



UNITED
NATIONS

EP

UNEP(DEPI)/ MED WG.417/4



UNITED NATIONS
ENVIRONMENT PROGRAMME
MEDITERRANEAN ACTION PLAN

15 May 2015
Original: English

MED POL Focal Points Meeting
Malta, 16-19 June 2015

Joint Session MED POL and REMPEC Focal Points Meetings
Malta, 17 June 2015

Agenda item 7: Report on specific issues (points a and j)

For environmental and economic reasons, this document is printed in a limited number. Delegates are kindly requested to bring their copies to meetings and not to request additional copies.

Report on Specific Issues

The objective of the Specific Issues Report is to bring to the attention of MED POL Focal Points two key themes and ongoing processes that require a special contribution and input by the MED POL Focal Points before their finalization. These are:

1. Updated list of priority contaminants/substances in the Mediterranean
2. NAP update Roadmap and related Guidelines

1. Proposed updated list of priority contaminants in the Mediterranean

Introduction

The MED POL Focal Points at their meeting in 2008 on the Implementation of NAPs and the Preparation of Legally Binding Measures and Timetables agreed to establish an exhaustive list of “substances of concern” for the Mediterranean and a list of “action substances” out of the exhaustive list of “substances of concern” according to the following criteria:

- the substance is covered by regional and/or international instruments regulating its use, release or phasing out, and
- the substance has an ELV or its ELV is under development either at national or at regional levels, and
- the substance and /or its high input could represent a risk to the marine environment or human health.

The list of “action substances” was not exhaustive. A Party could propose the inclusion of a substance, falling under the above criteria, during the Contracting Parties meetings.

Due to legal and regulatory development in the MAP system as well as at regional and global level since 2008, there is a need to review the priority contaminant list taking also into account the results of reporting of pollutant loads by the Contracting Parties as well as marine pollution data.

In this context COP 18 mandated the Secretariat to undertake an assessment of contaminants in the Mediterranean with the view to update as appropriate the list agreed by the MED POL FP in 2009.

To this end, the Secretariat has updated the background report prepared in 2009 UNEP (DEPI)/MED WG. 328/Inf. 1 “Overview and assessment of priority substances globally and regionally addressed and related Emission Limit Value (ELVs) in order to take into account the most recent and relevant legal and scientific development.

The updated report is presented as information document UNEP (DEPI)/MED WG.417/Inf.13 “An updated list of priority contaminants for the Mediterranean, Background document”

The objectives were to:

- a) identify common substances of concern for the marine environment through an international comparison of updated lists of priority substances.
- b) review available updated information on the occurrence of substances of concern in the Mediterranean marine environment.
- c) review available data on the emissions of substances of concern.
- d) identify updated ELVs already adopted in other international legal frameworks or regional marine conventions, to reduce pollution from substances of concern.

Based on the updated Background Report the Secretariat has prepared a comparative list of contaminants (LBS and SAP MED, UN relevant Conventions, OSPAR, HELCOM, EU WFD, MSFD, REACH) that is presented in the Annex I of this document for the consideration of and prioritization by the MED POL FP during their meeting. Annex I presents a consolidated comparative table of lists of priority substances as analysed in document UNEP (DEPI)/MED WG.417/Inf.13. MED POL National Baseline Budget (NBB) records for the years 2003 and 2008 have been included as well as information on the existence of Emission Limit Values in the various international and regional regulatory frameworks. The purpose of this

consolidated comparative table is to facilitate the listing of priority substances of relevance for the Mediterranean.

Substances to be considered for inclusion in the Mediterranean Priority List of Substances

It is recalled that international and regional criteria and procedures to prioritise substances present some commonalities throughout the different approaches:

- *Persistence*
- *Liability to bioaccumulate*
- *Toxicological risk (towards humans and/or the environment)*
- *Potential for long range transport*
- *Widespread occurrence*
- *Production volume and current use*

Furthermore these criteria are very similar to those considered in the LBS Protocol. In fact, in its Annex I, the LBS Protocol states that in preparing action plans, programmes and measures, the Parties will give priority to substances that are toxic, persistent and liable to bioaccumulate, in particular to persistent organic pollutants (POPs). This is of key relevance, as the resulting international lists of substances of concern and priority substances can be used as a basic reference to identify priority substances in the Mediterranean region, to be refined with regionally specific circumstances and data on occurrence of pollutants in the Mediterranean Sea, use and emissions of substances, etc.

Nevertheless there is still an observed requirement in the Mediterranean to establish monitoring programmes in many countries to fill the geographical data gaps and ensure the continuation of temporal trend data. Moreover, with the improvement and development of analytical techniques, the identification and quantification of emerging substances of potential concern for the marine environment because of their persistence, toxicity and bioaccumulation properties, is continuously increasing. They are believed to be ubiquitous but information on their occurrence in the Mediterranean is limited and should be improved.

In Annex I, the chemical compounds have been grouped into a common classification, which is always a difficult task. To this end, very general categories have been established, combining the nature of substances and its use, following as far as possible the categories suggested in Annex 1-C of the LBS Protocol and the SAPMED. As a result, the following general categories have been used:

- *Metals and related compounds*
- *Hydrocarbons*
- *Organohalogen compounds*
- *Organohalogenated pesticides/biocides*
- *Other organic compounds*

It should be noted that the even where data are complete, the NBB (and other emission registers) can only ever cover the proportion of the priority substances that are actual and point source releases from industrial installations. In reality, many of the substances addressed here are emitted from non-point sources, for example pesticides in agriculture and anti-fouling agents used in shipping; or from environmental reservoirs, such as stockpiles of banned products which are no longer used.

Furthermore, it is recalled that the inclusion of substances in OSPAR and HELCOM lists is primarily on the basis of toxicological properties and/or presence in the environment, while

the inclusion of substances in the WFD list is on the basis of current production or usage, and whether use is strictly regulated or forbidden (a basis for exclusion from the list).

A first analysis of the substances listed allows for a further level of categorization into the following groups (as visualized by the colour schemes presented in the table):

Priority substances for which LBS Protocol legally binding measures for reduction/phase-out/elimination have been adopted;

these include the metal mercury (Hg), the organohalogen UNPOP compounds PFOS, PFOSF, pentachlorobenzene, tetra-, penta-, hexa-, and hepta- bromodiphenyl ether (these latter 4 compounds further grouped as brominated flame retardants of which hexa and heptabromodiphenyl ether are UN POPs), hexabromobiphenyl, aldrin, chlordane, dieldrin, endrin, heptachlor, mirex, toxaphene and DDTs (the latter 8 organohalogenated pesticides consisting of the initial and largely out of use UN POPs, aldrin, dieldrin and endrin in particular posing a low level of concern), further organohalogenated pesticide POPs chlordecone, endosulphan, alpha hexachlorocyclohexane, beta hexachlorocyclohexane, lindane

Priority substances that have been mostly identified in all or almost all of the selected lists and are also included in SAPMED, proposed to be also included in the Mediterranean priority list of substances;

these include the metals cadmium (Cd) and lead (Pb), tributyltin compounds, the polycyclic aromatic compounds (PAH¹): Anthracene, Naphthalene, Fluoranthene, Bezo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)pyrene, benzo(k)fluoranthene, Indeno(1,2,3- cd)pyrene, the halogenated aliphatic hydrocarbons chloroform (trichloromethane), dichloromethane, 1,2-dichloroethane, the halogenated aromatic hydrocarbons trichlorobenzenes, polychlorinated biphenyls (PCBs), polychlorinated dibenzodioxins (PCDDs), polychlorinated dibenzofurans(PCDFs)

Priority substances that have been mostly identified in all or almost all of the selected lists and also included in SAPMED for which more additional scientific information (sources, quantities) is needed (Category 2?);

these include short chained chlorinated paraffins (SCCP), the UN POP hexachlorobenzene

Substances Recommended by the POPRC for 2015 for which more additional scientific information (sources, quantities) might be needed for the Mediterranean (Category 2?);

these include the halogenated aliphatic hydrocarbon hexachlorobutadiene, polychlorinated naphthalenes, the organohalogenated pesticide pentachlorophenol

Substances included in MED POL NBB Records and considered priority hazardous under WFD, not included in SAPMED. Further investigation might be merited (Category 2?);

these include nonylphenols, octylphenols, diethylhexylphthalate (DEHP), while the organohalogen pesticide diuron is not expected to be detected in the marine environment,.

Substances included in WFD priority list of substances, not included in SAPMED for which preliminary screening might be merited for the Mediterranean (Category 2?).

¹Further PAH of concern, which are detected in the marine environment include Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Pyrene, Chrysene, Benzo(a)anthracene, Dibenzo(a,h) anthracene

These include the metal nickel (Ni) and its compounds, the aromatic hydrocarbon benzene, the halogenated aliphatic UN POPs hexabromocyclododecanes (HBCCDs), the organohalogenated pesticides Aclonifen, Alachlor, Atrazine (3 records in 2008 MED POL NBB), Bifenox, Chlorfenvinphos, Cypermethrin, Dichlorvos, Dicofol, Isoproturon, Quinoxifen, Simazine, Trifluralin, the triazine biocides Cybutryne, Terbutryn.. It is noted that these latter pesticides/biocides have not been detected in European marine monitoring activities.

Finally, as regards substances that are not included in the comparative lists of priority substances as presented in the Annex, with particular reference to pharmaceuticals, according to the scientific bibliography the most common pharmaceuticals detected in Mediterranean marine waters are the following:

Clarithromycin, Diclophenac, Erythromycin, 17alpha-ethinylestradiol, 17beta-estradiol (all latter five substances are included in the WFD Watch List), Ibuprofen, Acetylsalicylic acid, Caffeine, Paracetamol, Theobromine, Theophylline,

2. NAP Update Road Map, related Guidelines and follow up

At the last MEDPOL FP held in December 2014 in Barcelona Spain, the focal points requested the Secretariat to prepare a roadmap for the update of the NAPs until COP 19.

Concise information on the so-far activities and the remaining steps needed to prepare updated NAPs is provided in the subsequent paragraphs of this Report.

In line with COP 18 mandate, NAP update process at the national level was initiated in 2014/early 2015 by most of the Contracting Parties. The Secretariat's support focused on development of methodological guidance (NAP update Guidelines UNEP(DEPI)/MED WG 404/7, Annex IV), provision of necessary technical assistance on the regional level to ensure harmonized approaches in implementing the Guidelines, mobilization of resources and provision of assistance for technical and organizational aspects of the process at national level. Support for NAP update is funded through Horizon 2020, MedPartnership (GEF), Israel voluntary contribution and MTF.

NAP update Guidelines (the main body addressing policy, process and stakeholders as well as methodological aspects for NAP update, and technical annexes covering *inter alia* updated methodologies for assessing hot spots and calculating national pollution loads –NBBs, proposed list of indicators to follow-up NAP implementation and guidance on the use of economic analysis tools in the NAP update) was reviewed and/ or endorsed at two consecutive MED POL Focal Points meetings held in March and December 2014. Last revisions proposed by country representatives were integrated and final versions of the Guidelines produced (English in January 2015 and French in May 2015). They are submitted to this MED POL FP meeting for formal approval.

Regional consultants were contracted between June and December 2014, and the national ones between December 2014 and May 2015. Regional meeting on the implementation of NAP update Guidelines was organised in May 2015 in cooperation with UfM Horizon 2020 Initiative and with the Technical and Administrative Support Project financed by the EC to strengthen national capacities. Representatives of 19 Contracting Parties attended the meeting, plus representatives of Palestine and Jordan.

The process of drafting the NAPs started in spring 2015 in parallel with holding of national workshops and/ or other forms of national consultations.

In order to ensure timely completion and submission of updated NAPs to the Secretariat no later than November 2015, concerted and stepped up efforts are needed. In particular:

- The Secretariat needs to ensure continued provision of advices to the Contracting Parties to expedite the process and prepare draft NAPs by August/ September 2015 (to enable national reviews and consultations towards finalisation of the document);
- The Contracting Parties need to ensure coordinated work of NAP update teams, thematic groups and other pertinent bodies towards collection of necessary data and completion of envisaged assessments and analyses (including assessment of mid-term benchmark, assessment of gaps and issues, setting of objectives and identification of measures, economic analysis and others) to develop programmes of measures to reach Good Environmental Status (GES) for pollution related ecological objectives (EO 5, 9 and 10), requirements of the Regional Plans and SAP-MED targets.

The submission of the NAP to the Secretariat should be done by the MED POL FPs based on Articles 5 and 15 of the LBS Protocol. As the approval of NAPs on the national level may require substantial time, it is recommended that the MED POL FPs submit to the Secretariat NAP versions that will be presented for public consultations and/ or versions endorsed by the last national workshop as a first step. This is to be followed by formal submission after national approval process is completed.

The Secretariat will review submitted NAPs considering *inter alia* the extent to which programmes of measures included in the documents meet requirements of the Barcelona Convention legal framework and contribute to fulfilment of GES and SAP-MED targets.

Efforts will be made to allow for possibilities to share experiences gained in the NAP update process through another regional meeting that would take place towards the end of the national processes.

Overview of the main steps in the process with related timings (completed and forthcoming) i.e. NAP update roadmap is presented in Annex II of this document.

Annex I Consolidated list of priority substances including MED POL NBB records and ELV considerations

CHEMICAL COMPOUNDS	UNP OP	OSPA R	HEL COM	WFD	REA CH	“Auth orizat ion	ECH A	Restri ctions List	Rotte rdam	NBB records		Included in SAP?	Any ELV?
										2003	2008		
METALS AND RELATED COMPOUNDS													
Metals													
Cadmium (and it compounds)		X	X ^{d,e}	X ^c				X		238 ^{2*}	429 ^{1*}	Yes	X
Lead (and its compounds)		X	X ^d	X				X		267 ^{1*}	475 ^{1*}	Yes	X
Mercury (and its compounds)		X	X ^{d,e}	X ^c				X		165	379	Yes	X
Selenium			X ^d							2	2		X
Nickel (and its compounds)			X ^d	X				X		-	-		X
Organic tin compounds		X	X ^d									Yes	X
Tributyltin compounds			X ^e	X ^c						5 ³	20	Yes	
Tributyltin-cation				X ^c									
Triphenyltin compounds			X ^e									Yes	
Organic Mercury compounds		X	X ^d					X	X			Yes	
Organic Lead compounds		X	X ^d						X			Yes	
Selenium compounds			X ^d										
HYDROCARBONS													
Aliphatic HC													
cyclododecane		x ^b											
1,5,9-cyclododecatriene		x ^b											
Aromatic HC													
Benzene				X				X		39	152	?	
Polycyclic Aromatic Hydrocarbons		X	X ^d	X ^c				X				Yes	X
Anthracene				X ^c				X			20	Yes	

^{2*} Sum of two separate entries for gas and liquid emissions

³ Butyltin compounds

CHEMICAL COMPOUNDS	UNP OP	OSPA R	HEL COM	WFD	REA CH “Auth orizat ion	ECH A	Restri ctions List	Rotte rdam	NBB records		Included in SAP?	Any ELV?
									2003	2008		
Napthalene				X			X		2	35	Yes	
Fluoranthene				X					26	70	Yes	X
Benzo(a)pyrene				X			X		20	33	Yes	X
Benzo(b)fluoranthene				X			X		36	90 ⁴	Yes	X
Benzo(g,h,i)perylene				X					36	81	Yes	X
Benzo(k)fluoranthene				X			X		See above		Yes	X
Indeno(1,2,3-cd)pyrene				X					36	76	Yes	X
Synthetic musk												
Musk xylene		X	X ^d		X				22 ⁵			
ORGANOHALOGEN COMPOUNDS												
Halogenated Aliphatics												
Chlorinated paraffins, short chained (SCCP or chloroalkanes, C ₁₀₋₁₃)		X	X ^{d,e}	X ^c	X (recommended)						Yes	Phase out
Chlorinated paraffins, medium chained (MCCP, or chloroalkanes C ₁₄₋₁₇)			X ^e									
Chloroform (Trichloromethane)			X ^d	X			X		5	33 ⁶	Yes	
Dichloromethane				X			X		10	46	Yes	X
1,2-Dichloroethane				X	X				21	42	Yes	X
Hexachlorobutadiene	X ^a			X ^c					2	4		X
PFOs (Perfluorooctane sulfonate)	X	X	X ^e	X ^c					-	-		
PFOSF (Perfluorooctane sylphonyl fluoride)	X											

⁴ NBB category is Benzo(b,k)fluoranthene

⁵ NBB category is ‘Xylenes’

⁶ Sum of records for ‘Chloroform’ (16) and ‘Trichloromethan (17)

CHEMICAL COMPOUNDS	UNP OP	OSPA R	HEL COM	WFD	REACH “Auth orizat ion	ECHA Restri ctions List	Rotte rdam	NBB records		Included in SAP?	Any ELV?
								2003	2008		
PFOA (Perfluorooctanoic acid)			X ^e								
Hexabromocyclododecanes (HBCDD)	X		X ^e	X ^c	X						
Halogenated Aromatics											
<u>Chlorobenzenes</u>											
Trichlorobenzenes				X		X		9		Yes	X
1,2,3-trichlorobenzene		X									X
1,2,4-trichlorobenzene		X		X							X
1,3,5-trichlorobenzene		X									X
Pentachlorobenzene	X			X ^c							
<u>Brominated Flame Retardants</u>											
Brominated diphenyl ethers BDEs				X ^c			X	1		Yes	
Tetrabromodiphenyl ether				X ^c			X				
Pentabromodiphenyl ether			X ^e	X ^c			X			Yes	
Hexabromodiphenyl ether	X			X ^c			X				
Heptabromodiphenyl ether	X			X ^c			X				
Octabromodiphenyl ether)	X		X ^e			X					
Decabromodiphenyl ether			X ^e								
Polybrominated biphenyls (PBBs)						X	X			Yes	
Hexabromobiphenyl	X		X ^d			X				Yes	
Polychlorinated Biphenyls (PCBs)	X	X	X ^{d,e}				X			Yes	X
Polychlorinated dibenzodioxins (PCDDs)	X	X	X ^{d,e}	X ^c				145 ⁷	288	Yes	X
Polychlorinated dibenzofurans (PCDFs)	X	X	X ^{d,e}	X ^c				See above		Yes	
2,4,6-bromophenyl 1-2(2,3-dibromo- 2-methylpropyl)		X ^b									
Pentabromoethylbenzene		X ^b									

⁷ Sum of gas and liquid PCDD and PCDF together

CHEMICAL COMPOUNDS	UNP OP	OSPA R	HEL COM	WFD	REA CH "Auth orizat ion	ECH A	Restri ctions List	Rotte rdam	NBB records		Included in SAP?	Any ELV?
									2003	2008		
Heptachloronorborene		X ^b										
Pentachloroanisole		X ^b										
Polychlorinated naphthalenes	X ^a	X ^b									Yes	
dichloronaphthalene	X ^a											
trichloronaphthalene	X ^a	X ^b										
tetrachloronaphthalene	X ^a	X ^b										
pentachloronaphthalene	X ^a	X ^b										
hexachloronaphthalene	X ^a	X ^b										
heptachloronaphthalene	X ^a	X ^b										
octachloronaphthalene	X ^a	X ^b										
naphthalene, chloro derivs.		X ^b										
Chlorinated Phenolic Compounds											Yes	
phenol, 4,4'-(1-methylethylidene)bis[2,6-dibromo- / tetrabromobisphenol A (TBBP-A)		X										
ORGANOHALOGENATED PESTICIDES/BIOCIDES												
Acclonifen				X								
Alachlor				X								
Atrazine				X						3		
1,2-Dibromoethane			X ^d									
Chlorophenoxyacids											Yes	
2,4,5-T			X ^d								Yes	
Acrylonitrile			X ^d									
Aldrin	X		X ^d					X		8	Yes	
Aramite			X ^d									
Bifenox				X								
Chlordane	X		X ^d					X			Yes	
Chlordecone (Kepone)	X		X ^d					X			Yes	

[illegible]

[illegible]

CHEMICAL COMPOUNDS	UNP OP	OSPA R	HEL COM	WFD	REACH “Authorisation ion ECHA Restrictions List Rotterdam	NBB records		Included in SAP?	Any ELV?
						2003	2008		
Dibutylphthalate (DBP)		X	X						
Diethylhexylphthalate (DEHP)		X	X	X ^c	X		17		
Pharmaceuticals									
Clotrimazole		X							
Diosgenin		X ^b							

UNPOPs: Stockholm Convention on Persistent Organic Pollutants. (X: approved POPs; X^a: proposed substance)

OSPAR: OSPAR List of Chemicals for Priority Action (update 20013) (X: priority chemicals where a background document has been or is being prepared; X^b: priority chemicals where no background document is being prepared because they are intermediates in closed systems or there is no current production or use interest)

HELCOM: X^d In list of Selected Substances for Immediate Priority Action (Recom. 19/5). X^e: In List of substances or substance groups of specific concern to the Baltic Sea (Priority Hazardous substances) (Recom. 31E/1)

WFD: List of priority substances in Directive 2013/39/EC amending the Water Framework Directive and 2008/105/EC (X: priority substance; X^c: identified or being identified as possible “priority hazardous substance”).

REACH: SVHCs of previous columns included in the Authorisation List (Annex XIV) of Regulation 1907/2006 (EC) (REACH Regulation) and subject to authorisation. These substances cannot be placed on the market or used after a given date, unless an authorisation is granted for their specific use, or the use is exempted from authorisation.

ECHA: European Chemical Agency. Substances of previous columns subject to Restrictions: may limit or ban the manufacture, placing on the market or use of a substance. These are included in REACH Regulation Annex XVII.

COLOUR HIGHLIGHT LEGEND

Grey Substances for which LBS Protocol legally binding measures for reduction/phase-out/elimination have been adopted.

Yellow Substances included in SAPMED proposed to be included in the priority list of substances

Pink Substances included in SAPMED for which more additional scientific information (sources, quantities) is needed (Category 2?)

Green Substances Recommended by the POPRC for 2015 for which more additional scientific information (sources, quantities) might be needed for the Mediterranean (Category 2?)

Orange NBB Records show emissions of substances considered priority hazardous under WFD, not included in SAPMED. Further investigation might be merited (Category 2?). It is noted that the pesticide Diuron in this group is not expected to be detected in the marine environment

Blue Substances included in WFD priority list of substances, not included in SAPMED for which preliminary screening might be merited for the Mediterranean (Category 2?) It is noted that pesticides/biocides in this category have not been detected in European marine monitoring activities

Annex II – NAP update roadmap

[illegible]