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FOR IMPLEMENTING INTERNATIONAL ACTION ON
CERTAIN PERSISTENT ORGANIC POLLUTANTS

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PREPARATION FOR THE CONFERENCE OF THE PARTIES

World Health Organization Action Plan for the Reduction of Reliance on DDT in Disease Vector Control

Note by the secretariat **

As referenced in UNEP/POPS/INC.6/5, attached to the present note is information provided by the World Health Organization. The information has been circulated as submitted and has not been formally edited.

* UNEP/POPS/INC.6/1

** Stockholm Convention, Annex B, Part II, Paragraphs 4, 5 and 6; Conference of Plenipotentiaries of the Stockholm Convention, resolution 1, paragraph 4

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Attachment

World Health Organization
Action plan for the Reduction of Reliance on DDT in Disease Vector Control
(reference: WHO/SDE/WSH/01.5)

INTRODUCTION

At the first meeting of the Intergovernmental Negotiating Committee (INC) for an international legally binding instrument for implementing international action on certain Persistent Organic Pollutants (POPs), the World Health Organization, mandated by World Health Assembly Resolution WHA50.13, proposed the development of an Action Plan to support its Member States in making informed decisions concerning the effect on disease transmission of a reduction and/or elimination of DDT, under a future POPs Convention. Such a WHO Action Plan would aim to increase public health staff awareness of the INC process. Ultimately, the Action Plan would assist Member States in their efforts to reduce their reliance on DDT use for public health purposes without jeopardizing the level of protection offered by their vector control programmes.

The Action Plan for the Reduction of Reliance on DDT in Disease Vector Control presented in this document emerged from an expert consultation held from 16 to 18 June 1999 at WHO, Geneva (reference: Annex 2 of WHO/SDE/WSH/01.5.)

Three strategic *principles* have served as the basis for developing and formulating the Action Plan. They are: **involvement of countries concerned, early identification of funding mechanisms and advocacy.**

The most recent recommendations concerning DDT use for indoor residual spraying against malaria vectors date back to 1993. They list well-defined conditions and a number of precautions (WHO, TRS 857, 1995). DDT is also used at times for the control of kala-azar (visceral leishmaniasis), plague and tick-borne encephalitis, but is not formally recommended by WHO for these purposes. In malaria control, it is used in routine spraying operations, for prevention of disease transmission and in epidemic situations. Some countries reserve the right to maintain stockpiles of DDT for emergencies.

Preliminary data show that at least 24 countries use DDT for vector control. Yet, there is a great deal of variability in the intensity of its use. There is also a disparity between the geographical distribution of DDT use for malaria control and the areas of the world where the malaria burden weighs the heaviest.

The use of adulticides, including DDT, for indoor residual house spraying to control vectors is just one of several possible components of integrated vector management (IVM). In turn, IVM is just one component of integrated disease management. The strategy for the prevention and control of vector-borne disease places vector control in the context of disease management and aims to seek tailor-made, flexible solutions to local malaria problems. In addition to its main objective of reducing disease transmission risks, another major goal of IVM is to reduce the use of insecticides whenever possible. It promotes decision-making criteria and management procedures that ensure the best local mix of *alternatives* at a given place and time.

For the purpose of this Action Plan, alternatives are defined as:

- alternative **products** for chemical and biological control.
- alternative **methods** of vector control such as environmental management and personal protection and
- alternative **strategies** that are based on scientifically sound criteria, cost-effectiveness analysis, and a delivery system compatible with current trends in health sector reform, including decentralization of health services, intersectoral action at the local level and subsidiarity in decision-making.

The concept of integrated vector management (IVM) as a sub-component of disease management will provide the decision-making framework for vector control in the future, including decisions on the use of DDT or other adulticides. This management approach has been highly successful in agriculture in the sustainable control of pests and in the reduction of reliance on insecticides.

The three main *instruments* for achieving the goals of the Action Plan are:

- **Integral research and capacity-building** to enable countries to introduce sustainable vector control alternatives based on a reduced reliance on insecticides including DDT,
- **Country-specific exemptions** in accordance with the procedures laid down in Annex B, part II of the Stockholm Convention, and
- Appropriate and timely **financial support and technical cooperation** for the implementation of the Action Plan.

It is recognised that there are several countries that continue to rely on DDT for public health purposes and that these countries should be allowed to do so until safe, effective and affordable alternatives are available and operational.

This is in line with recommendations made at the 20th Malaria Expert Committee meeting in October 1998 which, *inter alia*, state: *It is anticipated for some time to come that there will continue to be a role for DDT in combating malaria, particularly amongst the poorest endemic countries. Restrictions on DDT for public health use contained in a future POPs Convention should therefore be accompanied by technical and financial mechanisms to ensure that effective malaria control is maintained, at least at the same level, through vector control methods that depend less on pesticides in general, and on DDT in particular.*" (WHO, TSR 892, 2000).

It has, therefore, been a fundamental principle in the development of this Action Plan that any possible deadline in the POPs Convention should relate not to the phase-out of DDT, but rather to the time at which the financial, technical, and administrative tools are in place to begin a transition from DDT to an integrated deployment of alternatives, without any jeopardy to disease transmission risk. Thus, the original IFCS requirement of reduction and/or elimination of DDT at no cost to public health is fulfilled. In the final text of the Convention no such deadline is included.

Furthermore, support for the Action Plan or for the assistance to countries to make a successful transition to alternatives to DDT should not be at the expense of financial resources earmarked for other priority public health issues.

Taking into consideration the conclusions and recommendations of the group of experts, WHO has developed the following Action Plan.

COMPONENTS OF THE ACTION PLAN

Based on the outcome of the expert consultation, referenced above, five areas of major importance for the implementation of the Action Plan were identified. They include:

1. Country needs assessment,
2. Safe management of DDT stockpiles,
3. Institutional research networks,
4. Monitoring, and
5. Advocacy.

Objectives and activities for each of these are presented below. In addition, each activity has been earmarked as a immediate, medium- or long-term action. The time frame does not foresee action for all areas of importance under each time horizon.

TIMEFRAME

The proposed endpoints for the activities are as follows:

- Immediate action - May 2001.
- Medium-term action - just prior to the POPs Convention taking effect (i.e. after the government ratification threshold has been passed), to report on progress to the first meeting of the Conference of Parties to the Convention.
- Long-term action - on-going technical cooperation with interested Member States among the Conference of Parties.

OBJECTIVES

Country Needs Assessment

- Ensure that health concerns are mainstreamed in the POPs negotiations in order to prevent any negative health impact as a result of the Convention's regulations concerning DDT.
- Provide a framework for a needs assessment in countries enabling the transition towards a reduced reliance on insecticides, while maintaining and, if possible, improving effective vector control.
- Provide incentives and leverage funds for strengthening the capacity of governments to promote, utilize and evaluate vector control alternatives.

Safe Management of DDT Stockpiles

- Prevent damage to the environment and minimise risk to human health.
- Develop criteria for decision making on options to use, reformulate, repack, or dispose of DDT stocks.
- Establish a reliable and verifiable management process that clearly defines the responsibility for stockpile management.

Institutional Research Network

- Formulate joint research projects of health and agriculture scientists/research institutions on the development of integrated pest and vector management strategies.
- Further develop, test and/or implement sustainable, environmentally safe and cost-effective alternatives to the use of DDT for vector control.

Monitoring

- Assist Member States in programming, monitoring and reporting information on the following DDT related issues:
 - Human exposure to DDT.
 - Public health outcomes of DDT reduction.
 - Production, storage and usage of DDT.
 - Efficacy and appropriateness of DDT in areas where it continues to be used.
 - Efficacy and appropriateness of alternatives to DDT, including integrated vector management (IVM).

Advocacy

- Provide background information on the POPs negotiations and on DDT to the health sector.
- Ensure that the health sector's views are known to delegations to the POPs negotiations.

IMMEDIATE ACTION

Country Needs Assessment

Prepare an inventory of current use, trends and regulatory status of DDT

To better understand what support Member States may need in order to reduce their reliance on DDT in vector control programmes, it will be necessary to review and update current information on the use of DDT in vector control. This will be done through the activities of WHO, FAO, and Global Crop Protection Federation (GCPF). The main categories of DDT use are:

- DDT in routine vector control programs.
- DDT in epidemic outbreaks; DDT reserved for epidemics only.
- DDT as an integral component of a disease management program such as is embodied in the Global Malaria Control Strategy.

Promotion of and incentives for the development of national action plans for the reduction and/or elimination of DDT

Country needs to facilitate a successful transition to a situation of reduced reliance on DDT in vector control should be assessed through Member State consultations at the WHO regional level or in different eco-epidemiological settings.

Safe Management of DDT Stockpiles

Co-operate with concerned organizations (FAO, UNEP) and non-governmental partners including the GCPF

A review, update and expansion of inventories of DDT stocks should be combined with efforts to encourage corporate partnerships that aid and fund proper storage and disposal of DDT.

Monitoring

Ensure a global program of monitoring exposure of DDT in humans

WHO, through the International Programme on Chemical Safety (IPCS) should promulgate standards, and identify regional laboratories to perform clinical and environmental sampling and analyses.

Advocacy

Furnish the appropriate information to the health sector to allow for balanced decisions based on "informed consent"

The provision and dissemination of appropriate information consists of the following elements:

- Information on the environmental and human health impact of DDT.
- Information on alternatives to DDT for disease prevention and control, including IVM.

- Estimates of the global mortality and morbidity (or DALYs) that are saved through programmes for the control of malaria and other vector-borne diseases, including the use of DDT indoor residual spraying.
- Information on the potential exemptions for DDT use in the POPs treaty.

WHO, the Secretariat of the Convention and industry through GCPF all have a role to play in this activity. Appropriate information should also be made available to NGOs.

Provide the health sector with the opportunity to have its views represented in the INC process and after

Firstly, participation of health ministries in the INC process should be encouraged through provision of information as described above, and the use of *Notes Verbales* of the WHO Director General and/or Roll Back Malaria to Member States.

In addition, it can be propose to national governments and/or Convention negotiating blocs (the WHO Regional Office for Africa, CRULAC, G77, etc.) that they adopt a joint position on DDT reduction. Action should also be undertaken to facilitate cooperation between NGOs and ministries of health and/or Convention negotiating blocs.

The DDT issue in the context of the POPs negotiations should be made a topic for internal discussions at WHO Regional Offices.

MEDIUM-TERM ACTION

Country Needs Assessment

Inventory of current use, trends and regulatory status of DDT

The inventory of actual current DDT usage prepared under *Immediate Action* should be expanded, taking into account the results of the review of the indications of use. The following elements should be taken into consideration:

- Decision-making criteria and procedures for the use of DDT in vector control programmes.
- Regulatory procedures, and where appropriate, the legal basis for the use of DDT.
- Amount of DDT actually used per year and where.
- Alternative vector control method(s) used.

Modalities for preparing the inventory should include a review of the presently used DDT reporting systems provided by country vector control programmes. Member States can furthermore be assisted in the development of DDT inventory questionnaires through

- the promotion and improvement of the process for obtaining information through questionnaires and other methods of data collection.
- Conducting regional workshops on DDT inventory information gathering mechanisms.
- Co-operation with FAO/UNEP in the collection of DDT use and regulatory information.
- Soliciting information/data on DDT use, and trends in future use from industry through GCPF and from non-governmental and private sector organizations engaged in market analysis.

Promotion and incentives for the development of national action plans for the reduction and/or elimination of DDT

This activity will entail the identification and promotion of incentives for the development of national action plans. It will also provide guidance and technical assistance to Member States for the development of national integrated disease control action plans.

Capacity building to promote, utilise, and evaluate alternative methods for vector control

In a comprehensive way, this activity will:

- Assist Member States in the review and adjustment of their vector control policies and programmes in the context of health sector reform, that will lead to a more decentralized, intersectoral delivery of vector control services.
- Promote, test, consolidate, and validate experiences on the use of alternatives for the control of malaria and other vector-borne diseases in areas where there is reliance on DDT.
- Train health sector personnel in the management and decision-making for integrated vector management. Include municipality level guidelines for the selection and evaluation of vector control options.
- Strengthen peripheral mechanisms (e.g. community participation, decentralised funding) for vector-borne disease control programme implementation.

Validation of effectiveness of different vector control interventions and analysis of their cost effectiveness

Past and present vector control programmes will be reviewed as to their (cost-) effectiveness and sustainability. Alternative disease and integrated vector management strategies will be designed, implemented and evaluated. In the context of comparative studies, cost-effectiveness analysis of DDT and alternatives in different settings will be conducted.

Safe Management of DDT Stockpiles

Safety measures - co-operation with organizations concerned (FAO, UNEP) to provide assistance to Member States

Based on the inventory preparation and partnership promotion under Immediate Action, this area of activity will now see action to assure safe containment of stockpiled DDT. Evaluation will take place of security of local stockpile management in order to prevent illegal diversion. Designation of stockpile management responsibility to appropriate organizations will be pursued.

Co-operation with organizations concerned (FAO, UNEP) to review and/ or develop the criteria if there is to be disposal of a stockpile of DDT: (i.e. FAO Pesticide disposal series No.4, 1996) along the following categories:

- Materials meeting WHO criteria for use in public health.
- Materials able to be reformulated and repacked to meet WHO criteria.
- Materials which must be destroyed.

Institutional Research Network

Research on the use of alternative vector control methods and strategies should be promoted through inter-institutional co-operation. Primary research should be dedicated to:

- The development of integrated pest and vector management strategies (IPM/IVM). Joint agriculture (FAO) and public health (WHO) initiatives should be developed, including research on alternatives to pesticides and pesticide resistance management.
- Design and implement pilot integrated vector management programmes. Implementation should be based on a review of ongoing IVM/IPM programmes and locally appropriate technology.
- Conduct research on managerial support systems that facilitate the implementation of IVM.
- Conduct research on the incorporation of risk assessment and management measures into infrastructure projects.

In addition, research should be promoted on

- The cost-effectiveness of pyrethroids compared to DDT and other adulticides for indoor residual house spraying, in operational settings.
- Insecticide resistance management.
- Impregnated mosquito nets as an alternative to DDT. Such research should examine their effectiveness, sustainability, and affordability when provided free for users as a public health measure or commercially under a social marketing scheme.
- Pesticide pricing practices and patents expiration, and options for local production with a view to making alternatives affordable in the poorest countries.
- The potential and operational implications of environmental management for malaria reduction in urban and rural areas.
- The impact of selective biological control agents on disease vectors (e.g., applicability of recent positive results with fish in Karnataka, India).
- Social and behavioral research on perceived needs and willingness to participate in mosquito / disease control.
- The evaluation of nuisance mosquito control as an incentive for vector control.
- The use of biological control such as *Bacillus sp.*, fungi, nematodes, copepods and botanicals in routine programs. Such research should examine their applicability and local production potential.

Monitoring

Human exposure to DDT - assist in the development of a global program of monitoring exposure of DDT in humans.

Under the aegis of IPCS, this area of activity will see revision, updating and standardization of protocols for analyses and data reporting.

Public health outcomes of DDT reduction - ensure that DDT reduction is not causing adverse impacts on the health status.

A number of activities are foreseen under this heading:

- Revise, update, and standardize protocols for analyses and data reporting (IPCS, leverage national technical standards).
- Assist countries in monitoring transmission indicators in locations where DDT is being reduced (WHO Regional Offices, ministries of health).
- Assist countries in developing the capacity for rapid analysis of data collected in the monitoring programme.

Monitor the efficacy and appropriateness of DDT in areas where it continues to be used. Ensure that continuing the use of DDT is bringing positive public health gains.

WHO, together with ministries of health and where appropriate the Secretariat of the POPs Convention, will work towards the development of a comprehensive approach to evaluating the use of DDT for vector-borne disease control, including:

- A DDT guidance manual based on existing WHO guidelines for appropriate use of DDT in public health.
- Dissemination of this manual through national disease control capacity building programmes.
- Training exercises to teach public health personnel how to educate others on the use of the guidance manual as part of vector-borne disease capacity building.
- Compliance of national governments, as required by the Convention to report public health uses of DDT, preferably in advance of the use although this is not prescribed by the Convention.
- Audit national proposals for use of DDT for consistency with the guidance manual and identify opportunities to introduce alternative strategies for the control of vector-borne diseases.

Monitor efficacy and appropriateness of alternatives to DDT, including IVM.

Firstly, this activity will ensure that information is gathered on the performance of DDT alternatives, in order to make decisions on whether to substitute DDT with these alternatives. It will further provide assistance in the development of standard methods for governments to document the cost of deploying alternatives, disseminate these costing methods through national malaria control capacity building programmes, include training exercises to teach trainers how to educate others on the use of costing methods, as part of vector-borne disease control capacity building, and finally, collect information on the cost increment of alternatives (*i.e.* the cost margin over and above the cost of DDT), for purposes of subsidizing the cost increment through a financial mechanism.

Advocacy

Develop methods for a full economic evaluations of the impact of the reduction or elimination of DDT use on malaria, including potential mortality and morbidity.

Communicate with industry to promote further collaboration in the area of IVM.

LONG-TERM ACTION

Country Needs Assessment

Capacity building needed to promote, utilise and evaluate alternatives for vector control

This will entail the strengthening of both institutions responsible for implementing and evaluating integrated disease programs and of country epidemiological and managerial information systems.

Validation of effectiveness of different vector control interventions and analysis of their cost-effectiveness

Studies on cost-effectiveness of alternatives to DDT will be continued and the applicability and reproducibility of alternative strategies to other locations, regions, and under different eco-epidemiological situations will be determined.

Institutional Research Network

Evaluate integrated vector management schemes. Compare their cost-effectiveness and sustainability with single method approaches

Advocacy

Expediently disseminate ongoing results of the WHO Action Plan to all interested parties. In particular, distribute the scientific results of alternative strategy implementation and IVM projects

REFERENCES

WHO, 1995. Vector control for malaria and other mosquito-borne diseases. Report of a WHO Study Group, *WHO Technical Report Series 857*, World Health Organization, Geneva

WHO, 2000. Twentieth report of the WHO Expert Committee on Malaria, *WHO Technical Report Series 892*, World Health Organization, Geneva
