

The Contracting Parties to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land- based Sources and Activities

1. Recalling Article 8 of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean as amended in Barcelona 1995, hereinafter referred to as the Barcelona Convention,
2. Recalling Annex 1.C of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land- based Sources and Activities,
3. Recalling further the decision 17/8 of the 15th meeting of the contracting parties entitled "Implementation of NAPs and the preparation of legally binding measures and timetables required by Art.15 of the LBS Protocol", highlighting the need to continue the implementation of NAPs endorsed in 2005 to the greatest possible extent and the development of a differentiation mechanism based on Emissions Limit Values (ELVs),
4. Taking into account the pertinent provisions of the relevant international environmental conventions, especially the Stockholm Convention on organic pollutants, and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade,
5. Taking full account of the National Implementation Plans in course of development or already developed by the Parties under the Stockholm Convention,
6. Noting the different capabilities of the Parties to undertake measures, as well as their common but differentiated responsibilities,
7. Noting also that the present use of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, Toxaphene by the Parties is mostly limited,
8. Considering that in spite of the actions already taken at regional and national level, these substances may still enter the marine environment by a an insufficient management of stockpiles and wastes, however, in decreasing amounts,
9. Recognizing that Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex, Toxaphene are persistent organic pollutants that possess toxic properties, resist degradation, bioaccumulate and are transported widely,
10. Fully aware of the health concerns resulting from local exposure to persistent organic pollutants,
11. Recognizing the special hydrographical and ecological characteristics of the Mediterranean Sea Area,
12. Affirming that precaution underlies the concerns of all the Parties of the Mediterranean Action Plan,
13. Conscious of the need of developing regional regulatory measures for hazardous pesticides in close cooperation with other international conventions,

Have agreed on the following measures:

ARTICLE I

Definitions of Terms

- a) "DDT" is a synthetic pesticide (Dichloro-Diphenyl-Trichloroethane; 1,1,1-Trichloro-2,2-bis-(4-chlorophenyl)-ethane; CAS Nr. 50-29-3). The technical product is a mixture of about 85% pp'-DDT and 15% op'-DDT isomers. In the environment, the product is broken down and metabolized mainly to its derivatives DDD and DDE.
- b) "Persistent Organic Pollutants (POPs)" are organic compounds from natural or anthropogenic origin that possess toxic properties, resist physical, chemical and biological degradation, bioaccumulate in high concentrations through the food web and are transported through air, water and migratory species, reaching regions where they have never been produced or used; their high persistence pose a risk of causing adverse effects to the environment and human health.
- c) "Wastes" means substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law.
- d) "Environmental Sound Management" of pesticides wastes means taking all practical steps to ensure that wastes are collected, transported, and disposed of (including after-care of disposal sites) in a manner which will protect human health and the environment against the adverse effects which may result from such wastes.

ARTICLE II

14. The Parties shall prohibit and/or take legal and administrative measures necessary to eliminate:
 - i) the production and use of DDT, subject to the provisions of Annex A; and
 - ii) the import and export of DDT, in accordance with the provisions of Art.2.
15. The Parties shall ensure that this chemical as an active substance or as a waste is imported or exported only:
 - i) for the purpose of environmental sound disposal according to the provisions of the protocol on the Prevention of Pollution of the Mediterranean sea by Transboundary Movements of Hazardous Wastes and their Disposal, or
 - ii) for a use or purpose which is permitted for that Party under Annex A;
16. The Parties shall ensure that the management and destruction of DDT stockpiles and waste containing this chemical, will be carried out with appropriate equipment, precautions to avoid accidents and spillage and by specialized personnel in an environmentally sound manner, making use of BEPs as listed in Annex B. The list is not exhaustive.
17. The Parties shall provide technical assistance to those Parties with a minor capacity to implement their obligations; in particular, regarding safe and efficient use of pesticides, integrated vector management, and pest control practices in agriculture,

as well as environmental sound disposal of stockpiles and waste containing DDT and its derivatives.

18. The Parties shall promote alternative chemicals used to substitute DDT do not exhibit the characteristics of persistent organic pollutants. In this sense, Parties shall exchange information on appropriate alternatives to DDT, suitable for the Mediterranean conditions. Possible alternatives are listed in Annex C.1, although the list is not exhaustive and should not be interpreted as a list of recommended alternatives.

ARTICLE III

Monitoring and Reporting

19. For the purpose of monitoring the implementation of this measure the Parties shall make use the MAP biannual reporting system for the implementation of the Protocol for the protection of the Mediterranean Sea Against Pollution from Land Based Sources and activities of 1996 to report on all measures taken in accordance with this Action Plan, as well as their consideration by the National Implementation Plans (NIPs) developed or being developed under the Stockholm Convention.

ARTICLE IV

Temporal implementation

20. Each Party shall implement the measures to eliminate DDT as soon as possible, but no later than 31 December 2012, or 31 December 2015 at the latest. Parties shall decide the deadline for prohibition taking into account its national circumstances and respective capacity to implement the required measures. The adopted deadlines shall be communicated and justified to the Secretariat one year after the adoption of this Action Plan.

ARTICLE V

Entry into Force

21. The regional plan shall enter into force and become binding on the 180th day following the day of notification by the Secretariat in accordance with the provisions of paragraphs 3 and 4 of Article 15 of the Protocol.

References

- Abildgaard A, 2000. Alternatives to Persistent Organic Pollutants. Final Report. COWI. Nordic Chemical Group.
- Basel Convention (2007) Technical guidelines for the environmentally sound management of wastes consisting of, containing or contaminated with 1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane (DDT). K0760101, 130607. (<http://www.basel.int/pub/techguid/ddt/tgDDTe.pdf>)
- IOMC - Mörner J., Bos R. and Fredrix M. (2002) Reducing and Eliminating the use of Persistent Organic Pesticides: Guidance on alternative strategies for sustainable pest and vector management. Inter-Organization Programme for the sound management of Chemicals (IOMC).
- Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.
- Ritter L, Solomon KR, Forget J, 1995. Persistent Organic Pollutants. An Assessment Report on: DDT Aldrin Dieldrin Endrin Chlordane Heptachlor Hexachlorobenzene Mirex Toxaphene Polychlorinated Biphenyls Dioxins and Furans. Canadian Network of Toxicology Centres and Deloitte and Touche Consulting Group. The International Programme on Chemical Safety (IPCS) within the framework of the Inter Organization Programme for the Sound Management of Chemicals (IOMC). (<http://www.pops.int/documents/background/>)
- UNEP / POPs Database on Alternatives, (<http://dbserver.irptc.unep.ch/irptc/owa/ini.init>).
- UNEP/POPs (2007) Report of the expert group on the assessment of the production and use of DDT and its alternatives for disease vector control. UNEP/POPS/COP.3/24, January 2007.
- UNEP/ MAP (2004) Plan for the management of PCBs waste and nine pesticides for the Mediterranean Region. MAP Technical Reports Series n°155, Athens, 2004.
- WHO - The Use of DDT in Malaria Vector Control - WHO Technical Position Statement, WHO, 2007.

ANNEX A

Part I – List of accepted purposes and specific exemptions for DDT.

CHEMICAL	ACTIVITY	SPECIFIC EXEMPTIONS ^{a, b}
DDT CAS No: 50-29-3	Production	<u>Acceptable purpose:</u> Disease vector control use in accordance with Part II of Annex B of the Stockholm Convention. <u>Specific exemption:</u> Intermediate in production of dicofol Intermediate
	Use	<u>Acceptable purpose:</u> Disease vector control in accordance with Part II of Annex B of the Stockholm Convention. <u>Specific exemption:</u> <u>Production of dicofol Intermediate</u>

^a As considered in the Stockholm Convention.

^b Exemptions can also be granted for quantities of a chemical to be used for laboratory-scale research or as a reference standard.

ANNEX B

Best Environmental Practices (BEP) for environmental sound management of DDT wastes

Several BEPs for the phasing out of DDT are hereby described:

1. Develop appropriate strategies to identify:
 - i) Stockpiles consisting of or containing DDT and its derivatives;
 - ii) Products in use and wastes consisting of or containing DDT;
2. Minimize cross-contamination which may affect the choice of available destruction options. Managers of collection points and consolidation stores shall ensure segregation of DDT waste by trained personnel on the basis of:
 - i) label information where DDT waste is in its original container with a definitive label;
 - ii) or indicative analytical tests, where label information is not available.
3. Take appropriate measures so that such wastes, including products and articles upon becoming wastes, are:
 - i) Handled, collected, transported and stored in an environmentally sound manner,
 - ii) Disposed in such in a way that the POP content is destroyed or irreversibly transformed so that they do not exhibit the characteristics of POPs or otherwise disposed of in an environmentally sound manner when destruction or irreversible preferable option or the persistent organic pollutant is low, taking into account international rules, standards, and guidelines, and relevant global and regional regimes governing the management of hazardous wastes,
 - iii) Not permitted to be subjected to disposal operations that may lead to recovery, recycling, reclamation, direct reuse or alternative uses of persistent organic pollutants,
 - iv) Not transported across international boundaries without taking into account relevant international rules, standards and guidelines.
4. Waste pesticide holders, including farmers and householders, shall be responsible for the sound management of that waste which is in their possession;
5. DDT waste must be segregated from other categories of waste that may be collected in any collection program;
6. Mixing or bulking of DDT waste shall not occur unless the waste has been positively identified by individual or composite sampling and analysis techniques;

7. Managers of collection points and consolidation stores shall adopt and employ emergency containment and clean-up procedures for the accidental release of DDT waste into the environment, as approved by the national authority;
8. Endeavour to develop appropriate strategies to identify sites contaminated by DDT and its derivatives. Remediation should be undertaken in an environmentally sound manner.
9. DDT waste in consolidation stores shall be consigned, within one year of the starting date, for destruction by a licensed destruction facility, unless the national authority determines that viable destruction facilities are not available in the country;

The BEP list above mentioned is not exhaustive; more extensive and detailed information is described in the MAP Technical Report n° 155 Plan for the management of PCB waste and nine pesticides for the Mediterranean Region, in the Stockholm Convention on Persistent Organic Convention (Annex B Part II), and in the Basel Convention Technical guidelines for the environmentally sound management of wastes consisting of, containing or contaminated with DDT.

Parties shall add and exchange information concerning other strategies and/or practices helpful to the phase out of the pesticides concerned.

ANNEX C

C.1. List of alternative chemicals to DDT

DDT production and uses are presently permitted under strict control within the Integrated Pest Management (IPM) approach and under the Disease Vector Control (DVC) strategy. Integrated Pest Management is a global strategic framework developed in order to improve cost-effectiveness, ecological soundness and sustainability of vector control. Disease Vector Control remains the most generally effective measure to prevent malaria transmission and therefore is one of the four basic technical elements of the WHO Global Malaria Control Strategy.

DDT is the most effective insecticide among the 12 that have been recommended by the World Health Organization (WHO), as it a vector control of particular relevance for several diseases (i.e. malaria).

At its 3rd COP Meeting (2007), the Stockholm Convention concluded that there is currently a continued need for the use of DDT in Disease Vector Control, until locally appropriate and cost-effective alternatives are available for sustainable transition. This need is, however, intended to be evaluated every 2 years.

Several possible chemical alternatives to DDT have already been proposed (Table 1) by several sources such as the UNEP database on alternatives (UNEP/POPs, 2004), the assessment report of the Canadian Network of Toxicology Centres for the IPCS (Ritter *et al.*, 1995), and the report of the Nordic Chemical Group (Abildgaard, 2000).

Table 1 Summary of potential chemical substitutes of POP pesticides.

Persistent Organic Pollutant	Chemical substitute
DDT CAS No: 50-29-3	acephate, alphacypermethrin, bendiocarb, carbaryl, chlorpyrifos, cyfluthrin, deltamethrin, demethoate, diazinon, dichlorvos, dicofol, endosulfan, etofenprox, esphenvalerate, ehyil azinphos, fenthion, fenitrothion, fluvalinate, lambda-cyhalothrin, malathion, methamidophos, methomyl, metidathion, monocrotophos, permethrin, phorate, phosmet, pirimiphos-methyl, propoxur, rotenone, sulfur, thiodicarb, trichlorphon

Although all the above chemicals could be feasible substitutes to DDT, **this list should not be used nor interpreted as a list of recommended alternatives.** On the one side, many of these chemical alternatives are believed to be also toxic and may entire risks for human health and environment. On the other side, efficacy and efficiency of such chemicals, alone or in combination, must be tested for resistance before being used as substitutes of DDT in the context of the Disease Vector Control.

Hence, the following general criteria should be taken into account to identify alternatives to DDT:

1. As far as possible, to apply those alternatives in the context of the Integrated Vector Control (IVC) framework, and according to the Disease Vector Control strategy. Recommendations already addressed by the WHO and the Stockholm Convention should be followed.
2. Chemical substitutes must be authorized in the regional or national legislation.
3. Chemical substitutes should not present, or at least should contribute to decrease the following characteristics: carcinogenicity, mutagenicity, toxicity for reproduction, endocrine disruptors, neurotoxicity, toxic, persistent and bioaccumulative (TPB).

Measures should be adopted in accordance with the business plan designed by the Stockholm Convention in close collaboration with the WHO. The business plan intends to promote a global partnership on the development and deployment of alternative products, methods and strategies to DDT for disease vector control, and achieve the ultimate goal of totally eliminating production and uses of DDT by 2020.

In this sense, particular strict conditions and good management practices have been already addressed by the WHO and by the Stockholm Convention on Persistent Organic Pollutants, which should be carefully followed so as to ensure safety and effective use of DDT and to minimize harmful health and environmental effects.