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**MEDITERRANEAN ACTION PLAN  
MED POL**

Meeting to review the long-term implementation of National Action Plans  
to address pollution from land-based activities

Durrës, (Albania), 1-3 June 2006

**REGIONAL REVIEW OF NAPS BY SECTOR OF ACTIVITY/SUBSTANCE**



## Table of contents

<b>I</b>	<b>SECTORAL REGIONAL REPORT ON URBAN SEWAGE</b> .....	1
1.	Assessment analysis of the regional situation on urban sewage.....	1
2.	Proposed priority national actions for 2010 .....	1
3.	Proposed longer term national actions.....	4
4.	Compatibility of actions vis-à-vis SAP targets.....	5
5.	Public Participation actions foreseen to implement the actions.....	5
6.	The cost estimate for the implementation of the actions.....	6
<b>II</b>	<b>SECTORAL REGIONAL REPORT ON AIR POLLUTION</b> .....	6
1.	Assessment analysis of the regional situation on air pollution .....	6
2.	Proposed priority national actions for 2010 .....	6
3.	Proposed longer term national actions.....	9
4.	Compatibility of actions vis-à-vis SAP targets.....	10
5.	Public Participation actions foreseen to implement the actions.....	10
6.	The cost estimate for the implementation of the actions.....	10
<b>III</b>	<b>SECTORAL REGIONAL REPORT ON SOLID WASTES</b> .....	10
1.	Assessment analysis of the regional situation on solid waste management .....	10
2.	Proposed priority national actions for 2010 .....	12
3.	Proposed longer term national actions.....	13
4.	Compatibility of actions vis-à-vis SAP targets.....	14
5.	Public Participation actions foreseen to implement the actions.....	14
6.	The cost estimate for the implementation of the actions.....	15
<b>IV</b>	<b>SECTORAL REGIONAL REPORT ON INDUSTRIAL WASTEWATER</b> .....	15
1.	Assessment analysis of the regional situation on industrial wastewater .....	15
2.	Proposed priority national actions for 2010 .....	15
3.	Proposed longer term national actions.....	19
4.	Compatibility of actions vis-à-vis SAP targets.....	21
5.	Public Participation actions foreseen to implement the actions.....	21
6.	The cost estimate for the implementation of the actions.....	21
<b>V</b>	<b>SECTORAL REGIONAL REPORT ON EMISSIONS OF Hg, Pb and Cd</b> .....	21
1.	Assessment analysis of the regional situation on emissions of Hg, Pb and Cd ..	21
2.	Proposed priority national actions for 2010 .....	22
3.	Proposed longer term national actions.....	25
4.	Compatibility of actions vis-à-vis SAP targets.....	26
5.	Public Participation actions foreseen to implement the actions.....	26
6.	The cost estimate for the implementation of the actions.....	27
<b>VI</b>	<b>SECTORAL REGIONAL REPORT ON HAZARDOUS WASTES, OBSOLETE CHEMICAL STOCKPILES, LUB OIL AND BATTERIES</b> .....	27
1.	Assessment analysis of the regional situation on hazardous wastes, obsolete chemical stockpiles, lub oil and batteries .....	27
2.	Proposed priority national actions for 2010.....	27
3.	Proposed longer term national actions.....	30

## Table of contents (continued...)

4.	Compatibility of actions vis-à-vis SAP targets.....	31
5.	Public Participation actions foreseen to implement the actions.....	31
6.	The cost estimate for the implementation of the actions.....	31
<b>VII</b>	<b>SECTORAL REGIONAL REPORT ON EMISSIONS OF ORGANOHALOGENS AND PCBs.....</b>	<b>31</b>
1.	Assessment analysis of the regional situation on emissions of organohalogenes.....	31
2.	Proposed priority national actions for 2010.....	31
3.	Proposed longer term national actions.....	33
4.	Compatibility of actions vis-à-vis SAP targets.....	34
5.	Public Participation actions foreseen to implement the actions.....	34
6.	The cost estimate for the implementation of the actions.....	34

## I SECTORAL REGIONAL REPORT ON URBAN SEWAGE

### 1. Assessment analysis of the regional situation on urban sewage

Environmentally efficient management of urban sewage is recognized as a priority issue in the NAPs of all Mediterranean countries. At least 108 Wastewater Treatment Plants (WWTPs) are proposed to be built until 2010 along the Mediterranean coastline and many more plants is planned to be upgraded (more advanced treatment, increase of treatment capacity, updating of equipment and process, etc). Therefore, the implementation of the NAPs will lead to an important reduction of the pollution load from these sources. However, there are important differences in priorities between countries. European Union (EU) countries have already established extended sewer networks and WWTPs (secondary treatment) according to the EU Directives, for most coastal cities with population above 100,000. Furthermore, many smaller coastal towns with population above 10,000 are already connected to such treatment units. Out of the 108+ proposed new WWTPs in all the Mediterranean, only 15 are located in EU countries, serving in most cases towns with relatively small population (< 100,000). Also, the financing of the proposed actions seems assured in these cases and it is expected that the EU countries will have no problem to satisfy the SAP targets in the sector of Urban Sewage for the year 2010.

On the other hand, a very important part of urban effluents generated in the cities of North Africa, Eastern Mediterranean and East Adriatic coasts are not treated at all before being released to the sea or surface waters. A part of the coastal population of these areas is connected to primary treatment units but very few secondary treatment plants are in operation. Overall, urban effluent discharges constitute a serious environmental problem in all countries, which is considered as an issue of high priority. In the NAPs of the non-EU countries, more than 100 WWTPs are proposed to be in operation until 2010 and if these actions are implemented in time, the SAP target for urban sewage will be reached to a considerable degree, improving greatly the quality of the coastal environment of the Mediterranean Sea.

### 2. Proposed priority national actions for 2010

#### Planned new Wastewater Treatment Plants included in the NAPs for 2010

Country	Cities	Total number of planned WWTPs
Albania	Shkodra, Shengjin, Durres, Vlora, Saranta	5
Algeria	Marsat El Hadjadj, Arzew, agglomerations of Beni Saf, Bouzedjar, Terga beach, Marsa Ben Mhidi, Honaine, Gazaouet	8
Bosnia & Herzegovina	Neum, Mostar, Citluk and Medjugorje, Konjic, Nevesinje, Bileca, Caplijna, Livno	8
Croatia	Split, Rijeka, Pula, Zadar, Sibenik, Dubrovnik	6
Cyprus	Famafusta, Limassol	2
Egypt	Alexandria Governorate (El Mex – El Agamy, El-Amria), Behira Governorate (Kafr El-Zayat, Shubrakit, Damietta (Enanva), Mahmoudia, Samanoua, Kafr	16

Country	Cities	Total number of planned WWTPs
	El Dawer, Abu El Matatameer, El Mohmoudia, Zarka, Edku, Hosh Eisa, Abo Hommos), Port Said Governorate (El'Garabaa-El'Manasra, Port Fouad)	
France	Marseille, Montpellier	2
Greece	Elefsina (Thriasio Pedio), East Attica (N. Makri), East Attica (Artemida, Rafina, Koropi etc), N. Kydonia, Mallia, Kalymnos isl.	6
Israel	Completion of WWTPs /comliance with Inbar Committee standards at Acre (Na'aman river); Haifa (Kishon river); Hadera, Iron and Jat (Hadera river); Lev-Hashaon-Tnuvot (Alexander river); Ra'anana (Poleg river), Nir Eliyahu, Kfar and Ramat Hasharon (Yakon river); Jerusalem, Beit Shemesh and Ayalon (Sorwq river); Kiryat Gat (Laschish river); Beersheba and Hebron (Besor river). Diverting the flow of urban runoff to constructed wetlands in the Yarkon river)	16 (building of new or upgrading of existing WWTPs)
Italy	Tertiary treatment established in regions related to sensitive areas	Not specified
Lebanon	Ghadir, Sour & Saida, Tripoli, Chekka, Batrun, Jbail, Chouf	7
Libya	Azzawia, Janzur, Tripoli, Misratah, Sirt, Benhazi, Dernah and Tobruk	8
Malta	Weid Ghammieq (Malta), Cumnija (Malta North), Ras il-Hobz (Gozo island)	3
Monaco		
Morocco	Tangiers, Tetouan, Nador, Al Hoceima	4
Palestinian Authority – Gaza Srip	Northern area, Gaza and the Middle area	2
Serbia & Montenegro		
Slovenia	Kopper and Isola (tertiary treatment), modernization of the WWRP of Piran (tertiary treatment)	2
Spain	Ensure that national legislation includes all provisions from Annex II of LBS Protocol. Apply national legislation addressing nutrients, specially the adoption of tertiary treatments in areas with problems of eutrophization	
Syria	Tartous, Lattakia, Baniyas, Jableh	4
Tunisia	Greater Tunis, Extension and rehabilitation of 19 WWTPs	1 + 19

Country	Cities	Total number of planned WWTPs
Turkey	Drainage Basins (WWTPs): Seyhan (3), Küçük Menderes (3), Büyük Menderes (2), Antalya (6) Gediz (3), Doğu Akdeniz (2), Batı Akdeniz (2), Ceyhan (2), Asi (2), Kuzey Ege (3), Meriç – Ergene (2) Additional WWTPs are planned for summer houses complexes	30 +

Planned Sewer Network extensions and other sewer network up-grading included in the NAPs for 2010

Country	Cities/Areas	Action
Albania	Shkodra, Koplik, Velipoja, Lezha, Shengjin, Lac, Kruja, Fushe-Kruja, Durres, Tirana, Kavaja and Golemi beach, Elbasan, Lushnja, Divjaka, Fier, Ballsh, Vlora, Saranta	Sewer network extension
Algeria	Coastal cities	Sewer Network extension
Bosnia & Herzegovina	Neum, Mostar, Citluk and Medjugorje, Konjic, Nevesinje, Bileca, Caplijna, Livno	Sewer Network extension
Croatia	Split, Rijeka, Pula, Zadar, Sibenik, Dubrovnik	Sewer network extension
Cyprus		N.S.
Egypt	Alexandria (El Mex – El Agamy, El-Amria), Behira (Kafr El-Zayat, Shubrakit, Damietta (Enanva), Mahmoudia, Samanoua, Kafr El Dawer, Abu El Matatameer, El Mohmoudia, Zarka, Edku, Hosh Eisa, Abo Hommos), Port Said (El'Garabaa-El'Manasra, Port Fouad)	New pumping stations (18) and sewer network extension
France		N.S.
Greece		N.S.
Israel		N.S.
Italy	Many coastal cities	Sewer network extension
Lebanon	Coastal cities	Closure of domestic raw sewage sea outfalls
Libya	Azzawia, Janzur, Tripoli, Misratah, Sirt, Benhazi, Derna and Tobruk	Sewer network extension
Malta	All areas	Sewer network extension and new pumping stations
Monaco	City of Monaco	Collect and retain first rain water from SNCF area
Morocco	Tangiers, Tetouan, Nador, Al Hoceima	Sewer network

Country	Cities/Areas	Action
		extension
Palestinian Authority – Gaza Strip	Khan-Younis Sewerage Development, Beit-Lahia Effluent Reuse Demonstration Project	Sewer network extension
Serbia & Montenegro	Kotor, Tivat, Budva, Bar, Ulcinj	Disconnecting short drains, rehabilitation of pumping stations
Slovenia	Coastal villages near Koper and Piran	Sewer network extension
Spain		
Syria	Banias, Jableh	Sewer network extension
Tunisia	Coastal cities	366 Km of sewers, 28,000 connections
Turkey	All drainage basins	Sewer network extension

\*NS: Not specified

### 3. Proposed longer term national actions

Many countries do not present specific actions for the period after 2010, but they anticipate a continuation in the implementation of the actions described for 2010. The main idea is to fulfill the SAP targets for 2025 through increasing the percentage of population connected to the sewer network in all coastal cities, complete the construction of wastewater treatment plants (WWTPs) or/and upgrade the treatment efficiency of already existing WWTPs in all coastal cities and towns and encourage the use of treated effluents for irrigation or restoration of watercourse's flow.

#### Actions proposed in the NAP for 2025

Country	Cities	Actions
Albania	Koplik, Lezha, Lac, Kruja, Tirana, Elbassan, Ballsh	WWTPs construction and extension of sewers network
Algeria	Regahia, Baraki, Beni Mesad, Beni Messous, Busmail and all coastal cities above 20,000	Recycling 250 million m <sup>3</sup> , building WWTPs for coastal cities (3,800,000 Eq.P), extension of sewers network
Bosnia & Herzegovina	Neum, Mostar, Livno, Citluk and Medugorje, Capljina, Jablanica, Konjic, Tomislav Grad, Siroki Brijeg, Rama-Prozor, Nevesinje, Bileca, Ljubuski, Stolac, Trebinje, Grude, Glamoc, Posusje, Gacko, Bergovici, Bos., Grahovo, Kupres, Jubinje and Kalinovik.	Second phase of WWTPs construction Extension of sewers network
Croatia	Town with pop. 2,000 – 15,000	WWTPs and sewer network extension
Cyprus	Paphos (2 <sup>nd</sup> phase), Larnaca (2 <sup>nd</sup> phase), towns < 2,000 pop.	WWTPs and sewer network extension
Egypt		N.S.
France		N.S.
Greece		N.S.
Israel		Utilization of the full potential of



Country	Cities	Actions
		effluents as a water source for agriculture and for improving the quantity and quality of river water. Application of integrated treatment to reduce pollutants from diffuse sources through reduction at source. Rehabilitation of riverbank vegetation and creation of buffer zones and intensification of the self-purification capacity of rivers
Italy		N.S.
Lebanon	6 coastal cities	WWTPs and sewer network extension
Libya	Zuwarah, Sabrata, Khums, Zilten, Ajdabiya	5 WWTPs and extension of sewers network
Malta		N.S.
Monaco		N.S.
Morocco	Tanger, Tetouan, Nador	2 <sup>nd</sup> phase of WWTP development
Palestinian Authority – Gaza Strip		N.S.
Serbia & Montenegro	All coastal cities	Sewer extension and WWTPs construction
Slovenia	Agglomerations between 50,000 and 100,000	Sewer extension and WWTPs construction, tertiary treatment
Spain		
Syria	Lattakia, Tartous, Jableh and Banias illegal housing, Arwad island	Sewer extension and WWTPs construction
Tunisia	Coastal cities	Improve connections to sewer network
Turkey		N.S.

\*N.S. = Not specified

#### 4. Compatibility of actions vis-à-vis SAP targets

According to the countries' NAPs, the SAP targets for urban sewage will be fulfilled to a great extent. Most cities and agglomerations with population above 100,000 will be connected to a WWTP until 2010, although some plants are expected to operate only primary treatment. In these cases, secondary treatment is planned to be constructed the soonest possible after 2010. Very few specific actions are included in the NAPs for recycling and use of treated effluents. However, the issue is mentioned in most NAPs and is included as a need for future actions, after 2010.

#### 5. Public Participation actions foreseen to implement the actions

Public participation is mentioned in all NAPs, to different degree of detail, without special focus on urban sewage actions. In general, public participation is promoted through the encouragement of NGOs and other stakeholders (industries, scientific community, etc.) involvement in the planning and implementation of NAP's priority actions. However, in most countries this involvement is not clearly defined and its implementation is one of the most important challenges in the Mediterranean region for the coming years.

## 6. The cost estimate for the implementation of the actions

The cost estimate for the implementation of the priority actions in the urban sewage sector are presented in many NAPs, but not for all countries. Therefore, at the moment, it is not possible to present a total cost estimate for all actions in the region. At national level, the costs are presented in the Synopsis Reports, which have been prepared for all 21 Mediterranean countries.

## II SECTORAL REGIONAL REPORT ON AIR POLLUTION

### 1. Assessment analysis of the regional situation on air pollution

Traffic in the cities and air emissions from industries are the most important sources for air pollution. Because of the rapid growth of coastal cities in the Mediterranean countries and the increase of vehicle fleets, the air quality is rapidly deteriorating in many places. In many cities vehicles are old, using leaded gasoline, emitting thus high pollutants' load. Furthermore, because almost all coastal Mediterranean cities are inhabited for hundred of years, the street network is not often suited for heavy traffic, leading to traffic jams and increase of pollutants emission. For everyday life in the Mediterranean cities, traffic related pollution is probably the most important pressure to the health of the population. On the other hand, industries are often located very close to the cities, or in some cases within in the city limits (especially in the south and east coasts of the Mediterranean), because of the fast city enlargement during the last decades. As a consequence, often industrial air emissions are directly affecting cities population. The technology used in many industrial plants is often old, resulting to important pollutants' emission to the air. The vicinity of wild dumps, where urban and industrial solid wastes are deposited without sanitary measures, also contributes to the deterioration of cities' air quality (smells, smoke from solid waste burning, etc.) Additionally, North African and Middle East coastal areas are arid and dust generation is an important problem for air quality, since many pollutants are more easily transported with small particles in the air. Overall, air pollution is an important problem for the Mediterranean region affecting primarily the health of the cities population. The SAP targets call for improvement of city air quality in the Mediterranean coastal areas, and the actions described in the countries' NAPs aim to fulfil this target.

### 2. Proposed priority national actions for 2010

#### Planned Actions for the control of air pollution included in the NAPs for 2010

Country	Cities/Districts	Actions
Albania	<ul style="list-style-type: none"> <li>• Elbasan</li> <li>• Elbasan</li> <li>• Elbasan</li> <li>• Ballsh</li> <li>• Ballsh</li> <li>• Vlora</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of DCM on air emission norms at Cement Factory</li> <li>• Technology up-grade on air emission at the Ferro-chromium plant</li> <li>• Technology up-grade on air emission at the Steel Production plant)</li> <li>• Technology up-grade for the TPP in Ballsh to reduce air emissions</li> <li>• Technology up-grade of the Ballsh Oil Refinery</li> <li>• Technology up-grade for compliance with the DCM on air emission</li> </ul>
Algeria		N.S.
Bosnia & Herzegovina	Trebisnjica river basin (Gako thermo power	Monitoring of the smoke gas and other air emissions

Country	Cities/Districts	Actions
	plant)	
Croatia		N.S.
Cyprus		<ul style="list-style-type: none"> <li>• Improve traffic management</li> <li>• Promotion of lead-free gasoline</li> <li>• Improve inspection of vehicles</li> <li>• Use of natural gas.</li> </ul>
Egypt	Alexandria Governorate	Air filters for the companies El Amria Cement, Carbon Black, Wood industries, Portland Cement Alex, Petrogas
France		<ul style="list-style-type: none"> <li>• Plans of urban transportation</li> <li>• Plans of companies transportation</li> <li>• Realisation of an agenda 21</li> </ul>
Greece		Implementation of programs including management and evaluation of air pollution, regional plans, monitoring, etc.
Israel		<ul style="list-style-type: none"> <li>• Equipping gasoline-powered vehicles with catalytic converters (90% of vehicles by 2014)</li> <li>• Compliance of diesel engines of vehicles with Euro "3" and "5" standards (by 2014, 74% of trucks, 97% of taxis, 73% of minibuses and 64% of buses)</li> <li>• Monitoring and compliance of electricity sector (power plants) and review of their compliance with air standards (by 2010). Enforcement of measures for compliance with national standards (2010-2014)</li> <li>• Monitoring and compliance of all industrial plants/facilities and review of their compliance with air standards (by 2010). Enforcement of measures for compliance with national standards (2010-2014)</li> <li>• Update of the National baseline Budget</li> </ul>
Italy		<ul style="list-style-type: none"> <li>• Enforcing the Kyoto Protocol for Italy (reductions in urban centers: CO<sub>2</sub> 21.5%, energy consumption 12.6%)</li> <li>• Complete the implementation of regional plans to control air pollution, especially in southern regions;</li> <li>• Improve the network of air quality monitoring and reach a geographical uniformity in order to have a general supervision of air quality on the national territory;</li> <li>• Undertake measures related to transport in urban centers in order to reduce ambient levels of particulate matter and ozone, CO<sub>2</sub>;</li> <li>• Increase the allocation of funds for the improvement of urban infrastructures and the substitution of obsolete vehicles with low emission combustibles supplied or with electricity supplied ones;</li> <li>• Promote further actions to develop the use of low emission combustibles as eco-diesel and</li> </ul>

Country	Cities/Districts	Actions
		<p>methane</p> <ul style="list-style-type: none"> <li>• Improve the network of methane stations in proximity of urban centers in order to encourage the purchase of methane supplied vehicles, especially for commercial activities.</li> </ul>
Lebanon		Reduce Air Pollution from Mobile Sources in Major Coastal Cities
Libya		Control of air emissions from the cement industry (electrostatic precipitators in 3 of the 6 existing plants)
Malta		<ul style="list-style-type: none"> <li>• National Programs to control emissions from mobile sources, promotion of lead-free gasoline, improve inspection of vehicles.</li> <li>• Introduction of natural gas</li> <li>• Control emissions from landfills</li> <li>• Control emissions from power plants</li> </ul>
Monaco		<ul style="list-style-type: none"> <li>• Give priority to public transport</li> <li>• Utilization of electric vehicles</li> </ul>
Morocco		N.S.
Palestinian Authority – Gaza Strip		Purchase of Portable Air Quality Measurement Instruments, Phase I
Serbia & Montenegro		N.S.
Slovenia		N.S.
Spain	Identified hot spots for air emissions: Amurrio/Etxegoien, Aan Roque, Castellon de la plana – P.I. El Serrallo, Tarragona, Castellbisbal, Barcelona-Zona Franca, Martorell, Flix	<ul style="list-style-type: none"> <li>• Urgent actions in identified priority hot spots</li> <li>• To promote changes in energy consumption patterns: <ul style="list-style-type: none"> <li>• use of biofuels in public transport</li> <li>• promotion of public transport and by bicycle</li> <li>• to optimize household heating systems</li> <li>• substitution of coal boilers</li> <li>• adoption of good practices codes on driving</li> <li>• promotion of photovoltaics in new buildings</li> </ul> </li> </ul>
Syria	<ul style="list-style-type: none"> <li>• Baniyas</li> <li>• Tartous</li> </ul>	<ul style="list-style-type: none"> <li>• Exchange of fuel with natural gas for two power generation units at the Baniyas thermal power plant</li> <li>• The installation of fabric filters on the production line for the Tartous Cement Factory</li> </ul>
Tunisia	<ul style="list-style-type: none"> <li>• Grater Tunis, Sfax, Gabes, Bizerte, Sousse</li> </ul>	<ul style="list-style-type: none"> <li>• National network for the monitoring of air quality</li> <li>• Connexion of 5 industries to the monitoring network</li> <li>• Mobile monitoring program for air quality</li> <li>• Program of partnership for the improvement of air quality</li> <li>• National strategy for the reduction of atmospheric pollution</li> <li>• Introduction of use of gas in public buses</li> <li>• Program for the promotion of renewable</li> </ul>

Country	Cities/Districts	Actions
		energies and energy saving • Promotion of public transports in the cities and urban agglomerations (Grater Tunis)
Turkey		N.S.

\*N.S. = Not specified

### 3. Proposed longer term national actions

Most countries do not present specific actions for the period after 2010, but they anticipate a continuation in the implementation of the actions described for 2010.

#### Actions proposed in the NAP for 2025

Country	Cities/Areas/industries	Actions
Albania		N.S.
Algeria		N.S.
Bosnia & Herzegovina		N.S.
Croatia		N.S.
Cyprus		N.S.
Egypt		N.S.
France		N.S.
Greece		N.S.
Israel		Actions initiated in the first phase (2010) will continue
Italy		N.S.
Lebanon		N.S.
Libya		<ul style="list-style-type: none"> <li>Control of air emissions from the remaining 3 plants of the cement industry (electrostatic precipitators)</li> <li>Use of natural gas instead of heavy fuel in all electric power plants</li> </ul>
Malta		N.S.
Monaco		N.S.
Morocco		N.S.
Palestinian Authority – Gaza Strip		N.S.
Serbia & Montenegro		N.S.
Slovenia		N.S.
Spain		
Syria	<ul style="list-style-type: none"> <li>Lattakia, Tartous and Jableh</li> </ul>	<ul style="list-style-type: none"> <li>Developing the public transport sector in Lattakia, Tartous and Jableh</li> <li>Phasing out leaded gasoline from use by vehicular traffic</li> <li>Improve the environmental standards in the extraction and refining of petroleum products</li> <li>Reduce the gaseous emissions, dust and other particulates to allowable limits</li> </ul>

Country	Cities/Areas/industries	Actions
		<ul style="list-style-type: none"> <li>• Reduce demand on vehicular transport; adjust peak periods; and substitute the individual vehicular traffic with an integrated public transport system</li> <li>• Raise the efficiency of energy utilization in industry</li> </ul>
Tunisia		<ul style="list-style-type: none"> <li>• Completion of the National Monitoring Network for air quality</li> <li>• Connexion of industries to the National Monitoring Network</li> <li>• Promotion of public transport in the cities and the urban agglomerations (Sfax)</li> </ul>
Turkey		N.S.

\*N.S. = Not specified

#### 4. Compatibility of actions vis-à-vis SAP targets

According to the countries' NAPs, the SAP targets for air quality will be fulfilled to great extend through improvement of air emissions from industry and traffic management (introduction of lead-free gasoline, support of public transport, development of air quality monitoring).

#### 5. Public Participation actions foreseen to implement the actions

Public participation is mentioned in all NAPs, to different degree of detail, without special focus on air pollution. In general, public participation is promoted through the encouragement of NGOs and other stakeholders (industries, scientific community, etc.) involvement in the planning and implementation of NAP's priority actions.

#### 6. The cost estimate for the implementation of the actions

No detailed information is presented in all NAPs on the cost estimation for the implementation of air pollution priority actions, although in some cases costs and financing sources are presented. Therefore, at the moment, it is not possible to present a total cost estimate for all relative actions in the region. At national level, the available cost information is presented in the Synopsis Reports, which have been prepared for all 21 Mediterranean countries.

### III SECTORAL REGIONAL REPORT ON SOLID WASTES

#### 1. Assessment analysis of the regional situation on solid waste management

In the NAPs already prepared by the countries in the frame of the SAP, a specific target is set for the year 2010, i.e. establishment of integrated Solid Wastes Management Systems for all coastal cities with population above 100,000. This target includes actions for the proper collection of solid waste, transfer to sanitary landfills, as well as solid waste minimization and valorization through separation of materials at source, recycling and production of organic fertilizer. Also actions are required for the environmentally sound rehabilitation of existing dumping sites, which are not in accordance with sanitary standards. Since the present Report is based on the NAPs and the Sectoral Plans prepared by the countries, the available information may vary between countries.

### Un-efficient collection of Solid Waste

Coastal cities' population grows continuously during the last decades in all Mediterranean countries for economic and social reasons. Although waste collection may be satisfactory in some countries of the northern Mediterranean coast (mainly the EU countries, i.e. Spain, France, Monaco, Italy, Malta, Greece, Cyprus), un-efficient collection is been recorded in almost all other areas. In North African and Middle East countries, uncollected solid waste may represent more than 30% of all generated waste in some cities, leading to continuous littering of streets and countryside and to potential health hazards for the population. In these areas, a special problem is related to the littering with plastic bags, which due to their resistance to degradation and light weight may be scattered to large areas around the cities. It is generally recognized that there is little environmental conscience for the protection of public space from littering and the solution lays in the improvement of the collection efficiency, as well as the raising of the environmental awareness of the population.

### Deposition of solid wastes in landfills

Deposition of collected solid waste is done on sanitary landfills, official dumping sites without any sanitary measures, or on unofficial wild dumps. In most countries, no real sanitary measures are taken during solid waste deposition leading to serious environmental stress. In most cases, solid waste dumps are generating bad smells, as well as toxic fumes due to self ignition. Since no soil cover or compaction is practiced in most cases and no fences are erected, lighter wastes (such as plastic bags and paper) fly away because of the wind littering great areas around the dumps. A special problem in relation to the marine environment is encountered in the southern and eastern Mediterranean coasts, where dumps are located on the coastline (Al Hoceima [Morocco], Al Bassa [Syria], Tripoli [Lebanon], Saida [Lebanon], Ganfuda [Libya]). In most of those cases, solid wastes enter into the sea littering the marine environment, while leachates contaminate coastal seawater. Lack of well organized landfills to cover the local needs is also recorded in the Adriatic Sea region (Albania, Bosnia & Herzegovina, Croatia, Serbia & Montenegro), while in some EU countries the need to improve the waste deposition facilities is also been recognized (Greece, Malta). In all NAPs it is recognized that the existence of the few official and hundreds of unofficial unsanitary dumps should be terminated and that new well planned sanitary landfills should be created.

### Valorization and recycling of solid wastes

Unofficial scavenging for the recuperation of valuable materials from solid wastes is been traditionally performed in many countries of the southern and eastern Mediterranean coasts, usually without any protection of the workers. On the other hand many countries have established compost plants to produce organic fertilizer from municipal solid wastes. Although this investment seems very promising because it combines waste minimization and production of organic fertilizer valuable to the increasing farming activity, it was not always very successful. The plants in some cases did not operate at their nominal capacity, but the main drawback was the bad quality of the product which contained glass fragments and other sharp pieces, as well as pieces of plastic, because of poor segregation of waste to be composted. As a result, farmers, which were initially interested in using the organic fertilizer, they gradually became disinterested in using it on their fields.

On the other hand with the exception of few countries, very little has been done until now for the recycling of valuable material at source. In all countries people's sensibilisation campaigns are foreseen in relation to the establishment of an efficient recycling system for collection of valuable materials from solid waste. Some countries include in the NAP for 2010 priority actions the construction of Recycling and Compost plants.

## 2. Proposed priority national actions for 2010

### Planned new landfills included in the NAPs for 2010

Country	Cities	Total number of landfills
Albania	Shkodra - Koplik - Velipoja, Leza - Shengjin, Lac, Durres-Tirana, Elbasan, Lushnja- Divjaka, Fier, Ballsh, Vlora, Saranta	10
Algeria	Wilayas: Alger, Blida, Boumerdes, Tipaza,	4 + 3 transfer stations
Bosnia & Herzegovina	Mostar	1
Croatia	Split, Rijeka	2
Cyprus	Larnaka/Famafusta, Limassol	2
Egypt	Alexandria	1
France		
Greece	Attika (Athens), Argos-Nafplio-Tolo, Arta, Litochoro, Thassos	5
Israel	Rehabilitating old dumps at Hiriya, Netanya, North Herzliya, Rishon LeZion, Retamin, Ashkelon, Bat Yam Establishment of 20 regulated sites for the disposal of construction and demolition wastes in quarries in which mining work is completed	7  20 for construction wastes
Italy		
Lebanon	Tripoli + Sour, Saida (Rehabilitation)	1+2
Libya	Azzawia, Janzur, Tripoli, Misratah, Sirt, Benhazi, Dernah and Tobruk.	8
Malta	Ghalis + Gozo isl. Transfer station	1 + 1 transfer st.
Monaco		
Morocco	Tangiers, Tetouan, Nador, Al Hoceima	4
Palestinian Authority – Gaza Strip	Rafah & Biet Hanoun (Rehabilitation)	
Serbia & Montenegro	Budva-Tivat-Kotor, Bar-Ulcinj, Herceg Novi Sanitation of existing dumps (1 in Herceg Novi, 4 in Kotor, 4 in Tivat, Budva, Bar, Ulcinj)	3  12
Slovenia		
Spain		
Syria	Tartous (El Hadde), Al Kassideh (Lattakia)	2
Tunisia	Bizerte, Nabeul, Sousse, Monastir, Sfax, Gabes, Medenine, Djerba	8
Turkey	Drainage Basins: Seyhan (2), Büyük Menderes (2), Antalya (6), Küçük Menderes (1), Gediz (4), Doğu Akdeniz (4), Batı Akdeniz (3), Ceyhan (6), Asi (5), Kuzey Ege (1), Meriç – Ergene (3)	37



Planned Recycling and Compost plants included in the NAPs for 2010

Country	Cities/Areas	Number of Recycling + Compost Plants
Albania	Recycling: Elbasan, Fier, Ballsh + Compost: Lezha, Shengjin, Fier, Ballsh, Vlora	3 + 5
Algeria		
Bosnia & Herzegovina		
Croatia		
Cyprus		
Egypt	Alexandria	2
France		
Greece	Athens	1
Israel	Hiryia (recycling) Compost 2000	1 + 1
Italy		
Lebanon		
Libya		
Malta	Compost Sant' Antnin Facility (improvement)	1
Monaco		
Morocco		
Palestinian Authority – Gaza Strip	Compost plant, Pilot Project Organic Farming	2
Serbia & Montenegro		
Slovenia		
Spain		
Syria		
Tunisia		
Turkey		

### 3. Proposed longer term national actions

Most of the countries do not present specific actions for the period after 2010, and anticipate a continuation of the 2010 NAP. The main idea is to fulfill the SAP targets for 2025 through solid waste generation minimization and recycling at source, improvement of solid waste collection efficiency in the cities, closure and rehabilitation of wild dumps and operation of proper sanitary landfills. Increase of compost production and quality improvement of the product is also a target for most of the countries.

Country	Actions
Albania	
Algeria	Continuation of PROGDEM program on solid waste management (creation of sanitary landfills, recycling, separation at sources)
Bosnia & Herzegovina	Sanitary landfills for Trebinje (25,000) and Livno (42,000)
Croatia	
Cyprus	

Country	Actions
Egypt	
France	
Greece	
Israel	<ul style="list-style-type: none"> <li>• Waste recycling for construction and demolition wastes. Separation of the problematic components from urban waste as part of the waste's pretreatment</li> <li>• Rehabilitation of Haifa dumping site</li> </ul>
Italy	
Lebanon	
Libya	<ul style="list-style-type: none"> <li>• Sanitary landfills for the solid wastes of the cities: Al Nigat Al Khams, Surman and Sabrata, Jifarah, Tajura, Tarhunah – Masallatah, Al Mergib, Ajdabiya, Al Hizam Al Akhdar, Al Marj, Al Bieda, Al Ghobba, Al Batnam. Improvement of solid waste collection in the cities</li> <li>• Construction of solid waste recycling and compost plants at Al Nigat Al Khams, Azzawiya, Al Megrib, Sirt, Ras Lanuf – Brega, Ajdabiya, Al Marj, Tobruk</li> </ul>
Malta	
Monaco	
Morocco	
Palestinian Authority – Gaza Strip	
Serbia & Montenegro	
Slovenia	
Spain	
Syria	<p>Construction of waste segregation plant and landfill in Heddah valley (Tartous)</p> <p>Rehabilitation and closure of Al Bassa solid waste landfill, Lattakia</p> <p>Elimination of all unauthorized dump sites for municipal solid waste and construction debris</p> <p>Sanitary landfills for all coastal communities</p>
Tunisia	
Turkey	

#### 4. Compatibility of actions vis-à-vis SAP targets

According to the countries' NAPs, the SAP targets for solid wastes will be fulfilled to a great extent. Most cities and agglomerations with population above 100,000 will be served by a sanitary landfill. However, it is not always clear how the collection efficiency will be improved in order to remove all generated wastes from the streets and households. Both public and private collection schemes are proposed for that purpose. On the other hand, actions for solid waste recycling at source, although included in some NAPs, are not always well developed. It is possible that recycling actions will be more dynamically developed during the next period of SAP (after 2010).

#### 5. Public Participation actions foreseen to implement the actions

Public participation is mentioned in all NAPs, to different degree of detail, without special focus on municipal solid waste actions. In general, public participation is promoted through the encouragement of NGOs and other stakeholders (industries, scientific community, etc.)

involvement in the planning and implementation of NAP's priority actions. However, in most countries this involvement is not well defined and its implementation is one of the most important challenges in the Mediterranean region for the coming years.

## 6. The cost estimate for the implementation of the actions

The cost estimate for the implementation of the priority actions in the solid waste sector are presented in many NAPs, but not for all countries. Therefore, at the moment, it is not possible to present a total cost estimate for all actions in the region. At national level, the cost is presented in the Synopsis Reports, which have been prepared for all 21 Mediterranean countries.

## IV SECTORAL REGIONAL REPORT ON INDUSTRIAL WASTEWATER

### 1. Assessment analysis of the regional situation on industrial wastewater

Industrial pollution is generated on wide scale along the Mediterranean coastline. Most of the countries try to control pollution from this source by issuing legislation on Effluent Limit Values (ELV) for specific industrial sectors and/or specific pollutants, as well as Environmental Quality Standards (EQS) for the receiving water bodies. Compliance monitoring of industrial discharges, linked to a "discharge permit system" is also in operation in some countries, as well as application of economic instruments to encourage industrial investments for the introduction of cleaner technology, BAT and the construction of wastewater treatment plants. However, in the greater part of the Mediterranean coastline, no such measures are effectively operating, mainly because of gaps in the legislation and/or lack of proper enforcement of the existing legislation. As a consequence, industrial pollution control constitutes a major component for the successful achievement of the SAP targets and a big challenge for most of the Mediterranean countries. In the NAPs, all countries describe actions related to the control of industrial wastewater, but the approach is not the same. Overall, the countries mention the need to introduce cleaner technologies to the industrial sector and include it as an action for 2010 or 2025 but, in most cases, without further details on the means to be used. On the other hand, many NAPs describe specific actions to be undertaken for a limited number of large industries, but it is not always clear the degree of pollutants reduction at National level in relation to the National Budget Baseline and the SAP targets. Also the control of smaller industrial units is planned to be achieved through the enforcement of legislation on industrial sector basis. Finally, information on the cost is mainly provided for some of the actions, especially for the public owned industries.

### 2. Proposed priority national actions for 2010

Planned Actions in the Industrial Wastewater Treatment Sector included in the NAPs for 2010

Country	Cities/Districts (industrial unit)	Actions
Albania	<ul style="list-style-type: none"> <li>Durres (poultry), Tirana (industries – not specified)</li> <li>Tirana (tanneries), Kavaja (tanneries), Patos-Marinza oilfields, Ballsh Oil Refinery</li> </ul>	<ul style="list-style-type: none"> <li>Construction of IWWTPs</li> <li>Technological upgrading, cleaner technology</li> </ul>
Algeria	Alger (Groupe GIPEC , Hospitals Mustapha et Kouba, paper industry Baba Ali, Bourouba), Skikda (Cement Hadjar Soud, Petrochemical Complex CNPK,	Signature of contracts of performance between industries and the state for de-pollution actions (construction of IWWTPs where needed)

Country	Cities/Districts (industrial unit)	Actions
	Natural Liquefied Gas, Plastics, Company of the Industrial Zone Management, SONATRACH), Annaba (Paper and Cellulose GIPEC, ASMIDA Fertilizers, Iron ISPAT), Mostagenem (Hadj Sahroui Tannery, paper Baba Ali), Tiemcen (ENCG Oil and Grease Maghnia, ALZINC Zinc electrolysis, Tafna Tannery ). More industries to be included in the program.	
Bosnia & Herzegovina	Mostar (textile, slaughterhouses, wineries), Citluk and Medugorje (textile, slaughterhouses, wineries, milk products), Siroki Brijeg (meat industries), Livno (textile), Glamok (textile), Trebinje-tool industry (metal industries - galvanization), Konjic UNIS GAL (metal industries - galvanization), Gacko (thermo power plant - wastewater treatment)	Pretreatment/cleaner production of wastewater from industrial plants
Croatia	Rovinj (Mirna fish processing), Zadar (Adria fish processing), Split (Jadranska Pivovara Brewery)	Construction of Industrial WWTPs
Cyprus	<ul style="list-style-type: none"> <li>• Refinery</li> <li>• KEO Brewery</li> </ul>	<ul style="list-style-type: none"> <li>• Complete closure</li> <li>• Industrial WWTP</li> </ul>
Egypt	<ul style="list-style-type: none"> <li>• Alexandria (Ratka Paper, National Paper, Misr Dairy Siclam, Eastern Linnen, Abu Qir Fertilizer, Edfina Canning, Arab United Textile, Siouf Spinning, Alexandria Pharmaceuticals)</li> <li>• Behira (Ismadye, Misr Rayon, El-Beida Dye)</li> <li>• Port Said (the industrial zone south of Port Said)</li> </ul>	Application of cleaner technologies and wastewater treatment plants in the companies
France	Mediterranean coastal zone of France	<ul style="list-style-type: none"> <li>• National Program of pollution prevention from specific substances</li> <li>• Measures for pollution reduction in the classified installations</li> <li>• Measures for introducing substances in the market</li> <li>• Specific measures (voluntary engagement of companies, BAT)</li> <li>• Tracing of dangerous substances in aquatic media (state of the environment)</li> <li>• Identification of the principal industrial sources of dangerous substances</li> <li>• Monitoring of emissions from registered industries</li> <li>• Identification of the dangerous substances in France</li> </ul>

Country	Cities/Districts (industrial unit)	Actions
		<ul style="list-style-type: none"> <li>• Introduction of specific means for the control of aquatic pollution (Quality targets, discharge permits, etc.)</li> </ul>
Greece	All coastal regions	Enforcement to control discharges from industrial installations, environmental permits
Israel	All coastal zone	<ul style="list-style-type: none"> <li>• Completion of treatment and recovery systems in Hot Spots and in coastal cities directly discharging effluents to the sea (Acre, Hof Hacarmel, Herzliya, Ashdod)</li> <li>• Land treatment of Shafdan sludge</li> <li>• Adoption of advanced treatment of industrial effluents at source to reduce pollutants in the brines and industrial effluents discharged directly into the sea through marine outfalls and vessels.</li> <li>• Establishment of more stringent standards for brines and effluents. Establishment of proper conditions in business licenses and enforcement in industrial plants.</li> <li>• Development of a pilot project to assess the most efficient treatment method for water emissions from fishponds.</li> </ul>
Italy	All coastal regions	<ul style="list-style-type: none"> <li>• Monitoring of all TPB substances</li> <li>• Reduce and phase out inputs</li> <li>• Introduce Environmental Quality Standards (water) and Effluent Emission Limits</li> </ul>
Lebanon	<ul style="list-style-type: none"> <li>• Fertilizer Company (North)</li> <li>• Beirut Slaughterhouse (Karantina) (Beirut)</li> <li>• Industrial Zones (Mount Lebanon)</li> <li>• Ghazieh Tanneries (Mount Lebanon)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce effluent concentrations &amp; quantities (cleaner technology, Industrial WWTP)</li> <li>• Industrial WWTP</li> <li>• Upgrade infrastructure (including IWWTPs)</li> <li>• Promote Cleaner Production &amp; Chromium Recycling</li> </ul>
Libya	All coastal Shabeyats (industries)	Introduction of standard specifications for industrial waste emissions
Malta	<ul style="list-style-type: none"> <li>• Malta (Weid Ghammieq WWTP), Malta North (Cumnija WWTP), Gozo island (Ras il-Hobz WWTP)</li> <li>• All country</li> </ul>	<ul style="list-style-type: none"> <li>• Treatment of industrial wastewater along with urban sewage in WWTPs (action included in the Urban Sewage Sector)</li> <li>• Introduce environmental quality standards for industrial areas (water</li> </ul>

Country	Cities/Districts (industrial unit)	Actions
	<ul style="list-style-type: none"> <li>All country</li> </ul>	<p>and sediments)</p> <ul style="list-style-type: none"> <li>Ensure the compliance of all discharges to Emission Limit Values</li> </ul>
Monaco	All city	Ensure the compliance of all discharges to Emission Limit Values
Morocco	All coastal area	Up-grading all industrial WWTPs (N.S.)
Palestinian Authority – Gaza Strip	All area	<ul style="list-style-type: none"> <li>Introduction of an Industrial Environmental Management System</li> <li>Introduction of Environmental Standards and Guidelines</li> </ul>
Serbia & Montenegro	Shipyard Bijela and Remont Institution, Metal industry Daido	Introduction of BAT and construction of industrial WWTPs
Slovenia	All coastal area	Introduction of BAT and construction of WWTPs to industrial plants
Spain	<p>Identified hot spots</p> <p><b>Emissions to water:</b> Barcelona – Zona Franca, Les Franqueses del Valles, Benicarlo, Tarragona, Castellbisbal, Martorell, Burgos, Castellon de la Plana – P.I. El Serrallo, Zaragoza, Villarreal, Vitoria, Zubillaga – Lantaron, Villa-seca, Flix.</p> <p><b>Coastal Emissions:</b> Carbonera, Los Barrios, Castellon de la plana – P.I. El Serrallo, Motril, Tarragona, Vila-seca, Barcelona-Puerto, El Prat de Llobregat, San Roque, Valle Escombreras, Cuevas del Alamazonara - Villaricos</p>	<ul style="list-style-type: none"> <li>Urgent actions in identified hot spots</li> <li>Propose to develop BAT in those SAP sectors not included in EU IPPC regulation</li> <li>Promote adoption of BAT in priority sectors</li> <li>Determination of standards and criteria adopted by the Parties</li> <li>Further develop national plans, considering SAP targets</li> <li>Promote voluntary agreements with priority sectors (chemical industry, agro-food, textile), considering the recommendations in BREFs</li> <li>Promote and regulate the adoption of tertiary treatments for industrial wastewater</li> </ul>
Syria	<ul style="list-style-type: none"> <li>Banias</li> <li>Jableh (Al Fawar Spring industrial area)</li> <li>Fawar Spring area and Ugarit Beverages Company (food industries)</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation of the Banias refinery industrial WWTP</li> <li>Construction of a sewerage network and a WWTP (Jableh)</li> <li>Pretreatment of industrial wastewater prior to discharge to public sanitary sewers</li> </ul>
Tunisia	Coastal zone of Tunisia	<ul style="list-style-type: none"> <li>Up-grading of 4,000 industries</li> <li>De-pollution and management of the coast of Sfax (Taparura project)</li> <li>Elimination of the discharges of phosphogypse into the Golf of Gabes</li> <li>Rehabilitation of the Lake of Bizerta through de-pollution of the neighbouring industries</li> <li>Creation of new industrial zones with necessary infrastructure, including pollution management</li> <li>Program of de-pollution of the</li> </ul>

Country	Cities/Districts (industrial unit)	Actions
		<p>Tunisian marine coastal zone</p> <ul style="list-style-type: none"> <li>• Industrial de-pollution studies in the Governorates of Ariana, Sousse and Mednine</li> <li>• Follow-up actions of NAP for the control of industrial pollution</li> <li>• Program of de-pollution of the major public industrial units (Cement of Bizerte, Chemical Industry of Gabes, Phosphate Industry of Sfax, Iron/Steel El Fouleth et Menzel Bourguiba, Power Plants of Rades and Ghannouch)</li> <li>• Dumping sites of phosphogypse in Gabes</li> <li>• Dumping sites of Jradou for industrial wastes</li> </ul>
Turkey	<p><b>Basins:</b>            Seyhan (Textile, food, organic chemicals, pulp &amp; paper)            Buyuk Menderes (industrial zone, textile, paper, food, organic and inorganic chemicals)            Antalya (aquaculture, food, mining)            Gediz (tanneries, food, textile)            Asi (metal, food)            Kucuk Menderes (textile, metal, food, pulp &amp; paper, organic chemicals)            Dogu Akdeniz (food, petroleum, metal, paper, mining, textile)            Meric-Ergene (pulp &amp; paper, textile, food, inorganic chemicals, electronic industry)            Kuzey Ege (tanneries, food)            Ceyhan (textile, food, aquaculture, organic chemicals)            Bati Akdeniz (aquaculture, mining, energy production)</p>	<p>Introduction of cleaner technology and/or construction or up-grading industrial WWTPs</p>

\*N.S. = Not specified

### 3. Proposed longer term national actions

Many countries do not present specific actions for the period after 2010, but they anticipate a continuation in the implementation of the actions described for 2010. The main idea is to fulfill the SAP targets for 2025 through introducing cleaner technology, BAT and construction of industrial WWTPs in the major industries located on the coastal area. All countries already have or plan to introduce Emission Limit Values for industrial effluents. The enforcement of these ELV through compliance monitoring and the introduction of economic instruments to assist industries, is expected to play an important role on the successful fulfillment of the countries obligation to reach the 2025 SAP targets

Actions proposed in the NAP for 2025

<b>Country</b>	<b>Cities/Areas/industries</b>	<b>Actions</b>
Albania	All coastal area (industries)	N.S.
Algeria	More industries to be included in the program of contracts of environmental performance.	N.S.
Bosnia & Herzegovina	All the country (major industries)	Introduction of pre-treatment and cleaner production will be continued
Croatia	All coastal Counties (major industries)	Enforcement of EU-harmonized national legislation (cleaner production, wastewater treatment, effluent discharge limits)
Cyprus	All coastal area (industries)	Enforcement of EU-harmonized national legislation (cleaner production, wastewater treatment, effluent discharge limits)
Egypt	Three coastal Governorates (Alexandria, Behira and Port Said) (industries)	Introduction of cleaner technology, construction of IWWTPs (N.S.)
France	Mediterranean coastal zone of France	Protection of aquatic environment in the context of Water Frame Directive (EU)
Greece		N.S.
Israel		Follow-up of all relative projects
Italy		N.S.
Lebanon	All coastal areas (industries)	Introduction of cleaner technology, construction of IWWTPs (N.S.)
Libya	All coastal Shabeyats (industries)	Use of standard specifications to control industrial waste emissions
Malta		N.S.
Monaco		N.S.
Morocco	All coastal area	Up-grading all industrial WWTPs and construction of new (continuation of the program)
Palestinian Authority – Gaza Strip		N.S.
Serbia & Montenegro		N.S.
Slovenia		N.S.
Spain		
Syria	<ul style="list-style-type: none"> <li>• Tartous</li> <li>• Banias</li> <li>• All coastal area</li> <li>• All coastal area</li> </ul>	<ul style="list-style-type: none"> <li>• Separation of storm water runoff from industrial effluent discharge line at the Tartous oil terminal and rehabilitation of existing separation tank</li> <li>• Recycling and recovery of segregated petroleum and mineral oil wastes at the Banias thermal power station</li> <li>• Segregation and pre-treatment of industrial wastewater with effluent to municipal sewers</li> <li>• Development of integrated wastewater</li> </ul>



Country	Cities/Areas/industries	Actions
		treatment systems for dealing with aqueous effluents from olive oil mills
Tunisia	All coastal area	Follow-up of the national pollution control program
Turkey	All coastal drainage basins	Continuation of NAP implementation

\*N.S. = Not specified

#### 4. Compatibility of actions vis-à-vis SAP targets

According to the countries' NAPs, the SAP targets for industrial wastewater (BOD<sub>5</sub> reduction by 50%) will be fulfilled to a great extent. However the data in the NAPs do not provide information to estimate the relative reduction of pollutants in relation to the NBB of the country. Also, when an action is targeting a specific industrial plant, the result can be anticipated accurately enough, but when the action targets a group of industries (sectors or industrial zones) the anticipated result could be less accurately estimated.

#### 5. Public Participation actions foreseen to implement the actions

Public participation is mentioned in all NAPs, to different degree of detail, without special focus on industrial wastewater actions. In general, public participation is promoted through the encouragement of NGOs and other stakeholders (industries, scientific community, etc.) involvement in the planning and implementation of NAP's priority actions. Especially for the industrial wastewater, the active participation of private industries in the key element for the successful implementation of the NAP's actions.

#### 6. The cost estimate for the implementation of the actions

Information on the cost estimate for the implementation of the priority actions in the industrial wastewater sector are presented in some NAPs, but not for all industries concerned. Therefore, at the moment, it is not possible to present a total cost estimate for all actions in the region. At national level, the available cost information is presented in the Synopsis Reports, which have been prepared for all 21 Mediterranean countries.

## V SECTORAL REGIONAL REPORT ON EMISSIONS OF Hg, Pb and Cd

### 1. Assessment analysis of the regional situation on emissions of Hg, Pb and Cd

Mercury, Pb and Cd are mostly emitted from industries, while Hg is also released from mining activities (Idrija Hg mine, in Slovenia). Runoff from urban area with high traffic is also transferring Pb and Cd into the sea, mainly in the harbors. Phosphogypsum releases, from fertilizer producing units (example Lebanon, Tunisia) are considered as a potential source of Cd, while all metals may be present in the leachates of seafront dumping sites in many areas along the Mediterranean (example Lebanon, Libya, Morocco, Syria). In most NAPs there are no specific actions directly targeting the emission of these metals, which are expected to be controlled through actions planned for the control of all industrial wastewater (introduction of cleaner technology, BAT and wastewater pre-treatment). All countries propose the introduction of legislation on Effluent Limit Values (ELV) for these metals (if not already in place), as well as Environmental Quality Standards (EQS) for the receiving water bodies. Compliance monitoring of industrial discharges, is also a tool to control metal emissions. Legislation enforcement is also considered as a major tool to meet the SAP targets.

## 2. Proposed priority national actions for 2010

Planned Actions in the control of emissions of Hg, Pb and Cd included in the NAPs for 2010

Country	Cities/Districts (industrial unit)	Actions
Albania	Tirana (tanneries and not specified industries ), Kavaja (tanneries), Ballsh Oil Refinery	<ul style="list-style-type: none"> <li>• Construction of IWWTPs</li> <li>• Technological upgrading, cleaner technology</li> </ul>
Algeria	Alger (Groupe GIPEC, paper industry Baba Ali, Bourouba), Skikda (Cement Hadjar Soud, Petrochemical Complex CNPK, SONATRACH), Annaba (Paper and Cellulose GIPEC, ASMIDA Fertilizers, Iron ISPAT), Mostagenem (Hadj Sahroui Tannery, paper Baba Ali), Tiemcen (ALZINC Zinc electrolysis Tafna Tannery). More industries to be included in the program.	Signature of contracts of performance between industries and the state for de-pollution actions (construction of IWWTPs where needed)
Bosnia & Herzegovina	Mostar (textile), Citluk and Medugorje (textile), Livno (textile), Glamok (textile), Trebinje-tool industry (metal industries - galvanization), Konjic UNIS GAL (metal industries - galvanization), Gacko (thermo power plant - wastewater treatment)	Pretreatment/cleaner production of wastewater from industrial plants
Croatia		Construction of Industrial WWTPs
Cyprus		
Egypt	<ul style="list-style-type: none"> <li>• Alexandria (Ratka Paper, National Paper, Abu Qir Fertilizer, Arab United Textile)</li> <li>• Behira (Ismadye, Misr Rayon, El-Beida Dye)</li> <li>• Port Said (the industrial zone south of Port Said)</li> </ul>	Application of cleaner technologies and wastewater treatment plants in the companies
France	Mediterranean coastal zone of France	<ul style="list-style-type: none"> <li>• National Program of pollution prevention from specific substances</li> <li>• Measures for pollution reduction in the classified installations</li> <li>• Measures for introducing substances in the market</li> <li>• Specific measures (voluntary engagement of companies, BAT</li> <li>• Tracing of dangerous substances in aquatic media (state of the environment)</li> <li>• Identification of the principal industrial sources of dangerous substances</li> <li>• Monitoring of emissions from registered industries</li> <li>• Identification of the dangerous substances in France</li> </ul>

Country	Cities/Districts (industrial unit)	Actions
		<ul style="list-style-type: none"> <li>• Introduction of specific means for the control of aquatic pollution (Quality targets, discharge permits, etc.)</li> </ul>
Greece	All coastal regions	Enforcement to control discharges from industrial installations, environmental permits
Israel	All coastal zone	<ul style="list-style-type: none"> <li>• Control the reduction rate of the metals Hg, Cd and Pb (in air and liquid emissions) in comparison to the NBB. If necessary taking enforcement measures including adoption of BAT NEC in order to reach required reduction level by 2010</li> <li>• Adoption of advanced treatment of industrial effluents at source to reduce pollutants in the brines and industrial effluents discharged directly into the sea through marine outfalls and vessels. Establishment of more stringent standards for brines and effluents. Establishment of proper conditions in business licenses and enforcement in industrial plants.</li> <li>• Completion of treatment and recovery systems in Hot Spots and in coastal cities directly discharging effluents to the sea (Acre, Hof Hacarmel, Herzliya, Ashdod)</li> <li>• Land treatment of Shafdan sludge (actually disposed off into the sea through a marine outfall)</li> </ul>
Italy	All coastal regions	<ul style="list-style-type: none"> <li>• Monitoring of all TPB substances</li> <li>• Reduce and phase out inputs</li> <li>• Introduce Environmental Quality Standards (water) and Effluent Emission Limits</li> </ul>
Lebanon	<ul style="list-style-type: none"> <li>• Selaata (Lebanon Chemical Company – fertilizers)</li> <li>• Tripoli, Bourj Hammoud, Sour, Saida (dumping sites)</li> <li>• Mount Lebanon (industrial area)</li> <li>• Gazieh and Dora (Tanneries)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of phosphogypsum slurry dumping (Cd)</li> <li>• Control release of leachates release from dumpsites (50%)</li> <li>• 50% Reduction of metal emission</li> <li>• 30-50% reduction of chromium</li> </ul>
Libya	All coastal Shabeyats (industries)	Introduction of standard specifications for industrial waste emissions
Malta	All country	<ul style="list-style-type: none"> <li>• Introduce environmental quality standards for Hg, Cd and Pb for industrial and non-industrial areas (water and sediments)</li> <li>• Ensure the compliance of all</li> </ul>

Country	Cities/Districts (industrial unit)	Actions
		discharges to Emission Limit Values
Monaco	All city	Measure of Cd and Hg at the outfall of the WWTP and introduction of Emission Limit Values in the Legislation
Morocco	All coastal area	Up-grading all industrial WWTPs (N.S.)
Palestinian Authority – Gaza Strip	All area	<ul style="list-style-type: none"> <li>• Introduction of an Industrial Environmental Management System</li> <li>• Introduction of Environmental Standards and Guidelines</li> </ul>
Serbia & Montenegro	Shipyard Bijela and Remont Institution, Metal industry Daido	Introduction of BAT and construction of industrial WWTPs
Slovenia	Idrija mine	Reduce Hg emission from Idrija mine (decommissioning of activities)
Spain	All country including hot spots	<ul style="list-style-type: none"> <li>• To apply measures included by the European Water Framework Directive. To promote additional measures in coastal regions oriented to reduce emissions of heavy metals</li> <li>• To ensure the adoption of SAP targets in strategic programs, specially in those industrial sectors more affected</li> <li>• To propose to the Barcelona Convention the adoption of emission limits (standards) for heavy metals, considering the adoption of BATs, for coastal and inland waters, and for air emissions</li> <li>• To develop monitoring programs in priority hot spots</li> <li>• To restrict the use of Cd, Hg and Pb. To apply the future European strategy on Hg</li> </ul>
Syria	<ul style="list-style-type: none"> <li>• Banias</li> <li>• Jableh (Al Fawar Spring industrial area)</li> </ul>	<ul style="list-style-type: none"> <li>• Rehabilitation of the Banias refinery industrial WWTP</li> <li>• Construction of a sewerage network and a WWTP (Jableh)</li> </ul>
Tunisia	<ul style="list-style-type: none"> <li>• (Gabes, Jradou)</li> </ul>	<ul style="list-style-type: none"> <li>• Control the discharge of phosphogypse into the sea</li> <li>• Program of cleaner technology</li> <li>• Program of coastal de-pollution</li> </ul>
Turkey	<b>Basins:</b> Seyhan (Textile, pulp & paper) Buyuk Menderes (industrial zone, textile, paper, inorganic chemicals) Antalya (mining) Gediz (tanneries, textile)	Introduction of cleaner technology and/or construction or up-grading industrial WWTPs

Country	Cities/Districts (industrial unit)	Actions
	Asi (metal) Kucuk Menderes (textile, metal, pulp & paper) Dogu Akdeniz (metal, paper, mining, textile) Meric-Ergene (pulp & paper, textile, inorganic chemicals, electronic industry) Kuzey Ege (tanneries) Ceyhan (textile) Bati Akdeniz (mining, energy production)	

\*N.S. = Not specified

### 3. Proposed longer term national actions

Most countries do not present specific actions for the period after 2010, but they anticipate a continuation in the implementation of the actions described for 2010. The main idea is to fulfill the SAP targets for 2025 through introducing cleaner technology, BAT and construction of industrial WWTPs in the major industries located on the coastal area. All countries already have or plan to introduce Emission Limit Values for industrial effluents. The enforcement of these ELV through compliance monitoring and the introduction of economic instruments to assist industries, is expected to play an important role on the successful fulfillment of the countries obligation to reach the 2025 SAP targets

#### Actions proposed in the NAP for 2025

Country	Cities/Areas/industries	Actions
Albania		N.S. – Actions for industrial wastewater
Algeria	More industries to be included in the program of contracts of environmental performance.	N.S.
Bosnia & Herzegovina	All the country (major metal related industries)	Introduction of pre-treatment and cleaner production will be continued
Croatia	All coastal Counties (major metal related industries)	Enforcement of EU-harmonized national legislation (cleaner production, wastewater treatment, effluent discharge limits for metals)
Cyprus	All coastal area (metal related industries)	Enforcement of EU-harmonized national legislation (cleaner production, wastewater treatment, effluent metal discharge limits)
Egypt	Three coastal Governorates (Alexandria, Behira and Port Said) (metal related industries)	Introduction of cleaner technology, construction of IWWTPs (N.S.)
France	Mediterranean coastal zone of France	Protection of aquatic environment in the context of Water Frame Directive (EU)
Greece		N.S. – Actions for industrial wastewater
Israel		>50% emissions' reduction. Respect maximum permissible level for sea

Country	Cities/Areas/industries	Actions
		discharge
Italy		N.S. – Actions for industrial wastewater
Lebanon	All coastal areas (metal related industries)	Introduction of cleaner technology, construction of IWWTPs (N.S.)
Libya	All coastal Shabeyats (metal related industries)	Use of standard specifications to control industrial waste metal emissions
Malta		Introduction of environmental quality standards for metals and Emission Limit Values for marine discharges
Monaco		N.S.
Morocco	All coastal area	Up-grading all industrial WWTPs and construction of new (continuation of the program)
Palestinian Authority – Gaza Strip		N.S.
Serbia & Montenegro		N.S.
Slovenia		N.S.
Spain		
Syria	<ul style="list-style-type: none"> <li>• Tartous</li> <li>• All coastal area</li> </ul>	<ul style="list-style-type: none"> <li>• Separation of storm water runoff from industrial effluent discharge line at the Tartous oil terminal and rehabilitation of existing separation tank</li> <li>• Segregation and pre-treatment of industrial wastewater with effluent to municipal sewers</li> </ul>
Tunisia		Introduction of cleaner technology, recycling and de-pollution
Turkey	All coastal drainage basins	Continuation of NAP implementation

\*N.S. = Not specified

#### 4. Compatibility of actions vis-à-vis SAP targets

According to the countries' NAPs, the SAP targets for emissions of Hg, Pb and Cd will be fulfilled to a great extent. However the data in many NAPs do not provide detailed information to estimate the relative reduction of metal releases in relation to the NBB of the country. Also, almost all actions related to metal reduction are included in the industrial wastewater control actions (control of both BOD<sub>5</sub> and metals). This approach does not allow isolation of the actions that specifically target metal reduction.

#### 5. Public Participation actions foreseen to implement the actions

Public participation is mentioned in all NAPs, to different degree of detail, without special focus on Hg, Pb and Cd emissions. In general, public participation is promoted through the encouragement of NGOs and other stakeholders (industries, scientific community, etc.) involvement in the planning and implementation of NAP's priority actions.

## 6. The cost estimate for the implementation of the actions

Information on the cost estimate for the implementation of priority actions for the reduction of Hg, Pb and Cd emissions are presented only in some of the NAPs, but as already mentioned metal reduction is included in the actions for industrial wastewater control. At the moment, it is not possible to present a total cost estimate for all actions in the region. At national level, the available cost information is presented in the Synopsis Reports, which have been prepared for all 21 Mediterranean countries.

## VI SECTORAL REGIONAL REPORT ON HAZARDOUS WASTES, OBSOLETE CHEMICAL STOCKPILES, LUB OIL AND BATTERIES

### 1. Assessment analysis of the regional situation on hazardous wastes, obsolete chemical stockpiles, lub oil and batteries

Hazardous wastes and stockpiles of obsolete chemicals is a problem, which is encountered in many Mediterranean countries. These stockpiles have been created for various reasons: PCB's bearing equipment (transformers) are stocked in the premises of National Electrical Companies awaiting to be destroyed; Obsolete Pesticides, which cannot be used any more, are stocked in many North African countries (but also in other Mediterranean countries); Obsolete chemicals are stocked without proper control in contaminated sites of closed industries (example Albania). Proper environmental management of these hazardous wastes/stockpiles is a first priority issue for some countries, because they may seriously affect human health. Most of the existing stockpiles are known, but a more detailed survey is needed to register the conditions of confinement of all obsolete chemicals. Regarding used lubricating oil, most countries do not operate an efficient system of collection and recycling, although some very efficient systems are already in place (example Tunisia). Used lub oil can be regenerated or used as fuel in industry, and such actions have been proposed in many NAPs. On the other hand, little has been done for batteries management. Lead car batteries are recycled (for lead recovery) in most countries but this is not always under proper supervision or in a well defined legal basis. As for the other batteries (for electrical and electronic appliances) almost no organized system is in place for collection and recycling and batteries end up in the solid waste dumps.

### 2 Proposed priority national actions for 2010

Planned Actions in the control of hazardous wastes obsolete chemicals stockpiles, lub oil and batteries included in the NAPs for 2010

Country	Cities/Districts	Actions
Albania	<ul style="list-style-type: none"> <li>• Lac</li> <li>• Lac</li> <li>• Durres (Porto Romano)</li> <li>• Durres (Porto Romano)</li> <li>• Lushnja</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental management of chemical stocks of the Chemical-Metallurgical plant of Lac</li> <li>• Disposal of chemical stocks of the Chemical-Metallurgical plant of Lac</li> <li>• Removal of liquid hazardous chemicals and treatment in EU facility</li> <li>• Construction of a landfill for toxic metals and contaminated inert demolition materials from an old chemical plant</li> <li>• Safe management of hazardous wastes and obsolete chemicals at the Plastic factory of Lushnja</li> </ul>

Country	Cities/Districts	Actions
	<ul style="list-style-type: none"> <li>• Fier</li> <li>• Patos-Marinza</li> </ul>	<ul style="list-style-type: none"> <li>• On-site treatment and removal of arsenic solutions at the Ammonia Factory (Fier)</li> <li>• clean-up at the Patos-Marinza oilfields</li> </ul>
Algeria		<p>Program PNAGDES, two possible scenarios:  <u>Scenario 1.</u> Elimination of special industrial wastes with conventional way (collection, transfer, specialised land filling, incineration, elimination of PCBs, elimination of cyanide wastes, physicochemical treatment). No waste valorisation.  <u>Scenario 2.</u> Elimination of special industrial wastes with co-incineration in cement plants and waste valorisation  Remediation of hot spots AZZABA and GHAZAOUET</p>
Bosnia & Herzegovina		<ul style="list-style-type: none"> <li>• Establishment of adequate legislation to reduce hazardous wastes in industry (cleaner production)</li> <li>• Elaborate national strategy for the safe management of hazardous wastes</li> <li>• Safe disposal of the remaining pharmaceutical wastes from the war</li> <li>• Overall, 20% reduction until 2010, 50% reduction by 2020</li> </ul>
Croatia		N.S. – collection of used lub oil and batteries
Cyprus		<ul style="list-style-type: none"> <li>• Hazardous wastes treatment centre</li> <li>• Collection, treatment and disposal of obsolete chemicals, lub oil and batteries</li> </ul>
Egypt	Alexandria Governorate	Built a hazardous wastes treatment facility with a capacity of 3000 tons/year at 12 km from Burg Al Arab
France		<ul style="list-style-type: none"> <li>• Reduction of industrial wastes by 10%</li> <li>• Environmental management inside the industry</li> <li>• Eco-conception</li> </ul>
Greece		Implementation of national plans for lub oil, obsolete chemical stockpiles and PCBs management
Israel		N.S.
Italy		<ul style="list-style-type: none"> <li>• Collection and recycling of used lub oil</li> <li>• Collection and recycling of used lead batteries</li> </ul>
Lebanon		Implementation of a National System for the collection and treatment of waste lub oil
Libya		Creation of a Regional site for treatment and disposal of hazardous chemical waste
Malta		<ul style="list-style-type: none"> <li>• Hazardous solid wastes deposited at Sant Antnin Plant according to instructions. Closure of local landfills for these wastes.</li> <li>• Introduction of environmental quality standards for oil and Emission Limit Values for marine discharges.</li> <li>• Enhance collection of used batteries</li> <li>• Develop data collection on obsolete pesticides</li> <li>• Set in place a formal system for collection of waste oil</li> <li>• Assistance to shipyards to treat oil / water</li> </ul>



Country	Cities/Districts	Actions
		residues
Monaco		N.S.
Morocco		<ul style="list-style-type: none"> <li>• Creation of a pilot site for the decommissioning of PCB bearing equipment</li> <li>• Elimination of obsolete pesticides stocks in the frame of African Program for Obsolete Pesticides (PASP)</li> <li>• Feasibility study for metal recuperation from used batteries</li> <li>• Organize a network of collection and valorisation of used lub oil in the Mediterranean coastal provinces</li> </ul>
Palestinian Authority – Gaza Strip		<ul style="list-style-type: none"> <li>• Creation of a Hazardous Waste Cell</li> <li>• Enhancement of Separate Hazardous Waste Management</li> <li>• Capacity Building to Enable Palestine Response and Communication to the Stockholm Convention</li> </ul>
Serbia & Montenegro		<ul style="list-style-type: none"> <li>• Control of PCBs bearing old electric equipment</li> <li>• Elimination of PCBs use</li> <li>• Collection and recycling of lub oil and lead batteries</li> </ul>
Slovenia		<ul style="list-style-type: none"> <li>• All PCB devices to be decontaminated or removed</li> <li>• Creation of additional collection sites and recycling of lub oil (collect 50%)</li> <li>• Reduction (20%) of batteries generation</li> <li>• Collection and disposal (50%) of batteries in environmentally safe manner</li> </ul>
Spain		<ul style="list-style-type: none"> <li>• To consider SAP targets in current and future regional plans for HW management, as well as in the national HW Plan 2001-2006.</li> <li>• Approval of the HW National Plan 2001-2006</li> <li>• To promote the final development of BREFs related to waste management, chemical industry, energy production and mining.</li> <li>• More investment in BATs leading to Hazardous Wastes reduction</li> <li>• To ratify the Protocol on Hazardous Wastes, or continue with an active participation in the Basel Convention.</li> <li>• To create a national inventory for obsolete chemicals, luboils and batteries</li> <li>• To adopt SAP targets in strategic plans, specially in those regions without specific plans, and to develop integrated management systems</li> </ul>
Syria		N.S.
Tunisia		<ul style="list-style-type: none"> <li>• Establishment of support measures for the management of the Jradou landfill</li> <li>• National Action Plan for the POPs</li> <li>• National Program for pesticides management</li> </ul>

Country	Cities/Districts	Actions
		<ul style="list-style-type: none"> <li>National Program for used lub oil and used lub oil filters management</li> <li>National Program for the management of used batteries</li> </ul>
Turkey		N.S.

\*N.S. = Not specified

### 3. Proposed longer term national actions

Most countries do not present specific actions for the period after 2010, but they anticipate a continuation in the implementation of the actions described for 2010.

#### Actions proposed in the NAP for 2025

Country	Cities/Areas/industries	Actions
Albania		N.S.
Algeria		Continuation of program PNAGDES
Bosnia & Herzegovina		N.S.
Croatia		N.S.
Cyprus		N.S.
Egypt		N.S.
France		N.S.
Greece		N.S.
Israel		N.S.
Italy		N.S.
Lebanon		N.S.
Libya		N.S.
Malta		N.S.
Monaco		N.S.
Morocco		N.S.
Palestinian Authority – Gaza Strip		N.S.
Serbia & Montenegro		N.S.
Slovenia		
Spain		
Syria		<ul style="list-style-type: none"> <li>Reduction of lead particulate emissions from transport vehicles (substitution of leaded gasoline by unleaded gasoline)</li> <li>Substitution of PCB oil in five transformers (two in the Tartous and two in the Baniyas electric transformers' stations and one in the old Jableh Weaving Company)</li> <li>Phasing out all activities discharging PCB's from industrial sectors</li> </ul>
Tunisia		N.S.
Turkey		N.S.

\*N.S. = Not specified

#### 4. Compatibility of actions vis-à-vis SAP targets

According to the countries' NAPs, the SAP targets for hazardous wastes, obsolete chemicals, lub oil and batteries will be fulfilled to great extent. PCBs are banned in all Mediterranean countries, but because PCBs bearing equipment (mainly old transformers of National Electrical Companies) are stocked in many areas, almost all countries have included actions for the collection and destruction of these compounds. Also hazardous waste management systems (including the creation of specialized landfills) are proposed in many NAPs. For the collection and recycling of used lub oil and batteries, most NAPs include relative actions, but few countries have already some experience (ex. Tunisia). Overall, the actions described in the NAPs are compatible to the SAP targets.

#### 5. Public Participation actions foreseen to implement the actions

Public participation is mentioned in all NAPs, to different degree of detail, without special focus on hazardous wastes. In general, public participation is promoted through the encouragement of NGOs and other stakeholders (industries, scientific community, etc.) involvement in the planning and implementation of NAP's priority actions.

#### 6. The cost estimate for the implementation of the actions

Information on the cost estimate for the implementation of priority actions for the management of hazardous wastes, obsolete chemicals, lub oil and batteries, varies between NAPs. In some cases (ex. Albania's obsolete chemicals stockpiles), the proposed actions include details on the involved cost, because these actions are already initiated. However, in most cases, no cost estimations are included. At the moment, it is not possible to present a total cost estimate for all relative actions in the region. At national level, the available cost information is presented in the Synopsis Reports, which have been prepared for all 21 Mediterranean countries.

### VII SECTORAL REGIONAL REPORT ON EMISSIONS OF ORGANOHALOGENS AND PCBs

#### 1. Assessment analysis of the regional situation on emissions of organohalogenes

Organohalogenes are emitted from some industries (organic chemicals, metal processing, electricity companies [PCBs], etc.) and from agriculture land runoff (pesticides). In most NAPs there are no specific actions targeting the control of emissions of these substances, which are expected to be reduced through actions planned for the industrial wastewater sector (introduction of cleaner technology, BAT and wastewater pre-treatment) and actions for the environmental management of pesticide application in agricultures. Since PCBs are not legally in use in the Mediterranean region, PCBs related actions aim at the management of decommissioned PCBs bearing equipment (in the Hazardous wastes sector).

#### 2. Proposed priority national actions for 2010

Planned Actions in the control of emissions of organohalogenes included in the NAPs for 2010

Country	Cities/Districts (industrial unit)	Actions
Albania		N.S.- Included to actions for industrial wastewater
Algeria		N.S.- Included to actions for industrial wastewater

<b>Country</b>	<b>Cities/Districts (industrial unit)</b>	<b>Actions</b>
Bosnia & Herzegovina		N.S.- Included to actions for industrial wastewater
Croatia		N.S.- Included to actions for industrial wastewater
Cyprus		N.S.- Included to actions for industrial wastewater
Egypt		N.S.- Included to actions for industrial wastewater
France		N.S.- Included to actions for industrial wastewater
Greece		N.S.- Included to actions for industrial wastewater
Israel		N.S.- Included to actions for industrial wastewater
Italy		<ul style="list-style-type: none"> <li>• Monitoring of all TPB substances</li> <li>• Reduce and phase out inputs</li> <li>• Introduce Environmental Quality Standards (water) and Effluent Emission Limits</li> </ul>
Lebanon		N.S.- Included to actions for industrial wastewater
Libya		N.S.- Included to actions for industrial wastewater
Malta		<ul style="list-style-type: none"> <li>• Reduce by 50% such releases from industrial installations</li> <li>• Introduce Environmental Quality Standards for non-industrial areas</li> <li>• Ensure the compliance of all discharges to Emission Limit Values</li> </ul>
Monaco		Survey on the use of pesticides and herbicides in Monaco
Morocco		Survey on the fate of POPs in the environment
Palestinian Authority – Gaza Strip		N.S. – Included to actions for industrial wastewater
Serbia & Montenegro		Introduction of BAT and treatment units in industry
Slovenia		All PCB devices to be decontaminated or removed
Spain		<p>To apply in the most affected regions and specially in the chemical sector the following actions:</p> <ul style="list-style-type: none"> <li>• Adopt the substitution principle as defined in the EU</li> <li>• Set emission limits under the current IPPC regulatory framework</li> <li>• Production of pesticides: to apply European regulatory framework</li> <li>• Ebro basin (main hot spots): to</li> </ul>

Country	Cities/Districts (industrial unit)	Actions
		<p>adopt the SAP targets in the next Basin Hydrologic Plan</p> <ul style="list-style-type: none"> <li>• Promote reduction of short-chain chlorinated paraffins, following EU and international initiatives</li> <li>• Promote reduction of tri, tetra and penta chlorophenol in wood treatment</li> </ul> <p>For POPs, to approve the NAP for the Stockholm Convention:</p> <ul style="list-style-type: none"> <li>• To set specific proposals to adapt to national regulatory framework</li> <li>• To include in the NBB those POPs not included in the current BB (future use of the PRTR)</li> <li>• Elimination of any use of DDT, in spite of exemptions included in the Convention</li> <li>• Consideration of substance included in the Stockholm Convention into the Barcelona Convention</li> </ul>
Syria		N.S. – Included to actions for industrial wastewater
Tunisia		N.S. – Included to actions for industrial wastewater
Turkey		N.S. – Included to actions for industrial wastewater

\*N.S. = Not specified

### 3. Proposed longer term national actions

Most countries do not present specific actions for the period after 2010, but they anticipate a continuation in the implementation of the actions described for 2010. The main idea is to fulfill the SAP targets for 2025 through introducing cleaner technology, BAT and construction of industrial WWTPs in the major industries located on the coastal area. Also no plans are made for pesticide control, since these substances originate from non-point pollution sources (agricultural land). For the industrial sources, all countries plan to introduce Emission Limit Values for organohalogens in industrial effluents. The enforcement of these ELV through compliance monitoring and the introduction of economic instruments to assist industries, is expected to play an important role on the successful fulfillment of the countries obligation to reach the 2025 SAP targets

#### Actions proposed in the NAP for 2025

Country	Cities/Areas/industries	Actions
Albania		N.S.
Algeria		N.S.
Bosnia & Herzegovina		N.S.
Croatia		N.S.
Cyprus		N.S.

Country	Cities/Areas/industries	Actions
Egypt		N.S.
France		N.S.
Greece		N.S.
Israel		N.S.
Italy		N.S.
Lebanon		N.S.
Libya		N.S.
Malta		N.S.
Monaco		N.S.
Morocco		N.S.
Palestinian Authority – Gaza Strip		N.S.
Serbia & Montenegro		N.S.
Slovenia		N.S.
Spain		
Syria	<ul style="list-style-type: none"> <li>• Tartous, Baniyas, Jableh</li> <li>• All the country</li> </ul>	<ul style="list-style-type: none"> <li>• Substitution of PCB oil in five transformers (two in the Tartous and two in the Baniyas electric transformers' stations and one in the old Jableh Weaving Company)</li> <li>• Phasing out all activities discharging PCB's and organohalogenes from industrial sectors</li> <li>• Reducing inputs of organohalogenes from agriculture</li> </ul>
Tunisia		N.S.
Turkey		N.S.

\*N.S. = Not specified

#### 4. Compatibility of actions vis-à-vis SAP targets

According to the countries' NAPs, the SAP targets for emissions of organohalogenes will be fulfilled to a great extent. However the data in the NAPs do not provide detailed information to estimate the relative reduction of organohalogenes releases in relation to the NBB of the country. Also, almost all actions related to organohalogenes reduction are included in the industrial wastewater control actions.

#### 5. Public Participation actions foreseen to implement the actions

Public participation is mentioned in all NAPs, to different degree of detail, without special focus on organohalogenes emissions. In general, public participation is promoted through the encouragement of NGOs and other stakeholders (industries, scientific community, etc.) involvement in the planning and implementation of NAP's priority actions.

#### 6. The cost estimate for the implementation of the actions

Almost no information on the cost estimate for the implementation of priority actions for the reduction of organohalogenes emissions are presented in the NAPs, but as already mentioned organohalogenes reduction is included in the actions for industrial wastewater control. At the moment, it is not possible to present a total cost estimate for all actions in the region. At

national level, the available cost information is presented in the Synopsis Reports, which have been prepared for all 21 Mediterranean countries.