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MeHSIP-PPIF

Mediterranean Hot Spot Investment Programme

Project Preparation and Implementation Facility

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List of Acronyms

AfDB	African Development Bank
AFD	Agence Française de Développement
AFED	Arab Forum for Environment & Development
ANND	Arab NGOs Network for Development
APAL	National Agency for Coastal Protection (Tunisia)
CBC	Cross-border cooperation
CIUDAD	Cooperation in Urban Development and Dialogue
CSP	Country Strategy Paper
DABLAS	Danube and Black Sea Initiative
DG ENV	Directorate-General for the Environment (EC)
EC	European Commission
EEA	European Environment Agency
EEAA	Egyptian Environmental Affairs Agency
EIA	Environmental Impact Assessment
EIB	European Investment Bank
ELV	Effluent Limit Values
ENP	European Neighbourhood Policy
ENPI	European Neighbourhood Policy Instrument
ENPI MEP	ENPI Mediterranean Environment Programme
EQS	Environmental Quality Standard
EU	European Union
EWRA	Egyptian Water Regulatory Agency
FEMIP	Facility for Euro-Mediterranean Investment and Partnership
GCT	Groupe Chimique Tunisien
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HCWW	Holding Company for Water and Wastewater (Egypt)
IFI	International Financial Institution
IMF	International Monetary Fund
IT	Information Technology
JBIC	Japan Bank for International Development
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau
MAP	Mediterranean Action Plan
MCC	Millennium Change Corporation (US)
MEDPOL	Mediterranean Pollution Monitoring Programme
MeHSIP-PPIF	Mediterranean Hot Spot Investment Programme Project Preparation and Implementation Facility
METAP	Mediterranean Environmental Technical Assistance Programme
NAP	National Action Plan
NGO	Non-governmental Organisation
NIF	Neighbourhood Investment Facility

NIP	National Indicative Programme
OM	Operations Manual
ONAS	Office National de l'Assainissement (Tunisia)
ONEP	Office Nationale D'Eau Potable (Maroc)
oPT	Occupied Palestinian Territory
PFS	Project Fact Sheet
R&D	Research and Development
RTD	Research and Technology Development
SAP	Strategic Action Programme
SC	Steering Committee
SME	Small or Medium Enterprise
SWM	Solid Waste Management
TA	Technical Assistance
TOR	Terms of Reference
UfM	Union for the Mediterranean
UNDP	United Nations Development Programme
USD	United States dollars
WAJ	Water Authority of Jordan
WHO	World Health Organisation
WB	World Bank
WWT	Wastewater Treatment
WWTP	Wastewater Treatment Plant

Executive Summary

Introduction

The *Mediterranean Hot Spots Investment Programme – Project Preparation and Implementation Facility* (MeHSIP-PPIF) is undertaken on behalf of the European Investment Bank (EIB) by a consortium made up of W.S. Atkins International Ltd, LDK Consultants and Pescares Italia Srl (hereafter known as the “Consultant”). It is funded by the European Union – FEMIP Support Fund.

MeHSIP-PPIF is designed to help reinvigorate the Horizon 2020 de-pollution initiative in the Mediterranean partner countries, by supporting the identification and development of projects that will contribute significantly to reducing pollution in the region. It will thereby facilitate access to regional and sectoral funds available for such projects.

De-pollution projects that may be eligible for support from potential funding agencies in this region are in urban wastewater, solid waste management and industrial emissions (air quality and water quality) sectors in the following countries:

- Algeria
- Egypt
- Israel
- Jordan
- Lebanon
- Libya
- Morocco
- Occupied Palestinian Territory
- Syria
- Tunisia

The aims of the MeHSIP-PPIF are to:

- Review the state of preparation and funding of the current pipeline of de-pollution projects in cooperation with funding agencies during Phase I;
- Launch and maintain a Horizon 2020 pipeline of projects;
- Select and prepare a number of projects for Phase II with a geographical and sectoral spread and sufficient degree of likelihood of obtaining financial support from EIB and/or other funding sources;
- Support the Pollution Reduction Sub-Group of the Horizon 2020 initiative.

This report describes progress made to date by the Consultant and EIB in pursuit of these aims. It presents conclusions and recommendations on:

- A catalogue of completed and ongoing projects in the above countries within the Horizon 2020 context, presented as the “Updated Short List”;
- An up-to-date list of potentially eligible de-pollution projects, presented as the “Horizon 2020 pipeline”;
- An assessment of necessary technical and institutional processes that will need to be addressed to bring such projects to full maturity suitable for funding applications; and,
- Recommendations on how to prioritise these projects, presented as the 1st and 2nd wave of the “MeHSIP-PPIF pipeline”.

Phase II will proceed over a 38-month period to support some selected prioritised projects through final development and implementation.

Launching the Horizon 2020 Pipeline

Relevant projects of national priority still lacking financing

A thorough review of the genesis and status of investments related to environmental Hotspots has been carried out in Phase I in order to arrive at and launch a “**Horizon 2020 Pipeline**”, presented in Section 5.12. The process of creating this pipeline has followed a systematic screening process that took as its point of departure the National Action Plans (NAPs) under the Strategic Action Plan for the Barcelona Convention.

Given the substantial amount of existing activities and financing in the region, a large number of relevant de-pollution projects under the NAPs have already secured funding, are under implementation or have been completed. Some projects on the NAPs are not financeable through lending instruments and in some cases, new priorities in the countries have evolved.

The sourcing of projects for the current exercise has gone beyond the NAPs in certain countries, in order to achieve a spread of countries and sectors, as well as potential demonstration value. Where this has been done, the screening process has remained within the principles of the Barcelona Convention, ensuring relevance to the Horizon 2020 objectives as well as national priorities. The intensified and broader project identification exercise under Phase I included the creation of an Updated Short List, presented in this report that documents the results of discussions had with the different national authorities and other financing agencies. During Phase II, it is expected that this Updated Short List will be reviewed and subsequently subsumed into the Horizon 2020 Pipeline.

Evolution of the Horizon 2020 Pipeline

It will be part of the work under Phase II to maintain an evolving Horizon 2020 pipeline that goes beyond the present NAPs, taking stock of the substantial progress already made. Relevant projects will continue to be high national priority, sustainable investment projects. These will make a significant contribution to the de-pollution of the Mediterranean and/or have a demonstration effect in target sectors of water management, solid waste and industrial pollution.

Evolution in the sourcing of projects will be sought in a structured manner, including systematic mainstreaming of wider sustainability issues and promotion of a coordinated approach to overcoming barriers to project development and implementation. Efficient integration of potential projects into the project cycle for funding will be sought in collaboration with all relevant stakeholders, including national and international funding agencies.

In particular, the sourcing and scoping of projects will take into account the evolving legal framework under the Barcelona Convention, including the entering into force of the Land-based Pollution Protocol, new national action plans, increased coordination with river basin planning, the Strategy for Water for the Mediterranean and evolving cooperation mechanisms between key funding agencies, including structures under EC funding instruments and the UfM Barcelona Secretariat.

Projects selected for preparation in Phase II – the MeHSIP Pipeline

The **MeHSIP-PPIF Pipeline** identifies projects for concrete project preparation activities by the MeHSIP-PPIF during Phase II. The selected projects under the MeHSIP-PPIF pipeline are presented in Section 5.13. The aim has been to identify projects for Phase II that would have the greatest likelihood of successfully satisfying the necessary conditions for loan financing within a reasonable time frame. The MeHSIP-PPIF Pipeline includes 11 projects, which are divided into two separate waves depending on their level of maturity. The value of the five projects included in Wave 1, which is the projects that have advanced level of maturity, is Euro 235 million, whereas Wave 2, including seven projects, has a value of Euro 378 million.

Pollution impact, as an important driver of action and relevance, has been one of a number of considerations made in each case. For projects included in the National Action Plans (NAPs), a sufficient degree of pollution impact and national priority has been implicit. Other essential considerations have been the likelihood of being able to ensure project sustainability, coordination in relation to ongoing planning processes as well as the degree of value added of the MeHSIP-PPIF in relation to the activities of other financiers.

The projects are at different stages of maturity and therefore the level of detail of further preparation at the outset of Phase II will vary among the suggested projects. Action plans for preparation activities are under elaboration in cooperation with EIB and the EC, on the basis of fact-finding carried out in Phase I. Project Fact Sheets for the projects included in the MeHSIP-PPIF pipeline can be found in Appendix 1 to this report, and include general information on each project, its objectives, estimated cost and components.

The work on these under Phase II will mostly focus on bringing the first wave of projects to maturity and, where feasible, implementation stage. In addition, a second wave of projects requiring longer lead times will be followed up and brought forward where possible. Circumstances may dictate that adjustments to the MeHSIP Pipeline are necessary.

Scoping and design of the projects will seek to ensure sustainability and financeability, if necessary through complementary investments or other actions. This will include the mainstreaming of key policies such as water and energy efficiency, balanced development of water and sanitation, sustainable cost recovery and polluter-pays principles, wastewater reuse, climate change resilience, effective environmental compliance and social issues.

Issues surrounding successful identification and delivery of projects

- Affordability, need for grant financing
- Operational unsustainability, insufficient cost recovery and maintenance
- Low level of development of environmental enforcement
- Sector issues requiring strategic country-sector approach

Specific issues have been flagged in the individual Project Fact Sheets attached to this report.

Activities carried out in Phase I

During Phase I the Consultant has visited each of the countries several times, in full cooperation with the EIB and EU officers in the target countries, in order to:

- Alert the Horizon 2020 focal point in each country to the purpose of MeHSIP-PPIF;
- Consult with senior members of the competent authority or project promoter regarding current institutional and sectoral obstacles and opportunities;
- Review the status of de-pollution projects that had originally been identified during the initial MeHSIP study (2008);
- Prepare an updated list of potential de-pollution projects (including a review of the current project proposals, the status and capacity of the project promoter, evidence that such projects are included in the national planning process, and evidence that there will be a significant de-pollution benefit);
- Enrich the updated list with the identification of new projects that could be potentially eligible to create a consolidated list (i.e. "Updated Short List") as of October 2009;

- Develop a “Horizon 2020 pipeline” that includes the projects of the Updated Short List, which are yet to secure financing;
- Suggest projects from the “Horizon 2020 pipeline” that are judged to have reached relatively sufficient maturity to be implemented. These projects are included in the “MeHSIP-PPIF pipeline”;
- Support project development by the preparation of an assessment of the maturity of each project through a gap-analysis to establish further studies and processes to be undertaken to achieve full maturity; and
- Screen, using a Project Fact Sheet assessment process, any additional projects proposed by the competent authority to determine if such proposals could be added to the Horizon 2020 pipeline.

The Consultant has also liaised with AFD, GTZ, KfW, World Bank, UNEP-MAP, and EEA during the preparation of this report.

Résumé analytique

Introduction

Le Mécanisme d'aide à la préparation et à la mise en œuvre des projets (PPIF) du Programme d'investissement pour l'élimination des principales sources de pollution en Méditerranée (MeHSIP) a été confié, pour le compte de la Banque européenne d'investissement (BEI), à un consortium (ci-après dénommé « le Consultant ») composé des entités suivantes : W. S. Atkins International Ltd, LDK Consultants et Pescares Italia Srl. Ce mécanisme est financé par l'Union européenne au moyen du Fonds d'assistance technique de la FEMIP.

Le MeHSIP-PPIF a été créé pour donner une impulsion nouvelle à la mise en œuvre de l'initiative de dépollution Horizon 2020 dans les pays partenaires méditerranéens en soutenant le recensement et l'élaboration de projets susceptibles de contribuer de façon notable à la réduction de la pollution dans la région. Il facilitera de ce fait l'accès aux moyens financiers régionaux et sectoriels disponibles pour ce type de projets.

Les projets de dépollution susceptibles d'être admissibles à un concours des organismes de financement actifs dans la région concernent les secteurs du traitement des eaux urbaines résiduaires, de la gestion des déchets solides et des émissions industrielles (qualité de l'air et de l'eau) dans les pays suivants :

- Algérie
- Égypte
- Israël
- Jordanie
- Liban
- Libye
- Maroc
- Territoires palestiniens occupés
- Syrie
- Tunisie

Le MeHSIP-PPIF vise à :

- évaluer le degré de préparation et de financement de la réserve actuelle de projets de dépollution en collaboration avec les organismes de financement, lors de la Phase I ;
- créer et alimenter une réserve de projets entrant dans le cadre de l'initiative Horizon 2020 ;
- sélectionner et préparer un certain nombre de projets destinés à la Phase II, qui soient bien répartis sur les plans géographique et sectoriel et dont on peut raisonnablement penser qu'ils obtiendront l'appui financier de la BEI et (ou) d'autres bailleurs de fonds ;
- appuyer le volet consacré à la réduction de la pollution dans le cadre de l'initiative Horizon 2020.

Le présent rapport décrit les actions réalisées à ce jour par le consultant et par la BEI dans le but d'atteindre ces objectifs. Les conclusions et les recommandations formulées portent sur les points suivants :

- une liste de projets en cours ou réalisés dans les pays susmentionnés dans le cadre de l'initiative Horizon 2020, ou « liste actualisée des projets sélectionnés » ;
- une liste à jour des projets de dépollution potentiellement admissibles, ou « réserve de projets Horizon 2020 » ;
- une évaluation des processus techniques et institutionnels qu'il faudra impérativement mettre en œuvre pour amener ces projets à maturité, afin qu'ils puissent faire l'objet de demandes de financement ; et

- des recommandations sur la méthode à adopter pour hiérarchiser ces projets, répartis dans les deux groupes qui constituent la « réserve de projets du MeHSIP-PPIF ».

La Phase II se déroulera sur une période de 38 mois et visera à appuyer une sélection de projets prioritaires dans leurs phases de finalisation et de réalisation.

Création de la réserve de projets Horizon 2020

Projets admissibles, prioritaires à l'échelle nationale et nécessitant un financement

Un examen approfondi de la genèse et du statut des projets d'investissement liés aux principales zones sujettes à des problèmes environnementaux a été mené lors de la Phase I avec l'objectif de parvenir à la création d'une « **réserve de projets Horizon 2020** », présentée au point 5.12. Le consultant a élaboré cette réserve en s'appuyant sur un processus de sélection méthodique avec, pour point de départ, les plans d'action nationaux relevant du plan d'action stratégique pour la Convention de Barcelone.

Compte tenu des volumes importants d'activités et de financements déjà déployés dans la région, un grand nombre de projets de dépollution admissibles au titre des plans d'action nationaux ont déjà obtenu des financements, sont d'ailleurs en cours de réalisation ou ont été achevés. Certains des projets relevant des plans d'action nationaux ne peuvent bénéficier du financement des instruments de prêt et, dans certains cas, les priorités du pays ont évolué.

Dans certains pays, la recherche de projets relevant de cette première phase a dépassé le cadre des plans d'action nationaux, et ce afin de couvrir une grande variété de pays et de secteurs, et éventuellement de faire que ces projets aient une valeur de démonstration. Lorsque tel a été le cas, la procédure de sélection a été menée dans le respect des principes établis par la Convention de Barcelone, de façon à assurer sa conformité avec les objectifs de l'initiative Horizon 2020 ainsi qu'avec les priorités nationales. L'action renforcée et élargie de recensement des projets mise en œuvre lors de la Phase I s'est notamment traduite par la création d'une liste actualisée des projets sélectionnés incluse dans le présent rapport, qui expose en détail les résultats des discussions menées avec les différentes autorités nationales ainsi qu'avec les autres organismes de financement. Lors de la Phase II, il est à prévoir que cette liste actualisée des projets sélectionnés sera révisée puis intégrée à la réserve Horizon 2020.

Évolution de la réserve Horizon 2020

L'une des actions à mettre en œuvre lors de la Phase II consistera à alimenter une réserve de projets, régulièrement mise à jour, consacrée à l'initiative Horizon 2020 et ne se limitant pas aux projets inscrits dans les plans d'action nationaux actuellement en vigueur, en tenant compte des progrès importants déjà accomplis. Les projets susceptibles d'être sélectionnés resteront des projets portant sur des investissements durables et jugés hautement prioritaires par les autorités nationales. Ceux-ci contribueront de façon significative à la dépollution de la Méditerranée et/ou auront un effet de démonstration dans les secteurs ciblés, à savoir la gestion de l'eau, les déchets solides et la pollution industrielle.

Le consultant s'efforcera de faire évoluer sa recherche de nouveaux projets d'une manière structurée, en tenant systématiquement compte de questions plus générales relatives à leur viabilité à long terme et à la promotion d'une approche coordonnée visant à surmonter les barrières à l'élaboration des projets et à leur mise en œuvre. Il s'emploiera également à intégrer efficacement les projets potentiels dans le cycle de financement, en collaboration avec l'ensemble des parties prenantes importantes, y compris les organismes nationaux et internationaux de financement.

Le recensement de nouveaux projets et la détermination de leur portée tiendront compte, en particulier, de l'évolution du cadre juridique mis en place par la Convention de Barcelone, notamment en ce qui concerne l'entrée en vigueur du Protocole « tellurique » ainsi que les nouveaux plans d'action nationaux, la coordination accrue avec la planification de l'aménagement des bassins versants, la stratégie de l'eau pour la Méditerranée et les mécanismes – en constante évolution – de

coopération entre les principaux organismes de financement, notamment les structures prochainement créées grâce aux instruments de financement de la Commission, et le secrétariat de l'Union pour la Méditerranée, situé à Barcelone.

Les projets sélectionnés en vue de leur préparation lors de la Phase II : la réserve de projets du MeHSIP

La **réserve de projets du MeHSIP-PPIF** recense les projets qui feront l'objet d'activités de préparation concrètes lors de la Phase II du MeHSIP-PPIF. Les projets ainsi sélectionnés pour la Phase II sont présentés au point 5.13. Ils ont été choisis car ils présentaient les plus grandes chances de satisfaire aux conditions nécessaires à l'obtention d'un prêt dans un intervalle de temps raisonnable. La réserve de projets du MeHSIP-PPIF comporte 11 projets, répartis en deux groupes distincts en fonction de leur degré de maturité. La valeur totale des cinq projets du premier groupe, qui rassemble les projets d'un niveau de maturité avancé, s'élève à 235 millions d'EUR, tandis que celle des sept projets du second volet se monte à 378 millions d'EUR.

Outre l'incidence des projets sur la pollution – qui constitue un critère important pour le choix des investissements urgents et pertinents –, d'autres éléments d'appréciation ont été pris en compte lors de la sélection des projets. En ce qui concerne les projets visés par les plans d'action nationaux, leur incidence suffisamment sensible sur la pollution et leur caractère prioritaire à l'échelle nationale allaient de soi. Parmi les autres considérations essentielles qui ont été prises en compte, figurent la capacité supposée du promoteur à mettre en œuvre un projet viable, la coordination avec les processus de planification en cours ainsi que le degré de valeur ajoutée présentée par le programme MeHSIP-PPIF par rapport aux activités d'autres bailleurs de fonds.

Les projets présentent des degrés de maturité divers et, par conséquent, la quantité d'informations fournies au début de la Phase II, en vue de la poursuite de leur préparation, sera variable d'un projet à l'autre. Des plans d'action en faveur des activités de préparation sont actuellement élaborés en coopération avec la BEI et la Commission européenne, sur la base d'informations collectées lors de la Phase I. Des fiches d'information relatives aux projets de la réserve MeHSIP-PPIF sont consultables à l'annexe 1 du présent rapport. Elles rassemblent des informations générales sur chaque projet et présentent également leurs objectifs, leur coût estimé et leurs diverses composantes.

Les travaux menés lors de la Phase II consisteront pour l'essentiel à mener les projets du premier groupe à maturité et, dans la mesure du possible, à leur phase de réalisation. En outre, un second groupe de projets présentant des délais de réalisation plus importants bénéficieront d'un suivi et seront mis en œuvre dans la mesure du possible. La réserve du MeHSIP pourra, si nécessaire, faire l'objet d'ajustements dictés par les circonstances.

La conception et la détermination de la portée des projets auront pour but de garantir leur viabilité et leur éligibilité à un financement, si nécessaire par le biais d'investissements ou d'actions complémentaires. Pour ce faire, l'adoption de certaines lignes de conduite sera d'une importance capitale, notamment en matière d'utilisation efficiente de l'eau et de l'énergie, de développement équilibré des réseaux d'adduction d'eau et d'assainissement, d'application des principes pollueur-payeur et de recouvrement durable des coûts, de réutilisation des eaux usées, d'adaptation aux changements climatiques, de respect effectif des normes environnementales et de prise en compte des questions d'ordre social.

Aspects susceptibles d'affecter la réussite des processus de sélection et de concrétisation des projets

- Viabilité économique, nécessité de mobiliser des aides non remboursables
- Non-viabilité de l'opération, recouvrement des coûts insuffisant et maintenance déficiente
- Faible niveau de développement des mesures d'application des normes environnementales
- Questions relatives à un secteur particulier nécessitant une approche stratégique spécifique au pays et au secteur visé

Les questions spécifiques sont signalées dans les fiches d'information individuelles des projets jointes au présent rapport.

Activités menées lors de la Phase I

Lors de la Phase I, le consultant s'est rendu à plusieurs reprises dans chacun des pays ciblés et a travaillé en étroite coopération avec la BEI et les représentants de l'UE dans ces pays, et ce pour :

- attirer l'attention du correspondant pour l'initiative Horizon 2020 de chaque pays sur la vocation du programme MeHSIP-PPIF ;
- s'entretenir avec les hauts responsables des autorités compétentes ou avec le promoteur du projet au sujet de l'état de la situation pour ce qui est des éléments institutionnels et sectoriels qui entravent ou favorisent la bonne marche du programme ;
- réviser le statut des projets de dépollution initialement recensés lors de la première étude relative au MeHSIP (2008) ;
- dresser une liste actualisée des projets de dépollution susceptibles de bénéficier du soutien du programme (cette tâche a notamment impliqué un examen des propositions de projets à l'étude, du statut et des compétences de chaque promoteur, des éléments attestant de l'inclusion de ces projets dans le processus de planification national et des éléments garantissant que les projets auront des incidences significatives en matière de dépollution) ;
- étoffer cette liste actualisée en répertoriant de nouveaux projets susceptibles d'être admissibles afin de créer une liste consolidée (la « liste actualisée des projets sélectionnés ») dès octobre 2009 ;
- élaborer une « réserve de projets Horizon 2020 » incluant les projets de la liste actualisée des projets sélectionnés, dont le financement n'est pas encore assuré ;
- sélectionner des projets de la « réserve Horizon 2020 » qui semblent avoir atteint un degré de maturité suffisant pour être réalisés. Ces projets ont été intégrés à la « réserve MeHSIP-PPIF » ;
- soutenir l'élaboration des projets en préparant une évaluation de la maturité de chaque projet grâce à une analyse des carences destinée à déterminer si d'autres études et procédures doivent être entreprises pour permettre au projet d'atteindre sa pleine maturité ;
- évaluer, au moyen d'une procédure basée sur une fiche d'information relative au projet, les projets complémentaires susceptibles d'être proposés par l'autorité compétente, en vue de leur ajout éventuel à la réserve Horizon 2020.

Le consultant a également coopéré avec l'AFD, la GTZ, la KfW, la Banque mondiale, le Programme des Nations unies pour l'environnement (PNUE) dans le cadre de son Plan d'action pour la Méditerranée (PAM) ainsi qu'avec l'Agence européenne pour l'environnement (AEE) lors de l'établissement du présent rapport.

1 Introducing MeHSIP-PPIF

The *Mediterranean Hot Spots Investment Programme – Project Preparation and Implementation Facility* (MeHSIP-PPIF), launched in March 2009, is undertaken on behalf of the European Investment Bank (EIB) by a consortium made up of W.S. Atkins International Ltd, LDK Consultants and Pescares Italia Srl (hereafter known as the Consultant). Subject to the identification of sufficient numbers of eligible and promotable environmental infrastructure projects during Phase I, a further stage, Phase II, may extend over a further 38 months.

The countries which are the subject of the MeHSIP-PPIF are:

- Algeria
- Egypt
- Israel
- Jordan
- Lebanon
- Libya
- Morocco
- Occupied Palestinian Territory (oPt)
- Syria
- Tunisia

1.1 Objectives

The overall objectives of the MeHSIP-PPIF are:

- To contribute towards achieving the Horizon 2020 goal of de-polluting the Mediterranean Sea by the year 2020;
- To identify and prepare high-priority, sustainable investment projects that will make a significant contribution to de-pollution of the Mediterranean and have a demonstration effect in target sectors; and
- To promote effective industrial waste management, urban wastewater management and solid waste management in the South Mediterranean region.

The MeHSIP-PPIF will support both the preparation and assistance with implementation of targeted investments as well as in supporting cooperation among funding agencies, specifically within the context of the Horizon 2020 organisation in the Mediterranean region.

1.2 Components and Activities

The MeHSIP-PPIF project is implemented through four Components, complemented by a fifth (horizontal) Component, which is backstopping. Below is a brief description of the four Components.

1.2.1 Component 1: Governance and Support to Horizon 2020

Component 1 provides a comprehensive overview of the Horizon 2020 initiative and its institutional structures, and presents the institutional structure of related environmental programmes and initiatives. This analysis provides a basis for identifying specific achievements, difficulties and prospective opportunities or threats and highlights these to allow “lessons learned” to be drawn for the Horizon 2020 initiative. (See *Chapter 2*)

1.2.2 Component 2: Sectoral Support

Component 2 describes changes in national policies and specific key sectors that may influence the implementation of environmental infrastructure investment projects. Following extensive consultation with relevant local and international stakeholders, and review of existing literature, the following two sections have been prepared for this report: i) sectoral overview on horizontal issues (municipal waste management, wastewater management, and industrial emissions); and ii) an initial view of institutional

and capacity constraints that may impede process on project preparation and implementation activities. (See Chapter 3)

1.2.3 Component 3: Management of Hotspots and Project Pipeline

Component 3 manages and builds upon the project listing with the aim of establishing an agreed Updated Short List complemented by a Horizon 2020 pipeline (for projects yet to secure financing), as well as to provide support to the beneficiary countries on project preparation for specific projects. The Consultant reviewed progress to date, including the identification of specific hotspots in the NAPs and the initial project long list and short list provided to the MeHSIP-PPIF and established an agreed Updated Short List and Horizon 2020 pipeline listing. (See Chapters 4 & 5)

The project listing will be continuously updated to reflect the development of project preparation activities for the selected de-pollution projects in the areas of municipal waste management, wastewater management, and industrial emissions with a direct environmental impact on the Mediterranean Sea.

It should be note that over 80% of the resources available within MeHSIP-PPIF during Phase I have been directed towards providing support on project development activities under this Component.

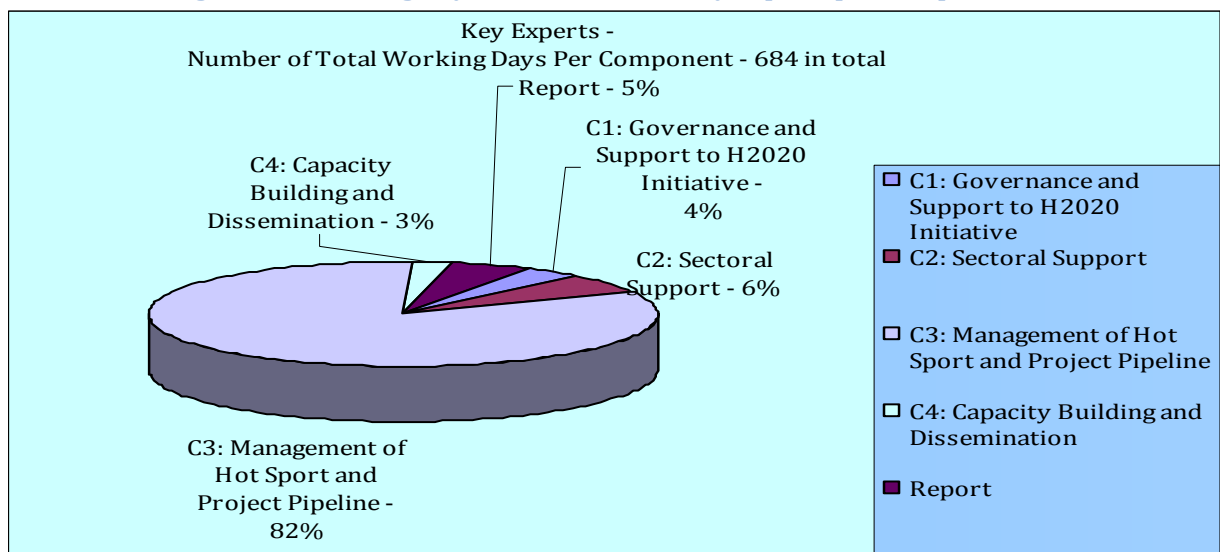
1.2.4 Component 4: Capacity-building and dissemination

Component 4 raises awareness in the beneficiary countries of the availability of different funding sources and disseminates information about the Horizon 2020 initiative, such as capacity-building, research, and monitoring and reporting mechanisms. Specific gaps in capacity identified while working on specific projects might be addressed in Phase II under this component, if judged vital for the project’s outcome. The MeHSIP-PPIF team will not undertake broader capacity-building activities because these are being led regionally by the European Commission and other donors active at national level (for example, see Component 2 of Horizon 2020). (See Chapter 6)

1.3 Work programme

The Key Experts undertook an intensive mission schedule across most beneficiary countries. During these missions the team met with representatives from national, regional, and local authorities as well as representatives from the private sector. Furthermore, contacts were established with international organisations, IFIs and EC delegations. The graph shows the days spent in each beneficiary country. Emphasis during Phase I has been on Component 3, the cornerstone of the MeHSIP-PPIF project (see below graph).

Figure 1.1: Working Days of MeHSIP-PPIF Key Experts per Component



2 Institutional Analysis

This section provides an overview of the Horizon 2020 initiative, its institutional design, and a comparative institutional analysis between similar regional environmental programmes/initiatives currently implemented by international organisations. It also identifies possible synergies and complementarities between the programmes and highlights key success factors and potential risk factors.

2.1 Horizon 2020

De-pollution building on the Horizon 2020 initiative is one of the six priority areas of the Union for the Mediterranean (UfM), which includes all 27 member states of the European Union, along with 16 partners across the Southern Mediterranean and the Middle East.

The Horizon 2020 initiative was endorsed in 2005 during the 10th Anniversary Summit of the Euro-Mediterranean Process (Barcelona, 27–28 November 2005). In 2006 at the meeting of Euro-Mediterranean Environment Ministers a timetable of concrete actions (the “Cairo Road-map”) covering the period to 2013 was agreed.

Horizon 2020 is an “umbrella” initiative to enhance and promote coordination between the various actors in the Mediterranean. It aims to improve the efficiency and effectiveness of environmental activities in the region. It was intended from the outset that Horizon 2020 would build on existing institutions and results, filling gaps where it could bring added value. It operates within the framework of existing and developing policy instruments, and supports the implementation of the commitments undertaken in the framework of the UNEP Barcelona Convention.

Figure 2.1: Institutional Set-up of Horizon 2020 Initiative

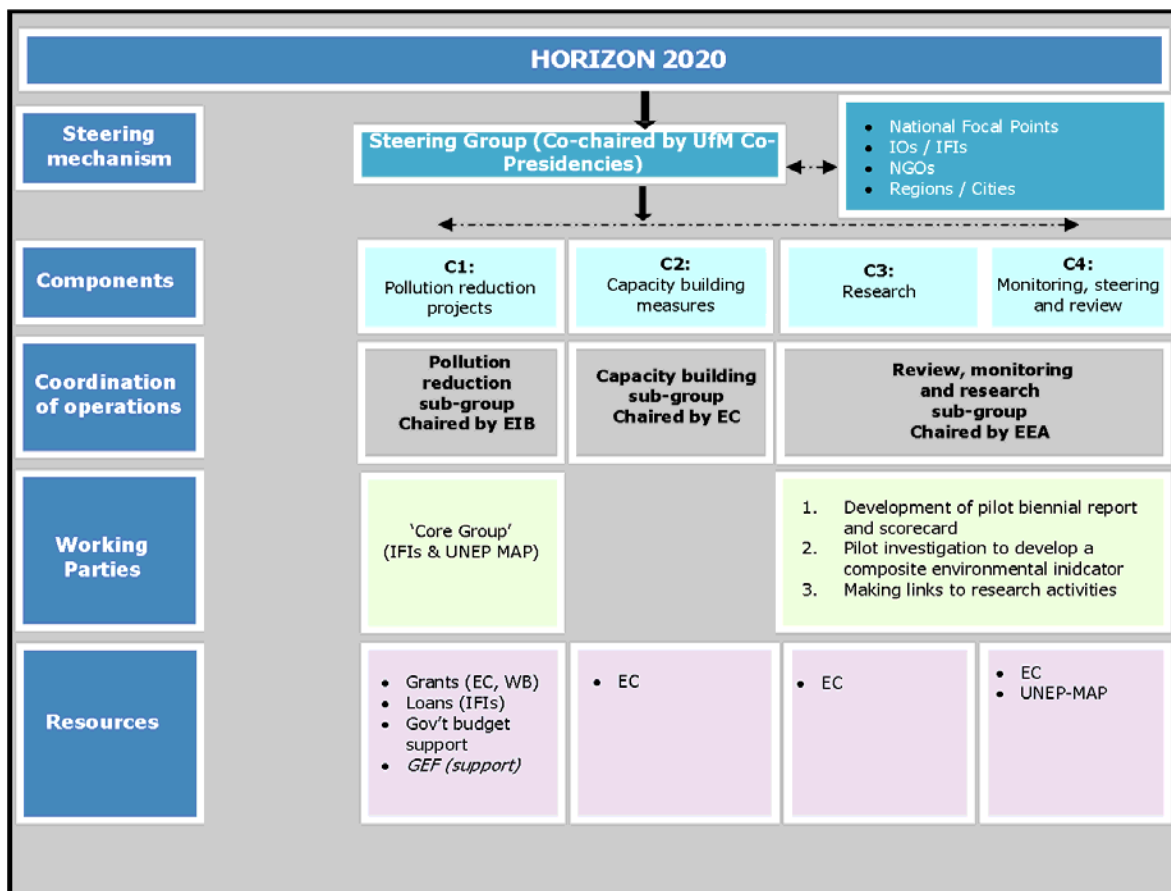


Table 2.1: Institutional Set-up of Horizon 2020 initiative

Policy level	<ul style="list-style-type: none"> • The recent inclusion of Horizon 2020 Initiative as one of the six components of the Union for the Mediterranean firmly places this initiative at the centre of the policy dialogue at the highest level. • Horizon 2020 has strong political commitment following endorsement by the Heads of States (Barcelona Summit, 2005) and the respective Ministers of Environment signing off on a timetable of concrete actions (“Cairo Road Map”). • The Horizon 2020 Steering Group includes nominated focal points (EU member states and ENP Partner Countries), international organisations (EC, UNEP-MAP), IFIs (EIB, WB) as well as several NGOs and regions/cities. • The Steering Group, which meets annually, facilitates discussion of Euro-Mediterranean environment policy developments and offers overall guidance as well as overseeing the implementation of the Horizon 2020 initiative.
Implementing structures	<p>The four components are chaired by EIB (Component 1), EC (Component 2), EEA (Component 3 & 4). However, all members of the Steering Group are also involved in its operations (based on the respective interest of the stakeholder). At the beneficiary country level Horizon 2020 builds on existing institutions and results, filling gaps where it could bring added value.</p> <p>Co-ordination and cross-fertilisation between the working groups of the Horizon 2020 components is essential. Co-ordination of the numerous focal points (MAP, MEDPOL, RACs, GEF, H2020, WB etc.) is essential in achieving leverage and an effective exchange of information and access to decision making in the beneficiary countries. H2020 needs to be further streamlined into the other sector ministries (see Ministries of Agriculture, Water, Interior, Finance, Development etc.)</p>
Activities / Components	<p>Horizon 2020 has four components (<i>see 2.1.2 for a more detailed explanation</i>)</p> <ol style="list-style-type: none"> 1. <i>Pollution Reduction Projects</i> 2. <i>Capacity-building measures</i> 3. <i>Research</i> 4. <i>Monitoring, Steering, and Review</i>

2.2 Related Environmental Programmes and Initiatives

2.2.1 United Nations Environmental Programme – Mediterranean Action Plan (UNEP-MAP)

The United Nations Environmental Programme (UNEP) was set up in 1972 by the Stockholm Ministerial Conference, and in 1975 the Mediterranean Action Plan (MAP) was established by 16 Mediterranean partner countries and the European Community. The MAP was the first plan adopted as a Regional Seas Programme under UNEP’s umbrella. Today, MAP involves 21 countries bordering the Mediterranean as well as the European Community.

Table 2.2: Institutional Set-up of UNEP-MAP

Policy level	<ul style="list-style-type: none"> • Ministerial level meetings (bi-annual basis) • Appointed Focal Points for each country
Implementing structures	<ul style="list-style-type: none"> • MAP Coordinating Unit (MEDU) acts as the MAP Secretariat (based in Athens). • The Mediterranean Commission on Sustainable Development (MCSD) acts as an advisory body to the Contracting Parties. • The Programme for the Assessment and Control of Marine Pollution in the Mediterranean • Region (MED POL) is the scientific and technical component of MAP.
Activities / Components	<ul style="list-style-type: none"> • Strategic Action Plan (SAP MED)) under which the National Action Plans were developed • Region (MED POL) is the scientific and technical component of MAP • Six MAP Regional Activity Centres (RACs) <ol style="list-style-type: none"> 1) Blue Plan RAC (BP/RAC) (France) 2) Priority Actions Programme RAC (PAP/RAC) (Croatia) 3) Specially Protected Areas (SPA/RAC) (Tunisia) 4) Regional Marine Pollution Emergency Response Centre for the

	<p>Mediterranean Sea (REMPEC) (Malta)</p> <p>5) INFO RAC (Italy)</p> <p>6) Cleaner Production RAC (CP/RAC) (Spain)</p>
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2.2.2 Global Environmental Facility (GEF)

GEF was established in 1991 by the UNDP, UNEP and World Bank, and is open to any member state of the UN and/or one of its specialised agencies. GEF's key objective is to address global environmental issues, with an emphasis given to biodiversity preservation and climate change, by supporting national sustainable development initiatives.

Table 2.3: Institutional Set-up of GEF

Policy level	<ul style="list-style-type: none"> • GEF Assembly: governing body (178 member countries participate). It meets every three to four years • GEF Council: functions as an independent board of directors (represented by 32 members) with primary responsibility for developing, adopting, and evaluating GEF programs. The Council meets twice each year and takes its decisions by consensus. • Each GEF member country has designated two Focal Points: <ul style="list-style-type: none"> ✓ Political focal points: responsible for GEF governance issues and policies (all member countries have political focal points); and ✓ Operational focal points: responsible for in-country program coordination of GEF projects (only countries eligible for GEF funding designate operational focal points)
Implementing structures	<p>The two governing bodies are supported by a Secretariat and a Scientific and Technical Advisory Panel. The Secretariat is hosted by the World Bank (Washington, D.C.) and reports directly to the GEF Council and Assembly. The GEF-funded projects are implemented by the support of 10 Agencies:</p> <ul style="list-style-type: none"> • UNDP (United Nations Development Program) • UNEP (United Nations Environment Program) • World Bank • AfDB (African Development Bank) • AsDB (Asian Development Bank) • EBRD (European Bank for Reconstruction and Development) • IADB (Inter-American Development Bank) • FAO (Food and Agriculture Organization) • IFAD (International Fund for Agricultural Development) • UNIDO (United Nations Industrial Development Organization)
Activities / Components	<ul style="list-style-type: none"> • Biological Diversity • Climate Change • International Waters • Ozone Layer Depletion • Persistent Organic Pollutants (POPs)

2.2.3 DABLAS Task Force

The DABLAS Task Force was set up by the EU in 2001 to provide a platform for cooperation for the protection of water and water-related ecosystems in the Danube and Black Sea Region. The main function of the process is to encourage a more strategic focus to the use of available financing, and to ensure coordinated action between all financial instruments operating in the region.

Table 2.4: Institutional Set-up of DABLAS Task Force

Policy level	The DABLAS Task Force was established following the adoption of a communication by the EC which highlighted priority actions required to improve the environmental situation in the Danube and Black Sea Region.
Implementing structures	The DABLAS Secretariat is the coordinating body and responsible for overseeing the implementation of the actions decided by the Task Force. The Secretariat is managed by the EC.
Activities / Components	The DABLAS Task Force includes operations on: 1. Development of a series of concrete activities including a short list of prioritised projects for the rehabilitation of the waters of the region complemented by concrete approaches for financing of priority projects; 2. Monitoring implementation of the priority projects, short listed by Task Force.

2.2.4 Sustainable MED Programme (World Bank)

The Sustainable MED Programme¹ is a new initiative by the World Bank funded by GEF Global Funds and is yet to become operational. The programme aims to “enhance and accelerate the implementation of transboundary pollution reduction, improved water resources management, and biodiversity conservation measures in priority hotspots and sensitive areas of selected countries of the Mediterranean basin that would help achieve the Strategic Action Plans’ (SAP MED and SAP BIO) targets”.

Table 2.5: Institutional Set-up of Sustainable MED Programme

Policy level	Discussions have been held to establish a governance structure called “Higher Council for Environment and Sustainable Development”, which will involve high-level representation from both environmental and other sectoral agencies. The programme received approval by the GEF Council.
Implementing structures	The key actor for overseeing the implementation and coordination of the programme’s activities is expected to be the technical secretariat.
Activities / Components	1) <i>Regional Technical Assistance</i> : Plans to establish a regional centre (“Know-MED-Centre”) to serve as a hub for knowledge development and dissemination. The centre will be based in Marseille. 2) <i>Investment Component</i> : provide financial resources to support investments and technical assistance, including: i) sustainable management of scarce resources and biodiversity; ii) de-pollution (water treatment, solid waste, industrial pollution, sea transportation, maritime safety; and iii) climate change - adapting and strengthening resilience to reduced surface and groundwater reserves.

2.2.5 Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem

As this report was being developed, a new project was launched under the GEF Strategic Partnership for the Mediterranean LME, implemented by UNEP and the World Bank. The Strategic Partnership, following the model of the GEF Black Sea Basin Strategic Partnership for Nutrient Reduction, consists of two complementary components:

1. Regional Component: "Implementation of agreed actions for the protection of the environmental resources of the Mediterranean Sea and its coastal areas" led by UNEP and already approved by the GEF Council in June 2007; and
2. "Investment Fund for the Mediterranean Sea Large Marine Ecosystem Partnership" led by the World Bank and already approved by the GEF Council in August 2006.

The objective of the Regional Component is to promote and induce harmonized policy, legal and institutional reforms and fill the knowledge gap aimed at reversing marine and coastal degradation trends and living resources depletion, in accordance with priorities agreed by the countries in the SAP MED and SAP BIO and to prepare the ground for the future implementation of the ICZM Protocol.

¹ Program Framework Document (PFD3977); Presentation at SMAP III Regional Seminar (Marseilles, 29-30 June 2009)

The Implementing agency of the Regional Component is UNEP while the Executing Agency is the Coordinating Unit for the Mediterranean Action Plan (MEDU-MAP) and its associated Regional Activity Centres (RACs). The Food and Agriculture Organization of the United Nations (FAO) and the United Nations Industrial Development Organization (UNIDO) are GEF Executive Agencies with “expanded opportunities”, and will therefore receive funding for their corresponding activities directly from GEFSEC

The objective of the Investment Fund is to accelerate the implementation of transboundary pollution reduction and biodiversity conservation measures in priority hotspots and sensitive areas of selected countries of the Mediterranean basin that would help achieve the SAP MED and SAP BIO targets, and is further detailed in the Investment Fund project documentation. Projects supported by the Investment Fund may include:

- i. Domestic and industrial wastewater treatment in selected priority hotspots;
- ii. Coastal ecosystem management;
- iii. Integrated surface and groundwater management in selected watersheds; and
- iv. Biodiversity conservation.

The implementing agency of the Investment Fund is the World Bank. A pipeline of projects has been under development since the Investment Fund concept was approved for pipeline entry in November 2004. Two project concepts have so far been reviewed and approved by the GEF Secretariat for pipeline entry and two more are currently ready to be reviewed.

The budget of the Regional Component is \$ 12,891,000 GEF + \$ 29,607,200 co-financing while the Investment Fund is \$ 85,000,000 GEF (up to 75% co-financing).

It should be noted that the GEF Strategic Partnership and the MEHSIP-PPIF share one objective of accelerated implementation of transboundary pollution reduction on priority hotspots. It is therefore essential for the MEHSIP-PPIF to ensure close coordination both with the GEF Strategic Partnership project team (comparing pipelines to avoid duplication of investment activities), as well as the UNEP-MAP component responsible for the management of the NAPs (MEDPOL), in order to take into consideration the evolution and updating of the NAPs

The project activities will be carried out in the following GEF eligible countries: Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Lebanon, Libya, Morocco, Montenegro, Syria, Tunisia and Turkey. Palestinian Authority also participates. The partners of the project are the following: World Bank; UNEP, FAO and UNIDO; UNEP/MAP-MEDU, MEDPOL and its associated RACs (CP/RAC, SPA/RAC, PAP/RAC and INFO/RAC); UNESCO/HP, WWF, GWP-Med, MIO-ECSDE, GFCM, METAP and Donors (Spain, France and Italy).

The MeHSIP-PPIF team was invited to the first meeting and made a presentation on Horizon 2020 and the Pollution Reduction component (Athens, 16-18 September 2009). Further discussions are expected to take in place in order to establish a coordination mechanism and seek synergies with this project prior to their first Steering Committee meeting which is planned to take place in Montenegro during the first week of December. The project is currently at its inception phase.

2.3 Comparative Analysis

2.3.1 Potential positive/negative factors – lessons learned

This section presents an overview of potential positive factors to be exploited and negative factors to be avoided. By comparing the institutional set-up of Horizon 2020 with other relevant programmes/facilities it aims to highlight specific lessons to be learned and taken advantage of.

Table 2.6: Comparative analysis of Horizon 2020 with other relevant programmes/facilities

Policy Level	<ul style="list-style-type: none"> • <i>Strong political buy-in/commitment:</i> with the inclusion of one of its components (the de-pollution of the Mediterranean Sea) as one of six the key initiatives of the Union of the Mediterranean, the Horizon 2020 initiative has the strongest political leverage, as the Head of State of all UfM partner countries have signed up. • <i>Partnership approach:</i> with the inclusion of all EU MS and 10 ENPI South Countries complemented by International Organisations, IFIs, NGOs and private sector into the Steering Group, the Horizon 2020 facilitates a participatory approach among its stakeholders.
Implementing Structures	<ul style="list-style-type: none"> • <i>Promoting interinstitutional cooperation:</i> Horizon 2020 is the only initiative has included different International Organisation and/or IFIs as part of its implementing structures, thus enhancing its credibility and scope of actions • <i>Utilise comparative advantages:</i> with the inclusion of already existing institutions that bring specific ‘competitive advantages’, the Horizon 2020 has established an implementing structure that should allow for an effective and efficient use of its resources. • <i>Need to enhance coordination among components:</i> although the implementing structures (i.e. sub-groups and possible working parties) are clear, the mechanism that will ensure coordination among the Horizon 2020’s four components might need to be further strengthened. • <i>Limited experience:</i> although the implementing structures are in place, so far, with the exception of the de-pollution component, only a few actions/activities have taken place under the framework of the Horizon 2020 initiative making far reaching conclusions on the actual efficiency of the instrument difficult to establish.
Activities / Resources	<p><i>Note: as indicated above, besides the de-pollution component (mainly through MeHSIP and MeHSIP-PPIF) a limited number of actions have been undertaken by Horizon 2020 so far – nevertheless some points could be highlighted:</i></p> <ul style="list-style-type: none"> • <i>Grant availability:</i> in particular for covering the much needed and substantial technical assistance during the project preparation phase. Furthermore, grants are needed for leveraging loans as environmental infrastructure projects have low financial ratios. • <i>All-inclusive set of tools:</i> Horizon 2020 combines under one umbrella most of the tools provided by other programmes/facilities, namely: a project preparation tool (promoting de-pollution projects), enhancing capacity building, taking advantage of best practices etc. (research) as well as including a monitoring tool.

2.3.2 Synergies & Complementarities with Horizon 2020

This section identifies specific areas where potential synergies could materialise between the Horizon 2020 initiative and related environmental programmes/facilities, in particular referring to UNEP-MAP, GEF, and Sustainable MED Programme (once operational), as their operations cover the same geographical area as Horizon 2020.

Table 2.7: Potential Synergies with Horizon 2020 (MeHSIP-PPIF)

Horizontal	<p><u>Enhance coordination and communication between focal points at national level:</u> UNEP-MAP, H2020, GEF, MWS - in order to facilitate exchange of information and build political commitment for the environment. Co-ordination and streamlining of the numerous focal points in-beneficiary countries would be essential in order to ensure co-ordination and exchange of information on the ground. There remains the challenge to access the main sector Ministries other than the Ministry of the Environment.</p>
UNEP-MAP	<p><u>Enhance coordination at policy level:</u></p> <ul style="list-style-type: none"> • Considering that the objectives of Horizon 2020 vis-à-vis UNEP-MAP largely correspond (i.e. improving the Mediterranean environment). A close coordination between EC and UNEP-MAP on how Horizon 2020 is implemented and its relevance to the MAP work programme would facilitate the successful implementation of the Barcelona Convention. • The implementation of the EC-MAP Joint Work Programme and the EEA-MAP Work Programme can provide significant contribution to strengthening coordination between H2020 and UNEP/MAP. • The umbrella of the “Union for the Mediterranean” can serve both processes in capitalising on reinforced political commitment from all Partners. • It should be noted that there is an ongoing EC funded project aiming at looking into essential synergies between Horizon 2020 and UNEP-MAP, in particular as concerns capacity building (Component 2) and monitoring (Component 4) of the Horizon 2020 initiative.
GEF	<p><u>Enhance Coordination at programme/project level:</u> Co-ordination between the recently launched GEF Strategic Partnership for the Mediterranean Large Marine Ecosystem (GEF-LME) and existing regional initiatives such as the MeHSIP-PPIF provides potential for creating synergies and leveraging.</p>
UNEP-MAP / EEA	<p><u>Monitoring & review:</u> Co-ordination and complementarities in the development of indicators and monitoring and reporting modalities.</p>
EEA / UNEP-MAP	<p><u>Dissemination of activities:</u> Considering that during the next planned phase of MeHSIP-PPIF information and dissemination activities will be more emphasised, initial discussions have already taken place with EEA to explore areas of cooperation. These discussions are planned to continue, and also to involve UNEP-MAP.</p>
ENPI South	<p><u>Coordination of capacity building activities:</u></p> <ul style="list-style-type: none"> • A technical assistance project (€4.5m) that is about to be awarded by EC will provide support in implementing activities relating to Component 2 of Horizon 2020 (i.e. capacity building). • Considering the need for project preparation activities in order to promote pollution reduction projects (Component 1), which includes capacity building activities tailored to the needs of the specific project, it is of particular relevance for the MeHSIP-PPIF project to work closely and coordinate its activities with the Consultant that will be awarded this project.
GEF-Sustainable MED	<p><u>Enhance Coordination:</u> On implementation with existing regional initiatives and programmes such as UNEP-MAP and Horizon 2020 will be essential in creating synergies and avoiding duplication of resources in the region. This is a key challenge to address.</p>

DABLAS Task Force	<p><u>Project preparation activities:</u></p> <ul style="list-style-type: none">• DABLAS Task Force has since its inception in 2001 developed tools for facilitating project preparation and to promote the ‘bankability’ of projects. Similar tools/procedures, but adapted to the specificities of the Mediterranean region is now being developed by the MeHSIP-PPIF project.• It would be useful to take advantage of the experience gained by DABLAS and to exchange general impressions, by for instance, taking part (as observers) at the annual meetings of the DABLAS Task Force.
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3 Horizontal Issues

The following chapter provides an overview of the three sectors that are covered by the Horizon 2020 initiative, namely: i) municipal waste management; ii) wastewater management; and iii) industrial emissions. However, considering the increasing impact of climate change on all these sectors, a separate section providing a brief overview of the challenges the Mediterranean region faces is presented. This chapter concludes by highlighting the institutional challenges that will need to be dealt with for environmental protection to be enhanced, thus reducing pollution.

3.1 Sectoral Overview

Water scarcity is a key characteristic of the whole Mediterranean region. This scarcity is compounded by quality deterioration due to pollution and increasing salinity. Pollution is caused by point sources such as the discharge of sewage or leakage from unsanitary landfills, and non-point sources such as fertilizer and pesticides from unsustainable practices in agriculture. Increasing salinity of groundwater can be caused by seawater intrusion or by overexploitation of inland aquifers. Surface water salinity increases due to drainage and wastewater return flows and to low flow conditions in the lower reaches of rivers caused by upstream abstraction.

Furthermore, in many countries in the region, untreated municipal and industrial sewage is released into the environment, either into the sea or into the beds of *wadis*, as is the case in the West Bank, Lebanon and Morocco. In some cases, untreated or inadequately treated sewage is reused for irrigation in an uncontrolled manner, with substantial health risks. Treatment is often inadequate, because treatment plants are not well maintained. Unsanitary landfills also cause pollution, with the potential to seriously impact the quality of aquifers used for municipal water supply.

Human pressures on the Mediterranean marine environment include agricultural waste, airborne particles and river run-off, carrying nutrients, pathogens, heavy metals, persistent organic pollutants, oil and radioactive substances. In addition, changes to the region's coastlines caused by human activities threaten coastal and marine habitats.

In summary Mediterranean partner countries share the following long-standing environmental issues, which only differ in magnitude and severity between the countries:

- Water scarcity and quality;
- Land and coastal degradation and desertification;
- Urban and industrial pollution; and
- Adaptation to climate change.

3.1.1 Municipal waste management

The municipal solid waste sector in the region suffers from: i) insufficient coverage of waste collection, ii) lack of adequate infrastructure for disposal and treatment of waste; and iii) limited focus on waste prevention, recycling and recovery, iv) lack of awareness of the benefits of proper waste management procedures. Waste collection is ineffective in almost all areas of the Mediterranean region, where more than 30% of waste in some cities is not collected, leading to severe littering of streets and countryside and to related environmental and health hazards.

The modes of disposal of collected solid waste vary across and between countries. Disposal may be in proper sanitary landfills, in official dump sites without any sanitary measures or in uncontrolled dump sites. Landfills and open dump sites are often located at the coast causing severe damage to the marine environment from leachates leaking from the sites. This can negatively affect the marine environment and also the ambience and value of coastal land, thus reducing the region's tourism potential.

A major problem is that many countries in the region do not have national solid waste management strategies guiding and prioritising the long term developments based on needs analyses. There are

also concerns with the large sums required to develop required SWM infrastructure, which results in that the sector may not be prioritised.

Other issues include the lack of recycling and lack of segregation of hazardous wastes from municipal non-hazardous waste as well as poor sorting of municipal waste. Some countries in the region have built composting plants to produce organic fertilizer from municipal solid waste, but these plants operate far below their nominal capacity and the quality of the end product is substandard, reducing farmers' interest in it as a valuable product.

Waste recovery and waste-to-energy are new to the region and have only been introduced through international mechanisms (i.e. funded by IFIs).

Solid waste management has been reported to be politically sensitive in most of the countries in the region. In addition to the lack of independent organizational structures for waste management in many countries, the potential for material and energy recovery in solid waste management and as an employment generator has not been fully considered in national planning.

Regarding comparative figures on quantities of solid waste generated across the countries of the region, it is important to note that the generation varies from one country to another, and even between different regions within the same country, according to community characteristics, social conditions and average income in each area. Quantities of generated waste are mainly correlated to population increases as well as economic, industrial and urban development. Table 3.1 shows the average rate and quantity of solid municipal waste generated in six of the south Mediterranean countries, based on population figures, and in accordance with available data. The quantity of municipal solid waste which is adequately treated or disposed is less than 20%, while recycled waste does not exceed 5% of the gross quantity of waste generated.

Table 3.1: Rates and quantities of municipal solid waste²

Country	Population (1000s)*	Municipal solid waste (kg/capita/day)	Gross quantity of municipal solid waste (million ton/year)
Algeria	N/A	N/A	N/A
Egypt	71,348	0.63	16.400
Israel	N/A	N/A	N/A
Jordan	5,600	0.90	1.840
Lebanon	3,917	0.60	0.858
Libya	N/A	N/A	N/A
Morocco	31,567	0.33	3.800
Palestine Territory	N/A	N/A	N/A
Syria	18,701	0.50	3.410
Tunisia	10,131	0.60	2.220

* 2006 estimates (LAS 2007)

3.1.2 Wastewater management

The main problem with urban wastewater is the release of untreated or inadequately treated sewage directly into the sea or into other receiving bodies. Inadequate treatment may result from inefficiently operating WWTPs, which in turn could be due to lack of maintenance, funding, and/or lack of trained personnel. Efforts by utilities to improve their performance have frequently failed, often because of the constraints to which public utilities are subjected, such as restrictions on tariff setting, salary levels and staffing. Unfortunately, public utilities may be expected to contribute to employment by keeping on their payroll a large number of less well-qualified staff.

As the population increases, especially resulting from tourism in the coastal areas, so the burden of untreated urban water increases. A large proportion of the urban effluents from Mediterranean coastal

² Sources: Ministry of Environmental Affairs of Egypt, GCC

cities are not treated at all before discharge. In many cases, only part of the coastal population is connected even to primary treatment units and very few to secondary treatment plants.

The major pollutants in municipal effluents are organic matter, suspended solids, nutrients and pathogenic micro-organisms, while other pollutants such as heavy metals and petroleum and chlorinated hydrocarbons can also be found. Increase of nutrient (nitrogen and phosphorus) supply to a marine ecosystem enhances primary production and may lead to eutrophication of the water body with side effects of proliferation of planktonic biomass, discoloration of the water, reduction of water transparency, reduction of dissolved oxygen in deeper waters and, in extreme cases, occurrence of toxic algae species.

However, the need to treat wastewater (and its link to water recycling and reuse) is widely understood at the political level, as seen in the achievements in some countries of the region. For example, Israel is very advanced with a large majority of its population served by WWTPs and Lebanon aims to connect up to 80% of the country's population to major WWTPs by 2020.

Water scarcity in the future will press the regional economies to become more sophisticated in water reuse, mostly for agricultural purposes. Most Mediterranean partner countries reuse at least some of their wastewater, for agriculture and irrigation of public parks and in large tourist developments. However, in many cases the cost of access to other sources of water is still relatively low and unregulated, providing limited financial incentive to use reclaimed water.

The main pollution sources from land consist of untreated sewage discharge, agricultural runoff containing pesticides, nitrates and phosphates, and emissions of contaminants directly from the ever-expanding industries around the Mediterranean or through rivers. Industrial pollution mainly comes from the chemical/petrochemical and metallurgy sectors. Direct impacts of effluents from these sources cause pollution problems at the site level and create 'hot spot' areas. Discharges of pollution connected to specific Hotspots in the south Mediterranean region are shown in Table 3.2 below.

Table 3.2: Estimates of BOD discharged from Hotspots in south Mediterranean³

Country	Hotspot	Effluent tyoe	BOD (t/y)
Algeria	Oran	Domestic + Industrial	113,600
	Rouiba-Peghaia	Domestic + Industrial	
	Ghazouet	Domestic + Industrial	
	Alger	Domestic + Industrial	
	Mostaganem	Domestic + Industrial	
	Bejaia	Domestic + Industrial	
	Annaba	Domestic + Industrial	
Egypt	Skikda	Domestic + Industrial	
	El-Manzala	Mixed (wastewater)	213,160
	Abu-Qir Bay	Mixed	
	El-Mex Bay	Mixed (wastewater)	
	Alexandria	Domestic	
Israel	N/A	N/A	N/A
Jordan	N/A	N/A	N/A
Lebanon	Damietta	Mixed (River)	
	Greater Beirut Area	Municipal + Industrial	4,090
	Jounieh	Municipal + Industrial	
	Saida-Ghaziye	Municipal + Industrial	
	Tripoli	Municipal	
Libya	Batroun-Selaata	Municipal + Industrial	
	Zawia	Domestic	2,160
	Tripoli	Domestic	

³ UNEP/WHO (1999), UNEP-MAP (2004)

	Zanzur	Industrial	
	Benghazi	Domestic	
	Tobruk	Domestic	
Morocco	Tangier	Domestic + Industrial	5,180
	Tetouan	Domestic + Industrial	
	Nador	Domestic + Industrial	
Palestine Territory	N/A	N/A	N/A
Syria	Tartous	Municipal + Industrial	
	Lattakia	Municipal + Industrial	
	Banias	Municipal + Industrial	
	Jableh	Municipal + Industrial	
Tunisia	Gabes	Municipal + Industrial	7,250
	Lake of Tunis	Municipal + Industrial	
	Lake of Bizerte	Municipal + Industrial	
	Sfax-South	Municipal + Industrial	

3.1.3 Industrial emissions

The Mediterranean region is characterised by a mixed industrial structure in terms of sectors and size of enterprises. Many family or traditional enterprises with outdated production methods still exist. Such industries may be located in close proximity to tourism facilities and city centres. Factories within or near cities tend to discharge their wastewater through urban sewerage systems with treatment plant unable to cope. A typical example is the heavily polluted Zarqa river near the city of Zarqa in Jordan, where a large number of industrial units are located very close to the town.

Despite efforts in some countries to improve industrial discharges and control emissions through the introduction of EIAs, ELVs (Effluent Limit Values) and EQSs (Environmental Quality Standards), the legislative gap in some areas and poor enforcement in others tend to create incentives for industries not to comply with pollution abatement measures. In most cases industrial zones are poorly equipped to collect and treat industrial waste, and such infrastructure is almost non-existent outside industrial zones.

In very few countries is the compliance monitoring of industrial discharges actually linked to a “discharge permit system”. Application of economic instruments to encourage investment by industry on cleaner technology, best available techniques or the construction of end-of-pipe treatment systems is almost non-existent regionally.

3.2 Institutional Structures and Legislative Challenges

3.2.1 General observations on the environmental sector

Despite the magnitude of the environmental challenges, the current legal and institutional framework does not generally support the alleviation of the problems, and in some cases creates further confusion.

In all target countries dedicated environmental authorities have been established, often with the encouragement and financial assistance from multilateral and bilateral development agencies. In most cases these authorities have been given powers under a framework environmental law which enables the implementation of more specific laws and regulations. In general, the key institution is the Ministry of Environment, which in many countries has been established between 2000 and 2003.

Environmental Ministries or specialised authorities are responsible for policy setting and legislative development, environmental monitoring, the designation and management of protected areas, and also for administering EIAs. However, other institutions are also involved in environmental protection, such as the Ministry of Interior, through local authorities which are usually involved in solid waste and

wastewater management. Involvement of numerous institutions in environmental issues leads to a lack of clarity on the division of responsibilities between ministries, which may be a limiting factor for the effective implementation of legislation.

In general, environmental legislation in the region is characterized by contradictions and overlapping of authority between different institutions. Environmental quality standards, economic measures, and the role of the public in environmental decision-making are often lacking in the legislation.

3.2.2 Legislative observations on the three sectors

Solid waste legislation is not well developed in most of the countries and the legislative framework is very weak or often missing despite the scale of the problem in the region. Solid waste management is usually delivered at the municipal level or sometimes on an inter-municipal level, with specific agreements between municipalities. The Governorates or other higher level administrative structures play an important oversight role such that health and safety standards are respected. However, these administrative structures are frequently understaffed and therefore less effective than desirable.

Wastewater legislation seems to be the most developed in the region because safe drinking water is the most pressing environmental issue in almost all countries. Nevertheless, dedicated laws for water quality control or for promoting integrated wastewater management are still usually missing.

Industrial emissions do not yet have specific legislation on pollution control measures, and enforcement barely exists within the region, although sector-specific laws are in place in several countries. EIA systems and permitting procedures are currently under development, either by drafting specific EIA laws or within the general environmental framework.

3.3 Stakeholder Involvement

This section provides an overview of the important roles of the civil society actors and the private sector, which might have a direct influence on the outcome of the projects throughout the project cycle, thus having an immediate impact on the MeHSIP-PPIF.

3.3.1 Civil society

The Arab region currently lacks a network of vibrant, effective and well-organised civil society groupings that can successfully raise the awareness and financial resources necessary to address key environmental challenges. With very few exceptions and only specific localized efforts, NGOs in the Arab region, in general, particularly lack the skills of launching campaigns on particular topics of special importance to the region (such as environment), developing programmes and preparing project proposals for funding by bilateral and/or multilateral agencies. The Arab NGOs Network for Development (ANND), which was established in 1996, has a membership of only 45 NGOs from 12 Arab countries. Out of these 45, very few have an environmental agenda or mandate.

However, there are a few well-established NGOs that have been successful in bringing external resources to the region. The Arab Forum for Environment & Development (AFED) is one such example. AFED is playing a key role in bringing the public, private and NGO sectors together using funding resources from membership fees, contributions to AFED's Trust Fund, sponsorship of programmes by corporate partners and organizations, and income from the Forum's activities and services.

Furthermore, until today the civil society actors involvement relating to the Horizon 2020 initiative has mainly focused on the severe water crisis most, if not all, Mediterranean countries are facing. Indicative of this was the Mediterranean Civil Society Statement issued for the Euro-Mediterranean Ministerial Conference on Water that took place at the Dead Sea (22 December 2008). However, there is currently ongoing discussion to widen the agenda, as could be seen at the last meeting of the Mediterranean Civil Society working on environment and sustainable development⁴. The proposed climate change issues to be presented in view of the Copenhagen climate change conference (7-18 December 2009) included issues such as management of water resources and civil protection from

⁴ Meeting took place in Cairo on the 1st of November 2009

extreme weather events, but also issues relating to ecosystems, energy, industry and transport, and tourism.

One of the aims of the EU's environment co-operation with the Mediterranean countries is to promote a strengthened civil society in which the concerned public has effective access to environmental information in order to contribute both to enhanced environmental awareness and to participate in environmental decision making. It is thus essential that NGOs are in a position to play their part in the development and implementation of environmental policy by complementing government agencies with appropriate levels of transparency and participation. The Horizon 2020 initiative requires a new impetus including targeted public participation activities leading to greater local ownership. For pollution prevention investments NGOs have an important role to play not only in the identification of appropriate de-pollution projects, but also in contributing during the EIA phase to understanding of the potential impact of the projects.

EIA, with its public participation components, calls on national and local NGOs to mobilize their resources in order to provide feedback on how to ensure a successful and sustainable outcome of the project. NGOs are well-placed to add a further dimension of ownership to the project cycle, by facilitating participation of civil society.

Finally, although it is encouraging that a significant number of NGOs and Mediterranean networks have been established, these have very uneven capabilities with limited resources, considering the challenges they are faced with.⁵

3.3.2 Private sector

Though the cost of environmental degradation in the region continues to rise, priority and financial resources allocated to address environmental concerns do not match the gravity of the problem. Not a single country in the region has allocated even close to one percent of its national budget for environmental purposes. The environment continues to be given a low priority by sectoral ministries, causing the environment and the goods and services it provides to continue to deteriorate. Moreover, the low budgets of ministries and departments concerned with the environment in most Arab countries, accompanied by weak mandates, prevent these entities from having a real impact on the ground.

Considering the financial allocations provided for environmental authorities, their institutional capacities, and the complexity of their mandates, it is likely that Arab countries will continue to fail to achieve their environmental targets until the mandates and roles of environmental authorities are redefined and a greater role is given to sectoral ministries to deal with environmental issues.

To boost the low level of funding allocated to national environmental programmes and activities, many Arab countries have established financial mechanisms for national, regional and international development assistance through funds and awards.

Many countries however have expanded the role of the private sector in the operations and management of environmental infrastructure. Various forms of Public Private Partnerships (PPPs) have been used in solid waste management, wastewater and industrial emissions. The main challenge remains the expertise as well as the legal and regulatory mechanisms to ensure the efficient management of these PPPs, which will enhance the investment resources available for funding operational and maintenance costs. Privatization or private participation of these assets will prove a difficult challenge for the Mediterranean countries, particularly in light of the absence of well developed financial markets for local companies to raise funds, which could lead to a high level of participation by large European companies.

Over the last few years, the Arab region has experienced a rapid increase in the number of private initiatives that contribute to environmental protection. An increasing number of companies have joined the Global Compact Initiative (GCI), though many have been categorised as inactive companies due to non-compliance with reporting requirements.

⁵ "A sustainable future for the Mediterranean; the Blue Plan's Environment & Development Outlook", G. Benoit and A. Comeua (edt.), 2005

In the context of the MeHSIP-PPIF the private sector can play an important role at the beginning as well as at the end of the project cycle. During the early stages of project development the possible roles of the private sector will be examined and the types of PPPs which could be used analysed. In addition, training and case studies could be developed through the Horizon 2020's Capacity Building component.

3.4 Climate Change

Rising greenhouse gas concentrations could cause warming in the Mediterranean of a similar magnitude to the global increase. For 2000, statistics showed that the world total GHGs emissions from all resources was about 33 thousand Tg (teragram), with Arab countries contributing about 4.2% of these total world emissions (WRI, 2005). The relatively small contribution of GHGs of all Arab countries does not correspond to the projected impacts of climate change over the region. Most of the Arab region lands are classified as hyper-arid, semi-arid and arid land zones (WRI, 2002). Most recent assessments have concluded that arid and semi- arid regions are highly vulnerable to climate change (IPCC, 2007a; see also Chapter 7).

According to modelling studies, the Arab region will face an increase of 2°C to 5.5°C in surface temperature by the end of the 21st century. This increase will be coupled with a projected 0 to 20 percent decrease in annual precipitation. These projected changes will lead to shorter winters, dryer and hotter summers, a higher rate of heat waves, a higher level of weather variability and a more frequent occurrence of extreme weather events.

FAO projections show that, as a direct consequence of climate change, and particularly given the current trend of rapid population increases, Algeria, Egypt, Morocco, Syria and Tunisia will experience severe water shortages by 2050; only Iraq is anticipated to be in a relatively better situation (FAO, 2002b). Typically, heavy reliance on surface and groundwater prevails in all countries of the region, with 60–90 percent of the water being used for agriculture. Throughout the region, water demand is steadily increasing while supply is steadily decreasing.

Climate change is projected to raise salinity levels of lakes and groundwater as a result of increased air temperature (Haas, 2002). Moreover, higher pollutant concentrations in rivers, increased groundwater contamination and increased leaching of agricultural chemicals into groundwater are forecast as a consequence of changes of runoff in catchments (IUCN, 2003). Watersheds are now facing frequent drought coupled with sudden intense rainfall events that cause serious soil erosion and desertification.

Consequently, climate change will require a more significant adjustment in the management of this region's water resources than any other region, since most resources are already being exploited for human use. Adaptation to climate change thus becomes a significant challenge for many sectors, with the water sector and agriculture being of top priority. The development of a multi-sectoral adaptation strategy to protect water resources and to meet the various other challenges imposed by climate change is required if national socio-economic goals are to be attained.

4 Progress on Project Development

4.1 Introduction

The Updated Short List and, consequently, the Horizon 2020 pipeline are directly linked to the 120 hotspots⁶ identified by the most recent UNEP/MAP and WHO report conducted in 2003. Many references to hotspots and project pipelines have been in circulation since the start of the Horizon 2020 initiative through a number of reports conducted at country and/or regional level. These reports, although providing useful insights on the environmental challenges facing the countries bordering the Mediterranean, also contributed to confusion about the number of hotspots and how these relate to the evolution of the project pipeline for the south Mediterranean.

The MeHSIP-PPIF team began by undertaking an in-depth review of the genesis and evolution of the hotspots and the related project pipeline. The existing literature was augmented by information gathered during the missions to the beneficiary countries allowing a clearer understanding of the evolution of the project pipeline from:

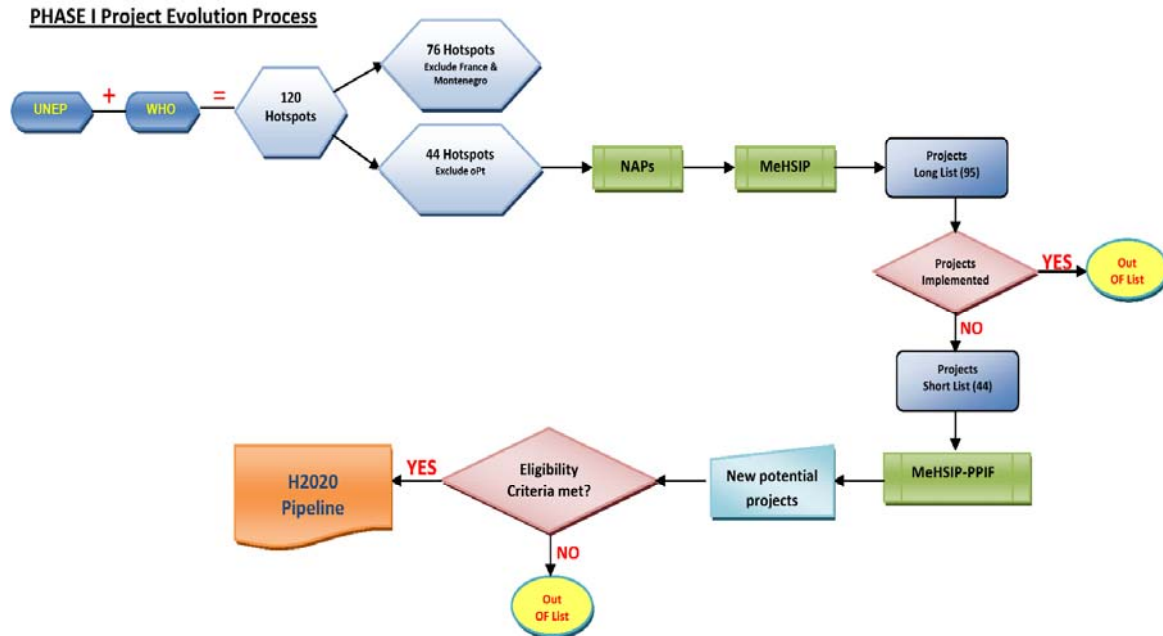
- the initial identification of hotspots across the Mediterranean, including north shore countries;
- down through early identification of possible projects;
- reducing the short list provided to reflect potential solutions for the beneficiary countries of this project;
- further reducing of the short list by collecting information on current national plans and the implementation of projects to create an Updated Short List ;
- adding new projects to the list following mission findings in the countries to create a consolidated list, which is presented as the Updated Short List (as of October 2009);
- resulting in a Horizon 2020 pipeline that includes the projects yet to secure financing; and
- clear up misunderstandings about the projects ensuring that promoters, central and local government, donors and IFIs use the same title for a given project.

The Updated Short List and consequently the Horizon 2020 pipeline will change as projects are started, dropped, revised or new projects are added. Updated versions of both the Updated Short List and Horizon 2020 pipeline will be maintained by the Consultant.

⁶ 1st Hotspot report (in 1999) identified 131 Hotspots. See "Identification of priority pollution hot spots and sensitive areas in the Mediterranean", MAP Technical Reports Series No. 124, UNEP, Athens, 1999

4.2 From Hotspots to a Horizon 2020 project pipeline

The figure below shows how identification of hotspots provided the foundation for the subsequent studies.



1. Hotspots: 131 'pollution hotspots' were identified in the initial UNEP and WHO study in 1999⁷. An updated UNEP/WHO study (2003) reduced the number of hotspots reported by the countries to 120, of which 44 related to Mediterranean partner countries. These 44 hotspots do not correspond directly to projects in the pipeline. The hotspots are locations where works might be needed to deal with the existing pollution. In the shortlist of 44 proposed projects presented in the MeHSIP study (2008)⁸, more than one project may be listed per identified hotspot (e.g. Alexandria, Egypt). The fact that the initial MeHSIP project list of 44 matched the number of identified hotspots was purely coincidental.
2. From a "long list" to a "short list": the initial project pipeline (the "long list") included 95 projects, based on the NAPs (National Action Plans). This list was revised (the "MeHSIP short list") to include 44 projects. The pipeline evolved as the respective countries completed some of the projects, and lack of information on other projects might have played a role (see Algeria, Lebanon, and Palestinian Territory, which MeHSIP did not visit). The "MeHSIP list" included 20 projects from the initial long list while the remaining 24 were newly identified projects.
3. MeHSIP-PPIF: started with 43 projects beginning in March 2009, benefited from the recent mission findings by the MeHSIP-PPIF team during Phase I and resulted in what is now called the "Updated Short List" (with 73 projects) as of October 2009. The following chapter provides further details on these projects.
4. The MeHSIP-PPIF team started the review based on the MeHSIP-PPIF shortlist of 43 projects derived, as described above.

⁷ In the frame of the Strategic Action Programme (SAP) – part of UNEP-MAP

⁸ MeHSIP 2008 – "Horizon 2020 - Elaboration of a Mediterranean Hot Spot Investment Programme (MeHSIP), EIB (Contract REG/2006/02), 2008

4.3 Challenges for Project Development in Mediterranean Region

4.3.1 Needs of the Mediterranean region

Before proceeding to identify and analyse the specific challenges relating to project development it is worth considering the rapid population growth in the Mediterranean region which exacerbates the challenges that this region faces and it needs. Until the 20th century the population of Mediterranean region was around 30 million, reaching 60 million early in the 20th century. Only from the second half of 20th century did population growth in the region gain real momentum. The total population increased from around 100 million in 1950 to around 380 million in 2000 - an addition of 280 million people in 50 years! In other words, during this period the population of the Mediterranean region increased 3.7 times, more than any other major world region.

Managing rapidly growing urban populations in the face of housing shortages and inadequate infrastructure is becoming more of a challenge. The populations of cities are growing faster than the populations of the countries as a whole, as population growth in the rural areas feeds a pool of potential rural-to-urban migrants. Governments have not been able to adjust in dealing with this new and complex reality and the problems that have followed, and have not until today allocated the needed resources for project preparation and development.

4.3.2 Challenges of project development

The development of environmental projects in the Member States of the EU remains a complex and lengthy process that often takes more than ten years. Still the EU Member States, in comparison with most countries around the world, have the most developed professional and relatively well paid civil service. So how come this apparent paradox?

The answer lies in extensive legislation which obliges the Governments to undergo public consultations and ensure that public concerns are exhaustively addressed. As it is not possible to shorten the duration of project preparation, the Member States address this problem by a two-fold approach: early planning and continuous follow-up to ensure progress.

The Mediterranean partner countries are facing similar challenges but the problems are compounded due to a number of additional factors which will be highlighted below.

Project scope

The public sector in the Mediterranean partner countries is not unique in its development of organisational silos. However the high degree of centralisation compounds this problem as projects developed although aiming to address specific environmental problems, tend to focus exclusively on pollution arising from a single source and do not necessary seek comprehensive solutions that would enhance the sustainable development of the region in the long term.

Furthermore, promoters invest considerable time and resources to develop their projects but without consulting other relevant ministries and departments only to find out that they have to redo a considerable part of the studies in order to meet the sectoral policy requirements set by their own Government that needs to be followed by the funding agencies.

Considering that most, if not all, of the projects included in the Horizon 2020 pipeline are currently at early stages of development the timing is suitable for the MeHSIP-PPIF team to engage in dialogue with the promoters encouraging the participation of most of the concerned departments, besides emphasising the need to include issues such as energy efficiency and water reuse when further developing the projects.

Financing project preparation

In the Mediterranean countries, at present, there are hardly any projects ready for financing and this is attributed to a number of reasons which are outlined below.

As already indicated considerable amount of time and resources are required to develop projects, which can constitute more than ten percent of the project's total value. Mobilising funds for project development and financing studies is a major obstacle since Ministries are reluctant to release funds in the absence of detailed studies. This is also the experience from other related programmes/initiatives as indicated in Chapter 2, and how the European Commission and EIB are attempting to deal with this specific challenge when funding projects in the new EU Member States (see JASPERS).

Now considering the case of the Mediterranean partner countries and also taking into account that the challenges this region are facing is more pressing due to the demographic situation, one should point out to a general lack of in-house expertise for preparing complex projects for implementation. During the 1970-1980s the Mediterranean partner countries were relying mainly on in-house expertise that in general lacked the skills and experience to address complex issues of environmental projects, and even today they lack the necessary procurement framework for hiring international expertise, hence relying, to a large degree, on externally funded technical assistance to overcome these obstacles.

The European Commission is by far the largest source of potential grant financing of technical assistance in the Mediterranean region. However, these funds were rarely used to support project development as the decision makers are faced with the same dilemma with that of the Ministries, namely: will the financing of the studies lead to a project or will they be financing reports which will end up in the promoters' shelves?

On the other hand, IFIs who have direct interest to develop projects do not have the resources or even the mandate to support projects which are not at an advanced stage of maturity. Although IFIs have often access and could mobilise Technical Assistance for additional project development, these facilities tend to be mainly available for projects which are at advanced stages of development.

Similar to the Governments, IFIs are under pressure to finance environmental infrastructure projects. Even though the financing agreements are usually concluded swiftly the actual procurement does not commence for at least another three to four years, resulting in disbursement of funds taking place close to five years after the date the financing agreement was signed. Consequently, the promoters and Governments do not make full utilisation of the benefits of these loans, such as the grace period. It is however argued that without the actual signing of the financing agreement and the pressure that follows with it the project might not materialise.

Resources from MeHSIP-PPIF can address some of these challenges if used in a coherent way. Although resources within MeHSIP-PPIF are small in comparison with the needs, the tools developed such as the Horizon 2020 Pipeline acts as commitment device to Governments and funding agencies alike and promote a long-term perspective on the investments needed. In addition, the preparation of ToRs, Project Fact Sheets, Gap Analysis, and capacity-building activities all relating to facilitate project development can further assist in the mobilisation of the resources needed.

Financing project development

Project development is often a task undertaken by highly specialised international experts as promoters do not have the means to engage such expertise. The creation of the Neighbourhood Investment Facility (NIF) is expected to a certain extent to fill the gap in project development, at least for the projects at an advanced stage of maturity. IFIs can more readily access grant funded technical assistance when projects are at an advanced stage of maturity as they will be more confident that these investments will lead to the actual implementation of these projects. In addition, for relatively mature projects Governments and promoters have better arguments to convince their decision-makers in allocating resources to complement the funds made available by external sources.

MeHSIP-PPIF intends to play a significant role in supporting projects reaching advanced stage of maturity by preparing prefeasibility studies and assist in the development of necessary project documentation. Furthermore, the tracking system established as part of the Project Fact Sheets is expected to allow for the continuous monitoring of project development.

Sustainability

At present the issue of sustainability could be singled out as the biggest challenge facing the mobilisation of resources for project financing. The existing tariff structures in almost all the Mediterranean partner countries are not sufficient to finance the operational costs let alone the full cost recovery of the investment.

Again, the European Commission will be called to assist in this area as well. Most of the grants made available by the EU to the Mediterranean partner countries are from bilateral programmes or the so called National Indicative Programmes (NIPs). The NIPs are predominantly financing sectoral and institutional reforms and in the Mediterranean partner countries a number of projects are playing a catalytic role in bringing the relevant Government departments together with the donors for addressing these issues.

The MeHSIP-PPIF does not have the mandate to address the problems arising from the institutional reforms and eventual tariff restructuring. Nevertheless, the MeHSIP-PPIF team has from its outset co-ordinated with the EC and other donor funded projects with the aim to establish an extensive network and to ensure proper co-ordination in the area of enhancing project sustainability. In addition, the Gap Analysis addresses the challenges arising from aforementioned problems and MeHSIP-PPIF team encourages the Governments and external investors in taking these issues into consideration to ensure that they become an integral part of the project's implementation.

Political Support

The Horizon 2020 deals with three main sectors at the country level, namely: i) wastewater; ii) solid waste; and iii) industrial emissions. It is important to highlight that most of the Mediterranean partner countries there is a high degree of centralisation, and often the decision-making of even operational issues lies with the political leadership. Moreover, the three sectors in question often face political challenges in most of the countries given their direct impact on communities. Accordingly all strategies and national plans developed to introduce solutions are often blocked due to the absence of a strong political will to support major reforms.

This particular challenge is clearly beyond the scope and direct influence of the MeHSIP-PPIF, and will need to be considered on a case-by-case basis depending on its implications on the MeHSIP-PPIF project.

Legal Enforcement

It is widely recognised that scientific and technological expediences alone will not provide the necessary protection of the environmental resources, unless binding controls are applied to ensure the enforcement of environmental laws. Moreover, laws in the Mediterranean partner countries tend to focus on the protection of marine environments against pollution caused by maritime sources (such as vessels), oil platforms, and other maritime facilities as well as land-based sources erected along or nearby coasts which discharge their effluents into the marine environment. However, factors affecting environmental compliance vary substantially from one country to another, with the main causes highlighted hereunder:

- *Environmental standards* adopted and set are inconsistent with the environmental conditions as well as with the technical and economic potential of the country;
- In many cases, these *laws set uniform standards* that apply to both production and service activities, regardless of pollution-combating costs and techniques;
- *Absence of qualified cadres and expertise* to help enforce environmental legislation;
- Multiple of authorities in charge of executing laws and *lack of co-ordination* contribute to hindering compliance;
- Most laws on environment do not sufficiently encourage operational clean technologies/techniques and pursuing *utilisation of economic tools and incentives* as effective means of achieving compliance; and
- Lack of political support for serious *enforcement of environment laws*.

Similar to the challenge of lack of political support, the challenge of legal enforcement goes beyond the scope and direct influence of the MeHSIP-PPIF, and will need to be considered on a case-by-case basis depending on its implications on the MeHSIP-PPIF project.

4.4 Conclusion

The analysis of the evolution of the 'pollution hotspots' identified across all countries sharing the Mediterranean Sea and the evolution of the project pipeline for the Mediterranean partner countries, provides a commonly accepted baseline from which the MeHSIP-PPIF team could readdress the Horizon 2020 initiative in the selected countries.

However, the establishment of a common project pipeline, although important as a commitment and monitoring device, will not in itself ensure that the specific challenges on project development that the Mediterranean partner countries are faced with will be addressed. The MeHSIP-PPIF is in a position to provide its support for dealing with some of these challenges, for instance by:

- *Facilitating stakeholder co-ordination:* MeHSIP-PPIF team to engage in dialogue with the promoters encouraging the participation of all concerned authorities/stakeholders;
- *Defining project scope:* MeHSIP-PPIF team to emphasise the need to include horizontal issues, such as energy efficiency and water reuse, when further developing the projects;
- *Project preparation financing:* although resources within MeHSIP-PPIF are small in comparison with the needs, tools developed (e.g. Horizon 2020 Pipeline) has the potential to act as commitment devices to Governments and funding agencies alike, promoting a long-term perspective on the investments needed;
- *Project development tools:* development of (i) Project Fact Sheets and (ii) Gap Analysis; preparation of (iii) ToRs, and (iv) capacity-building activities, are intended to further facilitate project development, thus enhancing the possibility of mobilising resources needed; and
- *Horizontal issues affecting sustainability, political support and legal enforcement:* although the MeHSIP-PPIF team does not have the mandate to address these challenges, nevertheless considering that its activities have been done in close co-ordination with the EC and other donors, it is envisaged that the MeHSIP-PPIF will be able to contribute its share on enhancing project sustainability and indirectly promoting needed reforms.

5 Project Preparation and Implementation

Chapter 5 describes how the MeHSIP-PPIF team further reviewed the short list to update it to its current status (Updated Short List) and then developed the Horizon 2020 pipeline based on the projects which have yet to secure the financing needed.

The eligibility criteria for projects to be included in the Updated Short List are based on the following principles:

1. Government priority of beneficiary country;
2. Objectives of project matching those set out by UNEP-MAP: project should aim to contribute to the de-pollution of a hotspot (by extension the Mediterranean Sea) and to be in accordance with the NAP; and
3. Pollution sources: cause of pollution as defined in Article 4 of the Barcelona Convention but limited to one of the three sectors which form the basis of the Horizon 2020 initiative (wastewater, municipal waste and industrial emissions).

Furthermore, reference is made to the estimated project cost where a guideline of approximately €15–20 million might be appropriate.

In the process of consolidating the project list the MeHSIP-PPIF team had exchanges with various institutions, in order to reach consensus around projects and ensure that they correspond to national priorities set. These institutions included:

- *Central level:* Ministry of Planning (or a similar structure); Ministry of International Cooperation (in some countries combined with Ministry of Planning; Ministry of Environment, Ministry of Water and Irrigation, Ministry of Interior, Ministry of Municipal Affairs; and specialized agencies in the relevant sectors; and
- *Regional / Local level:* Governorates, Regional Administration, and Municipalities.

Moreover the country tables (see Tables 5.1 - 5.9) presents a cross reference with the Country National Action Plan (NAP) in order to report as accurately as possible on progress of NAP projects and build on existing initiatives.

5.1 Algeria

Pollution problems are mostly concentrated in Algeria's coastal zone (a coastal band with a width of 40 km) representing 1.8% of the country's surface and hosting approximately 12.5 million people (1998) or 45% of the country's population. Most urban effluents are discharged untreated directly into the sea. Industrial activity is also concentrated on the coastal zone and industrial effluents are discharged into the coastal marine environment. Also petroleum hydrocarbon pollution is very common along the Algerian coastline because of maritime oil traffic lines passing close to the Algerian coast.

The relevant government authorities expressed serious concerns about their capacity to deal with the large number of hotspots on their coastal strip due to industrial pollution sources. The authorities acknowledge there is pollution from urban wastewater, however they believe that they have enough human and financial resources to deal with urban wastewater. Discussions held with the MeHSIP-PPIF team focused on requesting technical support to assist them in the identification and formulation of projects to reduce industrial pollution at the coasts. Some 80% of the total industrial emissions (industrial wastewater) originates from six coastal *Wilaya* (Alger, Annaba, Bejaia, Oran, Skikda, and Tlemcen). Their main technical deficiency lies in two aspects; the capacity to identify efficient technical and economical solutions for the industrial emissions,; and the capacity of authorities in charge of managing the environment to set standards, formulate and enforce laws for protecting the environment.

MeHSIP-PPIF Team is ready to intervene by undertaking a detailed assessment of each pollution area, assisting in identifying the scope of each intervention and developing the projects. Substantive technical assistance in these areas will contribute positively to pollution reduction to the Mediterranean Sea from Algerian land based sources. The main polluting areas are:

1. Fertil in Annaba
2. Mittal-Steel in Annaba
3. Alzinc in Gazaouet
4. Sonatrach in several terminals located on the Mediterranean Coast
5. Mercury Complex in Azzaba

The list is not exhaustive and it was the result of our first visit to the country. A complete list of land based pollution sources is needed to identify the actual scope of industrial pollution.

Main counterparts contacted were the MAP focal point at the Ministry of Land Management Environment and Tourism (MATET), as well as representatives from: Algérienne Des Eaux (ADE), ONA, SEAAL, SEOR, SEACO, SEATA, and Ministry of Water Resources (MRE).

The map and table below indicates the hotspot locations for Algeria as well as the project included in the updated short list and whether it was included in the NAP.

Algeria
 H2020 Project Pipeline



2. CHLEF	23. ANNABA	38. TISSEMSILT
6. BÉJAÏA	24. GUELMA	41. SOUK AHRAS
9. BLIDA	25. CONSTANTINE	42. TIPAZA
10. BOUIRA	27. MOSTAGANEM	43. MILA
15. TIZI-OUZOU	29. MASCARA	44. AÏN DEFLA
16. ALGER	31. ORAN	46. AÏN TÉMOUCHENT
18. JIJEL	34. BORDJ-BOU-ARRÉRIDJ	48. RELIZANE
19. SÉTIF	35. BOUMERDÈS	
21. SKIKDA	36. EL-TAREF	

100 km



Table 5.1: Updated Short List - Algeria

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
1	WW	Construction of WWTP (Gazaouet)	N.A.	FFEM	Yes	0.25

5.2 Egypt

The pollution generated by the country's sizable population of 84 million people who live and work in close proximity to the Nile makes this region by far the largest polluter of the Mediterranean Sea. The pollution generated by agricultural and other economic activities of the 35 million residents of the Nile Delta is extensive. Fertilizers and pesticides end up in drainage canals which discharge to the nearby lakes and then to the Sea. Sewage from a number of agglomerations is discharged to the canals and solid waste dumps are in close proximity to the same drainage canals.

It should be noted that the large volume of water which the Nile discharges influences the current of the Mediterranean Sea. During most of the year, with the exception of some local particularities, the current moves from Egypt along Gaza, Israeli, Lebanese, Syrian and even as far as the Turkish coast.

With significant donor assistance Egypt prepared and launched the first National Strategy on Water and Wastewater in May 2009. Following the launch, the MeHSIP-PPIF Team, reviewed the project pipeline and identified new projects with the main counterpart, HCWW. Two new major WWTP projects which were considered as top priority were identified in Marsa Matrouh and Kafr El-Sheikh and support was provided in developing these projects. Other potential wastewater projects are currently being discussed with the Governorate of Sharkia.

Extensive discussion with EEAA on the development of solid waste did not identify any SWM projects and there is considerable fragmentation of responsibilities and authority without a clear cost recovery plan. EEAA is developing a national policy and strategy for the SWM sector with EC assistance.

The Egyptian Government places great emphasis in developing programmes and mobilising investments for the treatment of industrial waste as Egyptian exporters for industrial products have a very limited time (only one year grace period) to comply with ISO 14001.

The map and table below indicates the hotspot locations for Egypt as well as the current projects included in the updated short list and whether these were included in the NAP.

Egypt

H2020 Project Pipeline

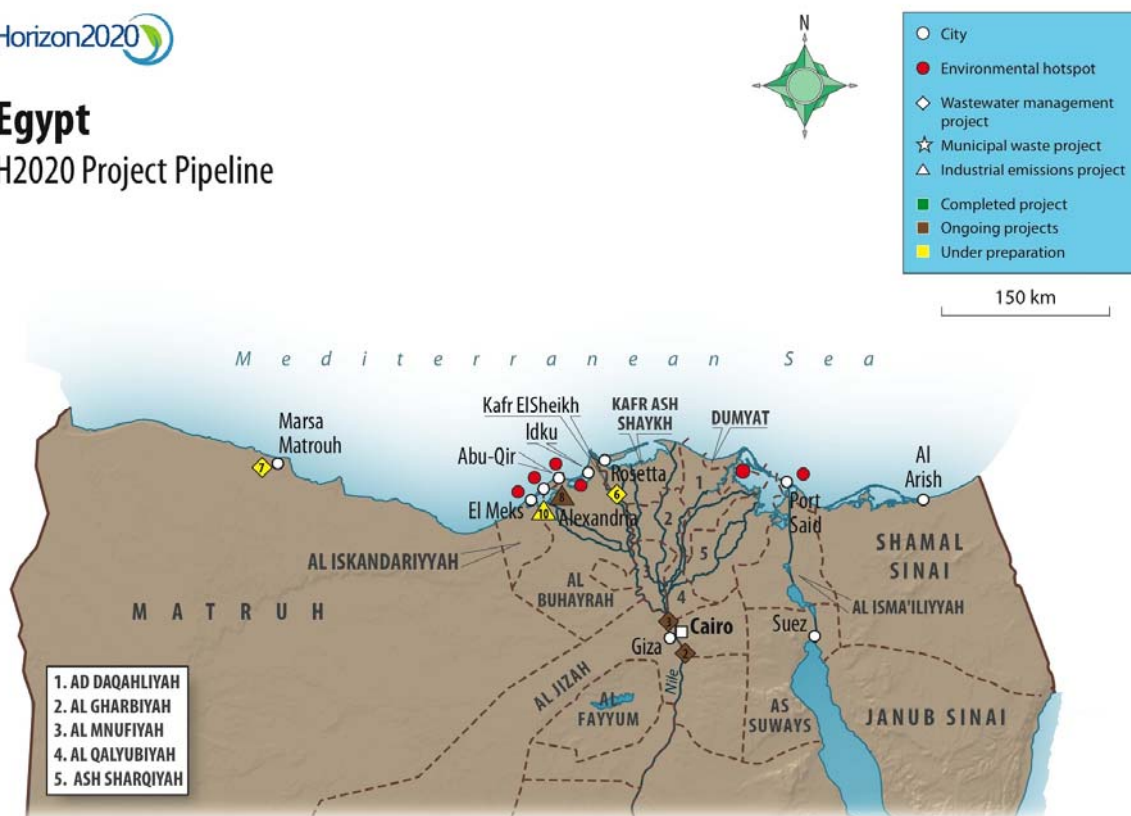


Table 5.2: Updated Short List - Egypt

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
2	WW	Untreated domestic sewage (Cairo / Abu Rawash)	EEAA	JBIC	No	50
3	WW	Expansion of existing WWTP for biological treatment (Cairo / Gabal el Asfar)	EEAA	AFD AfDB	No	180
4	WW	Improved Water and Wastewater Services Programme - IWSP	EEAA	KfW , AFD, EIB, EC, GoE, NIF	Yes	300
5	WW	Integrated Sanitation and Sewerage Infrastructure Project – ISSP	EEAA	WB	Yes	87
6	WW	Wastewater Treatment (15 villages in Kafr El-Sheikh)	HCWW	Not secured	Yes	105
7	WW	Water and wastewater expansion (Marsa Matrouh)	HCWW	Not secured	Yes	87
8	ICZM	Coastal Zone Management Project (Alexandria)	EEAA	GEF, WB	No	4
9	IE	Private Public Sector Industry Project - PPSI (Cairo)	EEAA	KfW	Yes	7
10	IE	Hazardous waste treatment facility (Alexandria)	EEAA	Not secured	Yes	25
11	IE	Egyptian Pollution Abatement Programme (EPAP II) (Cairo)	EEAA	WB, EIB, AFD, EC	Yes	145

5.3 Israel

About 70% of Israel's population lives within 15 km of the Mediterranean coast where the major economic and commercial activities of the country are concentrated. Industrial and urban effluents are usually treated together in wastewater treatment plants but some industries discharge effluents directly to rivers and the sea. Solid waste is also an important environmental problem, despite the country's relatively well developed and implemented waste legislation.

Israel has completed more than 90% of the country's wastewater infrastructure and 70% of the water is re-used, putting Israel on the top of the list on water re-use. A recently signed EIB loan agreement aims to close this small gap and to develop wastewater facilities in smaller and poorer agglomerations. The next phase of the country's plan is for the municipalities to upgrade a number of WWTPs to tertiary treatment and treat the sludge generated from the treatment plants.

Two of Israel's hotspots at the mouth of Kishon river and of the industrial city of Asdod are due to industrial emissions. A number of studies have been completed and discussions are ongoing between the government and the industries on the type of investments needed to ameliorate the problem and how the costs will be split between the local, central governmental as well as the industries.

Israel has a large number of sanitary landfills and is in the process of completing the remaining ones planned. However, considerable investment will be needed to ameliorate pollution caused by leachate reaching the sea from old closed dump sites.

Israel had no projects on the initial MeHSIP-PPIF short list of 43 projects. The MeHSIP-PPIF team conducted a five day mission to Israel to discuss with relevant authorities any new projects or updates on existing projects. A master plan for rehabilitation of landfills is expected to be ready by October 2009 for discussions and decisions for an action plan. The Ministry of Environmental Protection expects to use the master plan in order to develop a priority list. The cost estimate is reported as 2 to 4 million EUR per landfill (i.e. total investment 110-220 million EUR). The Updated Short List for Israel can be reported currently as follows.

The map and table below indicates the hotspot locations for Israel as well as the current projects included in the updated short list and whether these were included in the NAP.



Israel

H2020 Project Pipeline

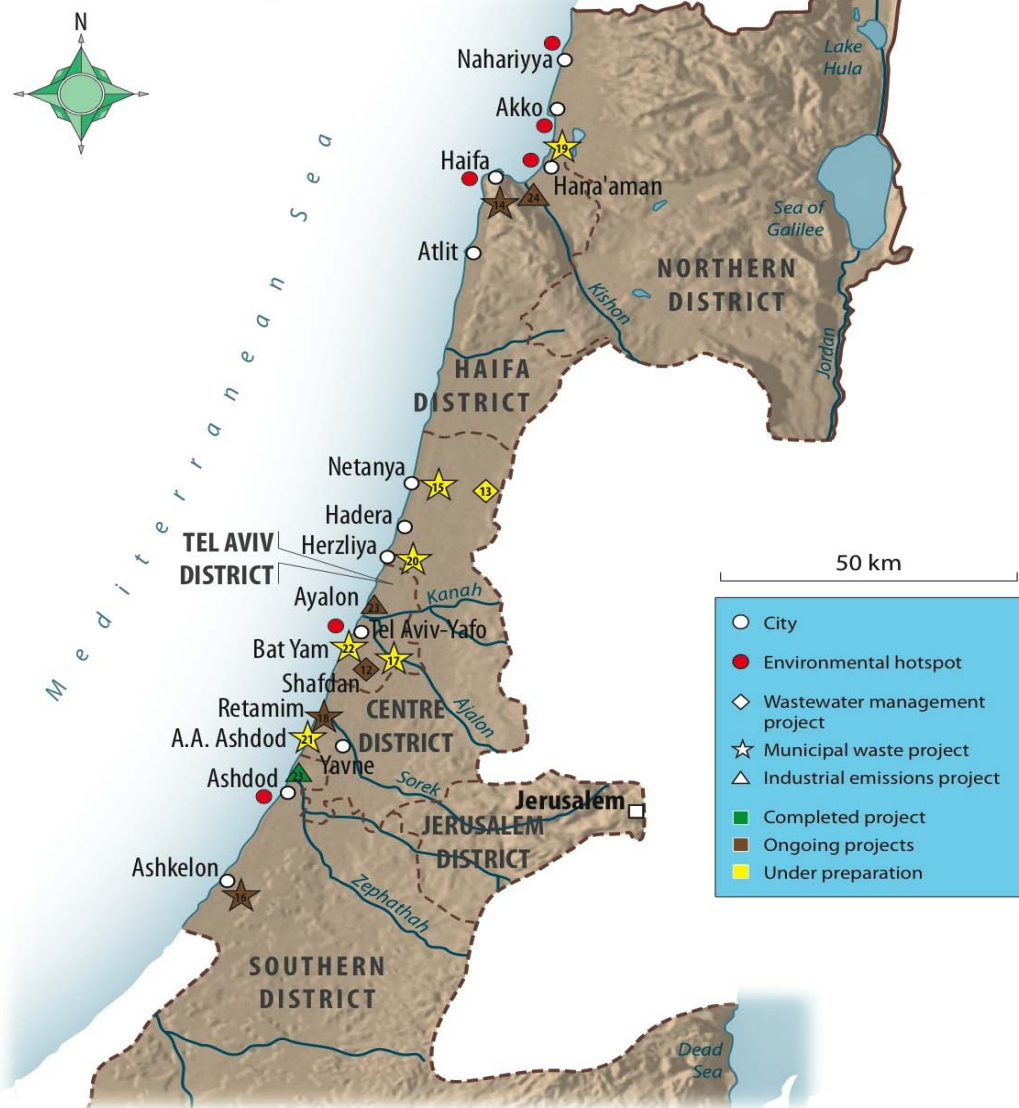


Table 5.3: Updated Short List - Israel

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
12	WW	Construction of sludge incineration plant or sludge drying plant (Shafdan)	Association of Municipalities	Loan from local Bank	Yes	200
13	WW	Construction of WWTP at Alexander river ⁹	Ministry of Environment	Could be part of an EIB 200 M committed on 2006	Yes	N.A.
14	SW	Rehabilitation of closed landfill	Municipality of	Not secured	Yes	6

⁹ Potentially be part of an EIB loan (EUR 200 million committed in 2006) to support wastewater projects in urban and rural areas (http://www.eib.org/attachments/country/israel_en.pdf)

		(Haifa)	Haifa			
15	SW	Landfill mining and reclamation (Netanya)	Municipality of Netanya	Not secured	Yes	50
16	SW	Rehabilitation of closed landfill (Ashkelon)	Municipality of Ashkelon	Not secured. Probably to be self-financed	Yes	6.7
17	SW	Rehabilitation of closed landfill (Rishon LaZion)	Municipality of Rishon LaZion	Not secured. Probably to be self-financed	Yes	5
18	SW	Rehabilitation of closed landfill (Retamim)	Municipality of Retamim	Self-funded – using CDM technique.	Yes	8.2
19	SW	Rehabilitation of closed landfill (Hana'aman)	Western Galilee Association of Towns for Environment	Not secured	No	2.2
20	SW	Rehabilitation of closed landfill (Herzliya)	Municipality of Herzliya	Not secured	Yes	6.8
21	SW	Rehabilitation of closed landfill (Ashdod)	Municipality of Ashdod	Not secured	No	4.6
22	SW	Rehabilitation of closed landfill (Bat Yam)	Municipality of Bat Yam	Not secured	Yes	0.8
23	IE	Rehabilitation of sewage collector and construction of pumping station (Ayalon)	N.A.	N.A.	Yes	123
24	IE	Rehabilitation of Kishon River (dredging of river bed, etc.)	Ministry of Environment + private companies	Not secured	Yes	20
25	IE	Upgrade of WWTP to biological treatment (Ashdod)	AGAN (Private company)	N.A.	Yes	N.A.

5.4 Jordan

The Government of Jordan has identified its most pressing problems as scarce water resources and land degradation. At present around 65% of the urban population have access to public wastewater collection and treatment systems. However, only a limited percentage (3%) of the rural population is connected to sewerage networks. In these areas wastewater is discharged to septic tanks, or directly to natural bodies. Solid waste management is a growing concern in Jordan. There is no national strategy for solid waste management. As a result, solid waste management systems, with the exception of Greater Amman, have not been developed to adequate levels and collected waste is generally 'managed' in dumps.

The project pipeline in Jordan contains 18 projects. Ministry of Planning and International Cooperation (MOPIC) helped the MeHSIP-PPIF team engage with Ministry of Environment, Ministry of Water and Irrigation and Water Authority of Jordan and the Jordan Valley Authority. Contact with local Authorities was also made with help from both MOPIC and the Ministry of Environment, where discussions on municipal solid waste and the problematic dump sites of Rossaifeh and El-Ekaider were reviewed. Following up on findings from the inception phase and discussions with the Higher Council for Privatization, contacts were also established with the Private Sector for the main medical waste project that has been recently awarded under a BOOT contract.

On the wastewater sector MeHSIP-PPIF team engaged in further detailed discussions with the Water Authority of Jordan (WAJ) in order to set priorities on the new projects identified and assess the sensitivity and importance of each in the Jordanian context where protecting water resources has been set as a national priority for the country. Contacts with donor community were made, namely with EC Delegation, USAID office, AFD, GTZ, and KfW. Many of the listed wastewater projects have secured financing, through the newly signed US Millennium Challenge Corporation (MCC). Other projects on the list are outside the MCC area and have either secured or are still looking for finance.

The map and table below indicates the hotspot locations for Jordan as well as the current projects included in the updated short list and whether these were included in the NAP.



Jordan

H2020 Project Pipeline



The short list for Jordan was among the most substantive ones in the identification process that took place during Phase I. Following the inception phase the MeHSIP-PPIF team conducted consultations with relevant government authorities to review all the projects identified. While reviewing the projects, the special case of Jordan when considering that it has no direct pollution impact into the Mediterranean Sea, consequently a prioritisation exercise was done. Following this prioritisation exercise a new round of information collection took place, in order to update the projects identified. Based on this, three of the newly identified projects (listed in red hereunder) were dropped from the list due to the following reasons:

1. Two of the project have very low cost estimations, hence do not qualify for financing; and
2. The third project covered only a WW network with no WWTP, in addition to very limited information provided during MeHSIP-PPIF team's consultations to allow for an objective evaluation of the project.

Table 5.4: Updated Short List - Jordan

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
X	WW	Construction of 70km sewer pipeline and pumping stations (Bab Jerash)	WAJ	NA (new)	N/A	8
26	WW	Box culvert (40km) for wastewater conveyance (Zarqa/Amman)	WAJ	Not secured	N/A	50
27	WW	Construction of WWTP (4000 m ³ /day), sewer pipelines (80km) and pump stations (Azraq)	WAJ	Not secured	N/A	70
X	WW	Construction and expansion of 60km sewer pipelines and pump stations (Maan)	WAJ	NA (New)	N/A	7
X	WW	Construction of 70 km sewer network and pump stations (Manshiyat Bani Hassan)	WAJ	NA (New)	N/A	18
28	WW	Expansion and upgrade of wastewater facilities (Karak and Kofranjah)	WAJ	KfW (partially)	N/A	56
29	WW	Construction of sewer pipelines (160km), pump stations, WWTP (9000 m ³ /day) (Karak-Kofranjah – serve hotels)	WAJ	Korean Government	N/A	60
30	WW	Construction of WWTP (12000 m ³ /day), pump stations, transmission pipelines (East coast of Dead Sea)	WAJ	Not secured	N/A	18
31	WW	Expansion of WWTP (first option) or construction of a new WWTP (second option) (As-Samra OR Wadi Zarka)	WAJ	USAID/MCC	N/A	172
32	WW	The construction of a proper cross section: closed Canal (50km) (Wadi Zarqa)	WAJ	USAID/MCC	N/A	47
33	WW	Upgrading and expansion of WWTP (Jerash)	WAJ	USAID/MCC	N/A	8
34	WW	Septic treatment facility capacity (10,000 cu m/day) (Ain Ghazal)	WAJ	Kuwait Fund for Arab Economic Development, WAJ (studies), MCC	N/A	23
35	WW	Wastewater System Reinforcement and Expansion (Zarqa Governorate)	WAJ	No financing needed (covered by MCC)	N/A	NA
36	IE	Central industrial WWTP (1,430 cu m/d) (Zarqa)	MoE/Zarqa Chamber of Industry	MoE/ZCI – Financing might be needed.	N/A	NA
37	SW	Integrated SWM Project (Ghabawi Landfill)	Amman Municipality	World Bank	N/A	NA
38	SW	Rehabilitation of a dump site and wastewater collection tank (Al-Akaider dump site)	Common Services Council (Irbid)	Not secured	N/A	35
39	SW	Rehabilitation of a dump site and wastewater collection tank (Rossaifa)	Not yet finalized	Not secured	N/A	22
40	HW	Medical and Industrial Waste Treatment Plant for Greater Amman and Middle Governorates	Nasser Group	Financing needed by BOOT group	N/A	28.5

5.5 Lebanon

Wastewater management is a high priority issue, because there is inadequate wastewater infrastructure and raw sewage generated from residential and industrial areas is discharged directly to streams or into the sea through short outfalls. The reliance of Lebanon on the tourist sector led to the early mobilisation of resources to address a large number of the land based sources of pollution. Lebanon has already invested over one billion Euros in the water sector. Additional resources will be needed for the government to conclude its plan for wastewater but emphasis needs to be placed on cost recovery for operations and maintenance of completed projects. On solid waste, the Lebanese Government is in the process of addressing the management aspects before it embarks on the implementation of their solid waste management programme.

There is also great awareness of the needs and problems created by uncontrolled dumping of solid waste and the resulting contamination of water sources. The sector has been studied extensively and a strategy with various options is under discussion on how to develop and implement the national solid waste strategy. However, there are strong disagreements between the different government departments as well as the different layers of government on which solutions should be adopted. It is widely accepted that the discussions can be concluded with the formation of a strong government willing to make difficult choices

The MeHSIP-PPIF team reviewed existing plans with CDR, the main promoter on behalf of the Lebanese government. Various meetings held with the EC Delegation, GTZ, KfW, AFD and the Mission Economique. The following table represents the pipeline evolution in Lebanon based on Phase I findings.

The map and table below indicates the hotspot locations for Lebanon as well as the current projects included in the updated short list and whether these were included in the NAP.

Lebanon

H2020 Project Pipeline

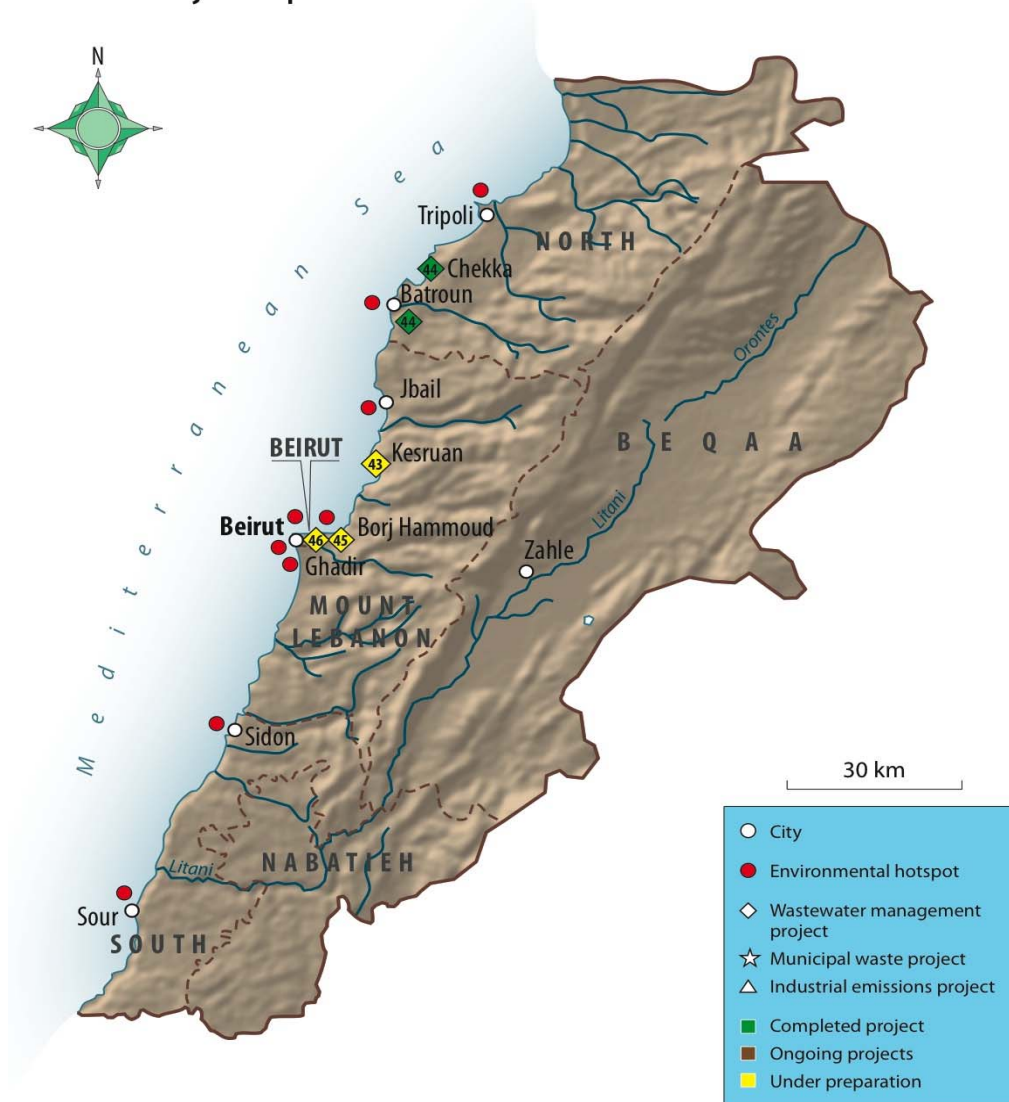


Table 5.5: Updated Short List - Lebanon

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
41	WW	WW main collectors (south Beirut)	CDR	KfW	Yes	16
42	WW	WW main collectors in (north Beirut)	CDR	GoL	Yes	
43	WW	Water and Wastewater Project (Keswan)	CDR	EIB, AFD, EC (NIF)	Yes	204
44	WW	WW treatment and network in north Lebanon connecting two villages to WWTP (Shekka and Batroun)	CDR	AFD	Yes	14
45	WW	Wastewater Treatment and network in Greater Beirut Wastewater System (Dora-Bourj Hammoud)	CDR	EIB, EC	Yes	60
46	WW	Extension of WWTP (Al-Ghadir)	CDR	NA	Yes	59

5.6 Libya

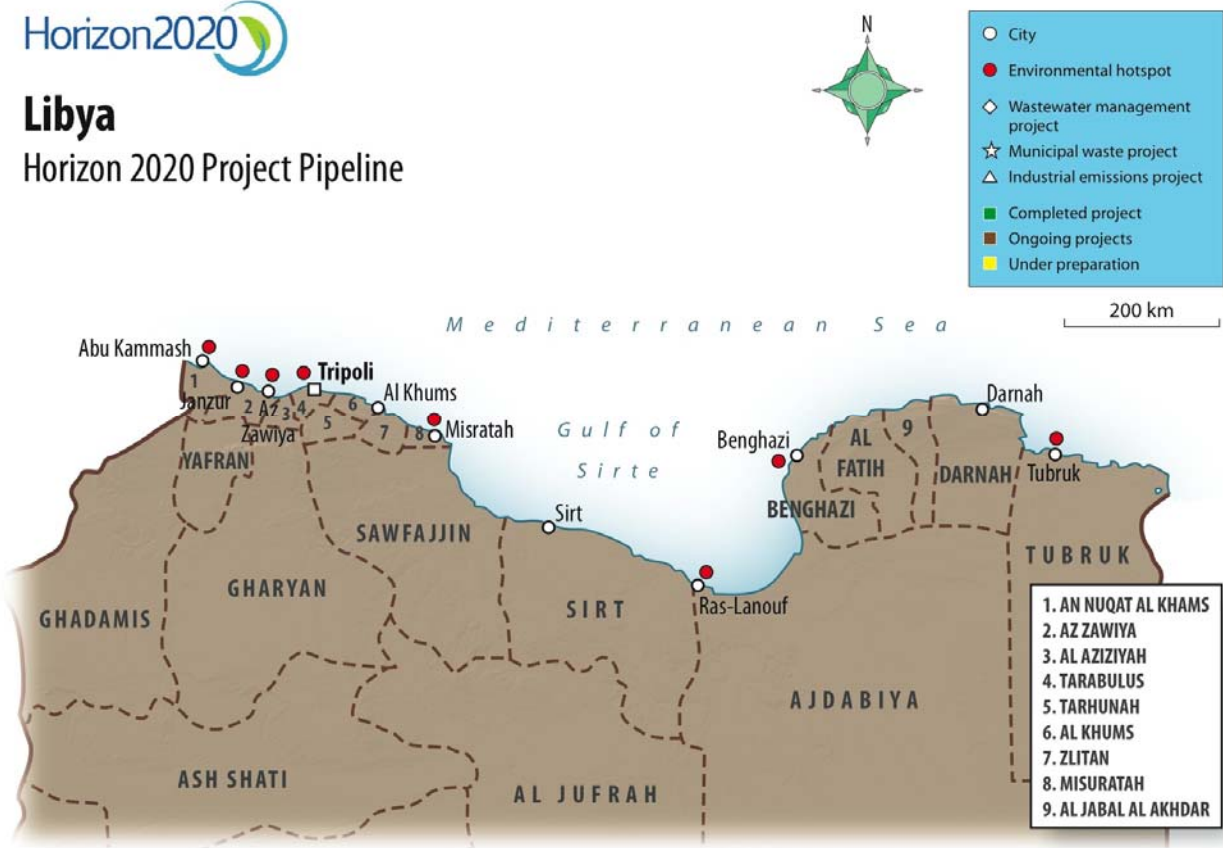
The major environmental concern in Libya is water availability and the depletion of underground water as a result of overuse in agricultural developments, causing salinity and sea-water penetration into the coastal aquifers. Another significant environmental problem is water pollution on the coastal environment from the combined impact of sewage, oil by-products, and industrial waste.

Pollution resulting from human activities mainly occurs near large coastal cities, and is concentrated on rather few urban/industrial centres on the coast. Assessment of the Libyan coastal environment revealed that the main sources of pollution are urban and industrial sewage, in addition to improper solid waste management.

The UNEP/WHO study identified 8 environmental hotspots in Libya with relevant investment projects. As Libya was not visited during Phase I, progress on the projects has not been captured and updated and no new projects were added to the short list.



Libya Horizon 2020 Project Pipeline



5.7 Morocco

Morocco has finalized a nationwide wastewater management programme (PNA) under which all wastewater projects should be bundled. There are thus no further projects in the wastewater sector to be followed by the MeHSIP-PPIF team. The PNA is being reviewed by three IFIs (AFD as leader, EIB and KfW) who are jointly interested to co-finance it.

The MeHSIP-PPIF team pursued a different track with government, donors and local communities identifying one project in solid waste in Tangier. The dump site of Mghogha in Tangiers, inspected by the MeHSIP-PPIF team, is in a dangerous state and causing major public health and environmental risks. Detailed information on the site and the project are mentioned in the relevant PFS. Close cooperation with GTZ is being kept for this site due to their past experience and knowledge in addition to the several studies and assessments they conducted on the site. The Ministry of Interior is leading the discussions for this project so far and close discussions were also held with the local authorities who will be the main promoters of such projects.

A second project was identified dealing with wastewater outside the PNA covering the coastal stretch from Fnideq to Oued Laou including the city of Tétouan and the coastal City of Martil. The project is an amended version of the proposed Veolia project for the Tamouda Bay area with a wider scope, which was completely re-formulated by MeHSIP-PPIF experts, to introduce a more comprehensive solution for protecting the Mediterranean coast of Morocco. The following table reports on the Moroccan project list with the above considerations taken into account.

The map and table below indicates the hotspot locations for Morocco as well as the current projects included in the updated short list and whether these were included in the NAP.

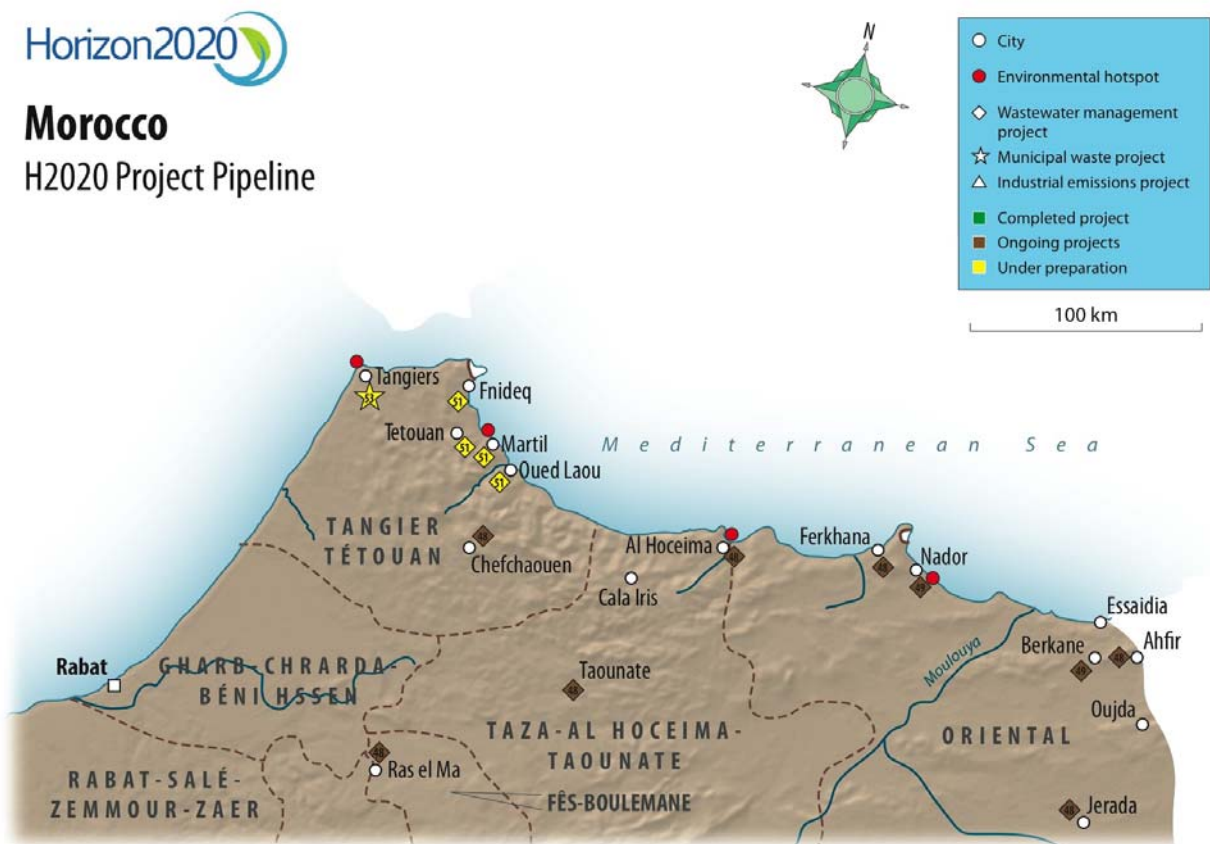


Table 5.6: Updated Short List - Morocco

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
47	WW	National Plan for implementing a nationwide strategy on wastewater management (PNA) (national)	ONEP	AFD, KfW, EIB, EC (NIF)	No	321
48	WW	Construction of 7 WWTPs in the municipalities and extension of primary and secondary collectors (Al Hoceima, Chefchaouen, Taounate, Ras El Ma (PNA), FerKhana (PNA) , Ahfir, Jerada)	ONEP	AFD EIB (<i>through its contribution to the Taounate project</i>)	Yes	40
49	WW	Extension of sewerage systems in various coastal provinces and WWTP (Nador, Berkane, Jerada, Taourirt)	ONEP	AFD	Yes	55
50	WW	Wastewater reuse project with 7 WWTP and part is related to Phosphogypsum (Oum Rabia')	ONEP	WB	No	31
51	WW	Integrated wastewater system: covering networks, pumping stations and WWTPs (Fnideq, Tétouan, Martil and Oued Laou Laou)	Amendis / VEOLIA	AFD initially interested Currently financing is NA	Yes	68
52	SW	Part of the PNDM: financing the private sector to undertake the construction of the infrastructure (national)	MOI / Env	WB (Development Policy Loan)	Yes	100
53	SW	SWM project: construction of new sanitary landfill site and the rehabilitation and closure of Mghogha dumpsite (Tangier and surrounding localities)	Commune Urbaine De Tanger	Not yet identified	Yes	30

5.8 Occupied Palestinian Territory

Pollution is generated from residential and industrial sources in the area managed by the Palestinian Authority along the Gaza strip coastal region that is home for over a million people. The main concerns in oPt include urban sewage, industrial wastewater and solid waste. The lack of sufficient wastewater treatment facilities makes wastewater the main source of pollution at the coastal zone of Gaza Strip. Similar to other countries in the region water scarcity remains major problem.

As reported, security concerns hampered the MeHSIP-PPIF's team efforts from visiting the region for a stock taking exercise to follow up on de-pollution projects. Consequently it was not possible to update the project list in terms of progress on ongoing projects and addition of new projects.

However, the Palestinian Authority is receiving grants in addressing some of the sources of pollution. Any updates to the project pipeline and new projects will be provided after our visit.

The map and table below indicates the hotspot locations for oPT as well as the current projects included in the updated short list and whether these were included in the NAP.

Gaza
 H2020 Project Pipeline

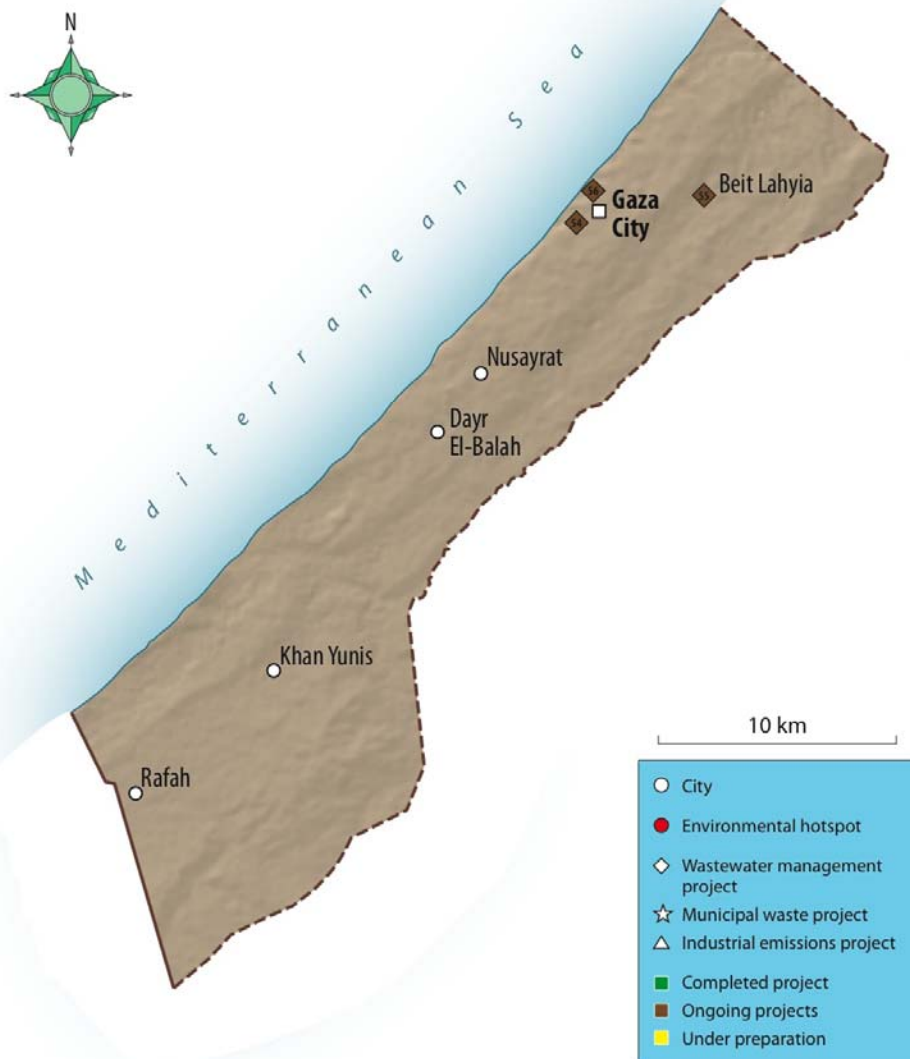


Table 5.7: Updated Short List – Occupied Palestinian Territory

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
54	WW	Rehabilitation of WWTP in view of the reuse of the treated wastewater for agricultural irrigation (Gaza Central)	N/A	KfW (for the WWTP), EIB (for reuse)	Yes	66
55	WW	Central WWTP (Beit Lahya)	N/A	AFD, EIB, WB, EC	Yes	65
56	WW	Emergency Sewage Treatment Project (North Gaza)	N/A	World Bank	Yes	14.45

5.9 Syria

The coastal plain has abundant water and fertile soil; the hilly zone has limited water resources and lower quality agricultural land; the mountains provide relatively poor living conditions. Rapid urban and industrial development resulted in uncontrolled land use in the coastal belt, sprawl of low-density housing causing high pollution of the coastal and marine environment, pollution of freshwater resources arising from uncontrolled release of municipal and industrial sewage, destruction of wetlands, sand dunes and other natural habitats for biodiversity.

MeHSIP-PPIF team identified that Syria has already taken tangible steps towards addressing the four hotspots (Latakia, Tartous, Baniyas and Jableh) through national financing and/or international financing through EIB and other actors. The assessment mission indicated no hotspot projects available to be followed.

However several land based sources polluting the Mediterranean are still in place. After consultations with government representatives, EC Delegation, GTZ and EIB, it was identified that there is a need to investigate further and an integrated approach should be developed. With the approval of EIB and consultations with UNEP/MAP an assessment mission to Latakia and Tartous Governorates was undertaken by MeHSIP-PPIF team. With the assistance of the Syrian Government officials further investigations took place during the missions and the conclusions were shared in a well developed concept note on an integrated programme that is needed if this fragile ecosystem is to be protected. This programmatic approach, if put in place, will revive the Horizon 2020 initiative in Syria and will generate several projects that could be presented for financing during Phase II.

The map and table below indicates the hotspot locations for Syria as well as the current projects included in the updated short list and whether these were included in the NAP.

Syria
 H2020 Project Pipeline

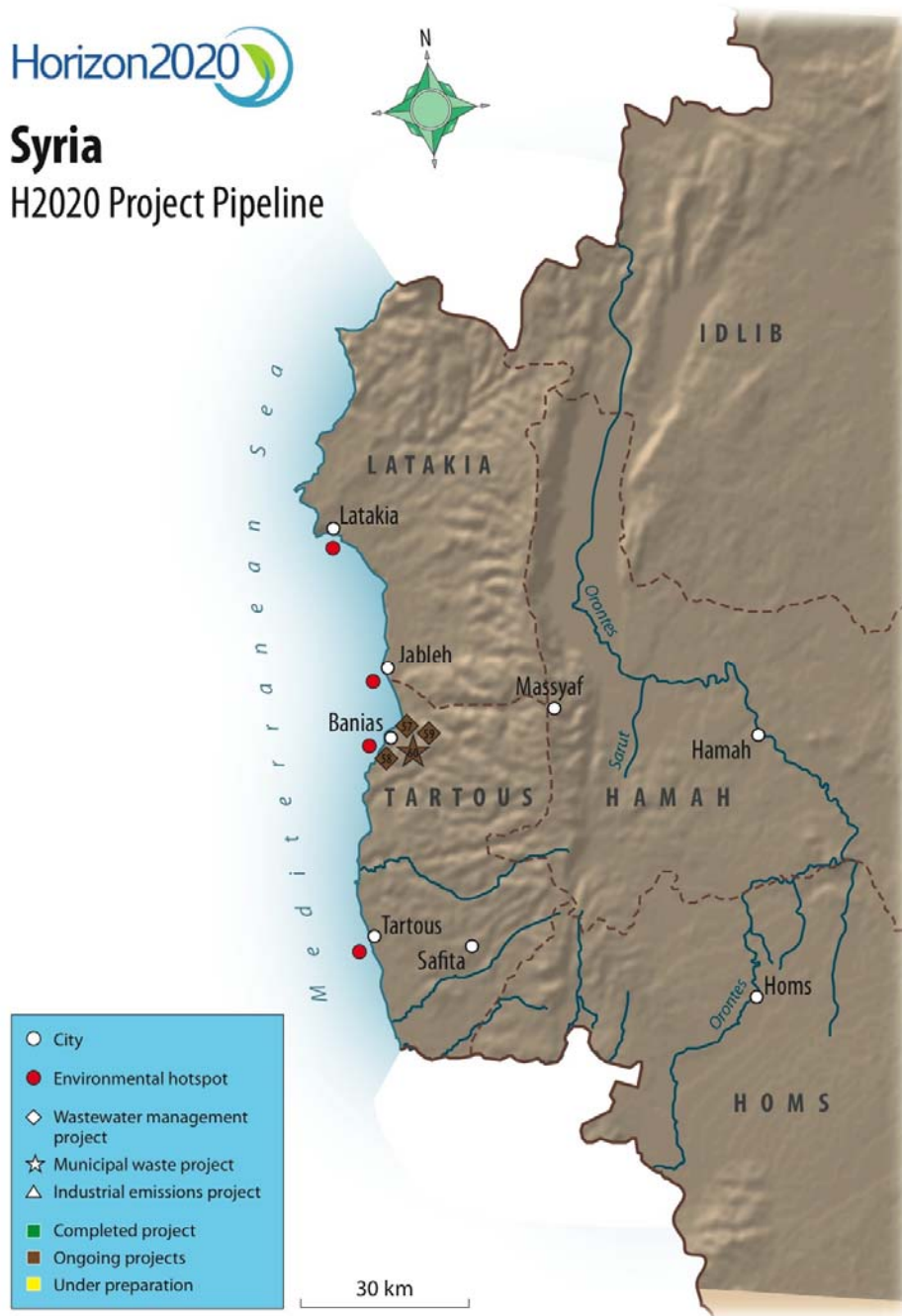


Table 5.8: Updated Short List - Syria

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
57	WW	Construction of WWTP and main collectors (Banias)	Ministry of Housing and Construction	EIB	Yes	25
58	WW	Conversions of units 3 & 4 of WTPP from fuel oil to gas (Banias)	Banias refinery	Own	Yes	35
59	WW	Rehabilitation and upgrade refinery WWTP (chemical and biological treatment) (Banias)	Banias refinery	N.A.	Yes	12
60	HSW	Facilities for recycling and treatment of fuel oil sludge from refinery (Banias)	Banias refinery	N.A.	Yes	18

5.10 Tunisia

The Minister of Environment is greatly involved in the Horizon 2020 and from the outset of the MeHSIP-PPIF mission the priorities of the Tunisian Government were clearly identified. At the request of the Ministry, the MeHSIP-PPIF team pursued potential projects at Monastir Bay, Lake Bizerta and the ONAS package. After a number of consultations and site visits the MeHSIP-PPIF team assisted the Tunisian Authorities in revising the initial presentation of the projects. This revision resulted in a substantial enlargement of their scope with much more integrated solutions for reducing pollution from land based sources.

The new scope required field investigation and literature review prior to presenting the final case and developing the new project proposals with the Government. Subsequently, Bizerta proposal has been amended and approved by concerned authorities (Dept. of Industrial Pollution at the Ministry, ONAS, ANGeD, APAL, ANPE and the Ministry of Agriculture). Similarly, Monastir proposal was assessed and a new scope was proposed by MeHSIP-PPIF experts and accepted by the Ministry and APAL. The revised programme aims to enhance the economic development of the region by addressing all sources of pollution.

In addition to the above proposals a comprehensive review was conducted with ONAS team of experts on their plans and proposed projects. Results of the review and discussions gave birth to a newly presented bundle will provide a comprehensive solution, in line with the H2020 Initiative, for the protection of the Mediterranean from wastewater discharges. It is important also to note that the new scopes for Bizerta and Monastir included a WW component under ONAS for both locations.

Consequently, the following list of projects reflects all the above changes and provides an Updated Short list for Tunisia to be pursued during Phase II.

The map and table below indicates the hotspot locations for Tunisia as well as the current projects included in the updated short list and whether these were included in the NAP.



Tunisia

H2020 Project Pipeline



During Phase I the MeHSIP-PPIF team thoroughly reviewed the four proposed ONAS projects (appearing in table hereunder in red). This revision did not only consider technical aspects of these projects, but took into account their geographical locations and expected contribution for reducing pollution. The review was undertaken in close co-ordination with ONAS's technical department and senior management. The result of the revision revealed the following:

1. Not all proposed WWTPs falls under the framework of the Horizon 2020 initiative in terms of reducing pollution discharged into the Mediterranean Sea;
2. Some of the proposed WWTPs, includes as part of the four projects, are now part of the revised projects (i.e. extended scope) of (1) Lake Bizerta project and (2) Monastir project; and
3. A bundle of WWTPs covering all river basins discharging into the Mediterranean Sea were alternatively suggested to be part of an integrated intervention, thus covering most of the river basins discharging into the Mediterranean Sea, which was approved by ONAS's senior management.. This is why we propose project No. 68 (see table below) to replace the four projects marked in red.

Table 5.9: Updated Short List - Tunisia

Nr.	Subject	Project (Location)	Promoter	Funding Sources	Included in NAP	Estimated cost (€m)
61	WW	Loan ONAS IV (various)	ONAS	AFD, EC, EIB	Yes	120
62	WW	Water Sector Investment Loan (various)	ONAS	WB, AFD, ADB	Yes	92
63	WW	Credit Line Industrial De-pollution		AFD	Yes	40
64	WW	Programme WWTP (complementary to programme WWTP financed by KfW: 36.5m) / coverage of a total of 19 WWTP and pumping stations	ONAS	KfW, AFD	Yes	40
65	WW	Construction of 6 WWTP, connection to sewerage system of Sidi Thabet and Ksar/Gafsar, rehabilitation primary and secondary collectors (196km), and 10.700 house connections (Tejerouine, Dahmani/Kssour, Redaiyf/Moularès, hammamet Nort, El Guettar, Ben Guerdane)	ONAS	KfW	Yes	33
66	WW	Construction of WWTP Phase II (BOT Project) (Al- Attar) The project is expected to serve 1 million inhabitants	ONAS	Private sector	Yes	48
67	WW	Construction of transfer pipes, pumping stations, distribution network for use of treated wastewater in agriculture (Grand Tunis)	ONAS	EIB, AFD, NIF, FFEM	Yes	500
68	WW	Rehabilitation programme and extension of WWTP, pumping stations and networks on coastal cities and river basins discharging into the Mediterranean Sea (Charguia, Msaken, Zarzis ville, Houmet souk, Sud Méliane, Sidi Mehrez, Jerba Aghir, Korba, Ben Arous Grappée, Zarzis Souihel, Gabès, Kaalet El Andalous, Lella Mariem, Kelibia)	ONAS (pending final approval)	Not Secured	Yes	67
X	WW	Rehabilitation programme and extension of WWTP, pumping stations and networks (500km) and linking 20,000 housing units (400 km of canalisation) (Sfax, Bizerte, Jendouba, Siliana, El Kef, Béja, Kasserini, Sidi Bouzid, Kebili)	ONAS	NA	-	60
X	WW	Programme of rehabilitation of 13 wastewater treatment plants (Kleibi, Korba Bou Agroub, Kef Mejdez El Bab, Siliana, Jendouba, Teboursouk, Tozeur, Jammel, Mednine, Houmet Souk, Tataounie) <i>These stations serve around 750,000 inhabitants.</i>	ONAS	NA (NEW)	-	29
X	WW	Programme of extension and rehabilitation of 12 wastewater treatment plants (Charguia, Sbitla, Sud Emliane I, Ben Arous \Grappée, Kalet Andalous, M'Saken, Jerba Sidi Mehrez, Zarzis Souihel, Lella Meriam, Zarzis Ville, Jerba Aghir, Hammet Gabes) <i>These stations will serve around 1.5 million inhabitants.</i>	ONAS	NA (NEW)	-	53

X	WW	Programme of energy management - installation of blowers systems with fine bubbles and development of co-generation in 16 wastewater treatment plants (Choutrana II, Charguia, Sud Melanie II, El Attar, Soliman II, Hammamet Sud, Beja, Bizerte, Menzel Bourguiba, Sousse Nord, El Frina, Sfax Sud, Sfax Nord, Jerba Aghir, Gabes, Jenbouba)		NA (New)	-	73
69	SW	Valorisation of organic waste or biomass (various)	ANGED	WB	Yes	NA
70	IE	Closure of Sfax Plant and constructing new one in Mdilla (Mdilla / Sfax)	GCT	EIB, NIF	No	330
71	IE	Rehabilitation of phosphogypsum dump site (Gabes)	GCT	EIB, AFD, KFW, NIF	Yes	800
72	Integrated (IE/SW/WW)	Integrated intervention program for de-pollution of lake basin (Lake Bizerta)	MOE	Not secured	Yes	61
73	IE	Integrated intervention program for the de-pollution of the bay and river basin (Monastir Bay)	MOE	Not secured	No	41

5.11 Updating of Short List

As indicated in the country sections above the Updated Short List has been updated during extensive missions to the countries by the MeHSIP-PPIF team during the first phase of this project. The updating included progress on existing projects as well as the identification of new projects at the country level.

This phase also benefited from the inception phase where the main elements of all new projects were identified. Consequently those projects benefited from further refining during Phase I to reach the present stage. The refining of the list was only possible through the intensive information collection work, field work and verification, consultations with relevant key parties as well as literature review of country plans and strategies that was undertaken by the MeHSIP-PPIF team. The following table shows the evolution of the Updated Short List from its initial status of 43 projects to its current size of 73 projects.

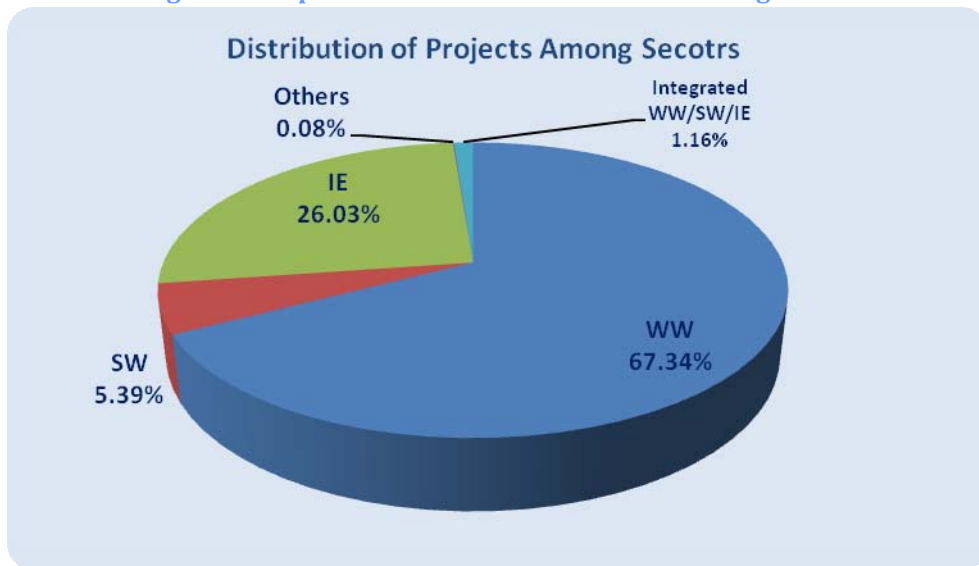
Table 5.10: Evolution of the Updated Short List

COUNTRY	Initial Short List		Updated Short List		Remarks
	Projects	Amount in million €	Projects	Amount in million €	
Algeria	1	0.25	1	0.25	No Financing required
Egypt	8	793.90	10	990.00	WW master plan produced
Israel	-	0.00	14	270.00	This sum represents <u>only 3</u> of the listed projects. Others were not estimated
Jordan	2	228.00	15	589.50	Some projects from the inception phase were reviewed and dropped
Lebanon	4	180.00	6	353.00	One project on WW was added
Morocco	7	192.45	7	645.00	The increase in amount is also due to updated figures obtained
oPt	3	145.45	3	145.45	To be visited
Syria	4	77.00	4	90.00	No new projects
Tunisia	14	927.00	13	2,172.00	Expansion in scope of new projects
Libya	-	-	-	-	Awaiting instructions from EIB
TOTAL	43	2,543.70	73	5,255.20	

As regards the updated short list relation to the NAP exercise, if one excludes Jordan which did not participate and consequently has no NAP, 50 out of the 58 projects (i.e. (86%) included in the short list originates from the NAPs. This is a good indication that the countries involved have to a large extent respected their commitments expressed in the NAPs. Moreover the MeHSIP-PPIF intervention, through FEMIP funds and EIB financing, has acted as a catalyst and helped to revive the NAP exercise and assist those countries in honouring their commitments for protecting the Mediterranean Sea.

The current Updated Short List shows a stronger focus on the wastewater sector compared to the solid waste and industrial emissions sectors. The following pie chart gives the percentage distribution of projects among sectors in terms of financial values.

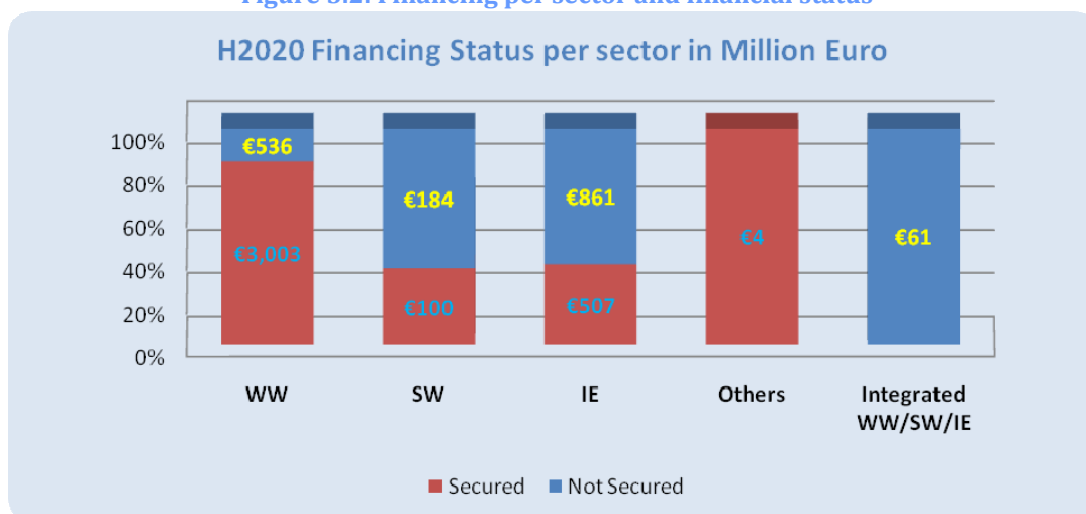
Figure 5.1: Updated Short List – distribution among sectors



5.12 Horizon 2020 Pipeline

To further elaborate on the Updated Short List a Horizon 2020 pipeline has been developed, which includes all projects that have yet to secure the financing needed to push ahead with implementation. The below figure provides an overview of the distribution of the financing needs per sector.

Figure 5.2: Financing per sector and financial status



Out of the 73 projects included in the updated short list, 29 projects are yet to secure financing and therefore included in the Horizon 2020 pipeline. As regards these projects relation to the NAP exercise, 21 out of the 23 projects (as the six projects from Jordan are excluded) originate from the NAPs, as indicated in the country tables (see Tables 5.1 – 5.9). The 29 projects are presented in the table below, which also indicates their relation to the NAP.

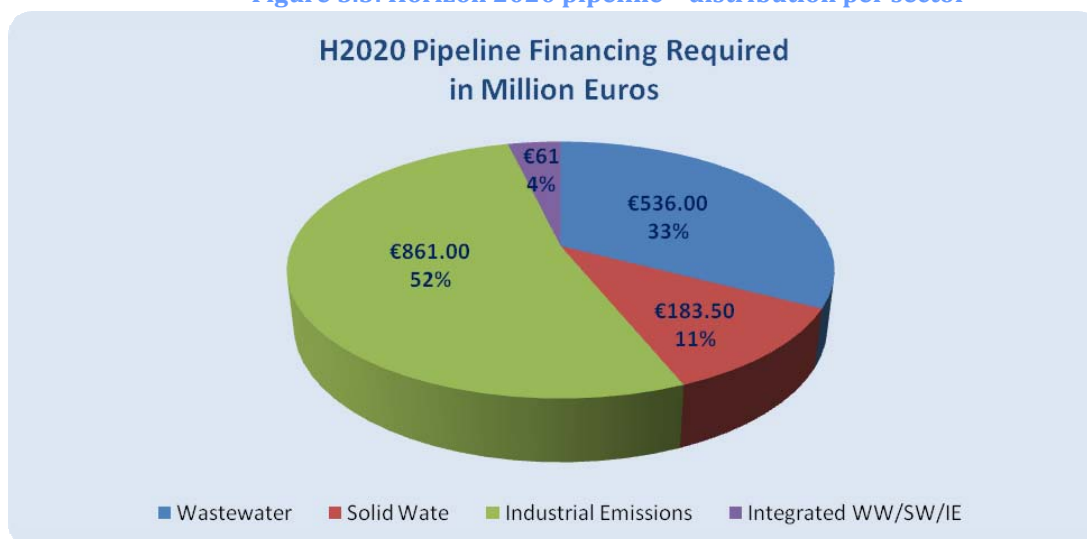
Table 5.11: Horizon 2020 pipeline

Nr.	Country	Sector	Project (Location)	Promoter	Included in NAP	Estimated cost (€m)
6	EG	WW	Wastewater Treatment (15 villages in Kafr El-Sheikh)	HCWW	Yes	105
7	EG	WW	Water and wastewater expansion (Marsa Matrouh)	HCWW	Yes	87
10	EG	IE	Hazardous waste treatment facility (Alexandria)	EEAA	Yes	25
14	IL	SW	Rehabilitation of closed landfill (Haifa)	Municipality of Haifa	Yes	N/A
15	IL	SW	Landfill mining and reclamation (Netanya)	Municipality of Netanya	Yes	50
16	IL	SW	Rehabilitation of closed landfill (Ashkelon)	Municipality of Ashkelon	Yes	N/A
17	IL	SW	Rehabilitation of closed landfill (Rishon LaZion)	Municipality of Rishon LaZion	Yes	N/A
19	IL	SW	Rehabilitation of closed landfill (Hana'aman)	Western Galilee Association of Towns for Environment	No	N/A
20	IL	SW	Rehabilitation of closed landfill (Herzliya)	Municipality of Herzliya	Yes	N/A
21	IL	SW	Rehabilitation of closed landfill (Ashdod)	Municipality of Ashdod	No	N/A
22	IL	SW	Rehabilitation of closed landfill (Bat Yam)	Municipality of Bat Yam	Yes	N/A
23	IL	IE	Rehabilitation of sewage collector and construction of pumping station	N.A.	Yes	N/A
24	IL	IE	Rehabilitation of Kishon River (dredging of river bed, etc.)	Ministry of Environment + private companies	Yes	20
25	IL	IE	Upgrade of WWTP to biological treatment (Ashdod)	AGAN (Private company)	Yes	N/A
26	JO	WW	Box culvert (40km) for wastewater conveyance (Zarqa/Amman)	WAJ	N/A	50
27	JO	WW	Construction of WWTP (4000 m ³ /day), sewer pipelines (80km) and pump stations (Azraq)	WAJ	N/A	70
30	JO	WW	Construction of WWTP (12000 m ³ /day), pump stations, transmission pipelines (East coast of Dead Sea)	WAJ	N/A	18
38	JO	SW	Rehabilitation of a dump site and wastewater collection tank (Al-Akaider dump site)	Common Services Council (Irbid)	N/A	35
39	JO	SW	Rehabilitation of a dump site and wastewater collection tank (Rossaifa)	Not yet finalized	N/A	22
40	JO	HW	Medical and Industrial Waste Treatment Plant for Greater Amman and Middle Governorates	Nasser Group	N/A	28.5
46	LB	WW	Extension of WWTP (Al-Ghadir)	CDR	Yes	59

51	MO	WW	Integrated wastewater system covering : , networks, pumping stations and WWTPs (Fnideq, Tétouan, Martil and Oued Laou Laou	Amendis / VEOLIA	Yes	68
53	MO	SW	SWM project: construction of new sanitary landfill site and rehabilitation and closure of Mghogha dumpsite (Tangier and surrounding localities)	Commune Urbaine De Tanger	Yes	30
57	SY	WW	Construction of WWTP and main collectors (Baniyas)	Ministry of Housing and Construction	Yes	25
59	SY	WW	Rehabilitation and upgrade refinery WWTP (chemical and biological treatment) (Baniyas)	Baniyas refinery	Yes	12
60	SY	HSW	Facilities for recycling and treatment of fuel oil sludge from refinery (Baniyas)	Baniyas refinery	Yes	18
68	TN	WW	Rehabilitation programme and extension of WWTP, pumping stations and networks	ONAS (pending final approval)	Yes	67
72	TN	Integrated (IE/SW/WW)	Integrated intervention program for de-pollution of lake basin (Lake Bizerta)	MOE	Yes	61
73	TN	IE	Integrated intervention program for the de-pollution of the bay and river basin (Monastir Bay)	MOE	Yes	41

In sum, the 29 projects included in the Horizon 2020 pipeline have a total cost estimation of approximately €1.6 billion. However, it should be noted that a number of the projects included have not yet defined cost estimates, as they are at the early stages of project development. Finally, the below figure provides an overview of the distribution of these 29 projects between the three sectors.

Figure 5.3: Horizon 2020 pipeline – distribution per sector



5.13 MeHSIP-PPIF Pipeline Development

It is important to highlight that the current Horizon 2020 pipeline includes old as well as new projects that were identified by the MeHSIP-PPIF team during Phase I. Those new projects were the result of thorough discussions and priority setting that was done in close collaboration with Government counterparts. Factors playing an important role in identifying the new projects prior to analysing their eligibility were as follows:

1. Consideration of other assistance flowing into the country in the form of grants or loans;
2. National strategies and targets set;
3. National execution plans and allocated budgets;
4. Relevance to Horizon 2020 initiative and its objectives
5. Project total estimated cost;
6. Project environmental and social impact;
7. Project contribution to reducing pollution of Mediterranean Sea; and
8. Project being part of or contributing to a larger programme.

The following table provides an overview of all projects, including those proposed by promoters and Governments during Phase I for each of the countries visited to create an easy reference for readers and interested partners.

Table 5.12: MeHSIP-PPIF Pipeline

Nr.	Country	Sector	Project	Cost M Eur	Wave	Recommendation
6	Egypt	WW	Wastewater Treatment (15 villages in Kafr El-Sheikh)	105	2	Complementary information needed as regards preparatory actions needed before pushing ahead with its implementation
7	Egypt	WW	Water and wastewater expansion (Marsa Matrouh)	87	2	Complementary information needed as regards preparatory actions needed before pushing ahead with its implementation
10	Egypt	SW	Hazardous waste treatment facility (Alexandria)	25	2	Complementary information needed as regards preparatory actions needed before pushing ahead with its implementation
15	Israel	SW	Netanya Landfill Mining and Reclamation	50	1	For immediate action for project preparation during Phase II
X	Jordan	WW	Construction of sewer pipeline 70km) and pumping stations (Bab Jerash)	-	OUT	Project too small for consideration
X	Jordan	WW	Construction and expansion sewer networks: sewer pipelines (60km) and pump stations (Maan)	-	OUT	Project too small for consideration
X	Jordan	WW	Construction of sewer networks: sewer pipelines (70 km) and pump stations (Manshiyat Bani Hassan)	-	OUT	Needs lots of missing information to complete the picture. The project only covers a network for WW collection
38	Jordan	SW	Integrated SWM Project (El-Ekaider)	35	1	For immediate action for project preparation during Phase II.
26	Jordan	WW	Box culvert (40km) for wastewater conveyance (Zarqa/Amman)	50	2	Further information needed from project promoter, in particular concerning financial sustainability
27	Jordan	WW	Construction of WWTP (4000 m ³ /day), sewer pipelines (80km) and	70	2	For further investigation on the estimated cost

			pump stations (Azraq)			
46	Lebanon	WW	Extension of WWTP (Al-Ghadir)	59	1	For immediate action for project preparation during Phase II.
53	Morocco	SW	SWM project:: construction of new sanitary landfill site and the rehabilitation and closure of Mghogha dumpsite (Tangier and surrounding localities)	30	1	For immediate action for project preparation during Phase II
-	Syria	Horizontal	Integrated environmental programme to protect the Mediterranean Sea	Not estimated	2	For immediate action for project preparation during Phase II
72	Tunisia	Integrated (IE/SW/WW)	Integrated intervention program for de-pollution of lake basin (Lake Bizerta)	61	1	For immediate action for project preparation during Phase II
73	Tunisia	IE	Integrated intervention program for the de-pollution of the bay and river basin (Monastir Bay)	41	2	For immediate action for project preparation during Phase II

5.13.1 Identification of projects to be included in the First and Second Wave

Taking into account the projects identified, and the fact that all projects identified have more or less the same maturity level, which is at the very initial stages, selection of projects for the first wave demanded lots of effort to make sure that country's priorities and objectives are not undermined.

In order to robustly undertake the selection exercise the Project Fact Sheet (developed by MeHSIP-PPIF team) was a major tool to allow for informed decisions. Information provided in the PFS was crucial to formulate the best picture possible for each project. This is why in the case of lack of information the project had to be dropped or recommended for the second wave.

Further to the PFS process the literature review conducted by the experts on most of the plans at the country level in the three sectors (SW, WW and IE) was also constructive in forming a better picture of the countries' priorities. Equally important was the close contact maintained with the donor community and IFIs at the country level in order to observe assistance flowing into the country and the sectoral focus of the international community.

With this understanding the MeHSIP-PPIF hereby provides the short list of projects recommended for the first wave. Each of the recommended projects has a PFS that includes information on the project's main objectives and components.

In addition to recommending projects for the first wave the table below indicates recommended actions for Phase II. The remaining projects are either dropped as is the case for three projects in Jordan, or recommended for the second wave.

A total of five projects are presented herewith for consideration and agreement with the MeHSIP-PPIF Steering Committee and for discussion with IFIs. The projects represent a total estimated value of Euro 235 million. Following this consideration all projects for the first wave will be subject to an implementation plan that will contribute to the development of a clear allocation of resources during Phase II of this project.

Table 5.13: MeHSIP-PPIF Pipeline – 1st Wave

Nr.	Country	Sector	Project	Cost M Eur	Wave	Recommendation
15	Israel	SW	Netanya Landfill Mining and Reclamation ¹⁰	50	1	Further information needed from project

¹⁰ Inclusion to 1st Wave is subject to further investigations during first half of 2010.

						promoter, in particular regarding expected national financial resources.
38	Jordan	SW	Integrated SWM Project (El-Ekaider)	35	1	For immediate action for project preparation during Phase II.
46	Lebanon	WW	Extension of WWTP (Al-Ghadir)	59	1	For immediate action for project preparation during Phase II.
53	Morocco	SW	SWM project:: construction of new sanitary landfill site and the rehabilitation and closure of Mghogha dumpsite (Tangier and surrounding localities)	30	1	For immediate action for project preparation during Phase II
72	Tunisia	Integrated (IE/SW/WW)	Integrated intervention program for de-pollution of lake basin (Lake Bizerta)	61	1	For Immediate action for project preparation during Phase II

With the above five projects recommended for the 1st wave, a further seven projects from the MeHSIP-PPIF pipeline are recommended for the 2nd wave. The below table presents the wave 2 projects with specific observations explaining the rationale for recommending them under the 2nd wave. The seven projects are estimated at a total value of Euro 378 million (excluding the integrated environmental programme suggested for Syria).

Table 5.14: MeHSIP-PPIF Pipeline – 2nd Wave

Nr.	Country	Sector	Project	Cost M Eur	Wave	Recommendation
6	Egypt	WW	Wastewater Treatment (15 villages in Kafr El-Sheikh)	105	2	Complementary information needed as regards preparatory actions required before pushing ahead with its implementation
7	Egypt	WW	Water and wastewater expansion (Marsa Matrouh)	87	2	Complementary information needed as regards preparatory actions required before pushing ahead with its implementation
10	Egypt	SW	Hazardous waste treatment facility (Alexandria)	25	2	Complementary information needed as regards preparatory actions required before pushing ahead with its implementation
26	Jordan	WW	Box culvert (40km) for wastewater conveyance (Zarqa/Amman)	50	2	Further information needed from project promoter, in particular concerning financial sustainability
27	Jordan	WW	Construction of WWTP (4000 m ³ /day), sewer pipelines (80km) and pump stations (Azraq)	70	2	For further investigation on the estimated cost
-	Syria	Horizontal	Integrated environmental programme to protect the Mediterranean Sea	Not estimated	2	For immediate action for project preparation during Phase II
73	Tunisia	IE	Integrated intervention program for the de-pollution of the bay and river basin (Monastir Bay)	41	2	This project is subject to further discussions with the Tunisian authorities

The projects included in the 1st and 2nd wave of the MeHSIP-PPIF pipeline cover all three sectors, as demonstrated by the following two charts.

Figure 5.4: Total value of 1st/2nd wave projects by sector

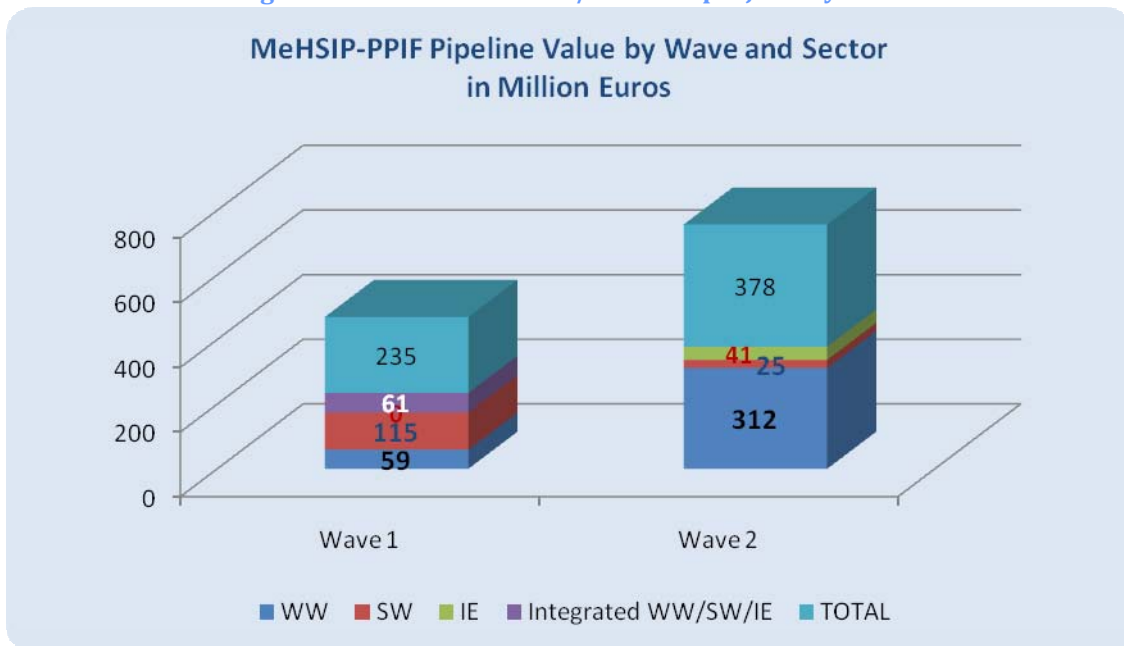
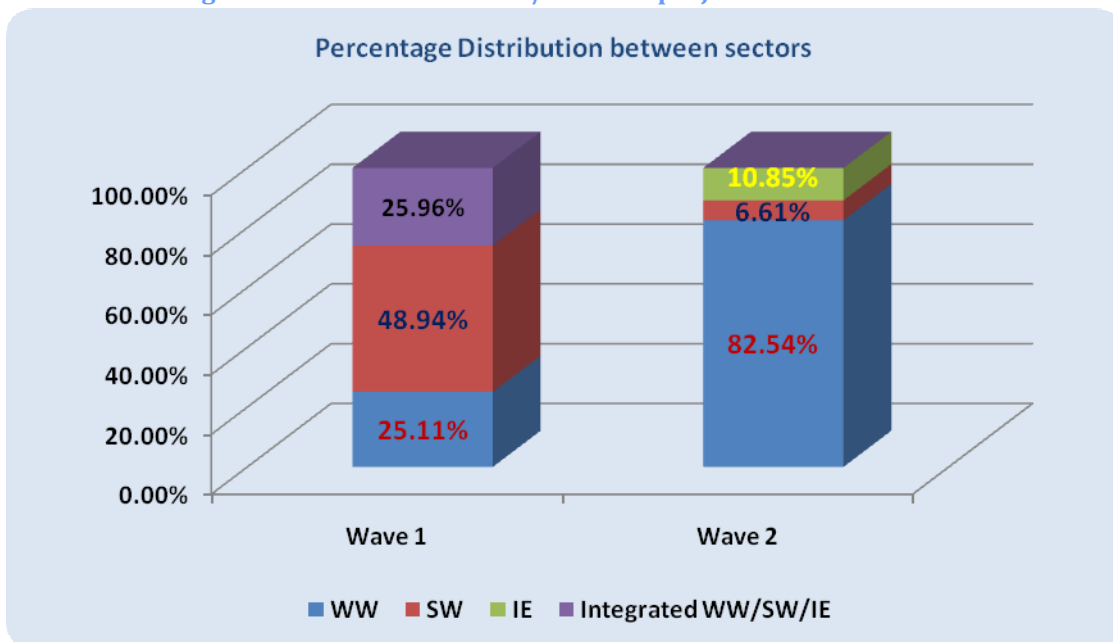


Figure 5.5: Distribution of 1st/2nd wave projects between sectors



6 Capacity-building and Dissemination

6.1 Capacity-building: the challenge ahead

In many of the countries public institutions do not possess adequately skilled staff to efficiently manage resources and to forecast, prioritize and plan capital expenditures. In addition, they often have limited capacity for project preparation and require significant support to manage international standard tendering and procurement processes.

The MeHSIP-PPIF capacity building input must address this general weakness in respect of the preparation and implementation of projects.

6.1.1 Main Components of the Capacity-building Programme

Addressing the above challenge will require interventions at different levels. The main pillars of the capacity-building programme, noting that further aspects might be added where the need arises, are as follows:

1. Project Planning

The planning function within project management includes the following tasks:

- Identify and assess the needs — their relevance to national plans and priorities and any gaps in existing projects.
- Set goals and strategies; identify focus areas and activities.
- Develop plans that
 - ✓ are consistent with needs, strategies, and areas of focus,
 - ✓ address constraints and opportunities, and
 - ✓ take into account technical and organizational capabilities.
- Account for technological, economic, social, and environmental aspects to ensure applicability of outputs.
- Find/create opportunities for funding that is secure, diversified, and sustainable.
- Review, revise, and approve plans/budgets.
- Develop project proposals; submit to and negotiate with funding agencies, sponsors, clients.
- When proposed projects are approved by funding agencies allocate adequate staff resources.

2. Project Implementation

Programme implementation requires some or all of the following tasks:

Internal Preparation:

- Identify Implement objectives.
- Assess the technical, administrative, and logistical support to needed for project(s) implementation
- Identify and meet training needs.

Communicating Results

- Create an image for the project and its objectives
- Disseminate/use Implementation results, as appropriate to highlight impact and Benefits
- Maintain linkages with policy makers, stakeholders and beneficiaries to promote ownership and sustainability.

3. Project Monitoring and Evaluation

Monitoring and evaluating projects are necessary elements in the planning project cycle.

These activities involve:

- Establishing performance measurement indicators and processes
- Monitoring technical quality and progress and providing feedback
- Administrative and financial monitoring and reporting
- Reviewing/revising procedures and resources; taking corrective measures or
- At project completion, evaluating:
 - ✓ objectives — their overall relevance, adequacy, appropriateness, and degree of achievement
 - ✓ cost effectiveness of activities
 - ✓ quality of outputs produced (relevance, adequacy, and appropriateness vis-à-vis objectives)
 - ✓ activities required to maximize utilization of outputs
 - ✓ lessons learned

Our team will identify the main pillars for a practical, project focused capacity-building programme for Phase II of the project.

6.1.2 Developing the Capacity-building Programme

Capacity-building is intended to be focused only on project proponents and on their skills and expertise in preparing and developing projects. Credible project information is critical if projects are to attract necessary financing.

A needs assessment will be conducted among government counterparts, mainly those dealing directly with projects in addition to the project promoter, alongside the action plan for project development identified through the gap analysis. The assessment will generally be fairly informal and will concentrate on ensuring that project development is not delayed. Where larger needs are identified we would follow the methodology described below to make sure that it reflects reality.

1. Methodology for Institutional Needs assessment

Any successful needs assessment requires the gathering of good accurate data and information regarding the target audience. Many assessment methods can be used to gather data and information: namely, observation, interviews, focus groups, oral surveys, questionnaires, existing data and tests. More than one method will be needed and we will rely on our observations and use our own tailor-made questionnaire to help us gather the most relevant data.

2. Development of the Questionnaire

Our questionnaire has been designed to cover most of the weaknesses identified by our team during field visits and in-country consultations. The questionnaire will be reviewed to reflect any new findings collected during field visits and in-country consultations.

3. Conduct Needs Assessment

We will use the questionnaire where required to support the needs assessment. We will increase the responses to the questionnaire through; 1) reminder calls; 2) incentives; 3) personal relationships; and above all 4) we will ensure anonymity to respondents.

4. Gather and Analyze Data

All data collected from field observations and from the questionnaire and interviews will be analysed. The output of the data analysis exercise will directly feed into the capacity-building programme and action plan.

5. Confirm the Topics and Audience

This step flows from the previous step whereby the analysis of the data will help clarify the topics to be covered as well as *how to deliver the training*.

6. Conduct Training Events

The training events will be tightly focused in topic but much of the learning may be derived from ensuring that the context of the project preparation process is always clearly set.

6.1.3 Information Dissemination

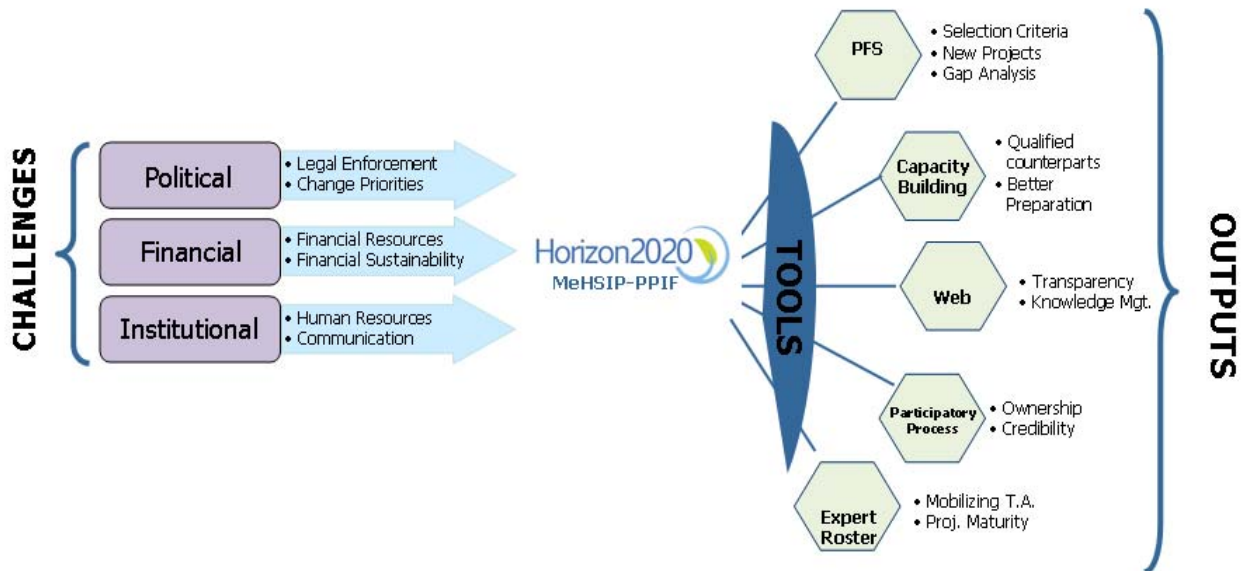
Information dissemination under MeHSIP-PPIF is part of an integrated process of Knowledge management to address; **First:** provision of a common understanding among all partners and stakeholders on the Horizon 2020 project pipeline; **Second:** provision of transparent information on project pipeline progress; **Third:** stimulation of a sense of ownership among partners and stakeholders through the creation of a platform where all information can be shared and updated; and **Fourth:** creation of credibility among partners and stakeholders that will help in building ownership of the process at the country level.

Information dissemination under the MeHSIP-PPIF is based on the following pillars:

- Creating an **identity or brand** for the Horizon 2020 Initiative and MeHSIP-PPIF. Establishing proper monitoring and data gathering with regards to progress of work on the de-pollution front. Information currently available remains scattered, losing value by not being user-friendly.
- Creating a **one stop shop** through the MeHSIP-PPIF so that all information related to Horizon 2020 projects can be readily accessed through other links or websites grouped in one place.
- Creating a **portal or gateway** to a number of separately managed websites for partners such as EC directorates, IFIs, UNEP-MAP, EEA, regional cooperation initiatives and government counterpart. The website will feature relevant studies in the sector, information on environmental hot spots, information on how to prepare proposals for funding, model project documents, and others.
- Creating **ownership** among concerned countries. The backbone of the MeHSIP-PPIF website will be content provided from the field. It will create a second level of interface with relevant access rights allowing a **platform for stakeholder interactions** and exchange of information as well as updating project information relevant to their respective countries.

7 MeHSIP-PPIF Approach: Challenges, Tools and Outputs

Following our overview of MeHSIP-PPIF’s position in the context of the Horizon 2020 initiative, complemented by an overview of its co-operation with relevant ongoing programmes and facilities, we present the MeHSIP-PPIF approach. This is summarised in the graph below and explained in detail in the next section.



7.1 Challenges

The MeHSIP-PPIF Team worked closely with government counterparts in the region and identified several specific challenges that appeared to be hindering progress in project development and implementation in general, and more specifically on projects relating to environmental protection. These identified challenges can be categorized as follows: i) political; ii) financial; and iii) institutional, which will be explained in detail below.

Underpinning all these challenges is the important issue of project development, which is a lengthy process requiring substantial resources and time that governments, IFIs and donors are often reluctant to commit at the early stages of project preparation. Furthermore, during the project development phase it is of vital importance that sufficient attention is paid to developing an appropriate scope of the project, as this is crucial for the successful outcome of the project. The tools developed (described in the following section – 7.2) will assist in ameliorating some of these issues, but above all are expected to significantly contribute in achieving much needed predictability of the investments with a time horizon estimated from three to seven years.

7.1.1 Political challenges

The political challenges identified concern the legislative framework and its enforcement, which is affected by the political support demonstrated, mainly by the central governments.

7.1.1.1 Legal enforcement

Environmental standards adopted are inconsistent with environmental conditions as well as with the technical and economic potential of the country. In many cases, these laws set uniform standards that apply to both production and service activities, regardless of pollution-combating costs and techniques.

In addition, there is an absence of qualified cadres and expertise to help enforce environmental legislation, whereas the multiplicity of authorities in charge of executing laws and lack of coordination further contribute to hindering compliance of environmental laws. Most laws on environment do not sufficiently encourage operational clean technologies/techniques and pursuing utilization of economic tools and incentives as effective means of achieving compliance.

7.1.1.2 Political support

Mediterranean partner countries are governed with highly politicised institutional structures and a very superficial decentralization system resulting in all decision taking in the hands of central institutions. The three sectors (wastewater, solid waste, and industrial emissions) are particularly prone to facing political challenges given their close impact on the daily life of the population. Accordingly strategies and national plans developed to introduce solutions are often blocked due to the absence of a strong political will to support their implementation. In sum, there is a general lack of political support for serious enforcement of environment laws as these can be seen as hindering economic development in the short run.

7.1.2 Financial challenges

The financial challenges identified relate to resources available (own resources) as well as the inclusion of a long-term perspective to cover the operational/maintenance costs, thus ensuring the projects' sustainability.

7.1.2.1 Own resources

Several of the countries visited clearly lack sufficient own resources to engage in project preparation or implementing activities. Despite the identification of national priorities in terms of de-pollution initiatives, these countries, due to limited financial resources, are not in a position to initiate the process of project preparation entailing studies and assessments needed (feasibility studies, technical designs, EIAs, etc.) that will allow them to properly engage with IFIs in bankable projects.

This lack of resources could to some extent be explained by the fact that the Ministries of Environment have only recently been established in most of the countries, thus still lacking clout in the Government and they cannot yet secure necessary public funds to implement their plans.

7.1.2.2 Financial sustainability

One key challenge that the authorities involved in coordinating national/international financing face, is to be able to provide well developed feasibility studies and project preparation and proper financial infrastructures to support the implementation and sustainability of those projects.

An additional challenge is to identify and study the planned projects' costs and consequently design and apply tariffs that are compatible with operational costs. Currently, these skills are severely lacking in the specialised institutions and agencies mandated to manage wastewater and/or solid waste projects. This lack of well structured tariffs results in long-term financial burdens on the national budgets where most project financing is covered by central budgets and not through revenues generated from the project.

7.1.3 Institutional challenges

This section aims to provide an overview on institutional impediments that are currently hindering the development and implementation of environmental projects in the region, specifically for securing international funding or financing. For an overview of the institutional context of the beneficiary countries served by the MeHSIP-PPIF, please refer to Chapter 3 (see section 3.2.1 on "General observations on the environmental sector").

The institutional challenges identified relate both to the availability of sufficient human resources with the relevant experience/expertise as well as their efficient use through effective co-ordination among the relevant public authorities.

7.1.3.1 Communication and co-ordination

During the missions of the MeHSIP-PPIF team it became apparent that lack of communication among public institutions, although existing at different intensities from one country to another, remains a common phenomenon amongst most, if not all, countries of the Mediterranean region. Although specific environmental institutions have been established to oversee environmental protection, other institutions are also heavily involved in environmental protection (such as Public Health Ministries, Industrial Ministries, and Ministries of Interior). Lack of clarity due to weak communication combined with conflicts arising due to shared responsibilities between ministries negatively impact on effective development of projects and programmes for environmental protection.

In cases where communication and coordination among institutions actually works efficiently, it was striking for the MeHSIP-PPIF team to see how smoothly the implementation of projects that are well-defined and accepted by all parties could proceed.

7.1.3.2 Human resources

Most countries in the region suffer from low public salaries hindering the recruitment of qualified staff in key positions at the heart of the public structure. The number of qualified staff is minimal putting them in a situation whereby they are overwhelmed with the number of tasks/projects they have to follow and oversee. These shortcomings at the institutional level affect project development at the national level on various fronts, including:

- Project preparation;
- Project management and monitoring;
- Programme/project coordination;
- Understanding the procedures for obtaining funding/financing from IFIs and international donors;
- Efficient coordination with IFIs and international donors;
- Managing international funds and loans; and
- Disbursement capacities.

7.2 Tools and Outputs

The introduction of MeHSIP-PPIF as a facility to revive the shortlist will not solve all the above challenges. However, with the progress achieved during Phase I and the proposed tools to be implemented during Phase II we can push the agenda forward and create momentum in the region for further de-pollution projects. The tools developed by the MeHSIP-PPIF team are in accordance with the principles for aid effectiveness (see *Paris Declaration*¹¹).

The following sections explain how outputs appearing on the above graphical representation can be achieved by applying the various proposed MeHSIP-PPIF tools listed below.

7.2.1 Tool 1: Project Fact Sheet

The Project Fact Sheet is a dynamic document that will be regularly updated to serve as the reference for determining the progress made on project maturity and as an indirect indication of progress under the Horizon 2020 initiative. The Project Fact Sheets will constitute the key source of information for the project database. Consequently, a Project Fact Sheet will be prepared for all projects in the pipeline, which will be updated on a regular basis.

Expected results of the Project Fact Sheet are:

- First:** its use in determining whether the project is eligible or not through a number of listed criteria.
- Second:** identify the status of project maturity through the listing of studies available and reviewed by MeHSIP-PPIF team from the field.

¹¹ Endorsed on 2 March 2005 by over one hundred Ministers, Heads of Agencies and other Senior Officials adhered and committed their countries and organisations to continue to increase efforts in harmonisation, alignment, and managing aid for results with a set of monitorable actions and indicators.

Third: identification of a gap analysis through which an action plan can be defined with necessary resources for a project to reach maturity.

In summary, the benefits foreseen from the Project Fact Sheet are substantial, as it is expected to encourage harmonisation and set the focus on results to be delivered. The Project Fact Sheets will be complemented by Action Plans that will also include activities of promoters as well as of donors/IFIs, thus promoting mutual accountability.

7.2.2 Tool 2: Capacity-building support

The capacity-building programme proposed through resources provided under the MeHSIP-PPIF will help reduce the existing gap in project related activities and bring the different parties closer together in understanding project cycles. This tool is also intended to familiarize project proponents with IFI requirements and demystify the process of project preparation. It will introduce ways and means to understand the main processes of the preparation phase and their outcomes.

Expected results of the capacity-building support are:

First: development of necessary skills among government institutions at the central or local level to understand the project culture, resulting in more qualified counterparts

Second: facilitate the project identification and preparation phases by adding further momentum to the process.

7.2.3 Tool 3: Web-based platform

Through this tool the MeHSIP-PPIF will introduce a key information evolution under the Horizon 2020 initiative not only by creating the website for the facility but by providing the necessary information collected from partners and stakeholders that can be updated, verified and edited by the same partners and stakeholders.

Expected results of the web-based platform are:

First: introduction of a transparent process of information sharing through online access to all partners and checking on the progress of their projects or learning from experiences applied by others.

Second: creation of a knowledge management tool is envisaged to help manage and maintain the institutional memory behind the process and capture lessons learnt and targets achieved.

7.2.4 Tool 4: Participatory process

A participatory process is applied at every level of the operation, aiming to build a good portfolio of projects at the country level. In many cases it was only possible to identify new projects at the country level through regular and close consultations ensured by the MeHSIP-PPIF team with government counterparts.

Expected results of the participatory process:

First: creation of a sense of ownership among government counterparts that they not only contributed to the process but rather have an ownership of the process and made it a success.

Second: enhance the credibility needed by showing how Horizon 2020 resources are committed and necessary actions undertaken.

It should be noted that the projects included in the Horizon 2020 Pipeline originates from the National Action Plans and strategies of the respective countries, thus being aligned with the country priorities.

7.2.5 Tool 5: Expert roster

This tool will undertake further development to respond to Horizon 2020 needs, but the consortium members behind the MeHSIP-PPIF can contribute substantively through their intensive work in the field to enriching this tool with available networks and contacts among experts and firms that can be mobilized for achieving results.

Expected results of the expert roster are:

First: swift mobilization of qualified experts on short-term basis to boost the process of project development.

Second: substantive contribution to specific projects towards a fast advancement on project maturity, through gap analysis and related action plans.

7.3 Final remarks on the MeHSIP-PPIF Approach

It is evident from the above analysis that the importance and magnitude of the challenges identified among the countries of the Mediterranean region will require concerted efforts and well focused actions to introduce the necessary tools, and if not to resolve all obstacles, at least to minimise their impact.

It is also important to emphasise that under these circumstances, it will be difficult to control pollution considering the challenges of developing, managing and implementing programmes/projects relating to pollution abatement of the Mediterranean Sea, especially when financing of these projects is sought through the international community (e.g. IFIs). With this understanding pushing the Horizon 2020 agenda further will require thorough and continuous follow-up by the MeHSIP-PPIF Team to ensure that all tools and philosophy behind applying them are in place and coherent.

It is also worth noting that during the planned Phase II of the MeHSIP-PPIF project it is foreseen that its fourth component (i.e. communication and capacity building), which was not applied during Phase I, will provide additional support with the aim to address some of the institutional impediments identified, notably the communication and cooperation on the one hand and the human resources aspect on the other. Of course the challenge remains to ensure efficient enforcement of environmental laws and the presence of the political support that accompanies them, which is the sole prerogative of the concerned state. A positive sign that should not be neglected is the ratification of international conventions, relating to the protection of the Mediterranean Sea, by most countries in the region are, to some extent, imposing a sense of responsibility and creating an enabling environment for the execution of an environmental protection agenda that has been materializing throughout the past years.

In summary, through the development and implementation of the above described tools the MeHSIP-PPIF team is striving to address two key issues, namely ownership and conditionality, which is of particular importance when considering the relatively poor track records of the governments in adhering to loan and grant conditions agreed with donors and IFIs. Furthermore, it is important that issues pertaining to the institutional and financial sustainability of the projects should be addressed from the onset of project development, since if they are left for discussion during the IFIs appraisal stage there will be limited time for the governments to mobilise the necessary political support to implement the reforms. The proposed MeHSIP-PPIF approach is also developed under the general context of the EU's principles of development, namely *Coordination*, *Complementarity*, and *Coherence*.

A concrete indication that the approach employed by the MeHSIP-PPIF is starting to pay dividends is the updated Short List (presented in Ch. 5), which includes new projects, despite the mentioned challenges and institutional imperfections, thus pushing the Horizon 2020 agenda forward.

8 Conclusions and Recommendations

8.1 Conclusions

The Horizon 2020 initiative aims to improve the quality of life of more than 420 million citizens living in the 25 countries bordering the Mediterranean Sea. It is an umbrella programme drawing together all the policies, strategies and action plans for enhancing environmental protection.

Horizon 2020 has mechanisms in capacity-building, research, monitoring and review that place the initiative in an excellent position to address the challenges it faces and ensure the efficient and effective use of the available resources. Furthermore, the recent inclusion of the Horizon 2020 Initiative as one of the six components of the **Union for the Mediterranean** (UfM) adds to the political impetus to address major environmental challenges, since Horizon 2020 will be an agenda item when the political leadership of the UfM partner countries meet.

The UfM will be the leading policy instrument for closer cooperation between EU member states and Mediterranean partner countries. "Projects" will remain the main way by which progress is judged and a common monitoring tool will be needed to ensure coordination, cooperation and synergies between the countries concerned and the funding institutions.

MeHSIP-PPIF key objective is to help reinvigorate the Horizon 2020 de-pollution initiative in the southern Mediterranean, by supporting the identification and development of projects that will contribute significantly to reducing pollution in the region. It will thereby facilitate access to regional and sectoral funds available for such projects. MeHSIP-PPIF was launched in March 2009 and it has already achieved the following results:

- Successful reinvigoration of the Horizon 2020 initiative in the target countries, with the exception of Libya, which has as yet to participate in the Horizon 2020 structures;
- Coordination between EIB, EC, KfW, AFD, World Bank, UNEP-MAP and EEA to ensure that parties remain in close communication in respect of the Horizon 2020 initiative;
- A thorough review and classification of the potential projects that were initially identified by MeHSIP in 2008. All relevant parties have been consulted;
- A consolidated list presented as the Updated Short List (for October 2009), including additional potential projects, has been produced and consulted upon and will be managed by the Consultant on behalf of Horizon 2020 Steering Group as the main progress monitoring tool;
- Use of the Project Fact Sheet (PFS) process has enabled focused discussion with the promoters on the purpose and eligibility of potential projects, and it has allowed the rapid identification of gaps and deficiencies. In Tunisia, for example, such a review led to a joint reformulation of some proposed projects into regional programmes of work with greater potential benefits;
- GIS based maps for each country has been developed and intended to constitute a single source for providing an overview of the geographic distribution of the project database that is planned to be developed during Phase II.
- Originating from the Updated Short List a Horizon 2020 pipeline has been developed, which includes the projects that have yet to secure finance;
- An analysis of gaps and deficiencies for the projects has been made, allowing an assessment of the maturity of the projects on the Horizon 2020 pipeline;

- On the basis of the maturity analysis a total of 12 projects from the Horizon 2020 pipeline have been included in the MeHSIP-PPIF pipeline and to be considered for implementation;
- Based on the Gap Analysis, Action Plans are under development for these 12 prioritised projects and are expected to allow for decisions on how to allocate the available resources efficiently during Phase II;
- Following thorough analysis and taking into account the eligibility criteria the MeHSIP-PPIF Team assesses that five of the projects included in the MeHSIP-PPIF pipeline are ready for immediate implementation. These projects represent a total estimated value of Euro 235 million; and
- At a later stage of the programme a second wave of the remaining seven projects of the MeHSIP-PPIF pipeline, in addition to the integrated programme suggested for Syria, are suggested for substantial support. These projects are estimated at a total value of Euro 378 million (excluding the integrated environmental programme suggested for Syria).

8.2 Recommendations

8.2.1 Institutional Framework

The process of reviewing and updating the long and shortlists of projects has been useful in discussions between the beneficiary countries, European Commission services and IFIs.

Recommendation 1

The web-based Project Pipeline database to be developed by the MeHSIP-PPIF team acknowledges the above issues and should be used as a tool for the Horizon 2020 Steering Committee, the political leadership and the UfM. The Pipeline will monitor projects submitted by the target countries, budgets, the level of development and any funding needed to develop and implement these projects. To assess progress, a reporting system will allow feedback from completed projects that received funding.

The MeHSIP-PPIF project is a continuation of the initial MeHSIP study conducted in 2008 under the framework of Horizon 2020, and in particular its first component aimed at supporting de-pollution projects.

When the “de-pollution subgroup” commissioned the MeHSIP and thereafter the MeHSIP-PPIF projects, one of the principal objectives was to deal with the challenges facing regional programmes. The MeHSIP-PPIF is now building on existing momentum developed under the Horizon 2020 initiative and aims to **maintain the regional dimension** by identifying common issues, such as bringing projects into maturity and obtaining grants to leverage the loans, to be addressed across the nine countries and territories south of the Mediterranean.

Most governments have nominated senior officials as their Horizon 2020 National Focal Point. The Focal Points are members of policy ministries, such as the Ministry of Environment, and have acted as catalysts in allowing the MeHSIP-PPIF team to **establish an extensive network** with central and local government officials involved in the development and implementation of environmental projects. Our contribution was particularly important given that the officials indicated that no meetings between the different government departments to discuss the progress of Horizon 2020 had taken place since the initial MeHSIP study was completed. Thus, one of the early and visible achievements of the MeHSIP-PPIF was the reinvigoration of the Horizon 2020 initiative in partner countries, allowing for the updating of the current situation and the identification of potential pollution reduction projects.

A number of governments and institutions have allocated, and are continuing to invest, considerable resources in the development of environmental infrastructure projects. The Horizon 2020 Pipeline, which shows priority projects that have been put forward in line with eligibility criteria, was developed by the MeHSIP-PPIF team. This exercise has been very useful for donor and **IFI coordination** since it

provides real clarity on project names, scope, budget and which organisation is developing which component.

Recommendation 2

Based on the positive response to the development of the Horizon 2020 pipeline, this database could become the base for co-ordinating information on the availability of projects of interest to Mediterranean partner countries and which require loans and grants.

European Commission delegations in the southern ENPI countries have substantial environmental programmes. Since the early stages of MeHSIP-PPIF, the team has maintained close coordination with concerned officials and has provided regular updates on mission findings.

Recommendation 3

Cooperation between MeHSIP-PPIF and the EC Delegations will be further strengthened. As projects mature, EC Delegations will be consulted during project preparation, especially where grant contributions are needed.

UNEP MAP will continue to be a principal point of reference, since it owns the most comprehensive information and data on environmental issues in the Mediterranean partner countries. Information on the extensive network of actors and on different initiatives was made available by UNEP-MAP to the MeHSIP-PPIF team. This close coordination and cooperation contributed significantly, by enabling the MeHSIP-PPIF team swiftly to strengthen an extensive network in its beneficiary countries.

Recommendation 4

The cooperation between UNEP-MAP and MeHSIP-PPIF will continue and the results from key meetings should be shared with all Horizon 2020 subgroups. A start-up meeting should be held to bring together the implementing and funding agencies. This will establish the responsibilities and contributions of the concerned parties, and develop synergies between the different components of Horizon 2020.

The **European Environment Agency** (EEA) is expected to play a lead role in supporting monitoring of and compliance with various national, regional and international obligations and targets in the context of Horizon 2020. Potential synergies with EEA have already been identified, and the MeHSIP-PPIF team will propose an approach based on a common GIS platform to ensure that the data and mapping work together effectively.

Recommendation 5

The MeHSIP-PPIF and EEA should make data and mapping interoperable, based on a common GIS platform.

Using GEF funds, the **World Bank** is planning to develop the Environmental Sustainable Development Program (Sustainable MED) to finance priority investment projects. As this is at the design phase, there has been limited consultation so far, but the Program Framework Documents and Project Identification Forms have been shared after approval from the GEF Trust Fund.

Recommendation 6

When the World Bank starts development of the GEF-funded Environmental Sustainable Development Program (Sustainable MED), discussions should take place on how to develop synergies, such as a common project pipeline, to avoid the potential for circulation of conflicting information.

8.2.2 Project Preparation and Implementation

Projects may be more readily funded if they adopt a holistic approach that demonstrates they contribute significantly to improving the environment and the institutional framework and result in substantial economic benefits. One such project is the development of Taparura. This type of intervention, using a **programme approach**, has been communicated to beneficiary countries and we have been pleased at the positive reactions of the concerned ministries.

With MeHSIP-PPIF assistance, the scope of previously identified projects at Lake Bizerte and Monastir Bay in Tunisia was revised, and in Syria the government agreed to consider the implementation of previously identified projects in the coastal region after the preparation of an integrated environmental programme. In Morocco, the request for constructing a landfill in Tangiers has been revised to a solid waste management programme for Tangiers and the surrounding settlements. The same applies to the Tamouda Bay project presented by Veolia, which was enlarged to cover the area from Fnideq to Oued Laou. In Egypt, the MeHSIP-PPIF team is engaged in discussions to address problems arising from the lack of sufficient wastewater treatment facilities in the coastal and tourist town of Marsa Matrouh.

Recommendation 7

Good scoping of a project during the early stages of development minimises delays. The programmatic approach should be encouraged and success stories from the region should be widely disseminated through the web-based platform, workshops and peer reviews.

Recommendation 8

When developing projects, extensive consultations should take place with NGOs and the private sector, as well as with all levels of the administration.

The Communication from the Commission to the Council Establishing an Environment Strategy for the Mediterranean stated that investment needs are substantial. The resources required for the preparation of these investment projects are significant.

In this context, **Project Fact Sheets** proved to be a useful tool with two important benefits. First, they encouraged government departments and promoters to address the issue of prioritisation of project development. Second, they focused discussion on necessary steps in project preparation and duration, the resources required and the institutional, legal and regulatory frameworks needed to ensure sustainability of the investments.

Another major contribution of the Project Fact Sheets is that there is now one set of information on the status of a project, the resources necessary for project preparation and the activities government agencies and promoters need to undertake to reach project maturity.

Recommendation 9

Project Fact Sheets should be further developed and shared with the key actors through a web-based platform because they are a sound basis for assessing projects and monitoring progress.

The **Algerian Government** allocated national resources to address problems arising from the economic development of the coastal region. The main problems arise from industrial pollution, the treatment of which is complicated by the presence of public and private industries. The Algerian authorities have officially stated that they have no interest in seeking IFI financing, but nevertheless requested support from the MeHSIP-PPIF team to assist with the development of a programme that would contribute to reducing pollution from coastal land based activities.

Recommendation 10

Discussions should take place with the Algerian Government, involving the European Commission and IFIs, concerning the assistance needed to address the environmental hotspots in the Mediterranean coastal region arising from industrial emissions.

The **Egyptian Government** recently launched the first national strategy (2008–2017) for water development and wastewater treatment in the region. The extent of the hotspots resulting from pollution generated by the 85 million people who live and work in the Nile Basin in Egypt is arguably larger than the combined hotspots of all the other Mediterranean partner countries. The Delta region is home to 35 million people, who are engaged in sizable economic activities but with few facilities to treat the waste generated. After delivery of the national strategy, the Egyptian authorities immediately engaged in dialogue with the MeHSIP-PPIF Team to prioritise the investment needs and develop projects.

After discussions with the MeHSIP-PPIF Team, the Egyptian authorities expressed interest in reducing pollution from industrial emissions in order to address environmental concerns and meet the strict requirements placed by the EU on the importation of industrial products.

The division of responsibilities and authorities in solid waste management hinders the development of this sector.

Recommendation 11

It is proposed that the MeHSIP-PPIF team and the Egyptian authorities work together to develop the priority wastewater programmes into bankable projects with priority concentration on Marsa Matrouh and Kafr El-Sheikh (both included in Wave of the MeHSIP-PPIF pipeline).

Recommendation 12

In view of the significant industrial pollution in the area, it is proposed that the MeHSIP-PPIF team, in close consultation with Egypt's IDA, and EEAA, should assess which projects targeting identified pollution sources could be transformed into bankable projects.

Recommendation 13

The MeHSIP-PPIF team should maintain dialogue with EEAA, which is currently developing a national solid waste policy and strategy.

The **Israeli Government** has invested substantially in wastewater treatment and the country holds the "world record" in this sector, with 70% water reuse. The hotspots arising from industrial emissions are also being addressed by the government. However, the quality of water discharged by existing WWTPs is still not up to the necessary standard, and will be improved via a programme of upgrading existing treatment. In discussions, government authorities stated that the country is in the process of addressing leachate from the closed solid waste dumps polluting the coastal region.

Recommendation 14

It is proposed that the MeHSIP-PPIF team assists in the conclusion of the discussions and develops a project to address pollution generated by the old solid waste dumps. The "Netanya Landfill Mining and Reclamation" project could be used as a pilot for possible replication along the coast. The economic benefits of such projects are considerable since they release valuable land for economic development.

The **Jordanian Government** has a well-developed programme and is receiving considerable financial support to address pollution. Although these sources of pollution are not affecting the Mediterranean Sea, Jordan is a member of the Horizon 2020 initiative. In discussions with the MeHSIP-PPIF team the Jordanian Government expressed interest in support focused on the treatment of wastewater and solid waste management.

Recommendation 15

It is proposed that the MeHSIP-PPIF team continues the discussion about developing and preparing bankable projects suggested for 1ST wave and identified by the Jordanian authorities.

The **Lebanese Government** has already invested over 1 billion Euros in the water sector. Additional resources will be needed for the government to conclude its wastewater treatment plan for the coastal region. At this time emphasis needs to be placed on the cost recovery operations and maintenance of the completed projects which is being supported by a GTZ funded project. However, on solid waste the Lebanese Government is in the process of addressing the management and policy aspects before it embarks on the implementation of their solid waste management programme.

Recommendation 16

It is proposed that given the relative maturity of the project, Al-Ghadir extension project for WWT is included in the first wave for the MeHSIP-PPIF team to initiate project preparation activities.

The MeHSIP-PPIF team did not visit Libya during Phase I.

Recommendation 17

Upon conclusion of the discussions between the Libyan Government and the EU, it is proposed that a fact-finding mission takes place to focus on the Libyan Government's plans for resolving the pollution sources that relate to environmental hotspots.

The **Moroccan Government** identified the economic potential of the Mediterranean coastal region and the need to take into consideration the potential threats to the ecosystem from unplanned economic development. Discussions with the MeHSIP-PPIF team focused in this area and an integrated approach to address the increased generation of solid waste in the larger towns was agreed. Discussions also centred on development of the infrastructure to collect and treat wastewater, taking account of the coastal river basin in locations where private investors are looking to invest. These discussions are coordinated with the Moroccan Government's integrated water and wastewater treatment programme (Plan National d'Assainissement). The PNA is receiving considerable support from the European Commission EIB, AFD and KfW.

Recommendation 18

It is proposed that the solid waste management programme for Tangiers identified by the Moroccan Government in the coastal region should receive support and be prepared for possible loan financing.

Security concerns hampered the MeHSIP-PPIF's team efforts to visit the Gaza coast region and assess the current situation. However, the Palestinian Authority is receiving grants to address some of the sources of pollution.

Recommendation 19

It is proposed that at this stage a stock-taking exercise is undertaken to identify the sources of pollution and the programmes that could ameliorate them.

In discussions with the MeHSIP-PPIF team, the **Syrian Government** expressed great interest in benefiting from the experiences from other countries in the Mediterranean region. The government asked MeHSIP-PPIF to prepare a concept note on the ways to address the sources of pollution of the coastal region while ensuring its sustainable economic development.

Recommendation 20

It is proposed that the MeHSIP-PPIF team assists the Syrian authorities to develop an Integrated Environmental Programme based on prepared concept note. Support in the form of technical assistance will be needed in the preparation of this plan.

The **Tunisian Government** has made considerable progress in resolving pollution. The MeHSIP-PPIF team received support from the highest level of government while updating the project pipeline, establishing a common base for discussions between government agencies and the international community. The receptiveness of the Tunisian agencies in developing a programmatic approach was notable and a holistic programme was rapidly developed in two of the areas.

Recommendation 21

It is proposed that with the support of MeHSIP-PPIF resources the identified pollution reduction projects for Lake Bizerta and Monastir Bay are developed into action plans and bankable projects that could receive loan and grant financing.

8.2.3 Capacity Building and Strengthening Co-ordination

Given the low level of maturity of the projects identified the close co-operation with promoters and relevant national actors was crucial in determining the importance of the projects approached and contributed to the prioritisation exercise.

Recommendation 22

As the Horizon 2020 project list is developed, the MeHSIP-PPIF team should help intensify discussions among the promoters, governments and concerned IFIs to address common concerns and sectoral issues.

During discussions with government departments and promoters it was made evident to the MeHSIP-PPIF team that there is lack of knowledge and understanding of the requirements of donors and IFI for financing projects. What constitutes a bankable project needs to be explained and promoters' capacity improved in assessing the quality of the feasibility studies that they receive.

Recommendation 23

It is proposed that with resources from MeHSIP-PPIF the capacity of the promoters in project preparation is enhanced. Training, the use of the web-based platform for dissemination of best practises and peer reviews are some of the tools the MeHSIP-PPIF team recommends.

Difficulties in the coordination between donors and IFIs, but also between different government departments and the various layers of government, were encountered because different organisations refer to the projects with different names. During the early stages of the programme, the MeHSIP-PPIF team addressed this issue by revising the Horizon 2020 Project pipeline and sharing it widely with all the concerned parties, seeking their comments.

Recommendation 24

In order to strengthen coordination and improve communication, it is imperative that there is a single database for projects, which can be maintained and updated by the MeHSIP-PPIF team. This database will be accessible from the web-based platform to be developed during Phase II of the programme.

The investment needed for the Mediterranean region's environmental projects amounts to several billion Euros and, as a result, the resources required to transform hotspots into bankable investments are considerable. MeHSIP-PPIF does not have these resources, but by using the tools it has developed it can act as a catalyst to mobilise them.

Recommendation 25

The MeHSIP-PPIF programme could be used to help governments prioritise their investment programmes and identify the resources needed to transform hotspots into bankable projects.

Experience from many Mediterranean and EU countries shows that the authorities and promoters will need to invest considerable time: it is often at least several years before the projects become mature and are ready to be financed. This is mainly due to highly complex legislative requirements. Timely identification of the issues and early planning are the two essentials that can significantly reduce the time taken from identification to implementation. Keeping track of progress is vital if momentum and interest are to be maintained.

Recommendation 26

The Horizon 2020 pipeline could be used to monitor the development of projects, including those at an early stage of preparation. In this way, the necessary momentum needed during this lengthy process can be maintained.

8.3 Final Remarks

The above analysis underlines the scale of the pollution challenges facing the Mediterranean partner countries. Clearly, there needs to be a concerted, focused effort if the MeHSIP-PPIF team is to be successful in its mission to introduce the necessary tools to combat this pollution.

It follows that any effort to push the Horizon 2020 agenda further will require thorough and continuous follow-up by the MeHSIP-PPIF team to ensure that all the tools and the philosophy behind their application are in place.

In this vital work the members of the MeHSIP-PPIF team will benefit from their extensive experience and contacts in the region, and as a result the team can make a significant contribution to promoting the de-pollution agenda.

The most tangible proof of the strengths of the MeHSIP-PPIF team lies in the new projects that have been included in the Updated Short List and Horizon 2020 pipeline respectively (see *Chapter 5*). Despite the considerable challenges and institutional imperfections already mentioned, the approach used by the MeHSIP-PPIF team within the framework of the Horizon 2020 initiative has resulted in the Horizon 2020 agenda being driven forwards.


It is worth noting that during the planned Phase II of the MeHSIP-PPIF project there will be a fourth component: communication and capacity-building. This component did not feature heavily in Phase I and it will aim to address some of the institutional impediments identified so far, notably communication and co-operation issues on the one hand and human resources issues on the other.

Naturally, it will always be a challenge to ensure efficient enforcement of environmental laws and obtain the necessary political support, which is the sole prerogative of the state concerned. However, the international conventions relating to the protection of the Mediterranean Sea, which have been approved and ratified by most countries in the region, are imposing a sense of responsibility and creating an enabling environment for the execution of an environmental protection agenda that has been gathering pace for a number of years.

APPENDIX 1 – PROJECT FACT SHEETS

A. Project proposed for consideration for Phase II of MeHSIP-PPIF (First wave)

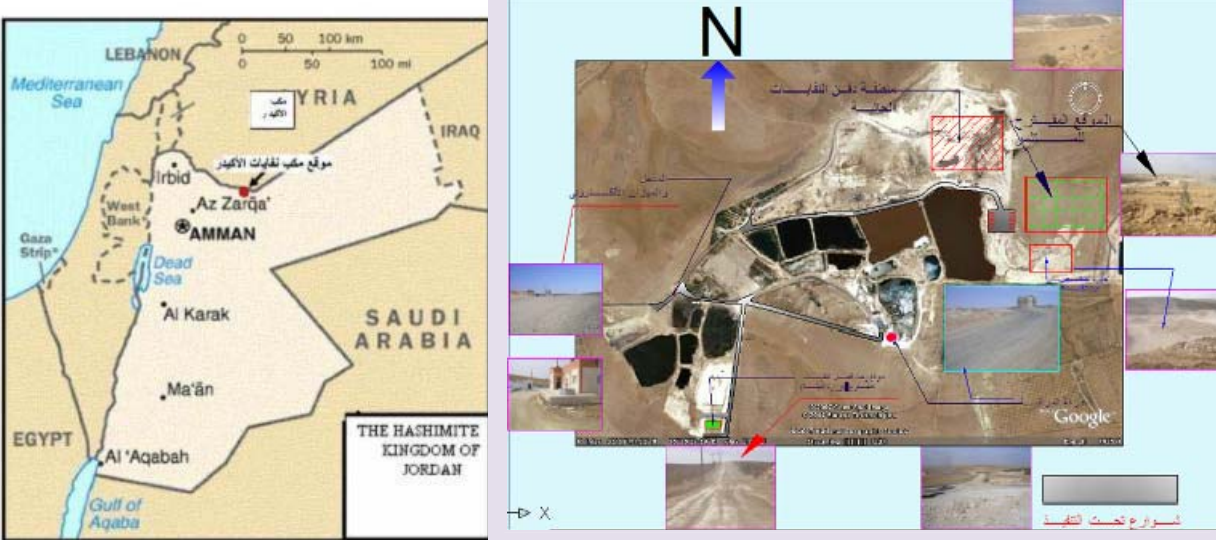
ISRAEL

PROJECT INFORMATION		Last Update: 14 09.2009
Country	ISRAEL	PFS No. IL. 01
Project Name	Netanya Landfill Mining and Reclamation	
Region / Governorate	Centre District	
City / Town	Netanya	
Sector	Solid Waste	
Map		
Key Objectives	<p><u>Key Objectives</u></p> <ul style="list-style-type: none"> • To improve the quality of life and environment of residents in the city of Netanya with a population of 200,000, preventing air pollution by Biogas emissions to the atmosphere, and preventing solid wastes residues and leachates from the coast area. • To prevent the pollution of adjacent Irus (flower) unique nature reserve. • To prevent the pollution of the Mediterranean water near the shore of Netanya. • To enable the development of the coast strip of the city for building housing, hotels, shopping area and a sea promenade by the Mediterranean coast, according to a c new statutory plan 	
Project Components	<p>LFMR project – Landfill Mining and Reclamation, working stages:</p> <ul style="list-style-type: none"> • Excavating bio-degraded solids wastes from the landfill site. • Mechanical separation to different phases- undersize, oversize. • Recycling of the different outputs for different uses-material for site development, other recyclables uses 	
Project Value	Estimation – 2,000,000 cu.m. wastes x 17.5€ = 35,000,000 €	
IFIs	No interest expressed so far	
National Strategy and NAP relevance	<p>The project complies with the national policy of the Ministry of the Environment-Israel. The Ministry sets a strategy according to which all dump landfills which are not part of the national landfills plan will be closed and reclaimed. Moreover, being an old site, without modern environmental arrangements, the Ministry considers the Netanya landfill to be violating the water law, the clear air law, and the clean sea-shore law, and demands its reclamation.</p> <p>In line with the Barcelona Convention since it will reduce the pollution and maintain the quality of the coastal waters.</p>	
Relevance to H2020	In line with H2020 priorities as this project will reduce the pollution generated from the closed solid waste dump.	

Key Parties

- The Municipality of Netanya
 - The Economic company for the development & tourism Netanya-HALAT
 - The Ministry of Environment Protection – Israeli government.
 - The land authority of Israel
-

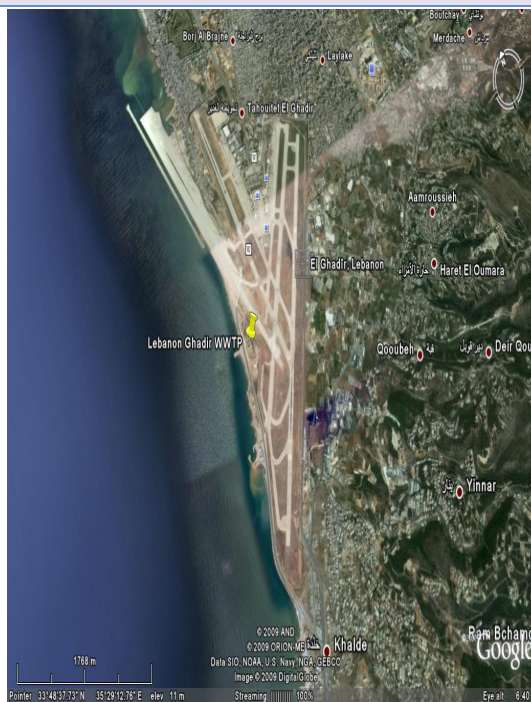
JORDAN

PROJECT INFORMATION		Last Update: 10.09.2009
Country	JORDAN	PFS No. JO.01
Project Name	EL-EKAIDER Dump Site	
Region / Governorate	IRBID	
City / Town	RAMTHA	
Sector	Solid waste and Industrial Wastewater management	
		
Key Objectives	<ul style="list-style-type: none"> • Eliminate a transboundary environmental disaster. • Reduce transboundary tension. • Provide a proper sanitary land fill to receive SW and Industrial waste generated in the IRBID province. • Eliminate the emission of methane from the municipal landfill. • Protect natural resources. 	
Project Components	<ul style="list-style-type: none"> • Domestic Waste Sanitary landfill (leachate collection, gas collection, etc.). • Sorting and recycling facility. • Industrial wastewater treatment plant. • Biogas recovery system from the buried solid waste. • Digester for the fresh organic biodegradable waste that is received to the site. • Power generation system that will utilize the produced biogas. • Control and monitoring system. 	
Project Value	Estimated between Euro 22and 35 Million	
IFIs	No interest expressed so far	
National Strategy and NAP relevance	<p>Based on all documents reviewed and interviews conducted with regards to the Akaider, the site is a national priority and part of the Jordanian government's attempt to improve SWM practices in the country.</p> <p>The project is directly linked to the three hot spots identified by the</p>	

	<p>Jordanian government. Moreover the project is part of the plan for improving SWM practices in the Kingdom. The site was also explicitly mentioned in the NEAP with recommendation to be closed due to its negative environmental impacts.</p> <p>Jordan does not have a NAP however improving SWM practices is part of the Jordanian National Environmental Action Plan (NEAP).</p>
<p>Relevance to H2020</p>	<p>The relevance of the project to H2020 initiative is mainly addressed by the fact that the site is an environmental hot spot and in its trans-boundary environmental impact</p> <p><i>Although Jordan has no access on the Mediterranean, however the project deals with two main sectors of the H2020 initiative, solid waste and Industrial emissions, in addition to its environmental impacts on natural resources. It also complies with the hot spots characteristics with its emphasis on its trans-boundary nature.</i></p>
<p>Key Parties</p>	<ul style="list-style-type: none"> • Common Services Council for Irbid Governorate • Ministry of Municipal Affairs • Ministry of Environment • Ministry of Planning and International Cooperation

LEBANON

PROJECT INFORMATION	Last Update: 15.09.2009		
Country	LEBANON	PFS No.	LB.01
Project Name	Extension of Ghadir Wastewater Treatment Plant		
Region / Governorate	BEIRUT		
City / Town	Ghadir		
Sector	Wastewater		



Key Objectives

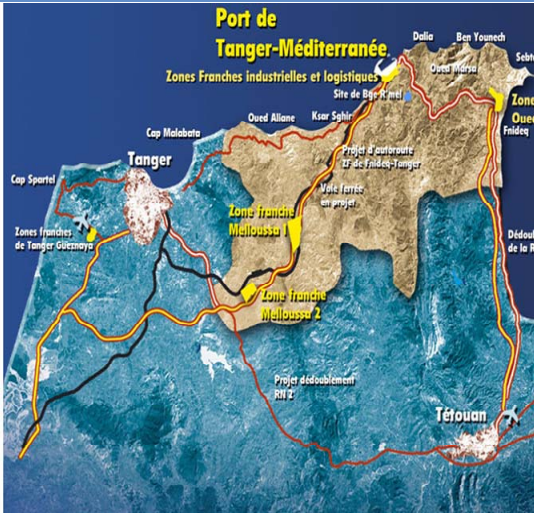
- Wastewater collection
- Wastewater conveyance
- Wastewater treatment
- Effluent reuse (water and Sludge)
- Improved environmental conditions of sea and coast

Project Components

- Main conveyance system
- Extension of existing sea outfall
- Wastewater treatment facility
- Sludge Disposal
- Power facility and generators
- Workshop equipment and general structure (admin Building)
- Land acquisition
- Compensation payment (for loss of beach sections)
- Civil works for site organisation
- Physical contingencies
- Engineering Services


Project Value	59 million Euros
IFIs	Aucune actuellement identifiée
National Strategy and NAP relevance	<p>The project is mentioned in the national wastewater strategy and was confirmed as a national priority through official communication with the promoter – CDR</p> <p>Given its importance in terms of geographic location (on the Sea) and the population it serves, the project is mentioned in the national strategy for wastewater management and NAP as a national priority.</p> <p>The Ghadir extension project was clearly mentioned under the NAP with a cost estimate. The government has initiated the preparation of technical designs in support to this project relating to the main collectors coming to the Treatment Plant</p>
Relevance to H2020	The existing site is directly located on the sea shore and around 85% of the wastewater reaching the exiting treatment plant is being discharged to the sea with no screening causing major sea and coastal pollution
Key Parties	<ul style="list-style-type: none"> • Council for Development and Reconstruction • Ministry of Energy and Water • Municipality of Beirut • Beirut and Mount Lebanon Water Establishment

MOROCCO

PROJECT INFORMATION		Last Update: Last Update 15.09.2009
Country	MOROCCO	PFS No. MO.01
Project Name	Projet d'actions concertées pour la préservation des milieux naturels méditerranéens par une gestion raisonnée des déchets solides des communes de Tanger et des environs	
Region / Governorate	Wilaya de Tanger	
City / Town	Préfecture de Tanger-Assilah Préfecture Fahs Anjra	
Sector	Gestion des Déchets Solides ménagers et assimilés = G.D.S.	
		<p>Key Objectives</p> <p>Pour l'ensemble de la région, les résultats généraux et/ou globaux attendus de cette dynamique de projet se déclinent sous deux aspects principaux :</p> <ul style="list-style-type: none"> • contribuer au développement durable de et dans la région et améliorer le cadre et la qualité de vie des citoyens par le respect de l'environnement ; • créer ou augmenter le potentiel de valorisation/recyclage matériel et/ou énergétique des déchets en préservant ainsi les ressources naturelles
Project Components	<ul style="list-style-type: none"> • Réaménagement de la décharge non contrôlée de Tanger afin de l'exploiter le temps de créer une autre (4ans) • Planification, réalisation et exploitation d'une nouvelle décharge contrôlée avec optimisation du recyclage des matières valorisables 	
Project Value	Le montant du projet est estimé entre ~27 et ~31 M€	

IFIs	Aucune actuellement identifiée
National Strategy and NAP relevance	Le gouvernement a promulgué en 2002 un Plan d'Action Nationale pour l'Environnement (PANE) retraçant de manière étendue les mesures de protection de l'environnement et des ressources naturelles planifiées dans les différents secteurs. Aussi un plan Nationale de gestion des déchets solides est mis en place en 2008. Ce projet s'oriente aux lignes d'action environnementales du gouvernement et à la mise en œuvre de la législation environnementale marocaine. Ceci concerne l'application des principes de droit au niveau national (p.ex. à travers l'utilisation des études d'impact sur l'environnement), mais aussi régional et communal (à l'occasion p.ex. de la mise en place d'une gestion communale des déchets ainsi que l'appui à la coopération intercommunale).
Relevance to H2020	<ul style="list-style-type: none"> • projet d'actions à vocation unique visant le domaine de la gestion des déchets solides en vue de réduire les pollutions solides et liquides des eaux du Détroit de Gibraltar s'engouffrant en Méditerranée
Key Parties	<ul style="list-style-type: none"> • La Commune Urbaine de Tanger • La Préfecture de Tanger-Assilah incluant : <ul style="list-style-type: none"> ✓ la C.U. de Tanger, ✓ la Municipalité d'Assilah, ✓ la Commune Rurale de Sebt Zinat, ✓ la Commune Rurale de Akouass Briech, ✓ la Commune Rurale de Khaloua. • La Préfecture Fahs Anjra contenant : <ul style="list-style-type: none"> ✓ la Commune Rurale de Taghramt, ✓ la Commune Rurale de Kasr Al Majaz, ✓ la Commune Rurale de Kasr Seghir, ✓ la Commune Rurale de Melloussa et Bahraouiyyine, ✓ la Commune Rurale de Aouama et Jouamaâ, ✓ la Commune Rurale de Anjra et Allyene. • L'Agence Spéciale de Tanger-Méditerranée (T.M.S.A.) incluant : <ul style="list-style-type: none"> ✓ le port de Tanger-Med, ✓ la zone franche de Fnideq, ✓ les zone franche le port et zone industrielle de Melloussa. • La Wilaya de Tanger <ul style="list-style-type: none"> ✓ <i>Le Ministère de l'Intérieur / la Direction Générale des Collectivités Locales (D.G.C.L.)</i> ✓ <i>Le Ministère de l'Energie et des Mines / le Secrétariat d'Etat à l'Eau et à l'Environnement (S.E.E.E.)</i> ✓ <i>L'Agence de Promotion et de Développement des provinces du Nord (A.P.D.N.)</i> ✓ <i>La GTZ, l'agence de coopération technique allemande / programme de gestion et protection de l'environnement (P.G.P.E.)</i>


TUNISIA

PROJECT INFORMATION		Last Update: 15.09.2009
Country	TUNISIA	PFS No. TU.01
Project Name	Programme intégré d'interventions de dépollution dans le bassin versant de la lagune de Bizerte et environs pour la restauration de la richesse et de la qualité de ses eaux et écosystèmes méditerranéens	
Region / Governorate	Gouvernorat de Bizerte	
City / Town	Bizerte, Menzel Bourgiba, Menzel Abdelrahman, Menzel Jemil, Mateur, Tinja et El Alia (sur le B.V.) Ras Jebel, Rafraf, Metline, Ghar El Melh, Aousja et Sajnène (sur la Méditerranée)	
Sector	projet d'actions coordonnées pluridisciplinaires	
		<p><u>Key Objectives</u></p> <ul style="list-style-type: none"> • restaurer la richesse et la qualité des eaux et écosystèmes méditerranéens de la lagune et des cordons côtiers voisins • ré-harmoniser et redynamiser les activités du pourtour de la lagune ainsi que la frange littorale en y améliorant notablement le paysage, le cadre et la qualité de vie.
Project Components	<p>Le programme vise l'amélioration de la situation environnementale et du cadre de vie dans la région de la lagune de Bizerte et les cordons côtiers voisins, et propose des interventions devant conduire à travers :</p> <ul style="list-style-type: none"> • la maîtrise et le contrôle qualitatif et quantitatif des rejets hydriques dans les milieux récepteurs naturels ; • la maîtrise et le contrôle des sources de pollutions urbaines et industrielles sous toutes ses formes, liquides, solides et gazeuses ; • la promotion des activités industrielles et agricoles durables et la réduction de leurs impacts sur l'environnement dans la région de Bizerte ; • le renforcement de la sensibilisation et l'implication des acteurs locaux et la société civile dans la protection de l'environnement. 	
Project Value	~ 61 M€ (1 € = 1,85 TND)	

IFIs	Aucune actuellement identifiée
National Strategy and NAP relevance	le programme proposé est très majoritairement issu de documents élaborés par les différentes parties prenantes à partir de la volonté politique et suivant les axes stratégiques nationaux dictés en vue de la réhabilitation de la lagune de Bizerte et du littoral
Relevance to H2020	<ul style="list-style-type: none"> • projet d'actions coordonnées en vue de la dépollution de la lagune de Bizerte comme partie intégrante de la Mer Méditerranée • projet d'actions pluridisciplinaires touchant à trois des domaines visés par les « Initiatives pour l'Horizon 2020 »
Key Parties	<ul style="list-style-type: none"> • la Direction de la Maîtrise des Pollutions Industrielles • l'Office National de l'Assainissement • l'Agence Nationale de Gestion des Déchets • l'Agence Nationale de Protection de l'Environnement • l'Agence de Protection et d'Aménagement du Littoral • le Ministère de l'Agriculture et des Ressources hydrauliques • le Ministère de l'Environnement et du Développement Durable

B. Project proposed for consideration for Phase II of MeHSIP-PIIF (Second wave)

EGYPT


PROJECT INFORMATION		Last Update: 17.09.2009
Country	Egypt	PFS No. EG.01
Project Name	Wastewater Treatment for Villages in Kafr el Sheikh Governorate	
Region / Governorate	Kafr el Sheikh Governorate	
City / Town	15 Clusters of villages in the Markazes of Baltim, El Hamoul, El Riad, Sidi Salem, Mutubis and Burullus.	
Sector	Wastewater	
 <p>Water & Drain Canals in Kafr El Sheikh Governorate</p> <p>Geo Coordinates (Google):</p>		<p>Key Objectives</p> <ul style="list-style-type: none"> To improve the quality of life and environment of residents in fifteen village clusters in Kafr el Sheikh Governorate by providing wastewater collection networks and wastewater treatment plants To reduce the pollution of canals and watercourses draining to the River Nile (Rosetta Branch) and Burullus Lake. To reduce the incidence of waterborne disease in the rural areas of the Governorate <p>To improve the quality of the waters of the Nile, the Burullus Lake and the coastal waters of the Mediterranean</p>
Project Components	Provision of first-time wastewater collection and treatment systems for fifteen clusters of villages in Kafr el Sheikh Governorate (aggregate treatment capacity 79,000 m ³ /day)	
Project Value	€ 105,000,000 (provisional)	

IFIs	No interest expressed so far
National Strategy and NAP relevance	<p>The project is consistent with the national policy, which aims to cover all urban and rural areas with potable water and sanitary wastewater collection, treatment and disposal services</p> <p>It is in line with the National Strategy for Water and Wastewater which was issued April 2009 in a National Conference</p> <p>It is in line with the NAP as the Nile Delta is a pollution hot spot.</p>
Relevance to H2020	<p>The project is very relevant to the H2020 initiative and country priorities) for the following reasons:</p> <ul style="list-style-type: none"> • The lower Nile Delta area is a pollution hot spot. The project aims to reduce pollution in the Rosetta Nile and Burullus Lake and, indirectly, the Mediterranean. • Provision of improved sanitation in Kafr el Sheikh Governorate is given priority in the National Water and Wastewater Master Plan of April 2009.
Key Parties	<ul style="list-style-type: none"> ▪ Holding Company for Water and Wastewater (HCWW) / Ministry of Housing (Promoter) ▪ Ministry of Finance (MOF) ▪ Ministry of International Cooperation (MOIC) ▪ Governorate of Kafr el Sheikh – Governor's Office <p>Kafr el Sheikh Water Supply and Sanitation Company (KSWSSC)</p>

PROJECT INFORMATION		Last Update: 10.09.2009
Country	EGYPT	PFS No. EG.02
Project Name	Water and Wastewater Expansion for Marsa Matrouh City and Markaz	
Region / Governorate	Matrouh Governorate	
City / Town	Marsa Matrouh City and Markaz	
Sector	Water & Wastewater	
Project Components	<p><u>Key Objectives</u></p> <ul style="list-style-type: none"> • To contribute to the governorate's economic development by increasing the supply of drinking water to the inhabitants and tourists of Marsa Matrouh city, • To contribute to the governorate's sustainable development by improving the quality of life of the rural poor, reduce incidence of waterborne diseases and reduce pollution of the groundwater resources and maintaining the quality of coastal waters of the Mediterranean • To conserve water resources by increased re-use of treated wastewater for irrigation. <ul style="list-style-type: none"> • Provision of water from 2 new seawater desalination plants, with a combined capacity of 18,000 m³/day, together with supply mains to connect to the city. • Extension of the water distribution and wastewater collection networks in Marsa Matrouh city (roughly 50 km of wastewater collectors and complementary water distribution networks). • Provision of first-time water supply and wastewater collection systems for nine villages in the Markaz (District) of Marsa Matrouh city. • Expansion of the wastewater treatment plant in Marsa Matrouh City from a capacity of 35,000 m³/day to 70,000 m³/day • Rehabilitation works on water and wastewater systems (SCADA for sewage PS's, leak detection & repair on water network, investigation and digital mapping) 	
Project Value	€ 87 million	

IFIs	No interest expressed so far
National Strategy and NAP relevance	<p>The project is relevant to the national policy, which aims to cover all the urban and rural areas with potable water and sanitary wastewater collection, treatment and disposal services.</p> <p>It is in line with the National Strategy for Water and Wastewater which was issued April 2009 in a National Conference.</p> <p>In line with the Barcelona Convention since it will reduce pollution and maintain the quality of the coastal waters.</p>
Relevance to H2020	<p>The project is very relevant to the H2020 initiative and country priorities) for the following reasons:</p> <ul style="list-style-type: none"> • The western Mediterranean coast of Egypt is an area of outstanding environmental value which must be preserved from degradation by the development of the tourist industry. • The explosive growth of tourism with development of hotels and resorts threatens to destroy the sensitive ecological balance of the sea and desert of Marsa Matrouh District. Expansion of the wastewater infrastructure must keep pace with development.
Key Parties	<ul style="list-style-type: none"> • Holding Company for Water and Wastewater (HCWW) / Ministry of Housing (Promoter) • Ministry of Finance (MOF) • Ministry of International Cooperation (MOIC) • Governorate of Marsa Matrouh – Governor’s Office • Marsa Matrouh Water Supply and Sanitation Company (MMWSSC) .

JORDAN

PROJECT INFORMATION		Last Update: 10.09.2009
Country	JORDAN	PFS No. JO. 02
Project Name	Construction of WWTP (4000 m ³ /day), sewer pipelines (80km) and pump stations	
Region / Governorate	Al Mafrq	
City / Town	Azraq	
Sector	Wastewater	
		<p><u>Key Objectives</u></p> <ul style="list-style-type: none"> • protecting the water table in the area known to be an oasis; • conserving natural resources • supplying water in conventional ways that are less expensive; and • providing better service to the local community and reducing health risks.
Project Components	<ul style="list-style-type: none"> • Construction of WWTP (4000 m³/day). • Construction of (80) km of sewer pipelines . • Installing 4 pumping stations. 	
Project Value	Euro 70 Million	
IFIs	No interest expressed so far	
National Strategy and NAP relevance	<p>The project is listed in the executive plan of the national strategy and serves the objectives of the national water strategy of conserving water resources.</p> <p>This project is directly linked to the country water management master plan in terms of protecting available resources and increasing water re-use quantities.</p> <p>This project is in line with the objectives of the National Strategy for Water management and is part of the national execution plan. The project will provide sanitary drainage and wastewater treatment to the region's communities. It will further contribute to protecting the water resources which are very scarce in Jordan. It will also increase the re-use of wastewater for irrigation of green areas and other plantations.</p> <p>Jordan is not part of the UNEP NAP initiative hence does not have a NAP.</p>	
Relevance to H2020	<p>The project falls directly under the wastewater sector of the H2020 initiative and of the sustainable management of water resources</p> <p><i>Although Jordan has no access to the Mediterranean, the project deals with two main sectors of the H2020 initiative, solid waste and Industrial emissions, in additions to its environmental impacts on natural resources. It also complies with the hot spots characteristics with emphasis on its trans-boundary nature.</i></p>	
Key Parties	<ul style="list-style-type: none"> • Ministry of Water and Irrigation • Water Authority of Jordan • Ministry of Planning and International Cooperation 	

PROJECT INFORMATION		Last Update: 10.09.2009
Country	JORDAN	PFS No. JO.03
Project Name	Zarqa/Amman Box Culvert for Waste water	
Region / Governorate	Zarqa Governorate	
City / Town	Wadi Zarqa Area	
Sector	Wastewater	
		<p>Key Objectives:</p> <ul style="list-style-type: none"> • Contain flooding and reduce vandalism of the network. • Contain flooding and the natural flow of water • Rehabilitate and improve the quality of water flowing to King Talal Dam. • Transport water during emergencies from Ain Ghazal to pumping station west of Zarqa Governorate. • Contribute positively to water supply in three areas namely: 1) Amman; 2) Rossaifeh; and 3) part of Al-Zarqa • Protect government property.
Project Components	40km box culvert for wastewater conveyance	
Project Value	Euro 50 Million	
IFIs	No interest expressed so far	
National Strategy and NAP relevance	<p>The deteriorating state of the Zarqa River Basin has become a priority at the highest levels in the Government. As a result, the Ministry of Environment has placed the rehabilitation and integrated environmental management of the Zarqa River Basin at the top of its priorities in its workplan since 2006.</p> <p>Jordan does not have a NAP, however Jordan has developed the National Environmental Action Plan</p>	
Relevance to H2020	<p>Even though Jordan is not on the Mediterranean hot spots list however this project serves a considerable amount of people with direct impact on irrigation and drinking water.</p>	
Key Parties	<ul style="list-style-type: none"> • Ministry of Water and Irrigation. • Water Authority of Jordan. • Ministry of Planning and International Cooperation. 	

TUNISIA

PROJECT INFORMATION		Last Update: Last Update: 15.09.2009
Country	TUNISIA	PFS No. TU.02
Project Name	Programme intégré d'interventions de dépollution dans la frange côtière et l'arrière-pays de la Baie de Monastir pour la restauration de la richesse et de la qualité de ses eaux et écosystèmes méditerranéens	
Region / Governorate	Gouvernorat de Monastir	
City / Town	Monastir, Khnis, Ksiebet El Mediouni, Lamta, Sayada et Té Boulba.	
Sector	projet d'actions coordonnées pluridisciplinaires	
		<p><u>Key Objectives</u></p> <ul style="list-style-type: none"> restaurer la richesse et la qualité des eaux et écosystèmes méditerranéens de la baie, redynamiser la frange littorale en y améliorant notamment le paysage, le cadre et la qualité de vie.
Project Components	<p>Amélioration de la collecte des eaux usées urbaines et industrielles par la réhabilitation du réseau existant et son renforcement. Renforcement des capacité hydraulique et biologique de la station d'épuration de Frina Raccordement des eaux usées des localités du bassin versant de la baie traitées actuellement par la station de STEP de Sayada sur la station de Frina par le biais d'une chaîne de transfert approprié. Limiter les points de rejet des eaux épurées en mer et particulièrement au niveau des zones à faible hydrodynamisme et prolonger l'émissaire en mer de la station de Frina</p>	
Project Value	~ 42 M€ (1 € = 1,85 TND)	
IFIs	Aucune actuellement identifiée	
National Strategy and NAP relevance	le programme proposé est issu du document fixant la stratégie élaborée par l'A.P.A.L. pour la réhabilitation de la baie de Monastir	
Relevance to H2020	projet d'actions coordonnées en vue de la dépollution de la baie de Monastir comme partie intégrante de la Mer Méditerranée projet d'actions pluridisciplinaires touchant à trois des domaines visés par les « Initiatives pour l'Horizon 2020 »	
Key Parties	l'Agence de Protection et d'Aménagement du Littoral la Direction de la Maîtrise des Pollutions Industrielles l'Office National de l'Assainissement l'Agence Nationale de Gestion des Déchets l'Agence Nationale de Protection de l'Environnement le Ministère de l'Agriculture et des Ressources hydrauliques le Ministère de l'Environnement et du Développement Durable	

APPENDIX 2 – PROJECT CONTACT LIST

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		and Wastewater Projects Executive Authority in Cairo	Projects Executive Authority in Cairo	
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