



April 2007

Update for COP3 on WHO activities relevant to country implementation of the Stockholm Convention on Persistent Organic Pollutants

1. Health considerations are embedded within the objectives of the Stockholm Convention. The first article of the Convention states that "Mindful of the precautionary approach as set forth in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Convention is to protect **human health and the environment** from Persistent Organic Pollutants" (emphasis added). Clearly the full and active participation of the health-sector is required in order to achieve the full objectives of the Convention.
2. The need to promote chemical safety and pay special attention to Persistent Organic Pollutants (POPs) is not a new issue for WHO. The World Health Assembly Resolution adopted in 1997 on "Promotion of chemical safety with special attention to persistent organic pollutants"(WHA 50.13) points to the need for: technical cooperation for the determination of capacity-building needs; the implementation of programmes for the management of chemical risks and the exchange of reliable comparative data on human exposures resulting from chemical incidents and poisonings. What is emerging more clearly with the commencement of enabling activities for the Convention is that there is a need for stronger inter-sectoral cooperation and for an actively-engaged health sector in national and international approaches to chemicals management.
3. Considering the provisions of the Convention, the key issues for the health-sector include: the need to assess public-health priorities, capabilities and health impacts in terms of National Implementation Plans (NIPS); the need for up-to-date risk assessment and promotion of alternatives for necessary uses of POPs used to protect public health; the future identification and targeting of new POPs; awareness, training and education of the health-sector; collection, collation and interpretation of biomonitoring data including its use in risk assessment and building on existing monitoring data to understand the pathways and trends, in exposure and to contribute to an evaluation of the effectiveness of the Convention. With the support of the Government of Sweden, a project examining common issues and needs for the health sector in relation to several contemporary chemicals conventions has shown that there is considerable potential to leverage support for greater health-sector engagement.
4. The Information Paper prepared by WHO at the time of the first Conference of the Parties (UNEP/POPS/INF28) set out the main areas of the Stockholm Convention in relation to the public-health management of Persistent Organic Pollutants (POPs). The purpose of this paper is to provide an update on selected WHO activities that can provide a basis for increased discussion and development of intersectoral work in order to strengthen cooperation with the health sector.

5. The issues selected for this information paper include: (a) Reducing reliance on DDT while strengthening malaria control, which will be supported by a Joint WHO-UNEP side event on Monday 30 April 2007; (b) Risk Assessment of POPs, new POPs and their alternatives; (c) Pesticide Safety and Management; (d) Monitoring of trends in the levels of POPs; (e) Children's Environmental Health; (f) Waste Management and (g) Information, awareness and education.
6. Contacts at WHO Headquarters and WHO Regional Offices for further information on these issues are listed in **Annex 1** and **Annex 2**.

A. Reducing reliance on DDT while strengthening malaria control

7. Malaria causes both a high mortality and a high burden of debilitating illness that impedes human progress. WHO has a commitment to the global goal of reducing and eventually eliminating use of DDT while reducing the burden of malaria. DDT for indoor residual spraying may be indicated in certain circumstances, if used in accordance with WHO guidelines and in the context of integrated vector management programmes. WHO is committed to the development of global partnerships towards achieving the sustainable development and deployment of alternatives to DDT. At the same time, WHO is working with the Stockholm Secretariat to ensure that Member States comply with the terms of the Stockholm Convention, including reporting of DDT usage for vector control purposes and building country capacities to use DDT in accordance with the Convention.
8. Technical support to Parties to the Stockholm Convention in relation to DDT is coordinated through the WHO Global Malaria Programme. Parties are being supported to assess needs and to develop national integrated vector management action plans, as part of their overall development of National Implementation Plans (NIPs) on POPs. A number of regional and country projects is being developed in collaboration with UNEP and the Global Environmental Facility. These projects are currently aimed at:
 - (i) demonstrating the applicability and cost-effectiveness of alternatives to DDT in specific eco-epidemiological settings and within the context of WHO's Global Strategic Framework for Integrated Vector Management (IVM);
 - (ii) strengthening national capacity to plan, implement and evaluate integrated vector management;
 - (iii) strengthening country capacity for pesticide management and to promote judicious use; and
 - (iv) establishing regionally-coordinated mechanisms for dissemination and sharing of country experiences.
9. **Annex 3** provides details of the regional and country-level projects being considered or under way.
10. WHO remains actively involved in the evaluation of the continued need for DDT and all alternative strategies to replace DDT (UNEP/POPS/COP3.4). WHO, in cooperation with the Stockholm Secretariat has undertaken a review of the adequacy of the information collected by the questionnaire adopted at COP1 and in cooperation with the Secretariat, has proposed a revised DDT questionnaire (UNEP7POPS/COP3/INF2).

11. WHO participated in the expert group on the assessment of DDT and reported on the special efforts it had made to collect information on the current status of DDT in Africa. These efforts included missions to verify individual country questionnaire responses and use of national consultations on the use of DDT for specific purposes e.g. for indoor residual spraying. A consultative meeting on the use of DDT for indoor residual spraying was held in the African Region (Brazzaville, Congo, 20-22 June 2006).
12. A WHO Position Statement on the Use of Indoor Residual Spraying for scaling up global malaria control and elimination was released in 2006
http://whqlibdoc.who.int/hq/2006/WHO_HTM_MAL_2006.1112_eng.pdf. This document sets out considerations for the use of Indoor Residual Spraying to curtail malaria transmission. Indoor Residual Spraying (IRS) is a specific application technique in which long-acting chemical insecticides are applied to the walls and roofs of houses and domestic animal shelters. IRS is only appropriate in certain situations and it does not always involve the use of DDT.
13. A Manual for Indoor Residual Spraying is also available from WHO
http://whqlibdoc.who.int/hq/2000/WHO_CDS_WHOPES_GCDPP_2000.3.Rev.1.pdf. This manual sets out guidance for ensuring the proper use of the application for IRS, the preparations needed beforehand, precautions during use and the procedures after spraying.
14. The Manual is currently being revised and extended to provide further guidance to those countries needing to consider the use of IRS so that: appropriate policies can be developed; sustainable IRS programmes are developed; national standards on IRS operational programme delivery are established; systems are put in place to monitor and evaluate the IRS programme, including both the quality of delivery and its effectiveness in controlling insect vectors; and so that existing country IRS guidelines and training manuals are adapted or updated. These materials are particularly important to ensure that only best-application practices are used and that they are integrated as part of a strategy to strengthen the capacity of those countries planning to use DDT so that misuse, leakage of DDT to the environment, operator and public exposures are minimized and so that compliance with the Stockholm Convention and other regulations is ensured.

B. Risk assessment of POPs, new POPs and their alternatives

Risk Assessment at WHO

15. WHO is a leader in the development of independent, updated and scientifically-credible international risk assessments. This work continues to be needed at the national level for a trusted reference and knowledge-base and is particularly important for less-developed countries which may lack sufficient infrastructure and capacities for making their own human health risk assessments. The work contributes to the core functions of WHO including the setting of norms and standards, articulating ethical and evidence-based policy options and providing vital support to countries in moving towards universal coverage with public health interventions. WHO risk assessment work covers both the development and harmonization of risk assessment methodologies and the application of these methodologies to specific chemicals of concern. Much of the work to date has been conducted under the auspices of the International Programme on Chemical Safety (IPCS).
16. A number of product lines are of importance to the risk management of POPs under the Stockholm Convention including those emanating from the Joint FAO/WHO programmes on food additives and contaminants and veterinary drug and pesticide residues, Concise International Chemical Assessment Documents (CICADs), the former series of Environmental Health Criteria monographs (EHCs) and for public information and workplace use, the series of International Chemical Safety Cards (ICSCs). The long-

standing importance of this assessment work is illustrated by the fact the IPCS undertook the original evaluation¹ of the 12 chemicals covered by the Stockholm Convention at the request of UNEP Governing Council Decision 18/32 in May 1995.

New Risk assessments on specific POPs and nominated new POPs

17. The Joint FAO/WHO Expert Committee on Food Additives (JECFA) is an international scientific committee that has existed since 1956 to evaluate the safety of food additives. Its work also includes the evaluation of contaminants, naturally-occurring toxicants and residues of veterinary drugs in food. At its 57th meeting in June 2001, JECFA performed a comprehensive safety assessment of polychlorinated dibenzodioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and coplanar polychlorinated biphenyls (PCBs) and established a provisional tolerable monthly intake (PTMI) of 70pg TEQ/kgbw per month. More information on the JECFA can be found at <http://www.who.int/ipcs/food/jecfa/en/index.html>. More information on the JECFA Evaluation of Dioxins, furans and dioxin-like PCBs can be found at <http://www.inchem.org/documents/jecfa/jecmono/v48je20.htm>.
18. A CICAD on Heptachlor was published in 2006 (<http://www.who.int/entity/ipcs/publications/cicad/cicad70.pdf>).

Toxic Equivalency Factors (TEFs)

19. The use of the toxic equivalent (TEQ) is based on the application of a Toxic Equivalency Factor (TEF) concept used to assess the cumulative assessment of groups of related compounds which are assumed to have a common mode of action. This applies in the case of mixtures of polychlorinated dibenzo dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). Over the last 15 years, WHO through IPCS has established and regularly updated TEFs for dioxins and related compounds. In 2005, new TEF values were adopted, which should be used by Parties in evaluating and monitoring exposures to dioxins and related compounds under the Stockholm Convention. WHO has provided an additional information paper (UNEP/POPS7COP3/INF/27) which lists the newly adopted values and the points to further information available from the WHO including from the IPCS web site http://www.who.int/ipcs/assessment/tef_update/en/ and articles in the scientific literature².

Update of the international risk assessment for DDT

20. An updated international risk assessment of the health effects of DDT is under way as part of the CICAD programme. This document will complement the most recent review of DDT carried out by the Joint FAO/WHO Meeting on Pesticide Residues (JMPR) in 2000. Up until 1984, DDT was still widely used in agricultural practice and therefore JMPR's evaluation was in order to establish an acceptable daily intake or ADI. Reviews in 1994 were undertaken to reflect the fact that the primary exposure in the majority of countries had switched to the contamination of food from persistence and bioaccumulation of DDT

¹ IPCS (1995). A review of selected persistent organic pollutants: DDT, Aldrin, Dieldrin, Endrin, Chlordane, Hexachlorobenzene, Mirex, Toxaphene, Polychlorinated biphenyls, Dioxins and Furans, PCS/95.39(http://www.who.int/entity/ipcs/assessment/en/pcs_95_39_2004_05_13.pdf).

² van den Berg, M, Birnbaum, L, Denison, M et al. .The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicological Sciences 93(2), 223–241 (2006).

in the environment. JMPR further reviewed DDT in 2000, to take into account more recent biochemical and toxicological studies including hormone modulating effects reported over the period 1984-2000. This review also included an evaluation of DDT and its primary metabolites DDD and DDE. As a result the Provisional Tolerable Daily Intake (PTDI) was reduced based on developmental toxicity in rats.

21. Subsequent to the 2000 JMPR reports, there have been further scientific reports concerning possible health effects of DDT, new results from epidemiological studies and an increasing scientific consensus about the effects of DDT on developmental biology and the particular vulnerability of certain life stages to in utero and neonatal exposures. Also of importance are findings that human milk rather than the environment can be a major source of exposure, given bioaccumulation of DDT metabolites in fatty tissues and excretion in human milk.
22. IPCS is currently preparing an updated international risk assessment on DDT taking into account current exposures and remaining uses. A draft CICAD has been prepared by the US Agency for Toxic Substances and Disease Registry (ATSDR) based on a substantive source document (ATSDR Toxicological Profile 2002). The draft CICAD further updates this ATSDR document to include new literature published to the end of 2005. The status of work on the draft CICAD is regularly updated on the IPCS web site (<http://www.who.int/ipcs>). In early December 2006, a peer-review period and process was announced which closed in mid-February 2007. The comments received on this CICAD and others in development were reviewed at an expert review board meeting held in Helsinki, Finland at the end of March 2007. The review meeting agreed a number of amendments to the draft CICAD and recommended additional work to be undertaken to develop an exposure scenario in which to assess the risks to human health from indoor residual spraying and reflecting a continued need for DDT for vector control in some Member States. The risk assessment of the use of DDT for indoor residual spraying will be based in the first instance on existing exposure data reported in the literature. Several new epidemiological studies published in 2006 were also recommended by the review board to be further considered, particularly those investigating the effects of DDT and its metabolites in the prenatal and early periods of life, and especially as related to neurobehavioral development and effects on fertility and reproduction.
23. The remaining assessment work and finalization of the draft CICAD will be completed during 2007. WHO will take into account the considerable interest expected in commenting on the draft before it is finalized and will announce opportunities for comment on the IPCS web site (<http://www.who.int/ipcs>).
24. As a separate assessment-related activity, WHO will through IPCS also develop further a risk assessment model for the use of insecticides in indoor residual spraying. Such an approach will complement the work undertaken by IPCS in collaboration with the WHO Pesticides Evaluation Scheme (WHOPES) which resulted in a generic risk assessment model for insecticide treatment of mosquito nets and their subsequent use for vector control purposes (http://whqlibdoc.who.int/hq/2004/WHO_PCS_04.1.pdf). This tool has proved invaluable for the development and safety evaluation of alternatives at a time of increased emphasis on the use of bed nets in vector control programmes. It is therefore expected that a generic model for indoor residual spraying will also be an important component of a strategic approach to the development and deployment of alternatives to the use of DDT, enabling all proposed insecticides to be evaluated on a common basis. This work will proceed independently of the finalization of the CICAD and is expected to be completed in the first half of 2008.
25. In relation to risk assessment methodology, WHO continues its leading efforts on the "Global Assessment of the State-of-the-Science of Endocrine Disrupting Chemicals

(EDCs), 2002

(http://www.who.int/entity/ipcs/publications/new_issues/endocrine_disruptors/en/index.html). This report along with subsequent IPCS-sponsored international workshops identified a number of high-priority research needs concerning the assessment of the effects of endocrine disruptors (most of which are POPs). A weight-of-evidence approach, originally used in the Global Assessment report, is being considered for elaborating principles and methods for assessing complex toxicological approaches.

C. **Pesticide Safety and Management**

26. The WHO Pesticides Evaluation Scheme (WHOPES) (<http://www.who.int/whopes/en/>) is an international programme which coordinates the testing and evaluation of pesticides for public health use. WHOPES is the WHO focal point for advising Member States on use of public health pesticides. The recommendations of WHOPES are intended to facilitate the registration and use of public health pesticides by national programmes and regulatory authorities. WHOPES has evaluated alternatives to DDT, including organophosphates, carbamates and pyrethroids. The following guidance on the safe use of public-health-related insecticides is among that available on WHOPES website:

- Najera JA and Zaim M. 2002. *Malaria Vector Control - Decision Making Criteria and Procedures for Judicious Use of Insecticides* (Document WHO/CDS/WHOPES/2002.5.Rev.1). The purpose of this document is to help health authorities and other partners to select suitable insecticides for their malaria control programmes. It reviews the main characteristics of the insecticides, the entomological, epidemiological and ecological variables, and the operational requirements which should be taken into consideration when making that choice
http://whqlibdoc.who.int/hq/2003/WHO_CDS_WHOPES_2002.5_Rev.1.pdf.
- *Decision making for the judicious use of insecticides*. This training material is made up of a **Facilitator's guide & Participant's guide** and provides vector-borne disease control programme managers, at national and district levels, with the skills and knowledge to apply evidence-based decision-making in vector management programmes
http://whqlibdoc.who.int/hq/2004/WHO_CDS_WHOPES_2004.9b.pdf (Facilitator's Guide)
http://whqlibdoc.who.int/hq/2004/WHO_CDS_WHOPES_2004.9a.pdf (Participant's Guide).
- *Draft WHO guidelines on the management of public health pesticides*. The main purpose of these guidelines is to assist Member States with better management of public-health pesticides and with implementing the International Code of Conduct on Distribution and Use of Pesticides
http://whqlibdoc.who.int/hq/2003/WHO_CDS_WHOPES_2003.7.pdf.
- *Guidelines for situation analysis of public-health pesticide management* (in English and French). The objective of this document is to provide guidance in the performance of a situation analysis aimed at identifying the weaknesses, strengths and needs for strengthening a country's public health pesticide management practices
http://whqlibdoc.who.int/hq/2005/WHO_CDS_WHOPES_GCDPP_2005.12.pdf.

27. Through IPCS, WHO actively assists Member States to establish and strengthen poisons centres, and in collaboration with WHOPES and UNEP have published a ***Resource Tool for the sound management of Pesticides and Diagnosis and Treatment of Pesticide Poisoning***. This tool is intended to assist national programmes and those involved in management of pesticides, and with diagnosis and treatment of pesticide poisoning, in

formulating training courses, adapted to specific needs of different target group(s)
http://www.who.int/whopes/recommendations/IPCS/Pesticide_ok.pdf.

D. Monitoring of trends in the levels of POPs

28. WHO's Department of Food Safety has implemented the Global Environment Monitoring System since 1976. This system commonly known as GEMS/Food has informed governments, the Codex Alimentarius Commission and other relevant institutions as well as the public on the levels and trends of contaminants in food, including human milk. The Programme is implemented through a network of WHO Collaborating Centres and Participating Institutions located in over 70 countries around the world. Data collected through GEMS/Food are accessed through web-based portal known as **WHO SIGHT**
<http://www.euro.who.int/foodsafety/>.
29. A recent *Information note (INFOSAN Information Note No 02/2007)*
[\(http://www.who.int/foodsafety/fs_management/infosan_archives/en/\)](http://www.who.int/foodsafety/fs_management/infosan_archives/en/) summarizes the efforts by GEMS/Food to date on biomonitoring of POPs. This easy-to-read note has been disseminated through the International Food Safety Authorities Network (INFOSAN) in all UN Languages. It summarizes the three WHO-coordinated international studies on levels of PCDDs and PCDFs as well as dioxin-like PCBs in human milk. Results have indicated a continuing trend towards lower levels as countries have taken action to reduce emissions.
30. To take into account the need for comparable and reliable monitoring data as part of the effectiveness evaluation of the Stockholm Convention, WHO has revised its *Protocol for the Collection, Handling and Analysis of Samples of Human milk at the country level*. In September 2005, a fourth coordinated survey of human milk was launched, having an extended focus to address all 12 POPs. This followed a feasibility study and a number of inter-laboratory quality assessment studies also coordinated on a multi-country basis.
31. As part of the activities associated with COP2, WHO and UNEP jointly held a side-event which presented an overview of the results of the first three rounds of the survey and an opportunity to discuss the revised protocol guidelines and to encourage participation in the fourth round. An agreement has been completed to reflect the cooperation in the development of the POPs Global Monitoring Programme between WHO and UNEP.
32. In accordance with the revised guidelines, 11 countries have submitted pooled samples for the fourth round of the WHO coordinated global survey. Another 17 countries have indicated an interest in doing so. The fourth round remains open and countries wishing to participate or have more information should contact the WHO Secretariat by email (popsmilk@who.int) or facsimile (+41 22 791 4807). Copies of the revised protocol for the fourth *WHO-Coordinated Survey of Human Milk for POPs* are available from the WHO web site (<http://www.who.int/foodsafety/chem/pops/en/index.html>).

E. Children's Environmental Health

33. Protecting children from exposure to environmental hazards requires a better understanding of the relationship between environmental conditions and health outcomes. Several recent international agreements, in particular the Plan of Implementation of the World Summit on Sustainable Development (WSSD) and the G8 Ministerial Statement on the WSSD, have specifically highlighted the need for assessing the state of children's environmental health (CEH) and monitoring progress, and have called for action to develop children's environmental health indicators (<http://www.who.int/ceh/en/>).

34. Indicators on children's environment and health are being developed by the WHO Regional Office for Europe, in collaboration with the European Commission and a number of Member States in the WHO European Region. They are a key tool for policy-makers in developing a comprehensive system of information on health and environment (EHIS). This system will help policy makers in countries to monitor the environment and health situation and trends, and track and evaluate relevant policy effectiveness. There are currently 26 indicators in the database, one of which is the level of POPs in human breast milk (<http://www.euro.who.int/EHIndicators>).
35. Evaluations of available data on POPs in biological media and of the scope of the problem indicate a significant paucity of data on levels of POPs in children and indigenous populations. Improved biomarkers of exposure, susceptibility and effect are needed. Pilot molecular-epidemiology collaborative studies to fill these data gaps have been initiated in three Latin American and Caribbean countries. Expansion to other countries is planned. Special consideration has been given to sampling and analytical procedures for the Longitudinal Cohort Studies in Children promoted by WHO, where those studies include the surveillance and follow-up of exposure to POPs in pregnant women and children, through the use of questionnaires and environmental and biological measurements.

F. Waste Management

36. The WHO Water, Sanitation and Health Programme carries out activities including the development of technical guidance materials for assessing the quantities and types of waste produced in different health facilities, creating national action plans, developing national health-care waste management guidelines and building capacity at national level. A policy paper is available that provides further information on the key issues involved in safe health-care waste management http://www.who.int/water_sanitation_health/medicalwaste/hcwmpolicy/en/.
37. A GEF-funded project was initiated in October 2004 on *Demonstrating and Promoting Best Techniques and Practices for Reducing Health Care Waste to Avoid Environmental Releases of Dioxins and Mercury*. The WHO is a co-partner in the project with the NGO Health Care Without Harm. Seven Member States are participating (Argentina, India, Lebanon, Philippines, Latvia, Senegal and Viet Nam). The project is designed to reduce health-care waste and emissions without compromising public health within health-care institutions and the broader communities. The results are intended to be replicable on a national, regional and global scale.
- WHO has supported the development of a six-month distance-learning certificate course on the sound management of health-care wastes, emphasizing the need for non-burn technologies to reduce dioxin emissions. This course is available in 36 countries and is run by the Gandhi Open University, India (<http://www.ignou.ac.in>).

G. Information, awareness and education

38. WHO has prepared both training and information materials for health care providers to increase awareness of POPs and the importance of the role of health-care providers in detection, surveillance and prevention of POPs exposure, especially in children in the context of the children's environmental health initiative mentioned above. In 2004, WHO convened a training workshop for health professionals from Mercosur countries on childhood exposures to POPs. In 2005, 2006 and 2007, the training module on POPs and children's health has been presented at several training events for health care providers (e.g. in Rome, Nairobi, Buenos Aires, Delhi).

The WHO Regional Office for Europe and IUPAC are jointly developing training materials to educate children about protecting themselves from the harmful effects of pesticides and to develop a safety culture for the future.

39. At the time of COP1 in May 2005, WHO organized jointly with IFCS and the Ministry of Uruguay, a side event on "POPs and Children" with the participation of children from a rural school and representatives from the governments of Argentina and Chile, NGOs and UNEP. A short video documentary in Spanish with subtitles in English was presented based on interview with the children which included their views and perceptions about POPs. This video may be downloaded from the IFCS web site (<http://www.who.int/ifcs/forums/four/video/en/index.html>).
40. An information pamphlet containing essential information for health-care providers was prepared for the same event and is available on request from WHO (see contact for children's environmental activities in **Annex 1**).

Annex 1

CONTACTS AT WHO HEADQUARTERS FOR FURTHER INFORMATION

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<p><u>Pesticide Residues in Food</u></p> <p>Angelika Tritscher Joint WHO Secretary to JECFA and JMPR Assessing and Managing Environmental Risks to Health International Programme for Chemical Safety Public Health and the Environment</p> <p>Tel: +41 22 791 3569 Fax: +41 22 791 4848 E-mail: tritschera@who.int</p>	<p><u>Update of CICAD on DDT and generic risk assessment model for Indoor Residual Spraying</u></p> <p>Lesley Onyon Assessing and Managing Environmental Risks to Health International Programme for Chemical Safety Public Health and the Environment</p> <p>Tel: +41 22 791 3548 Fax: +41 22 791 4848 E-mail: onyonl@who.int</p>
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Annex 2

WHO REGIONAL ENVIRONMENTAL HEALTH FOCAL POINTS

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Annex 3

Table of regional and country level projects concerning reducing reliance on DDT being completed or under consideration by the GEF
 (Summary data taken from GEFonline project database accessed 24 April 2007 (<http://www.gefonline.org/projectList.cfm>))

Country/region	Title	Implementing Agency	Executing Agency	Status	Abbreviated Objective
India/Asia & Pacifici	Reduction in Use of DDT by Enhancing the Capabilities through the Implementation of Integrated Vector Management	UNEP	WHO & Ministry of Health & Family Welfare, India	Not yet approved	The long-term development objective of the proposed project is to reduce the reliance on DDT while at the same time improving the control of vector borne diseases, through the promotion of appropriate vector control management practices and the strengthening of relevant country capacities for sustainable implementation of environmentally sound alternatives
Regional (Myanmar, Korea DPR, Indonesia, Papua New Guinea, Solomon Islands, Thailand, Vanuatu, Vietnam, Philippines)	Demonstrating and Scaling up Sustainable Alternatives to DDT, and Strengthening National Vector Control Capabilities in South Asia and Pacific	UNEP	WHO Regional Office for South East Asia and WHO Regional Office for Western Pacific - Ministries of Health of the participating countries	Not yet approved	The objective of the project is to sustain the withdrawal of the use of DDT without adversely impacting on vector borne disease burden. Countries in the South East Asia and Pacific regions are increasingly adopting the use of alternative interventions to DDT in the control of vector borne diseases (VBDs) such as malaria. Several countries have already withdrawn the use of DDT while others have significantly reduced reliance on the insecticide. Countries in the region are however increasingly faced with significant challenges in deploying and scaling up the use of the alternative interventions, and this is occurring at a time when several countries are experiencing resurgence of VBDs, particularly malaria.

Country/region	Title	Implementing Agency	Executing Agency	Status	Abbreviated Objective
India/Asia & Pacifici	Reduction in Use of DDT by Enhancing the Capabilities through the Implementation of Integrated Vector Management	UNEP	WHO & Ministry of Health & Family Welfare, India	Not yet approved	The long-term development objective of the proposed project is to reduce the reliance on DDT while at the same time improving the control of vector borne diseases, through the promotion of appropriate vector control management practices and the strengthening of relevant country capacities for sustainable implementation of environmentally sound alternatives
Regional (Myanmar, Korea DPR, Indonesia, Papua New Guinea, Solomon Islands, Thailand, Vanuatu, Vietnam, Philippines	Demonstrating and Scaling up Sustainable Alternatives to DDT, and Strengthening National Vector Control Capabilities in South Asia and Pacific	UNEP	WHO Regional Office for South East Asia and WHO Regional Office for Western Pacific - Ministries of Health of the participating countries	Not yet approved	The objective of the project is to sustain the withdrawal of the use of DDT without adversely impacting on vector borne disease burden. Countries in the South East Asia and Pacific regions are increasingly adopting the use of alternative interventions to DDT in the control of vector borne diseases (VBDs) such as malaria. Several countries have already withdrawn the use of DDT while others have significantly reduced reliance on the insecticide. Countries in the region are however increasingly faced with significant challenges in deploying and scaling up the use of the alternative interventions, and this is occurring at a time when several countries are experiencing resurgence of VBDs, particularly malaria.