development phase such kind of actions do not seem to be under GEF mandate. Nevertheless, we believe that by increasing environmental security, the MedProgramme will indirectly strive improve the conditions of migrants, and regional stability.

Many of the Programme interventions are best described in the framework of the Source to Sea concept. Programme proponents are advised to consult the recently released Source to Sea conceptual framework to consolidate and design further often loosely connected activities of the Programme (available at: http://www.thegef.org/council-meeting-documents/conceptual-framework-governing-and-managing-key-flows-source-sea-continuum).	The source to sea conceptual framework, coupled with the GPA guidelines, has clearly inspired the MedProgramme design, which builds on the 40 years' experience, data, information and country ownership produced by the Barcelona Convention.
A priority not dealt with in Component 4 is provision of support to participating countries to incentivize application of IMAP to policy reform or implementation.	The IMAP has been endorsed by the Contracting Parties to the BC in February 2016. All the countries made provision for its implementation at national level. The intention of the MedProgramme is to support and coordinate part of this process at regional level. This will happen especially under CP1.1. Moreover, CP4.1 will implement a KM Strategy which on top of bring benefit to the Programme is also helping the countries to manage the data and information produced by the child project and transfer them, as needed, to the Barcelona Convention IMAP process.
The PFD does not provide substantive evidence of ownership (the word is missing from the entire document), beyond the formal country endorsements, and as is the case with regional projects in general, an emphasis on the demand side needs to be more fully demonstrated, especially for the proposed child projects.	On the contrary, the Programme builds on over 20 years of GEF IW involvement in supporting the TDA-SAP-NAPs process, and on the actions of the Barcelona Convention and of its Regional Activities Centres. This has ensured a level of country ownership rarely achieved in previous efforts globally.
There should also be consideration of potential non industrial sources of POPs and other toxic chemicals, and seeking out of the potential role of Integrated Pest Management (IPM) techniques to minimise use of pesticides in agriculture, horticulture, general pest control, vector control, structural preservation treatments and others.	The Chemicals and Waste component addresses non-industrial use of PFOS by fire fighting services, in line with the priorities expressed by countries in their NIPs. Country NIPs do not prioririze
Where there are data gaps as relates to chemicals pollution, there should be careful retention of such data in the course of implementing this project, as well as key lessons learned in the course of implementation of methods to curtail chemicals pollution from various sources, including the impacts of climate change and variability on the concentration and behaviour of harmful chemicals.	The Child Project 1.1 includes data compilation using a GIS platform on waste inventories and for tracking of disposal progress. It also proposes collection of data on gender aspects of exposure to these waste sites. Finally it will produce lessons learnt on prevention of new POPs and mercury. Through the links with Child Project 4.1 these knowledge products will be retained systematically in the wider KM systems and made available for stakeholders.
GEF Council	

Germany on OUTCOME 1: Reduction of land-based pollution in priority coastal hotspots and measuring progress to impacts. Germany suggests expanding the suggested focus on chemicals pollution (in particular POPS, PAHs, and mercury) to include also non-industrial sources of POPs of high relevance. Furthermore, a more detailed analysis for each country (how effective support and coordination will be reached) is recommended for better monitoring and evaluation purposes.	The reduction of land Bases Sources of pollution (LBS) and measuring of progress to impact in the Mediterranean Sea is based on a 15 years cycle stated with the Transboundary Diagnostic Analysis, followed by the preparation and endorsement by the countries of the Strategic Action Plan (SAP) for LBS (SAP-MED) and for Biodiversity (SAP-BIO). The implementation of the two SAPs led to the definition of national Action Plans were the hotspots of intervention in terms of LBS are clearly indicated and agreed upon by the countries. Unfortunately, this process did not included the tracking, monitoring and identification for POPs, PAHs and Mercury. , Nevertheless, the Child Project 1.1 (GEF ID 9684) of the MedProgramme addresses non-industrial use of PFOS by firefighting services, in line with the priorities expressed by countries in their NIPs. Country NIPs do not prioritize. Moreover, the work done by the Barcelona Convention on defining stocks of POPs and Hg in the Mediterranean countries, together with the further development of this information under the MedProgramme will allow a huge step forward in the region to support the countries in their effort of addressing this issue.
Germany on OUTCOME 4: Germany welcomes the promotion of an integrated coastal zone management (ICZM). Participatory management, thus the empowerment of user groups into the management decisions as well as the surveillance and monitoring is crucial for the projects' success. A stronger emphasis on alternative livelihoods for fishing communities is recommended.	Child Project 2.1 (GEF 9687) focuses on major coastal wetlands, lagoons, humid zones and coastal habitats, providing very valuable services and contributing to coastal livelihoods and biodiversity, are all in part or totally dependent on groundwater regimes. This included livelihoods for fishing communities. Moreover, being the MedProgramme executed under the umbrella of the Barcelona Convention, it will benefit of the ongoing partnership between the Convention and the General Fishery Commission of the Mediterranean which will introduce elements related to fishing in the Programme.
Germany on OUTCOME 7: Germany welcomes the improvement of management capacity as well as the expansion of the Libyan Marine Protected Areas (MPA). It is recommended to incorporate the high importance of artisanal fisheries for local food security and livelihoods. The MPA management plan should imply buffer zones between the MPA and fishing areas. In these small strips local fishermen communities can use an exclusive access (ban for industrial fisheries) and benefit from extensive fisheries. Involvement of fishermen in the management of marine protected areas is crucial for their sustainability.	Artisanal fisheries is included in Child Project 3.1 (GEF ID 10158), concretely in its output 31 where the importance of artisanal fishery is recognized and supported by several activities such as the preparation and dissemination of a set of communication material to promoting artisanal sustainable fishery heritage in and around the selected MPAs.
Germany on the MedProgramme: Lobbying for a higher political prioritization of the implementation of national fishery policies and frameworks promoting sustainable marine resource management.	Although this activity is not directly included in the MedProgramme (which mainly addresses the priorities defined by the Mediterranean Countries under the Protocols of the Barcelona Convention), implementation of national fishery policies and frameworks promoting sustainable marine resource management it is focus of the collaboration partnership between the Convention and the General Fishery Commission of the Mediterranean. Outcomes and outputs of this partnership will be linked to the MedProgramme.

Germany on the MedProgramme: 'Blue Carbon' offsets as an economic potential for coastal villages.	Although we recognize the importance of the comment made by Germany, 'Blue Carbon' offsets as an economic potential for coastal villages is not in the scope of the MedProgramme. However, being the Programme executed in the wider framework of the Barcelona Convention process linkages with Blue Carbon offset and related matter will be explored and certainly made if appropriate.
Germany on the MedProgramme: Decentralized adaption strategies for the intrusion of saline groundwater into aquifers. In sunny areas PV-driven small-scale desalination plants could allow local approaches.	Although we recognize the importance and tehcnial relevance of the comment made by Germany, desalination plan/processes/standards are not eligible under GEF 6 therefore have been removed by the Programme. Nevertheless, under Child project 1.2 (GEF ID 9717), the Barcelona Convention will develop common environmental standards on desalination for the Mediterranean Region by using NON-GEF funds. These standards will be submitted to the Conference of Contracting Parties of the Convention for consideration. If approved they will be the first step to support the approach suggested by Germany.
Germany on the MedProgramme: The involvement of wastewater reuse and freshwater consumption reduction strategies.	Child Project 1.2 (GEF ID 9717) is promoting investments at national level will focus on WWTP Extension and upgrade including treated wastewater reuse/reinjection (MAR) to decrease water consumption in the countries where national actions will take place (Egypt, Lebanon and Tunisia). Moreover the same Child Project will develop regional standards on wastewater management (including reuse) for deliberation of the Contracting Parties of the Barcelona Convention.
Germany on the MedProgramme: More investments into wastewater-treatment facilities for the reduction of heavy metals, endocrine disrupters, plastic and other pollutants as runoff in the Mediterranean Sea.	Under Child Project 1.2 (GEF ID 9717) EIB will mobile more than USD 600M in investments on WWT facilities in Egypt, Lebanon and Tunisia. Moreover, the MedProgramme is already generating interest of other potential investors to engage in advanced WWTP in the region to achieve reduction of LBS of pollution and increase climate change adaptation resilience.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS.

A. Provide detailed funding amount of the PPG activities financing status in the table below:

1. Provide detailed funding amount of the PPG activities financing status in the table below:

TOTAL PPG GRANT USD 300,000

Chemicals and Waste (POPs and Mercury) – USD 228,000

International Water -USD 72,000

PPG Grant Approved at PIF:			
Project Preparation Activities Implemented	***GETF/LDCF/SCCF/CBIT Amount ($)***		
	Budgeted Amount	***Amount Spent Todate***	***Amount Committed***
International CW Consultant - Child Projects Formulation Specialist for CW (6 months)	11,400	11,400	
Knowledge Management Specialist	12,400	12,400	-
International CW Consultant - PPG Planning for CP 1.1 and 1.2	50,850	64,483	-
International CW Consultant -Technical expert on POPs and PCB	31,800	43,878	-
Technical IMAP Expert	39,600	12,489	-
Travels to support the preparation of CW related Child Projects	7,450	14,334	-
SSFA with Plan Blue to support the preparation of CP 1.1 and 2.1	15,000	6,500	-
SSFA with SCP RAC to support the preparation of CP 1.1	93,000	90,499	-
1st Regional PPG meeting (March 2018)	14,000	13,646	-
2nd regional PPG mid-term meeting (September 2018)	19,000	9,063	1,937
Meetings: PPG kick-off workshop	5,500	-	-
Total	300,000	267.292	1,937

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/CBIT Trust Funds or to your Agency (and/or revolving fund that will be set up)

N/A

ANNEX E: GEF 7 Core Indicator Worksheet

Use this Worksheet to compute those indicator values as required in Part I, Table G to the extent applicable to your proposed project. Progress in programming against these targets for the program will be aggregated and reported at any time during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Core Indicator 7	**Number of shared water ecosystems (fresh or marine) under new or improved cooperative management**					***(Number)***
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
		Mediterranean LME		*4*		
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
		Mediterranean LME		*4*		
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
				1		
Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
				1		
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)					
POPs type			Metric Tons			
			Expected		Achieved	

			PIF stage	Endorsement	MTR	TE
	Polychlorinated biphenyls (PCB)			*1,350*		
	Perfuluorooctane sulfunic acid /salts/ PFOS			*20*		
	Hexabromocyclododecane (HBCD)			*630*		
Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Mercury wastes at contaminated sites		*50*	*50*		
Indicator 9.4	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Regulators prevent import and use of new POPs in 3 project countries			*3*		
Indicator 9.5	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	3 country pilot demonstration projects on alternatives to new POPs in manufacturing			*3*		
Indicator 9.6	Quantity of POPs/Mercury containing materials and products directly avoided					
			Metric Tons			
			Expected			Achieved
			PIF stage	Endorsement	PIF stage	Endorsement
	Mercury-containing equipment in hospitals			*300*		
Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**					***(Number)***
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female		2000		
		Male		2000		
		Total		*4000*		

ANNEX: Project Taxonomy Worksheet

Use this Worksheet to list down the taxonomic information required under Part1 by ticking the most relevant keywords/topics//themes that best describes the project

Level 1	Level 2	Level 3	Level 4
Influencing models			
	Strengthen institutional capacity and decision-making		
	Convene multi-stakeholder alliances		
	Demonstrate innovative approaches		
Stakeholders			
	Private Sector		
		Large corporations	
		SMEs	
	Communications		
		Awareness Raising	
Capacity, Knowledge and Research			
	Knowledge Generation and Exchange		
	Innovation		
	Knowledge and Learning		
		Knowledge Management	
Gender Equality			
	Gender Mainstreaming		
		Sex-disaggregated indicators	
		Gender-sensitive indicators	
	Gender results areas		
		Knowledge generation	
Focal Areas/Theme			
	International Waters		
		Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
	Chemicals and Waste		

		Mercury	
		Persistent Organic Pollutants	
		Disposal	
		New Persistent Organic Pollutants	
		Polychlorinated Biphenyls	
		Best Available Technology / Best Environmental Practices	
	Climate Change		
		Climate Finance (Rio Markers)	Sustainable Development Goals

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