

Overview of Outcomes

from POPs Awareness Raising
Workshop Working Groups

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Summary of the Results of the UNEP/IFCS Subregional Awareness Raising Workshops on POPs

Background

In response to a request to the Executive Director of the United Nations Environment Programme from the UNEP Governing Council, Decision 19/13C paragraph 13, to initiate immediate action on Persistent Organic Pollutants (POPs), UNEP Chemicals, in co-operation with IFCS, convened a series of eight subregional workshops to raise awareness of POPs issues in developing countries and countries with economies in transition. Participants were invited from governments, industry, public interest groups and intergovernmental organizations and some experts were invited from outside the region to assist in providing information. The workshops were designed to

- describe the nature and significance of the POPs problem including what is known about releases and the risks they pose,
- present recent regional and international policy developments relating to POPs and
- discuss the opportunities to address problems related to POPs at the national and regional levels, including efforts made in a number of countries to manage POPs.

Workshops were held in St Petersburg, Russian Federation; Bangkok, Thailand; Bamako, Mali; Cartagena, Colombia; Lusaka, Zambia; Iguazu Falls, Argentina; Kranjska Gora, Slovenia and Abu Dhabi, United Arab Emirates. Altogether 138 countries participated in the workshops (see attachment 1). All the necessary financial resources to hold these workshops were provided by the generous contributions from the governments of Canada, US, Norway, Sweden, Finland, Australia, Iceland and from the European Commission.

Working Group Sessions

In each workshop, except the first in St Petersburg, countries of the subregion met in working group sessions. For practical purposes two working groups were established at each workshop, one for the pesticide POPs and another for the industrial POPs and the contaminants. The working group sessions gave countries the opportunity to discuss problems and needs related to POPs issues in their region. The sessions dealt with issues related to what is known about exposure situations in countries, including sources and uses of POPs, monitoring data, special needs for research, etc, response strategies to reduce or eliminate releases at the national level and possibilities for bilateral, multilateral and regional co-operation.

For each session the group were given some questions for guidance (see working group reports). The countries elected a chair and a rapporteur among themselves. Experts from outside the regions participated in the working groups as resource persons. From each session the groups prepared a report that was presented and discussed in plenary. The final working group report reflected the discussions of the group as well as issues raised during the plenary presentation. The working group reports are included in the proceedings from each workshop and in this report.

Common Themes from the Working Groups

Sources and releases

All regions noted the need for a better understanding of the sources and releases of POPs in the individual countries of the region as well as at the subregional or regional level. There is a genuine lack of knowledge on the sources and releases of all POPs. In some regions, e.g. Central and Eastern Europe, national and regional monitoring programmes do exist, but data are limited due to resource restraints. Although some data provided indicates rather high exposures the overall picture is one of scarce data on sources and releases, particularly on industrial chemicals and contaminants.

In many countries and regions there is a severe shortage of adequately equipped laboratories, as well as of sufficiently trained personnel. Many countries asked for guidance on standard analytical methods as this is a limiting factor for establishing baseline data for POPs in humans and wildlife. There is need for technical and financial assistance as well as training courses e.g. on a regional basis.

In most regions abandoned stockpiles of old chemicals including POPs is an important and difficult issue. Some countries have established inventories of pesticide stockpiles, with the support of FAO, and destruction or disposal measures, including exportation to industrialised countries with proper incineration facilities, have been taken in a few cases. The chemicals in abandoned stockpiles are often hard to identify, due to inadequate storage conditions, leakage and loss of labelling. The twelve POPs constitute an unknown fraction of the stockpiles. In some countries stockpile inventory programs are underway or being planned, but for many the location of old stockpiles and the quantities of chemicals in them are largely unknown. Sharing expertise and experience between countries could save resources and facilitate the establishment of basic information on remaining stocks.

There are still stocks of PCB in electrical equipment. In all regions there is a lack of adequate destruction capacity for POPs. The majority of countries are aware of the problems of stockpiles of old POPs and their disposal and consider it a high priority issue. More information was requested on non-incineration techniques. Most countries have not yet been able to tackle the issue on a systematic basis.

In many regions the infrastructure for enforcement is weak, and border controls maybe infrequent or deficient. Illegal trading of POPs across boundaries occurs and could be a substantial problem, particularly when there are differences in legislation on POPs between neighboring countries of the same region. Measures may be needed at national and regional levels to handle the problem of illegal trade.

National strategies

The working group discussions clearly indicate the need for creating or strengthening national coordinating mechanisms e.g. intersectoral and/or interministerial committees on POPs. Such committees should contain all relevant ministries, agencies and other government organisations involved with chemicals. Many countries recommend

including non-governmental stakeholders in these committees, while some would prefer consulting with such groups on an ad hoc basis. An important step in taking action against POPs is the clear designation of responsibilities between the appropriate ministries.

National profiles on chemicals management has been proposed by the IFCS as a means of creating the necessary overview of how chemicals are manufactured, used and disposed of in a country. In the workshops reference was frequently made to the establishment of such profiles as a basis for future co-operation between different organisations and institutions within a country. Based on a national profile a national action plan for POPs could be established, listing priorities, resources, responsibilities and time schedules. Several countries indicated their interest in performing national case studies on POPs and looked towards UNEP and country donors for support.

Developing national inventories, particularly for PCBs, was seen as an important action, where there could also be some possibilities for regional co-operation. Linked to this issue was the destruction capacity for POPs. Countries were waiting for the outcome of the ongoing UNEP study to identify destruction capacities for PCB worldwide. There could also be possibilities for regional or subregional solutions.

All workshops stressed the need to nominate UNEP national focal points for POPs, as well as focal points for IFCS, and to make sure that there was sufficient co-ordination between them and other focal points, e.g. PIC focal points. Whenever possible these focal points should be the same, to reduce overlap or gaps.

There was a clearly expressed need for more information on alternatives, in order to proceed with phase-out of some currently used POPs. The assistance of UNEP for national case studies on POPs management was welcomed. Countries indicated that the ongoing UNEP project to develop guidance for selecting replacements for the pesticide POPs would be of great help.

Regional strategies

The need to rely on existing structures for regional co-operation and to avoid creating new entities came out consistently in the discussion on response strategies at the regional or subregional level. Existing organisations might differ in mandate and scope between regions, but in all regions there were structures that could be used for discussing POPs issues.

Other issues mentioned for regional and subregional co-operation were: increased information exchange through established networks, identification of various regional resources e.g. laboratories for the analysis of POPs, educational institutions including training facilities for technical staff, experts on POPs, disposal options available, destruction facilities etc. Regional co-operation was seen as a tool to facilitate and strengthen national measures against illegal trade in POPs.

Some regions agreed to hold further regional or subregional workshops in the near future, subject to the availability of funds, to discuss, *inter alia*, the extent of the problem with POPs in the particular region, identify problems faced by countries in

addressing the POPs issues, develop consensus on regional co-operation, share information on destruction technologies, exchange scientific information, exchange data from monitoring programmes etc. In some regions countries agreed to take the lead on particular issues related to pesticide POPs, e.g. risks linked to the storage of pesticides, monitoring programmes to identify hot spots and pesticides in animal feed.

The Internet was seen as an efficient means of communication, although access to the Internet is limited in some countries due to lack of resources and deficiencies in telecommunication infrastructures. It is therefore important to keep distributing documents by mail and fax. International organisations and donor countries could provide assistance.

Specific Issues for Pesticides

For the nine pesticide POPs most countries reported that, in general, their use has been banned or discontinued, with the exception of DDT for vector control. Some countries have recently taken action to reduce significantly the use of or to phase out DDT for malaria control. Other countries are looking for guidance on alternatives to DDT. Experience with various chemical and non-chemical alternatives is limited and needs to be better reported.

There was awareness in several regions, supported by monitoring and other data, that the continued use of POPs could cause health or environmental problems in the country of use. Limited use of pesticide POPs for termite protection still occurs. The working groups expressed a strong need for more information on alternatives, particularly practical advice for specific applications.

Requests for Further Assistance from Intergovernmental Organisations, International and Regional Financing Institutions, Donor Countries and Others.

Countries expressed concern that their financial and personal resources were inadequate to manage POPs properly. The POPs issue has to compete with other pressing problems on the national agenda. There was a strong message from the working groups directed towards intergovernmental organisations, donor countries and global and regional financing institutions to assist countries in the necessary capacity building for the environmentally sound management of POPs. Case studies in individual countries might give a clearer picture of the situation in regions where there is a genuine lack of basic information. Establishment of national inventories of stockpiles was an area of high priority. Some countries expressed a need for assistance for carrying out projects on individual POPs. Approaching the GEF with applications that relate to pollution of the marine environment was suggested as a possibility in some regions.

Possible Immediate, Medium-term and Long-term Follow up Actions

A number of proposals for immediate actions emerged from the working groups, e.g. countries to prepare project plans for case studies and to prepare applications for

support from UNEP and GEF, some regions to start planning for a second regional or subregional follow-up workshop, regions to establish networks, through the Internet and otherwise. On an intermediate to long-term basis discussions were to begin on regional centres in some regions. On a long-term basis countries need to establish the necessary legal and institutional infrastructure to be able to deal effectively with POPs.

Have the Workshops Fulfilled their Purpose of Awareness Raising?

From the working group reports it is obvious that the awareness raising workshops have sensitised countries to the POPs issue and even resulted in the initiation of actions at both national and regional levels. In the process, new national focal points have been established. Most countries now have personnel who are aware of the global POPs issues and who can facilitate their countries' participation in the negotiations. Some countries have taken legal action on POPs recently, in one case concurrently with the workshop in the subregion. New regional activities have started as a result of the workshops. Regional networks have been established or strengthened. From the workshops there emerged a clear list of needs and priorities for countries and regions. Regions are planning new workshops to support their POPs activities. Many of the participants of the subregional workshops will take part in the global negotiations on POPs. The workshops have also offered countries in a subregion a meeting ground to discuss common chemicals issues in a positive and fruitful atmosphere.

WORKING GROUP REPORTS

**St Petersburg,
Russian Federation
1-4 July 1997**

FINAL REPORT

I. ORGANISATIONAL MATTERS

UNEP Chemicals (IRPTC) in collaboration with the State Committee for Environment Protection of the Russian Federation and its Centre for International Projects (CIP), Moscow, held the Subregional Meeting on Identification and Assessment of Releases of Persistent Organic Pollutants in St.Petersburg, Russian Federation, from 1-4 July 1997.

Representatives from the following countries responsible for environment and public health attended the Meeting: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan. As lecturers the representatives of the following international and regional organizations were invited: UNEP Chemicals (IRPTC), UN ECE, CEFIC, Greenpeace International. The presentations were also made by representatives from a number of national agencies, namely: Environment Canada, US Environment Protection Agency, Swedish National Chemical Inspectorate (KEMI), Federal Environmental Protection Agency of Germany and the Bavarian Institute of Waste Research. A list of participants is attached (Annex 1).

The workshop is considered as a logical continuation of collaboration between UNEP Chemicals (IRPTC) and New Independent States aimed at strengthening their national POPs management systems.

The aim of the St.Petersburg meeting was to discuss the current status of the problem and to initiate national inventories of POPs emissions, discharges and losses. A number of related issues were discussed at the Meeting including POPs containing pesticides, dioxin/furan emissions and wastes.

The meeting was opened by Mr G.Shkolenok, UNEP Chemicals. He welcomed the participants, briefly described the goals and tasks of the meeting and wished everybody a successful work. The meeting was also welcomed by Ms M.Yu.Klimova, the Head of the Unit of the Centre for International Projects, Mr A.N.Petrov, Director of the Institute of Toxicology (St.Petersburg). On behalf of UN ECE the participants were greeted by Mr.L.Nordberg, and on behalf of Intergovernmental Forum on Chemical Safety - by Mr.J.Buccini.

Following the presentation of the participants the Chairman - Mr.B.Kurlyandsky (Russia) - and the Vice-Chairman - J.Plavinskis (Latvia) were elected. Ms T.Petrova (Uzbekistan) was elected the reporter. The participants adopted the proposed agenda (Annex 2).

2. PRESENTATIONS BY IRPTC AND REPRESENTATIVES OF THE REPUBLICS

In accordance with the programme (Annex 2) the lectures and presentations of lecturers of the region and outside the region were made and discussed.

Subsequently, in their presentations, representatives of the Republics addressed various issues concerning POPs discharges and emissions in their countries. A brief summary of the presentations is given below.

As stated by the representatives of **Armenia**, the priorities in the country are the POPs containing pesticides as well as drinking water pollution by the persistent organic compounds. There is an urgent need to identify hazardous chemicals and the places of their storage. Due to the difficult economic situation the assistance of the developed countries in the field of methodologies transfer is deeply required.

The representative of **Azerbaijan** informed the meeting on the tasks facing the country in relation of POPs, including the establishing of the national register on POPs. There is lack of information in the country on pollution sources and pollutants from the neighbouring states. In relation to POPs the joint activities of all the countries in the region are required. Ecological situation in the country is extremely unfavourable due to the air, soil, water pollution, including the pollution of the Caspian Sea. The problem of toxic wastes management is also very acute.

As reported by the representative of **Belarus**, the List of Chemical and Biological Means of Plant Protection Approved for Use in Agriculture for 1994-1998 has been adopted. Persistent organic chemicals such as DDT, hexachlorocyclohexane, aldrin and some others were excluded from the list and their use was banned. Also use of such compounds as gamma HCH, sevin, phenylmercuracetate was banned and their stocks were buried at special grounds. The production and use of dioxins, biphenyls and furans are prohibited in the country. Nevertheless, environment pollution by these compounds is possible in the vicinity of such large industrial enterprises as Polimir plant in Novopolotsk, Chimvolokno Amalgamation in Mogilev, Azot Amalgamation in Grodno, and enterprises in the towns of Vileika, Lida and Gomel where these compounds may be formed as technological by-products. The need of awareness raising in the country in relation to POPs was also stressed.

The representative of **Georgia** reported that in the country the use of chemicals is decreasing. The system of their control and registration does not work, their testing has been factually stopped, and there is no registry of chemicals. In the majority of cases there is no any possibility to assess and/or to stop the harmful exposure. Till nowadays the problem of dioxins and furans monitoring has not been discussed. To solve the problem it is very important to use the experience of other countries and international organizations. Domestic problems of the country include lack of inter-agency co-ordination and huge volumes of illegally imported chemicals.

As stated by the representative of **Kazakhstan**, the pesticide environmental load has been lowered. Factually there is a lack of environmental POPs monitoring. Emissions from stationary sources has also been decreased. The law on wastes is being worked out, it is to solve many POPs related issues. Nowadays, the main needs of the country include environmental monitoring, development of analytical control services, and control of imported wastes.

The representative of **Kyrgyzstan** informed the meeting of the problem of new technologies transfer which faces the country. In the republic there is a lack of qualified experts to assess the introduction of new technologies. That was revealed during the construction of a new chemical plant. The absence of analytical base and lack of specialists hamper the solution of the POPs problem. There are no grounds for

hazardous chemical wastes disposal, at the same time uncontrolled import of hazardous wastes to the country occurs.

As reported by the representative of **Lithuania**, the meeting is very useful, in the future it is essential to develop information exchange on POPs toxicity. The data received at the meeting will be used in the country, and materials of the meeting will be disseminated among the interested agencies.

The representative of the **Republic of Moldova** informed the meeting that there is no dioxins/furans monitoring in the country. DDT is prohibited, aldrin, dieldrin, endrin, chlordane, hexachlorobenzene, mirex, toxaphene, heptachlor and some other persistent compounds are not used. Despite the progress there is a number of serious problems which limit the possible activities in this field. Among the priorities one should mention training of personnel, improving of the information system and public awareness, development of the wastes management programme and development of the national programme on chemical safety. The Republic will be grateful for any assistance provided by the international organizations related to fulfilment of the planned activities on POPs management.

The representative of the **Russian Federation** informed of the problem of the various pollutants exposure at the country population. As for POPs containing pesticides, different control measures were taken from their restriction (toxaphene) to their total prohibition (aldrin, dieldrin, endrin, chlordane, heptachlor). Nowadays the production and use of 78 pesticides are prohibited. The situation with polychlorodibenzodioxines is being complicated due to the absence of systemic monitoring. The main activities to prevent the unfavourable exposure to dioxins are the following:

- careful identification of all potential primary sources of pollution;
- provision of pollution monitoring at the most dangerous sites;
- activities to eliminate the secondary sources of pollution;
- identification of prior sources of pollution and development of regional coordinative plans on restriction and elimination of the most dangerous sources;
- activities within the frames of the international conventions;
- wide informative and instructive measures, development of mechanisms for the exchange of information on POPs.

As stated by the representative of **Tajikistan** the country faces a series of problems. Due to the decrease in industrial activities, POPs emissions have been lowered. Monitoring of POPs concentrations is hampered by the lack of means of analytical control and poor technical support to the state monitoring service centres. It is necessary to develop the registration of pollution sources in the country. One of the major POPs sources is the use of pesticides in agriculture, not long ago the pesticides residue levels reached 10-13%. However, prohibition of the aerial application of pesticides and rare treatment of agricultural crops since 1994 have resulted in sharp decrease of pesticides environmental load. Nowadays the problem of analytical control is extremely important because of lack of necessary equipment and materials.

The representative of **Turkmenistan** stressed that the problems related to POPs which face the country are similar to those in the other states of the region. One

of them is lack of information on the issue. The most serious problem in the country is technical support to POPs analytical control, since no related issue can be solved without special monitoring means. The representatives of the developed countries were asked to prove possible technical assistance to the country.

As it was mentioned by the representative of **Uzbekistan** the country is to identify the prior pollution sources according to their hazard degree. Nowadays there is no possibility to conduct thorough toxicological assessment of new pesticides which are being registered in the country only on the base of documents provided by suppliers. The appropriate environmental POPs monitoring and pollution sources control have not been established in the country, appropriate equipment and experts are absent. Since its establishment in 1977 the State Environmental Monitoring Service has been registering the residue levels of chlororganic pesticides. The POPs problem is the global problem, it requires the appropriate means for its solution and mutual efforts of all the countries in the region.

The representative of the **Ukraine** informed the participants of the POPs environmental load in the country (kg per hectare). Nowadays the most urgent problem is the storage of significant pesticides quantities with expired dates or banned for use. The conditions of their storage in most cases do not correspond to the relevant requirements. The above-mentioned as well as prolonged storage periods, poor quality of containers and packages resulted in the formation of various chemical compositions, and the formation of new compounds with unknown characteristics can not be excluded. Besides, there is a real possibility of illegal use of the banned pesticides, several such cases were reported. In the country there is an urgent need to develop and implement the organizational, technical, technological measures to dispose and eliminate the unwanted and banned pesticides stocks. The first stage of this work consists of comprehensive registration, including chemicals identification, sorting and repackaging of useless pesticides. In the Ukraine the draft programme of registration of useless pesticides has been developed. However difficulties in the economic situation hamper the commencement of the programme.

3. GENERAL DISCUSSION

An exchange of views on current problems with regard to POPs took place. The discussion touches upon the following issues: the problem of harmonization, transfer of technologies on wastes disposal, problem concerning the co-ordination of efforts by industry, government agencies and public. Various general deficiencies and matters of concern were identified.

The common problems which face the countries, are the lack of information, absence of analytical control, lack of funds and skilled personnel, as well as the problem of interagency co-ordination.

All representatives showed keen interest in co-operating with UNEP/Chemicals (IRPTC), other international and national programmes and agencies as well as with non-governmental organizations. Many participants were of the opinion that the UNEP/Chemicals (IRPTC) were of great importance and activities in the region and deserved continuation.

4. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

1. The participants stressed the urgency of the topic for their countries and timeliness of the Meeting as well as the key role of UNEP in its initiation.
2. The high level of lectures and reports were noted as well as the usefulness of the discussions.
3. During the discussions both general and specific problems related to POPs in the countries of the region were identified.
4. In most countries the strategy and workplan adopted by the government concerning the POPs problem are absent.
5. In many countries the POPs global pathways, origin and transfer are not identified.
6. In many countries there are no POPs monitoring and risk assessment.
7. Some participants noted the absence of the analytical control service in their countries, other pointed out that the available analytical methods were extremely expensive. In relation to this, it is necessary to search for other ways of the problem solution.
8. Practically all the countries mentioned the absence of information exchange on POPs in the region.
9. The participants expressed their concern that introduction or transfer of new technologies on, so called, favourable terms very often posed threat to health of a man or to the environment.
10. It was stressed that many countries had certain legislative norms regulating handling of chemicals in all the use categories. However, lack of co-ordination among ministries and agencies poses a problem for the effective management of the process, and, in particular, POPs.
11. There is no co-ordination between the government and scientific centres on POPs alternatives development, assessment and production.
12. Some countries noted that it was necessary to assess POPs pollution of the environment with the aim of the development of the strategy and mechanisms to reduce and/or eliminate POPs discharges, spills and wastes.
13. It was stressed that the successful solution of the POPs problem was impossible without close co-operation among the countries of the region.
14. Many participants noted that the decisive factor of the POPs problem solution was to render the financial and technical support to the countries.

RECOMMENDATIONS

1. To bring to the attention of the Governments of the participating countries the conclusions and recommendations of the Meeting.
2. To recommend to the Governments to develop the national strategy and action plan aimed at the POPs problem solution.
3. To recommend to the Governments to strengthen the co-operation in POPs problem including the involvement of intergovernmental mechanisms.
4. To develop the information exchange on POPs risk assessment.
5. To establish and/or strengthen the analytical control service for POPs.

6. To develop monitoring of the POPs pollution sources and POPs movements with the aim of their risk assessment, to establish national registers of POPs discharges.
7. The States should take measures to study technologies, to strengthen control on introduction (transfer) of new technologies concerning POPs alternatives.
8. To draw attention of the international organizations to the POPs problem existing in the countries with economies in transition with the aim of providing the countries with financial and technical assistance to solve the problem.
9. To accelerate the activities on the governmental level in the region to prepare an international document on POPs.

Bangkok, Thailand
25-28 November 1997

Working Group (WG) Reports

INDUSTRIAL CHEMICALS AND CONTAMINANTS

Session 1

1. The WG comprised representatives from 16 countries, namely, Australia, Bangladesh, Bhutan, India, Indonesia, Iran, Korea, Laos, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Singapore, Thailand and Vietnam. Bangladesh chaired the WG and Singapore was the rapporteur of the first session and Australia was rapporteur the second and third sessions.

2. -The WG discussed the states of POPS with respect to four POPs:

- (a) PCBs;
- (b) dioxins;
- (c) furans; and
- (d) hexachlorobenzene (HCB), as a contaminant.

3. PCBs

(a) Most countries in the Asia-Pacific region have banned the import of PCBs. PCB is not produced in the region.

(b) However, in practically all countries, PCB is still used in transformers, capacitors, and other electrical equipment and is the major source of PCBs in these countries. Existing stocks of PCBs within electrical equipment are left alone until the equipment is decommissioned. The waste PCB and contaminated equipment are then either kept in storage or exported overseas for incineration.

(c) Countries in the WG generally do not have a complete inventory of PCB equipment.

4. Dioxins and Furans

(a) The WG noted that the main source of dioxins and furans are releases from incineration of municipal wastes. Other sources such as use of leaded petrol, cement industries, paper and pulp industries, etc., need to be investigated further.

(b) Most countries do not have a comprehensive system in place to monitor the release of dioxins and furans from incineration.

(c) In the case of Vietnam, substantial quantities of dioxin contamination were reported as a result of the use of Agent orange[®] in the war.

(d) Most countries have introduced unleaded petrol and it is in varying stages of replacing leaded petrol use.

5. HCB

The WG generally did not have information about the extent of HCB problem in their countries.

6. Conclusions

(a) The WG recognized that the establishment of a comprehensive inventory of POPs is the first step in addressing the POP issue.

(b) The WG also noted that the sources of POPs in developing countries in the region may not necessarily be the same as in developed countries. There is perhaps need for a study on the sources of POPs in this region. Vietnam had suggested that a study be carried out in Vietnam.

(c) The WG requests UNEP to assist countries in the region in the following aspects:

- establish an inventory of POPs;
- facilitate capacity and institution building;
- monitor releases of POPs, i.e., dioxins and furans;
- provide practical guidance, with existing levels of release in other countries for comparison and reference;
- look into/investigate low-cost screening tests, by examining existing testing systems in countries, such as Canada; and
- provide training, especially at the grassroots-level to raise the awareness of the problem in developing countries.

(d) UNEP reported that it was compiling a compendium of incineration capacities of hazardous wastes incinerators worldwide, and it will issue guidelines for dioxins and furans. It will also hold regional workshops to help countries in the Asia-Pacific region understand/manage POPs more effectively.

Session 2

What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems?

7. The WG requested that UNEP provide assistance to countries in the region to help them:

- develop national case studies on POPs problems;
- identify risks and possible alternatives to POPs;
- identify better management practices so as to avoid fetal exposure to estrogenic POPs; and
- develop inventories on PCB equipment;

8. On the development of inventories of dioxins and furan emissions, the WG noted that incineration is not a priority issue for all countries in the region. Some countries have medical, municipal and hazardous waste incinerators whereas others do not. The Working Group concluded that such emissions inventories would be a priority for those countries with incinerators and for others it will not. However, the Working Group did acknowledge that there were other possible sources of dioxins in the region such as leaded fuel and open burning and that countries should take these aspects in to account in deciding on whether dioxin inventories should be a priority for them. Given the difficulties being experienced by developed countries in deciding how best to

develop dioxin inventories, the WG requested guidance from UNEP on the best way of developing such inventories.

9. To encourage the exchange of information on possible actions, the WG strongly supported the setting up of networks within countries and between countries of the region in the lead up to the INC negotiations.

10. The Working Group requested the UNEP provide a short summary on how to develop POPs inventories, perhaps in a checklist format.

11. The Working Group discussed the issue of destruction technologies for POPs, including the newer non-incineration based technologies that are now being commercialized in several countries. The Working Group recommended that UNEP develop a case study on the possible means of destruction of POPs in the region. This could examine the options for funding such destruction activities including the possible use of the Global Environment Fund and bilateral or multilateral aid.

What are the possible ways and means to implement actions identified under question 1 above?

12. The Working Group recommends that countries first address technical issues before tackling political issues.

13. To this end, the Working Group recommended that all countries be encouraged to develop risk assessments so as to determine which the issues and actions they believe are important and which they need to address. Concern was expressed on short amount of time available to undertake such work before the INC negotiations are expected to commence and on the availability of necessary capacity within countries to undertake such assessments.

14. The Working Group also expressed concern over the adequacy of present controls over movements of POPs between countries, particularly the movement of equipment that may contain POPs such as PCBs.

What steps do countries need to undertake to prepare national positions for the upcoming POPs convention negotiations?

15. As a first step to prepare for the negotiations and using POPs as case studies, the Working Group recommended that countries use the IFCS National Profiles process to develop national positions in preparation for the POPs negotiations.

16. The Working Group noted the need for data, background, information sharing, capacity building.

17. The Working Group requested that UNEP circulate a skeletal national profile, perhaps in the form of a check list, as an aid for countries in the region to develop their countries= status report.

Contributions from the Plenary

18. As it is unrealistic to get all countries to complete comprehensive profiles by July 1998, the plenary agreed that each country would gather basic facts and figures before July 1998. UNEP will help facilitate the development of national profiles. Also, the plenary agreed that irrespective of international POPs processes and the need to develop national positions for June 1998, countries should proceed to take national actions on POPs.

Session 3

19. At the meeting of the Working Group, the representative of the UN/ECE informed participants that ECE's sister organisation ESCAP had requested time to convey an apology for the absence of ESCAP during most of this workshop. ESCAP had indicated that it would be pleased to offer its intergovernmental network in the region for the support of actions on POPs, recognizing that it did not have the same experience and profile as the ECE. ESCAP also had indicated that it would be pleased to be assisted by the ECE in developing co-operation in the region.

20. The representative of ECE would inform ESCAP about the outcomes of this workshop and propose a way forward. He also offered his assistance, subject to available resources, for a possible future awareness-raising event directed to decision-makers in the ESCAP region, for which the experience of ECE might be useful.

How could countries work together to raise awareness throughout the region of POPs problems?

21. The Working Group agreed on the following measures:

- (a) By holding a further combined technical/high level workshop before the regional POPs negotiations start.
- (b) By co-operating within the scope of the Basel Convention and national policies and regulations on the destruction of POPs in the region.
- (c) Through capacity building, bilateral and multilateral training.
- (d) By making available countries information on their POPs activities through the UNEP web site.
- (e) By encouraging the involvement of relevant industry groups, for example, this would be important in the case of dioxin emissions and leaded petrol.

What regional networks could be employed to exchange information and expertise about POPs to a number of countries to the region?

22. The Working Group identified a range of organizations and their networks should be employed to exchange information:

ASEAN
SPREP
ESCAP
ICCA
Non-government organizations such as Greenpeace International
The Global Crop Protection Network
Responsible Care networks

What are some of the POPs-identified problems that are common to a number of countries of the region?

23. The Working Group identified the following common problems:

- (a) Managing stockpiles of obsolete POPs (including DDT, other pesticides and PCBs).
- (b) Emissions of dioxins through point and non-point sources, for example, industrial sources, biomedical waste incineration of biomedical waste, open burning and municipal solid waste incineration and pulp and paper manufacture.
- (c) Preparation of national POPs inventories.
- (d) Characterizing risks of POPs (from soil contamination, POPs emissions and POPs stockpiles).
- (e) Undertaking national and regional collections of obsolete POPs.

Of the problems identified, which could be addressed more efficiently through regional co-operation?

24. The Working Group agreed that information sharing on national policies and regulations on the following activities could be addressed more efficiently through regional co-operation:

- biomedical waste management
- leaded petrol
- paper and pulp production
- POPs assessment, monitoring and clean-up

How might countries of the region work together more co-operatively to address POPs related problems?

25. The Working Group recognized the direction from UNEP that activities related to POPs be cost effective. Given this, it recommended the following activities to enhance regional co-operation:

- (a) Establish an Internet discussion group. The Working Group encouraged either Australia or New Zealand to act as moderator of the electronic discussion group. These countries will discuss further which country is best placed to act as moderator of the discussion group and co-ordinate the start of the discussion group with UNEP.
- (b) Convene a regional workshop before the POPs negotiations start. The task of the workshop would be to:

- (c) Consider the extent of the global and regional POPs problem.
- (d) Clearly identify the POPs problems perceived and faced by countries in the region.
- (e) Develop consensus on regional cooperation.
- (f) Share information on POPs destruction technologies.
- (g) Seek and discuss a status report on POPs by WHO.
- (h) Further help governments in the region to prepare for the POPs negotiations.

The workshop could involve both policy and technical people, perhaps in a back to back meeting format and customs officials should be encouraged to attend.

The Working Group requested UNEP to consider ways of obtaining funding for the Workshop.

26. The Working Group recommended that member countries examine the potential for promoting pilot POPs treatment activities in the region, using alternative treatment technologies and, employing GEF funding. UNEP advised the Working Group that there are various approaches for taking forward such an initiative. First, it may be pursued by individual countries although UNEP would be pleased to be a partner in any submission made to the GEF. If a broader proposal is developed, involving more than one country, there could be a larger role for UNEP. In any case, UNEP can assist countries in forwarding proposals to the GEF. The Working Group noted advice from UNEP that any proposal for funding under the GEF should be strongly linked to Regional Seas= Agreements. Contamination and injury of marine organisms by DDT, other pesticides and PCBs and the potential of such contamination to adversely impact on trade in marine products (such as fish) may be helpful issues to address in any GEF proposal. Finally, the Working Group noted recent correspondence which sought suggestions for funding of projects, related to implementation of UNCED Agenda 21, Chapter 19.

27. The WG concluded that priority should be given to the protection of the fetus from POPs, particularly those POPs which act as endocrine disruptors, because the fetus is uniquely sensitive.

Pesticides

Session 1

28. **Present:** Delegates from Australia, Bhutan, Brunei, Cambodia, China, India, Indonesia, Iran, Japan, Korea (Republic of), Laos, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Sweden, Thailand and Vietnam. Representatives of Greenpeace, Commweal, UNEP, SPREP and UN/ECE.

Chair: Mr J. Keerthiratne, Sri Lanka
Rapporteur: Mr S. Harrison, Australia

29. **Situation Report.** Delegates of countries present reported on the situation with respect to the presence, use and management of the nine POPs pesticides in their

countries. It was noted that this was for the purpose of defining issues only, and that countries would have the opportunity of providing definitive information in their responses to the detailed UNEP POPs questionnaire currently with their governments.

30. Most countries have banned most uses of POPs pesticides. Uses that were not banned tended to be either minor agricultural uses or the use of DDT for malaria control. Two or possibly three have the capacity to manufacture one or more of the POPs pesticides.

31. **Issues Identified.** Both during reports and in subsequent discussion, delegates identified a number of issues of importance in the Region. These are summarised below.

32. **Illegal Import/Use.** Many countries reported problems with the illegal import and use of banned POPs pesticides. Particular hazards arose from farmers formulating and mixing illegal chemicals.

33. **Enforcement/Compliance.** A number of countries reported problems with an inadequate enforcement and compliance system, making it difficult to enforce POPs bans and also restrictions on use. Specific issues identified were the need for an effective legal structure, such as registration and control of use legislation, and there was a suggestion that common framework legislation be circulated as a potential model for developing countries. The other critical issue was having the resources, both financial and human, to effectively enforce bans.

34. **Capacity Building.** The need for assistance for capacity building was identified in respect of national chemical management infrastructure. A particular issue identified was the need to build intersectoral cooperation between different authorities/ministries/departments within countries with roles in the management of chemicals.

35. **Monitoring.** The lack of monitoring programs and data was an issue in most countries. This included monitoring of pesticide use, of environmental residues and of residues in agricultural produce. A particular issue was the cost and expertise needed to maintain chemical testing programs. Another issue raised was the comparability and reliability of results, as well as the standardisation of methods of analysis.

36. **Alternatives.** The finding of suitable alternatives, including non-chemical and biological alternatives as well IPM approaches, was identified as an issue by a number of countries, particularly those with continuing approved uses of POPs pesticides. The availability of not only effective but also cost-effective alternatives is an issue, especially in developing countries. The need for assistance in finding alternatives was identified, particularly in respect of research into the viability of proposed alternatives under local conditions.

37. **Stockpiles.** Stockpiles of obsolete chemicals was a significant issue in most countries. The need to identify stockpiles of POPs pesticides, especially those remaining with farmers, retailers and importers was an issue, as was the collection and transport to a central point. Safe storage was an issue, particularly with stockpiles

which have not been centralised. Safe disposal of stockpiles of obsolete chemicals was a significant issue in a number of countries, as was remediation of contaminated sites.

38. **Awareness Raising.** The need to raise awareness of POPs issues, particularly among decision makers, was identified as an issue in a number of countries. There was a concrete proposal that national awareness raising workshops be held in developing countries, targeted at decision makers and policy influencers, with technical and financial support from UNEP and/or developed countries. Other suggestions include training and media/information campaigns.

39. **Community Access to Information.** The need for groups outside government to be kept informed of POPs pesticide issues was raised, particularly in terms of assisting governments in dealing with POPs pesticide problems. This includes the establishment of a publicly accessible databank.

Session 2

40. **National Actions and Strategies.** The topic of discussion was possible actions and strategies that nations could put in place now to address relevant POPs pesticide issues, including preparation for the forthcoming negotiations on the proposed international legally binding instrument. The discussion was wide-ranging with suggestions from most of the delegates present.

41. From the discussion emerged a picture of a stepwise national process which a nation could follow. A number of delegates referred to the process followed for Ozone Depleting Substances (ODS) and suggested this was a tried and effective model, and many elements of the ODS process will be common with what is mapped out below. Elements are not necessarily sequential and will not apply to all countries.

- Nominate the UNEP POPs focal point.
- Set up national inter-ministerial coordination mechanism (there may already be one established for chemicals in general)
- Identify domestic experts in POPs issues
- Collect basic information on the scope of the problem (the UNEP questionnaire is too detailed, and full inventories may initially take too much time and resources)
- Meet with stakeholders including industry and public interest groups (in some nations, these may be part of the government established committee)
- Training of human resources by outside experts in POPs
- Development of a National Action Plan
- slowly raise awareness
- review available information
- initiate case studies
- undertake a review of the literature on POPs problems and solutions
- initiate the establishment of inventories for POPs releases and stocks
- identify alternatives to remaining POPs uses
- identify the domestic infrastructure able to implement actions
- develop a program of actions
- Develop proposals for assistance with identified problems

- Develop national position for the forthcoming negotiations

42. **Issues.** Delegates raised a number of specific issues of concern in addition to the above process.

43. **Multinational Chemical Companies.** Chemical companies can in many countries be the most influential stakeholder in chemical control policy. These companies need to give their support to the POPs control process and cooperate with government activities for this process to succeed.

44. **Funding.** Assistance for developing countries was raised by many delegates, and three proposals were put forward:

Fund. A fund should be established to assist developing countries in dealing with POPs problems.

Travel to INC. Assistance needs to be made available to enable delegates from small or developing countries to attend the International Negotiating Committee meetings.

International Legally Binding Instrument Provisions. The proposed international legally binding instrument needs to include provisions for the support of developing countries in dealing with POPs problems.

45. **Inventories.** Delegates suggested that it was more important to assemble basic information first rather than waiting for full inventories, so that the extent of the problem could be assessed. It was suggested that government figures on POPs be verified with all government and non-government stakeholders to ensure completeness. Training was needed on the technical aspects of how to undertake inventories of releases and stockpiles, and standard definitions and inventory formats needed to be put in place.

46. **Implementation of Proposed International Legally Binding Instrument.** Many delegates pointed out that they may not be able to implement all agreed measures on POPs arising from the proposed international legally binding instrument at once. Delegates proposed that some prioritisation of POPs problems occur, and that the proposed international legally binding instrument have a staged implementation and a timetable to achieve reductions/phaseouts.

47. **Developing Countries.** Delegates pointed out that this is going to be a massive, complex task overall for developing countries. Developing countries are going to need financial and technical assistance to ensure the task is successfully completed.

48. **Possible Regional Cooperation to Manage POPs Pesticides.** The topic of discussion was possible regional cooperation in managing POPs pesticide issues. The discussion was wide-ranging with suggestions from most of the delegates present. A number of opportunities and issues for regional and sub-regional cooperation were raised and are described below.

49. **National Focal Points.** The basic medium of information exchange and coordination is through the designated National Focal Points. It was noted that many

nations were yet to nominate focal points on POPs and it was suggested that UNEP set a deadline to encourage responses. Many countries reported difficulties with interagency coordination within nations, and it was suggested that nations make an effort to establish interagency coordination mechanisms where these did not already exist. UNEP is also encouraged to make regular contact with the National Focal Points of developing countries, both to promote involvement and awareness and to offer assistance and guidance, particularly where countries are contemplating organising National Workshops.

50. Information Exchange through the Internet. The Internet offers an excellent means of exchanging information. UNEP has established a POPs website, which includes an area for Asia/Pacific case studies and other material, and nations are encouraged to submit material for inclusion or to provide their own chemicals Internet addresses to which the POPs website could point. The Global Information Network on Chemical Safety (GINC) established by Japan could also offer an opportunity for exchange for information via its website. Members of SARCEP and ASNEM indicated that these bodies will investigate contributing to or using these websites. Additionally, it was suggested that the E-mail addresses of Focal Points be published to facilitate the exchange of information.

51. Regional and Sub-Regional Fora. ESCAP was suggested as one regional forum which may have a role to play in cooperation on POPs issues. Sub-regional fora which were proposed included:

- South Asian Region Environment Program (SARCEP)
- Asian Network for Environmental Monitoring (ASNEM)
- Association of South East Asian Nations (ASEAN) Working Group on the Transboundary Movement of Hazardous Waste
- South Pacific Region Environmental Program (SPREP)
- North East Asia Region Environment Program (NEAREP).

52. Matters for Possible Regional Cooperation. A number of matters were proposed as being the subject of possible regional or sub-regional cooperation:

- Exchange of information.
- Training opportunities.
- Connections between experts.
- Shared research effort.
- Access to laboratory facilities and development of low cost screening ests.
- Disposal options and access to disposal facilities.
- Mutual cooperation on illegal transport between countries.

Training, research and disposal are enlarged upon below.

53. Training Opportunities. A distinction was made between training of public sector officers and decision makers, and training of the public and chemical users. It was suggested that GEF funding may be sought for running training programs on a regional basis for public sector officers, though it was noted that some countries may find it difficult to fund officer travel outside of their country. It was suggested that the

UNITAR/UNEP Chemical Management Training Program, which is being developed on a modular basis, could usefully give priority to developing a module on legislative control of chemicals and their enforcement, as this was an issue of concern to a number of countries.

54. **Research.** Collaboration on research into POPs related issues was suggested, and one model put forward was the identification of research centres as centres of expertise for a region or sub-region. It was noted that FAO was funding research into chemical alternatives, and it was suggested that this could be aligned with research into POPs pesticides issues.

55. **Disposal of Unwanted Chemicals.** Access to disposal facilities could be a matter for regional cooperation. It was noted that FAO was active in the area of obsolete chemicals and it was suggested that FAO be encouraged to become active in Asia as well as Africa. It was suggested that GEF may be approached for assistance in dealing with stockpiles of obsolete and unwanted pesticides.

56. **Funding.** It was noted again that developing countries would need funding in order to progress many of these tasks.

57. **Burden of Chemicals Work.** There was discussion on the burden being experienced by many countries from the increase in international chemicals work, and the need to prioritise and pace this work in order to achieve results. There was also discussion on the cross-sectoral nature of chemicals work and the consequent challenge in coordinating activities within nations.

58. **Regional Meetings.** It was suggested that regional meetings are very useful and should continue in future, including during the forthcoming negotiation period.

Bamako, Mali
15-18 December 1997

SESSION 1

WORKING GROUP ON PESTICIDES

Despite all the risks posed by the distribution and handling of POPs, these substances continue to be in widespread use in the various countries of the subregion. These products are always used in the various areas of activity of our people (agriculture, public health, ...).

In this regard, Group 2 recommends:

- . The ratification by all our countries of the various international conventions relating to this issue;
- . Preparation and/or the revision of legislative documents and regulations on the management of pesticides, including POPs;
- . The strict implementation of the above-mentioned conventions and laws.

The purpose is to prevent the illegal importation and use of these products.

Regarding the monitoring and assessment of emissions, very few studies have been carried out in the subregion. However, some surveillance has been undertaken in some countries, such as:

- . In Cameroon, on oysters, fish;
- . In Senegal, for the coastal area;
- . In Côte d'Ivoire, in the aquatic environment (sediments, oysters, fish, crustaceans);
- . In Algeria, on animal fat;
- . In Guinea, in the marine environment.

The group recommends studies dealing with human beings, as all of the preceding ones have been on animals.

There is no reliable information available regarding the assessment of emissions and exposure to POPs in the subregion. Group 2, therefore, recommends:

- . The promotion of scientific research to assess the level of environmental pollution and the contamination of living beings;
- . The strengthening of facilities, training and refresher courses for staff; in brief, the strengthening of national capacities.

The POPs identified in the subregion are: DDT, Dieldrin, Aldrin, Endrine, Lindane, Heptachlor, Chlordane.

SESSION 2

WORKING GROUP ON PESTICIDES

Chairman: Ms. Alamir

Alternate Rapporteur: Georges Kovadio, Ms. Traore

- I. It is accepted that the majority of countries are exposed to risks from POPs to one extent or another. To address the problems connected with POPs, the immediate actions that may be taken at a national level are as follows:
 1. An inventory should be made of outdated POP pesticides stocks and their packaging monitored according to required standards;
 2. The establishment of a network of African experts on POPs is necessary in order to undertake the effective control and follow-up of stocks to monitor compliance with storage conditions;
 3. The exchange of information on POPs, which requires the establishment of a communication network linked to the Internet;
 4. Promote the establishment of a poison control centre to advise on the risks and dangers connected with POPs and other toxic products;
 5. Comparative studies are indispensable for the introduction of alternative products, in order to evaluate their cost, potential risks and effectiveness.
- II. Concerning possible ways and means of implementation, the following actions are indicated:
 1. The Governments should: ratify the Bamako and Basel Conventions, make laws for the protection of the environment and public health; where these exist, their effective implementation in the field should be monitored;
 2. For this reason it would be useful to establish interministerial committees responsible for guiding local and departmental committees, including to NGOs and local cooperatives;
These local and departmental committees should be watchdogs for informing, educating and raising the awareness of the general public and giving the alert in case of accidents to those responsible for health environment and to decision makers, in order to take the precautions and measures that are required;
 3. It is important to encourage voluntary programmes for industry and to conduct public information campaigns (using the assistance and advice given by international, regional and national organizations, as well by other countries).
- III. With a view to preparing national positions for the negotiations required for a convention on POPs:

1. Each country should endeavour to achieve an internal consensus among the various parties concerned, i.e., government and non-government authorities, for national environmental management of POPs;
2. Session 2 suggests the establishment of POP and FISC focal points in those countries where they do not exist. These focal points require a certain minimum of resources (fax, telephone, etc.) in order to carry out their duties effectively;
3. Establishment of a South-South communications network (for the exchange of information, data and publications, etc.).

SESSION 3

WORKING GROUP ON PESTICIDES

Possibilities for regional cooperation for the management of POPs

Our countries are exposed to problems connected with the use of POPs that are known to have harmful effects on the animal and vegetable kingdom.

Awareness-raising on the problems of POPs is necessary at a regional level, because of the long-range transport of these pollutants from their emission sources.

Countries should work together to carry out this awareness campaign. For that reason they should:

- Develop mutual systems of information exchange;
- Promote working meetings to exchange experience from one another in regard to the awareness campaign.

The exchange of information on POPs between countries should be supported by the regional and subregional organizations already in existence. Among other bodies to be considered are CILSS, OCCGE, OVA and international and local NGOs.

Among the problems connected with POPs, certain ones are common to various countries of the subregion, such as the following:

- The grave lack of education, information and awareness concerning POPs;
- The lack of means of analysing and identifying POPs in order to evaluate their level of pollution, the extent to which they affect the health of the population;
- The lack of strictness in the implementation of existing laws, and, at times, the lack of harmonization of laws;
- The non-ratification of conventions relating to chemical products by all the countries of the subregion;
- Poor management of existing stocks;
- Transboundary mobility.

Of the problems enumerated above, those that can be efficiently tackled at a regional level are:

- Information, education and awareness-raising of the population. In respect of this, it is necessary to take specific cultural values of the countries into account. An example is Senegal, where it is essential to accord attention to opinion leaders (Marabouts, religious chiefs, etc...);
- The ratification of international conventions related to protection;
- The management of stocks with the support of a network of African experts and the experience of FAO.

To address better the problems connected with POPs and to work together effectively, there is a need to list the functioning laboratories that are capable of carrying out analyses on POPs chemical products.

At a national level, countries should strengthen their capacities in regard to facilities for chemical analysis, to train the necessary specialists to deal with problems connected with POPs with the support of UNEP and other organizations.

Proposal for a regional centre for scientific training

Algeria offers itself to be the base of a regional centre for scientific training for the strengthening of expertise in toxicological chemical analysis of POPs. It offers its expertise for the training of personnel for laboratory analysis of POPs.

Activities concerning POPs should be or can be involved in certain regional forums such as CILSS, OVA, OCCGE, SOACHEM, WAEC, ECOWAS, UCA and national, international and local NGOs. It is important to encourage other structures to be involved in activities concerning POPs.

In order to tackle problems connected with POPs in a strategic manner, a partnership should be established between countries of the region and various organizations (regional, intergovernmental, technical, financial). To do this, our countries ought to cooperate closely with these organizations through projects financed to assist in the solving of problems connected with POPs from these different aspects.

Chairman: Ms. Alamir
Rapporteur: Mr. G. Kovadio and
Ms. Trapre

Session 1
WORKING GROUP ON INDUSTRIAL POPs

Côte d'Ivoire - Chairman
Gambia - Rapporteur

1. POPs Still in use

PCB
NCB
Dioxin
Furan

Most countries still use PCBs in transformers especially in the production of electricity. They are still used because of lack of alternatives

Hexachlorobenzene is used as a solvent in many industries and in consumer chemicals (colorant, paints etc.).

Little is known about the sources and quantities. People involved in all stages of the management and control have lack of knowledge on these POPs

Very little monitoring & estimation is currently being undertaken.

2. Levels of POPs in different media

Little or no systematic measurement of concentration is done but from reports obtained from other countries and from presentations from this workshop there is room for concern.

3. Which of the POPs are considered significant

Since little or no studies have been done we cannot say which of the POPs is most significant. All the POPs and all the media are of concern. Because little or no studies are underway to address the problems, the tendency is for increases in risks in the POPs. On the other hand from other risk reduction programs such as the PIC procedure, some of these POPs have been banned. This move signals a descending trend.

4. What further information to assess releases + exposures to POPs

It is necessary to carry out systematic studies and monitoring of POPs releases. The trends can be only identified at the end of the studies of monitoring programs.

Inventories, networks, Internet + all other information exchange systems would be needed for information flow. This should be coupled with sensitization mechanisms which would include attitudinal change approaches.

Capacity building, financial assistance, information exchange, technical assistance, sub-regional cooperation and adequate legal instruments are paramount for countries to better understand releases + levels of POPs.

SESSION 2

WORKING GROUP ON INDUSTRIAL POPs

Chairman: Mr. Zadi Côte d'Ivoire
Rapporteur: Mr. Essafi Morocco

Working Group I, after a frank discussion, made the following recommendations:

Point 1: In regard to immediate actions that may be taken at a national and local level to address problems connected with POPs.

I. Establishment of a National Committee on POPs

- * Preparation of inventories of emissions from POPs;
- * Preparation of inventories of equipment containing PCBs;
- * Preparation of inventories of potential sources of dioxin and furans;
- * Preparation of inventories of stocks of undesirable pesticides as well as other POPs stocks;
- * Identification of polluted sites;
- * Strengthening of national capacities;
- * Classification of wastes.

II. Establishment of a legal system

III. Information and awareness-raising on the dangers and risks of POPs

IV. The raising of financial resources so as to allow:

- * The introduction of chemical and non-chemical alternatives, including their production techniques;
- * The introduction of technologies and techniques for the effective disposal of wastes.

Point 2: In view of the importance of possible ways and means of implementation to carry out the actions identified above, the working group proposes:

- * To prepare directives and other instruments on the management of POPs;
- * To prepare a national action plan;
- * To establish coordinating mechanisms involving various national authorities, other partners and national actors as well as the general public;
- * To develop and consolidate national legislations;
- * To use the assistance and advice available from international, regional and national organizations as well as those from other countries;
- * To promote voluntary industry programmes, and
- * To conduct public information campaigns.

POINT 3:

In regard to the third point in relation to the stages to be undertaken by countries so as to prepare their national positions:

- * The National Committee will be responsible for the proposal of negotiations for a convention on POPs for:

- * Getting the various partners concerned together;
- * Arriving at a wide inter-industrial consensus;
- * Establishing regional cooperation.

SESSION 3
INDUSTRIAL POPs
Chairman – Cote d’Ivoire
Rapporteur – The Gambia

1. & 2. Countries Working Together for Awareness Raising

Recommendation – that each country designates a Focal Point.

Establishment of a net work of POPs Focal Points that would work through already existing structures such as ECOWAS, URTNA and communication structures set up by the Ozone Network.

3. The POPs Related Problems

It is certain that potential problems do exist emanating from POPs emissions and discharges such as problems from fuel, coal, wood and waste burning and problems linked to PCBs in transformers. For this, an inventory of sources of emission and categorisation of wastes is a prerequisite to their effective address.

Analytical work and research should be undertaken to establish accepted levels of PCBs in the different media.

Legal instruments such as the Prevention of Dumping Act, the Bamako and Basel Conventions should be ratified by all African countries.

Training for personnel involved in the exercise such as custom officers is essential.

4. The problems that can be addressed through regional cooperation

All the problems can be addressed through regional cooperation.

5. How can countries work more effectively

Cooperation and networking among the POPs Focal Points is considered to be the best method, but for this financial and technical assistance should be secured.

6. Regional and International Fora to be involved.

The following have been identified as appropriate: -

IFCS, WACAF, Gulf of Guinea Project, ECOWAS, WHO, UNEP and other appropriate scientific organizations. Effective functioning of some of this for is lacking and their scope of activities is limited. Financial and logistical problems are some of their setbacks. Regional and National capacity building are essential. The efforts of some of these for are not effectively coordinated and they are not sometimes sufficiently implicated in the POPs issues to deal with significant problems.

7. Partnership with other bodies

Partnership should be built among the following: - governments institutions, environmental institutions, NGO, communities, private sectors, technical organisations, research institutes, UN bodies, financial institutions such as the World Bank and the EU. They can contribute financially + technically to the work.

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Cartagena, Colombia
27-30 January 1998

Working Group Reports
Working Group Industrial Chemicals and Contaminants
Session 1:

Status of Releases and Levels in Countries and
Needs for Further Information and Research

Guidance Questions

1. What is known with regard to sources and releases of POPs in countries?
 - Which POPs are still in use, for which purpose and to what extent?
 - What is known about sources and quantities released of POPs?
 - What type(s) of monitoring/estimation is currently used to determine releases?

2. What is known with regard to levels of various POPs in different media?
 - Have concentrations been measured on any systematic basis for any of the POPs?
 - Do data show any significant levels or give rise to concern for any of the POPs?
 - Are there any trends visible in the concentration levels?

3. Based on the existing data, which of the twelve POPs can be considered of significance for countries in the region?
 - Has any of the POPs been identified as significant in a number of countries?
 - Do data give rise to particular concerns for any specific POPs or medium?
 - Do data trends provide indications of potential future increases or decreases in risks?

4. What further information is needed to assess releases and exposures to POPs in countries?
 - Is there a need to carry out further release estimates/monitoring for any of the POPs or for a particular media?
 - Is it possible to identify trends with the estimation and monitoring systems/programmes, which could assist in evaluating successes of actions to reduce/eliminate releases?
 - Which tools, such as inventories and networks, would be needed to make information more easily accessible and useable?

5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Report Session 1

1. ON SOURCES AND RELEASES OF POPs WITHIN COUNTRIES OF THE SUB-REGION:

a. Identification of sources (Inventories):

Transformers and capacitors were identified as one of the main PCB sources.

- Venezuela has a preliminary inventory of sources.
- Many countries are planning to set-up inventories, but have not done so as yet.
- Many countries have made arrangements with European countries (France, Finland, England and Denmark) for the final disposal of existing PCBs. Mexico is setting-up a mobile unit for the management and treatment of PCBs.

Regarding dioxins and furans, it is known that incinerators and combustion processes are their main sources, but a quantification and assessment of these sources has not been made as yet in most countries.

- a. Most countries indicated their lack of infrastructure as well as technical and analytical capability to monitor and assess releases of POPs.
- c. In many countries POPs as well as toxic wastes are being banned and/or restricted by law.

2. INFORMATION ON CONCENTRATION LEVELS

There are no systematic monitoring processes of these substances as yet. At the international level some sporadic and specific research has been made. Significant levels of POPs were found in Rio de la Plata, as well as in electric transformer storage places in the Panama Canal region.

CONCLUSIONS

Answering the questions that were proposed in the guidelines was difficult due to the lack of capacity of countries for the identification, quantification and monitoring of POPs in industrial processes and chemicals in countries of the region.

COMMON NEEDS THAT WERE IDENTIFIED AND THAT NEED TO BE REFLECTED IN THE REPORT OF THE SEMINAR:

- The need to strengthen analytical capabilities within countries.
- The need to harmonize analytic methodologies, in order to make data comparable.
- Need to educate and public and private sector on the sources of POPs and on alternative technologies and substitutes.

Session 2:

Possible National Actions and Strategies to Address Relevant POPs Issues

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems? E.g.,

- Develop an inventory of POPs releases;
- Develop an inventory of PCB-containing equipment;
- Develop an inventory of potential sources of dioxins and furans;
- Develop an inventory of unwanted POP pesticide and other POPs stockpiles;
- Establish a network of experts dealing with POPs;
- Establish an information exchange network on POPs hazards and risks;
- Develop case studies on most urgent POPs problems, including identification of risks and possible alternatives;
- Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
- Introduce more efficient and effective waste disposal technologies and techniques.

2. What are the possible ways and means to implement actions identified above? E.g.,

- Develop guidelines and other tools on POPs management;
- Develop national action plans;
- Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
- Develop/strengthen national chemicals legislation;
- Use assistance and advice provided by international, regional organizations and national agencies of other countries;
- Encourage voluntary programmes by industry; and
- Conduct public information campaigns.

3. What steps do countries need to undertake in order to prepare national positions for the upcoming POPs convention negotiations? E.g.,

- Inter-ministerial consensus-building efforts; and
- Meetings with stakeholders

Report Session 2

Possible National Actions and Strategies to Address Relevant POPs Issues

The Group considered the questions of UNEP and IFCS as follows:

ACTIONS:

Raise awareness about the problems:

1. Implement capacity-building programmes in all sectors
2. Determine the sources of emissions of the POPs
3. Investigate the national reality of the problem
4. Create necessary regulatory actions for control, management and final disposal of POPs
5. Develop national capacity for control and monitoring.
6. Implement analytical investigation systems of the levels and emissions of POPs
7. Create coordination mechanisms between the government, the industry and the population, as well as with International Organizations on the subject.

MEANS:

1. Learn from experiences in different countries on the implementation of programmes and financed projects by the International Organizations.
2. Implement programmes to strengthen institutions, which involve capacity-building, research and public awareness with the participation of involved sectors.
3. Learn from experiences in some countries on the use of tools which involve capacity-building, social participation and control of emissions coming from industries through registers.
4. Create available information networks for the region.
5. Look for financial mechanisms and transfer of technology and/or alternatives with International Organizations in order for actions to be successful.
6. Implement register on illnesses caused by POPs.
7. Follow up and support existing programmes concerning POPs.
8. Implement and/or strengthen registers on potentially toxic chemicals.
9. Create a network or another experimental mechanism to perform necessary analysis on the generation, emissions and effects of POPs.
10. Involve the participation of industry, NGOs and other sectors in the negotiations for the creation of regulatory action.

STEPS:

1. Coordinate with corresponding authorities to preliminary evaluate the issue.
2. Creation of an executive commission to perform the necessary actions.
3. Organization of meetings with interested parties in the issue.
4. Undertake actions.

Session 3:

Possible Regional Cooperation to Manage POPs

Guidance Questions:

1. How could countries work together to raise awareness throughout the region of POPs problems?
2. What regional networks could be employed to exchange information and expertise about POPs among countries in the region?
3. What are some of the POPs-related problems that are common to a number of countries to the region?
4. Of the problems identified, which could be addressed more efficiently through regional co-operation?
5. How might countries in the region work together more effectively to address POPs-related problems? (This response should not be limited to those problems addressed in questions 3 and 4.)
6. Which regional international fora are, could or should be involved in POPs issues? Are the fora currently engaged in POPs issues sufficient to deal with the most significant problems? Are their efforts co-ordinated effectively? Should other fora be encouraged to become engaged?
7. Are there opportunities to build partnerships among the countries in the region, regional intergovernmental organizations, technical international organizations with regional presence, international financial institutions and non-governmental groups (including environmental and industry) to address regional POPs problems in a more strategic manner? Please describe those identified.

Report Session 3:

Possible Regional Cooperation to Manage POPs

Question 1

Every country should accelerate actions to:

- Identify the sources that generate POPs
- Incorporate the issue of POPs in the environmental agenda
- Identify the institutional infrastructure to address the problems
- Establish the similarities of problems in the region
- Define priorities at regional level
- Implement necessary legal action
- Identify which is the most adequate technology and have a inventory of countries which have the same technology
- Benefit from the installed capacity
- Continue to elaborate national profiles
- Establish a directory to access the information through Internet
- Promote regional capacity-building through countries which have experience on the issue

Question 2

The following regional networks were identified:

- Internet
- CEPIS
- Universities (Venezuela and Mexico have centres for information in toxicology)

Question 3

Problems common to the region are:

- Lacking information and capacity-building
- Reduced laboratory capacity
- Insufficient legislation
- Need for common action with government and industry
- Public awareness

Question 4

The following problems could be more efficiently addressed through regional cooperation:

- Identify and train personnel for regional laboratories
- Identify countries which have technology to organize meetings
- Solve problems in the short and the long term

Question 5

Countries could work together to

- Exchange publications on technical and industrial matters
- Establish databases

Question 6

The following regional for a should be involved:

- Intergovernmental Forum on Chemical Safety (IFCS) members in the region
- CARICOM
- EPA
- Latin American Group for Trade (GRULAC)
- Programme for Environment and Health in Central American Peninsula (MASICA)
- Promote political will to accelerate process

Question 7

Opportunities to build partnership were identified, e.g.

- Collaboration with Canadian International Agency (CIDA) and other International Organizations.
- Establish a foundation for technical and financial assistance similar to that established for the implementation of Montreal Protocol

Working Group Pesticides
Session 1:
Status of Releases and Levels in Countries and
Needs for Further Information and Research

Guidance Questions

1. What is known with regard to sources and releases of POPs in countries?
 - Which POPs are still in use, for which purpose and to what extent?
 - What is known about sources and quantities released of POPs?
 - What type(s) of monitoring/estimation is currently used to determine releases?

2. What is known with regard to levels of various POPs in different media?
 - Have concentrations been measured on any systematic basis for any of the POPs?
 - Do data show any significant levels or give rise to concern for any of the POPs?
 - Are there any trends visible in the concentration levels?

3. Based on the existing data, which of the twelve POPs can be considered of significance for countries in the region?
 - Has any of the POPs been identified as significant in a number of countries?
 - Do data give rise to particular concerns for any specific POPs or medium?
 - Do data trends provide indications of potential future increases or decreases in risks?

4. What further information is needed to assess releases and exposures to POPs in countries?
 - Is there a need to carry out further release estimates/monitoring for any of the POPs or for a particular media?
 - Is it possible to identify trends with the estimation and monitoring systems/programmes, which could assist in evaluating successes of actions to reduce/eliminate releases?
 - Which tools, such as inventories and networks, would be needed to make information more easily accessible and useable?

5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Session 2:

Possible National Actions and Strategies to Address Relevant POPs Issues

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems? E.g.,

- Develop an inventory of POPs releases;
- Develop an inventory of PCB-containing equipment;
- Develop an inventory of potential sources of dioxins and furans;
- Develop an inventory of unwanted POP pesticide and other POPs stockpiles;
- Establish a network of experts dealing with POPs;
- Establish an information exchange network on POPs hazards and risks;
- Develop case studies on most urgent POPs problems, including identification of risks and possible alternatives;
- Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
- Introduce more efficient and effective waste disposal technologies and techniques.

2. What are the possible ways and means to implement actions identified above? E.g.,

- Develop guidelines and other tools on POPs management;
- Develop national action plans;
- Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
- Develop/strengthen national chemicals legislation;
- Use assistance and advice provided by international, regional organizations and national agencies of other countries;
- Encourage voluntary programmes by industry; and
- Conduct public information campaigns.

3. What steps do countries need to undertake in order to prepare national positions for the upcoming POPs convention negotiations? E.g.,

- Inter-ministerial consensus-building efforts; and
- Meetings with stakeholders

Session 3:

Possible Regional Cooperation to Manage POPs

Guidance Questions:

1. How could countries work together to raise awareness throughout the region of POPs problems?
2. What regional networks could be employed to exchange information and expertise about POPs among countries in the region?
3. What are some of the POPs-related problems that are common to a number of countries to the region?
4. Of the problems identified, which could be addressed more efficiently through regional co-operation?
5. How might countries in the region work together more effectively to address POPs-related problems? (This response should not be limited to those problems addressed in questions 3 and 4.)
6. Which regional international fora are, could or should be involved in POPs issues? Are the fora currently engaged in POPs issues sufficient to deal with the most significant problems? Are their efforts co-ordinated effectively? Should other fora be encouraged to become engaged?
7. Are there opportunities to build partnerships among the countries in the region, regional intergovernmental organizations, technical international organizations with regional presence, international financial institutions and non-governmental groups (including environmental and industry) to address regional POPs problems in a more strategic manner? Please describe those identified.

Final Report

A guide was distributed containing questions, among others, on sources and releases of pesticides which are POPs in the countries of the sub-region, on the levels of concentration of POPs and on the capacity to evaluate the emissions and exposure to POPs.

It was agreed that the discussion would focus on pesticides included in the “dirty dozen” list of the 12 POPs which are internationally acknowledged: aldrin, clordane, DDT, dieldrin, endrin, heptachlor, mirex, toxaphene, hexachlorobenzene.

It was also agreed to focus the discussion on the following subject matters: production, prohibition, legal exceptions allowing use, inventories, environmental impact assessment, accidents and spills. illegal use, residues, legal and illegal imports and exports, difficulties in the management and final disposal of these substances.

Fourteen countries had the opportunity of commenting on their current circumstances regarding the above subject matters: Brazil¹, Guatemala, Nicaragua, Jamaica, Colombia, Venezuela, Peru, Panama, Cuba, Costa Rica, Trinidad y Tobago, Saint Kitts and Nevis, Barbados and Belize.

The comments made by each country are summarized in a table, which is attached. There were several coincidences in countries experiences regarding POPs pesticides, particularly regarding the following aspects:

1. These countries do not produce the pesticides included in the 12 “dirty dozen” POPs list.
2. The use and import of these pesticides is banned or restricted by law in these countries, except for public health reasons such as malaria eradication. However, illegal use and imports have been detected in some instances.
3. Many countries do not have inventories of these substances.

According to the above, there was agreement on the need to strengthen the capacity of countries at several levels (national, regional and internationally) regarding the following:

1. Identify, quantify and assess existing stockpiles. International assistance for the preparation of inventories.
2. Identify the risks and promote awareness on them.
3. Identify and assess sources and producers (both current and historic).

¹ Brazil's comments were limited to the use of DDT in the programme to control Malaria. Therefore, further data for the table that is annexed was not available.

4. Identify alternatives to POPs pesticides, including non-chemical alternatives. Discourage the use of other pesticides with similar POPs characteristics.
5. Monitor illegal traffic of these substances in the region, (according to international law, including the Basel Convention). Establish fiscal, control and punitive measures against illegal trafficking.
6. Identify financially and ecologically sound alternatives to the final disposal of these substances, including their export to countries with the technical capabilities to deal with them, according to current international law, including the Basel Convention.
7. Develop and strengthen the technical capacity of customs personnel to identify prohibited POPs pesticides, so as to avoid the import of these substances.
8. Develop techniques for the periodic analysis of residues of POPs pesticides in food.
9. Strengthen the capacity of national authorities to continually monitor the existence, import, use and final disposal of these substances.
10. Establish laboratories and qualify personnel to identify and to adequately manage these substances. Establish links with existing laboratories in the region, to assist countries that do not have laboratories of this kind.
11. Identify integrated remedial environmental actions for areas that have been affected by these substances.
12. Strengthen international cooperation (technical and financial assistance) regarding adequate packaging, spill management, environmental impact assessments and return-to-sender/producer practices.
13. Improve access to information by the public at large, regarding location and quantity of stockpiles, use and trade of pesticides. Promote awareness and engage the community in adequate safe disposal techniques and alternatives to POPs pesticides.
14. Reduce new or current exposures to POPs, which are endocrine disruptors and minimize the exposure of pregnant women and infants, because of the potential for permanent developmental effects on the fetus.
15. Develop and enforce guidelines for DDT application (in malaria control programs) that exclude areas of conservation value and the exposure of pregnant women and infants, and other people who are particularly vulnerable to negative health and developmental effects.
16. Promote inter-change of information at the regional and international levels, on inventories, disposal facilities, analysis etc., through:

- The timely response to the UNEP questionnaire on POPs.
- The use, at the regional level of the UNEP web and clearinghouse mechanism on POPs.

17. Active participation by countries of the region in the technical working group in charge of selecting criteria for the inclusion of new POPs in the list.

18. Identify the gaps in international law (including Basel Convention and PIC) regarding illegal trafficking of these substances, so as to fill these gaps in the POPs protocol.

Lusaka, Zambia
17-20 March 1998

INDUSTRIAL CHEMICALS AND CONTAMINANTS GROUP

Chairman: Mr. H.A. Onyoyo (Kenya)

Rapporteur: Mrs. El Sayed (Egypt)

SESSION 1

Guidance Questions

1. What is known with regard to sources and releases of POPs in countries?
 - Which POPs are still in use, for which purpose and to what extent?
 - What is known about sources and quantities released of POPs?
 - What type(s) of monitoring/estimation is currently used to determine releases?
2. What is known with regard to levels of various POPs in different media?
 - Have concentrations been measured on any systematic basis for any of the POPs?
 - Do data show any significant levels or give rise to concern for any of the POPs?
 - Are there any trends visible in the concentration levels?
3. Based on the existing data, which of the twelve POPs can be considered of significance for countries in the region?
 - Has any of the POPs been identified as significant in a number of countries?
 - Do data give rise to particular concerns for any specific POPs or medium?
 - Do data trends provide indications of potential future increases or decreases in risks?
4. What further information is needed to assess releases and exposures to POPs in countries?
 - Is there a need to carry out further release estimates/monitoring for any of the POPs or for a particular media?
 - Is it possible to identify trends with the estimation and monitoring systems / programmes, which could assist in evaluating successes of actions to reduce / eliminate releases?
 - Which tools, such as inventories and networks, would be needed to make information more easily accessible and useable?
5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Answers

Q1. The group agreed that PCBs, dioxins and furans are the major POPs industrial chemicals and contaminants that are used, generated or released in the sub-region.

. The group identified the following as major actual or potential sources of releases of the chemicals:

- incineration of hospital wastes, especially when proper performance standards are not met;
- emissions from transportation vehicles;
- contamination from disposal of municipal and industrial wastes;
- combustion of wood and coal as sources of energy;
- pulp and paper manufacturing industries that employ elemental chlorine in bleaching processes;
- solvents used in dry-cleaning operations;
- releases from refineries and petroleum operations;
- disposal of PCBs;
- grass fires and the burning of fields prior to harvesting sugar cane;
- pharmaceutical production;
- PCBs contained in electrical and hydraulic equipment in power distribution systems and underground mines;
- releases from smelting of iron, steel, aluminium and copper and other metals; and
- contaminants in dye chemicals used in textile industries.

Q2. The group agreed that, with very few exceptions, there is little or no existing information on POPs and extremely limited or no analytical capacity or capability in the region to document the sources and quantities related to releases of POPs. The group, observed that while PCBs are being phased out in some countries (Botswana, Mauritius, Zambia, Republic of South Africa) and attempts have been made in others (Malawi, Seychelles), no further efforts have been made to phase out PCBs in other countries of the sub-region.. Some countries in the subregion are collecting PCB wastes for export to the UK for disposal by incineration. The group further noted the involvement of PCBs in incidents of human poisoning in Tanzania.

. Due to the lack of capacity and capabilities in the subregion, no attempts have been made to estimate releases nor to monitor PCBs or industrial contaminants; as a consequence, no trend data were known to exist.

Q3-4. The group identified the industrial POPs chemicals to be of great significance as a source of pollution of the sub-regional environment and a threat to the health of the inhabitants of the region. The development of inventories on PCBs and industrial contaminants is crucial in the understanding the scope of the problem in the sub-region.

Q5. The major barriers were identified as follows:

- lack of information on handling, treatment and disposal of PCBs;

- lack of financial and technical resources for PCB disposal;
- lack of reliable, accurate inventories and scientific information in the subregion as a basis for making an attempt to phase out chemicals;
- lack of financial resources for researchers;
- lack of adequate co-operation and co-ordination locally, sub-regionally, regionally and internationally to address the chemicals;
- lack of both national and subregional legislation and regulations;
- lack of exchange fora in which to share each country's contributions;
- lack of political awareness and commitment;
- lack of adequately trained personnel to tackle the industrial chemicals and contaminants;
- inadequate information from the developed world to the developing world and the necessary assistance in terms of technology and equipment;
- lack of public awareness on the hazards of handling, use, storage and release of hazardous chemicals including POPs;
- lack of involvement of stakeholders from all sectors of society; and

fragmentation of regulations and inadequate communication and co-ordination between responsible government departments or ministries.

SESSION 2

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems ? e.g.

- Develop an inventory of POPs releases;
- Develop an inventory of PCB -containing equipment;
- Develop an inventory of potential sources of dioxins and furans;
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- Establish a network of experts dealing with POPs;
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- Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
- Introduce more efficient and effective waste disposal technologies and techniques.

2. What are the possible ways and means to implement actions identified above?

E.g.,

- Develop guidelines and other tools on POPs management;
- Develop national action plans;
- Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
- Develop/strengthen national chemicals legislation;
- Use assistance and advice provided by international, regional organizations and national agencies of other countries;
- Encourage voluntary programmes by industry; and
- Conduct public information campaigns

3. What steps do countries need to undertake in order to prepare national positions for the upcoming POPs convention negotiations? E.g.

- Inter-ministerial consensus-building efforts; and
- Meetings with stakeholders

New Rapporteur: Mrs. O.M. Serumola (Botswana)

Q1. Discussion from Session 1 was seen as a good basis for the work of Session 2. After a lot of suggestions and discussions, the group came to the consensus on the responses detailed below.

. The first question was what kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems. The group's response was: to establish an independent body comprised of all stakeholders such as university researchers, government agencies, manufacturing industries, the community, etc. which will look into the following:

- development a national action plan;
- identification of agencies likely to undertake an inventory of POPs releases;
- financial resources; and
- development of guidelines and legislation.

Q2. The second question was what are the possible ways and means to implement actions identified above? The group's response was:

- There is no need to re-invent the wheel. In order to ensure rapid progress the most important thing is to look at different approaches from other countries which have already developed their action plans.
- Then co-ordinate and communicate with agencies at national, regional and international levels for exchange of information on a lot of research work done on POPs chemicals.

Q3. How do we re-access the information? Answer:

- through Internet systems;
- through contact persons; and
- through information agencies such as EPA and UNEP

SESSION 3

Guidance Questions:

1. How could countries work together to raise awareness throughout the region of POPs problems?
2. What regional networks could be employed to exchange information and expertise about POPs among countries in the region?
3. What are some of the POP s-related problems that are common to a number of countries to the region?
4. Of the problems identified, which could be addressed more efficiently through regional co-operation?
5. How might countries in the region work together more effectively to address POPs-related problems? (This response should not be limited to those problems addressed in questions 3 and 4.)
6. Which regional international fora are, could or should be involved in POPs issues? Are the fora currently engaged in POPs issues sufficient to deal with the most significant problems? Are their efforts co-ordinated effectively? Should other fora be encouraged to become engaged?
7. Are there opportunities to build partnerships among the countries in the region, regional intergovernmental organizations, technical international organizations with regional presence, international financial institutions (e.g., the Asian Development Bank) and non-governmental groups (including environmental and industry) to address regional POPs problems in a more strategic manner? Please describe those identified.

Answers

Q1. First the group identified the common problems that exist in their respective countries in order to see how to proceed in solving them. Two major obstacles were identified:

- financial resources; and
- lack of legislation (enforceable).

Q2. In order to formulate a collaborative co-operation for the exchange of information, the group concluded that it is necessary to take stock of respective experts regionally so as to forge capacity building within the region and recommended that each country should have an inter-ministerial committee at the national level to co-ordinate information research to raise awareness among the nations on POPs issues.

Q3. The POPs-related problems that are common to a number of countries in the subregion include:

- transboundary movement of chemical waste from one country to another;
- illegal trafficking of chemical waste;
- illegal and indiscriminate dumping of chemical waste, within and outside the region;
- lack of harmony of legislation in the area;
- lack of harmonised quality standards; and
- lack of scientific data due to lack appropriate infrastructure aimed at their collection.

Q4. For problems identified in the region, harmonisation of legislation would be useful to address them. The region should also attempt to have standardisation in countries data collection methods. Existing protocols, such as SADC, which have subcommittees dealing with environmental issues should include POPs as a “red list” in their committees.

Q5. The regional or subregional fora identified which could be involved in POPs issues include:

- South Africa Development Co-operation (SADC);
- East African Community (EAC);
- Organisation for African Unity (OAU);
- AMCED; and
- IGAD.

Q6. In response to the question of how to get information to influence national decision-makers, the group recommended that:

- UNEP write a recommendation on behalf of the group participants to ensure rapid progress; and
- information be communicated through the contact person in their respective countries.

Q7. The group identified the following opportunities to build partnerships to address POPs problems in the subregion:

- joint permanent technical committees, like those that already exist in Botswana and South Africa;
- Nile River Technical Co-operation;
- African Development Bank; and
- bilateral committees, e.g., OKACOM.

SESSION 1
PESTICIDE GROUP

Chair: W. Scott, South Africa
Rapporteur: E. Mutale, Zambia

Guidance Questions

1. What is known with regard to sources and releases of POPs in countries?
 - Which POPs are still in use, for which purpose and to what extent?
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 - Is there a need to carry out further release estimates/monitoring for any of the POPs or for a particular media?
 - Is it possible to identify trends with the estimation and monitoring systems/programmes, which could assist in evaluating successes of actions to reduce/eliminate releases?
 - Which tools, such as inventories and networks, would be needed to make information more easily accessible and useable?
5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Answers

Q1. In discussing the sources and releases of the POP pesticides it was clear that these are used in most countries. The major POP in use is DDT for malaria vector control. It was also used in the Zambezi valley for tsetse fly control. The quantities of POPs used are not well documented, but information could be obtained from the authorities where there is a registration system in operation. Most countries have some legislation controlling the use of POP pesticides but the degree of sophistication varies. One country pointed out that customs officials are not familiar with POPs and it is possible that POPs could enter unnoticed. Actual monitoring and/or estimation of releases are either limited or non-existent.

Q2. Knowledge about the levels of various POP pesticides in different media has been hampered by a lack of analytical equipment and the absence of monitoring programmes. Furthermore, there is a shortage of suitably trained staff to do the monitoring. Some systematic monitoring data are available in South Africa (e.g., food products) and Zimbabwe (e.g., DDT in Lake Kariba). It was clear that countries were not capable to monitor all the pesticides residues and the establishment of regional laboratories needs to be considered. It was not possible to make any detailed assessment of trends due to the haphazard nature of the existing analyses.

Q3. From the existing data the most significant POP appeared to be DDT which was used for indoor spraying according to WHO guidelines. Most countries have a ban on other uses of DDT but unauthorised uses have not been ruled out. Dieldrin and aldrin have been used mostly for termite control but this has been phased out and banned. Although not a POP chemical, it was noted that methylbromide will be phased out under the Montreal Protocol. Obsolete chemicals remain a problem in all countries and dealing with it is extremely costly. There are no suitable incinerators in full-time operation in the region to dispose of these.

Q4. In discussing further information needs, the shortage of suitable analytical facilities was again emphasised. The problem of easily identifying POPs through suitable labelling was mentioned and ongoing work under the IFCS in harmonising the classification and labelling was noted. Information on risk assessment and exposure to POPs was needed by most countries and it was agreed that networks must be expanded throughout the region.

Q5. The major barriers are lack of funding and human capacity.

SESSION 2

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems? E.g.,
 - Develop an inventory of POPs releases;
 - Develop an inventory of PCB -containing equipment;
 - Develop an inventory of potential sources of dioxins and furans;
 - Develop an inventory of unwanted POP pesticide and other POPs stockpiles;
 - Establish a network of experts dealing with POPs;
 - Establish an information exchange network on POPs hazards and risks;
 - Develop case studies on most urgent POPs problems, including identification of risks and possible alternatives;
 - Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
 - Introduce more efficient and effective waste disposal technologies and techniques.

2. What are the possible ways and means to implement actions identified above? E.g.,
 - Develop guidelines and other tools on POPs management;
 - Develop national action plans;
 - Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
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 - Use assistance and advice provided by international, regional organizations and national agencies of other countries;
 - Encourage voluntary programmes by industry; and
 - Conduct public information campaigns.

3. What steps do countries need to undertake in order to prepare national positions for the upcoming POPs convention negotiations? E.g.,
 - Inter-ministerial consensus-building efforts; and
 - Meetings with stakeholders

Answers

Q1. The theme of the discussion was centred around possible actions and strategies to address relevant issues. It was agreed that the immediate actions should incorporate those suggested in the guidance questions, i.e., to develop inventories of pesticide releases and unwanted pesticide stockpiles, to establish a network of experts and information exchange dealing with hazards and risks, and to look at the introduction of alternatives and more efficient disposal technologies and techniques.

. The discussion reiterated the need of obtaining adequate information and the involvement of all stake holders. Political backing was also identified as essential for actions to move forward. The high cost of once only disposals of stockpiles of pesticides did not justify erection of incineration facilities but such facilities should nevertheless be established to increase capacity and be utilised for other, non-POPs, wastes.

. The group also examined problems of storage, where small amounts of POPs wastes could be kept until sufficient quantities could be accumulated for eventual cost-effective disposal. It was agreed that long-term or indeterminate storage was unacceptable because of potential danger to humans and the environment, especially when there are accidents, such as fires.

Q2. There was agreement that all action plans and strategies should have a preventative approach with emphasis on waste minimisation and avoidance.

. The ways and means of implementing actions will depend on successful dissemination of information to all stakeholders, and participation of the concerned public (local people) must be encouraged. Guidelines should be tailor-made for the local conditions. Provision should be made to strengthen enforcement where specific requirements must be met.

. The development of national action plans must include full public participation and publicity in the media should be part of it. The action plan must spell out specific responsibilities and there is a primary role for industry. Co-ordination should, however, lie with governments.

. The POPs information clearinghouse will be an important source of information, but it will depend on individual countries to provide the information.

Q3. In preparation of national positions at the forthcoming convention negotiations, countries should first co-ordinate among different government ministries or departments to deal, among other things, with the scattered information and approaches, and second liaise with all other stakeholders. The best way would be to establish or expand existing inter-departmental and multi-stakeholder committees

SESSION 3

Guidance Questions:

1. How could countries work together to raise awareness throughout the region of POPs problems?
2. What regional networks could be employed to exchange information and expertise about POPs among countries in the region?
3. What are some of the POP s-related problems that are common to a number of countries to the region?
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Answers

Q1. The discussion of regional co-operation started by looking at existing regional co-operation in terms of registration of pesticides where regional meetings have been held in Lusaka and Harare. Countries involved stretch from Uganda in the north to South Africa in the south. Dissemination and sharing of information on the POPs pesticides should be on the agenda of the next meeting scheduled for Pretoria, where a common strategy could be formulated.

Q2. The need was also expressed to make POPs awareness an item on the agenda at even higher level meetings such as SADC, PTA and OAU; at this level the necessary political will can be generated. It was agreed that the utilisation of existing structures have advantages and there is already good co-operation on certain research areas within SADC. Other existing structures that could be considered are Cleaner Technology Centres which are already present in Zimbabwe and Tanzania. A regional training centre under the auspices of the Basel Convention is due to be established in the near future. Wastes originating from POPs chemicals will naturally form part of the activities of the centre, which is aiming at capacity building, technology transfer and information dissemination.

Q3-4. The following common POPs-related problems were identified by the group:

- lack of knowledge of alternatives;
- illegal imports;
- lack of capacity to store and to destroy;
- lack of enforcement; and
- inappropriate donations of pesticides.

Regional co-operation could contribute to improving the first two of the above problems. The others are probably of a more local nature, excepting the future possibility of developing a regional disposal facility.

Q5. Regional co-operation would also contribute to getting information of POPs releases of mutual (e.g., transboundary) interests and the establishment of Regional Analytic Laboratories as discussed earlier. Various manuals and guidelines, including storage of pesticides, are available from the FAO as well as industry.

Q6-7. Preparation of the region for the forthcoming negotiations is of great importance. Governments should expedite the nomination of focal points as soon as possible and focal points should liaise with each other. Assistance can be obtained from UNEP Chemicals on request. The opportunities are there.

Iguazu Falls, Argentina
1-3 April 1998

Working Group Reports
Working Group Industrial Chemicals and Contaminants
Session 1:
Status of Releases and Levels in Countries
and Needs for Further Information and Research

Guidance Questions

1. What is known with regard to sources and releases of POPs in countries?
 - Which POPs are still in use, for which purpose and to what extent?
 - What is known about sources and quantities released of POPs?
 - What type(s) of monitoring/estimation is currently used to determine releases?
2. What is known with regard to levels of various POPs in different media?
 - Have concentrations been measured on any systematic basis for any of the POPs?
 - Do data show any significant levels or give rise to concern for any of the POPs?
 - Are there any trends visible in the concentration levels?
3. Based on the existing data, which of the twelve POPs can be considered of significance for countries in the region?
 - Has any of the POPs been identified as significant in a number of countries?
 - Do data give rise to particular concerns for any specific POPs or medium?
 - Do data trends provide indications of potential future increases or decreases in risks?
4. What further information is needed to assess releases and exposures to POPs in countries?
 - Is there a need to carry out further release estimates/monitoring for any of the POPs or for a particular media?
 - Is it possible to identify trends with the estimation and monitoring systems/programmes, which could assist in evaluating successes of actions to reduce/eliminate releases?
 - Which tools, such as inventories and networks, would be needed to make information more easily accessible and useable?
5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Report Session 1

Situation Analysis

ARGENTINA

PCBs:

There is no explicit ban on imports and there are no regulations governing changes to new technologies without PCBs.

There is regulation of hazardous wastes.

There is no inventory of all PCBs.

PCBs are neither treated nor disposed of in the country, which means that for the past four years they have been exported (1,000 tons exported).

There are laboratories for measuring PCB levels.

The companies control for the absence of PCBs in new equipment.

Dioxins and furans:

There is no regulatory framework, except for the limits established in the Regulation on hazardous wastes.

With regard to sources, incineration is uncontrolled or carried out under improper conditions.

There is no knowledge concerning measurements in different media, except for the study on the Plate River, carried out in Germany.

BOLIVIA

PCBs, dioxins, and furans:

With regard to estimates of use, the Law on the Environment requires all industries to report on hazardous chemical substances.

There are no incinerators.

The Regulation on water pollution, approved in 1995, sets the maximum permissible limits of the PCBs in the classified receptor bodies.

The regulation on Solid Waste Management, approved in 1995, prohibits the burning of solid wastes.

BRAZIL

PCBs:

There are two incinerators to treat liquid PCBs.

Refilling of transformers and importation and marketing of PCBs are prohibited.

They have been exported for 10 years, and treatment facilities are being developed in the country.

Dioxins and furans:

There is no analytical capability, which means that analyses are done abroad.

There is no legislation that requires monitoring, and residue quantities are not known.

There is a trend toward the regulation of incinerators.

There is a specific regulation (Bahía) that requires testing for dioxins and furans.

CHILE

PCBs:

There is no regulation in force; however, regulation of the handling of hazardous waste is under development.

Some companies voluntarily export PCBs, through the Basel Agreement.

There are no treatment facilities or final disposal sites.

There is no knowledge of the quantity existing in the country.

Dioxins and furans:

There is no regulation.

There is no knowledge of the generating sources.

Analytical capacity exists; however, it is not operational due to the problems of residue disposal.

PARAGUAY

PCBs, dioxins, and furans:

There is no regulation.

There is no knowledge concerning the sources of dioxins and furans.

There is neither knowledge nor awareness (among the government and entrepreneurs) of PCBs.

It is assumed that one of the major sources of dioxins and furans is waste incineration in municipal garbage dumps.

URUGUAY

PCBs:

There is no ban on use.

The companies have voluntarily discontinued use of equipment with PCBs.

Installations are being constructed for the management and temporary storage of PCBs.

No information is compiled; there are no inventories.

Dioxins and furans:

There is no regulation.

There are no analytical laboratories.

There are incinerators that, it is assumed, generate dioxins. There is also open-air burning of copper cables and incineration of hospital waste.

Paper-bleaching plants are a source of dioxins, and their importance is related more to the area in which they are located than to their size.

PROPOSALS

The Center for Regional Coordination of the Basel Agreement (in Uruguay) could serve as support for the countries for technology transfer, training, information exchange, and the characterization of wastes.

It is suggested that there be a laboratory in the Region for the analysis of the persistent organic pollutants (POPs).

The POPs focal points need to contact the authorities responsible for the Basel Agreement.

The training of the people who sample the POPs is important.

Inventories of the POPs should exist in each country. Therefore, it is suggested that advisory services be providing to the country development them, addressing matters such as: dissemination of forms, protocols, and instructions.

The registration of PCBs is not expected to be difficult, but that may not be true for dioxins and furans (whose sources are unknown). It is suggested that the experience of countries that have already investigated their sources be consulted.

Timely strengthening of fulfillment of the commitments made to UNEP is suggested.

The need for promoting education in these matters is underscored.

It is recommended that risk assessment studies be conducted for each POP compound.

Session 2:

Possible National Actions and Regional Cooperation to address POPs issues.

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems? e.g.,
 - Develop an inventory of POPs releases;
 - Develop an inventory of PCB-containing equipment;
 - Develop an inventory of potential sources of dioxins and furans;
 - Develop an inventory of unwanted POP pesticide and other POPs stockpiles;
 - Establish a network of experts dealing with POPs;
 - Establish an information exchange network on POPs hazards and risks;
 - Develop case studies on most urgent POPs problems, including identification of risks and possible alternatives;
 - Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
 - Introduce more efficient and effective waste disposal technologies and techniques.
2. What are the possible ways and means to implement actions identified above? E.g.,
 - Develop guidelines and other tools on POPs management;
 - Develop national action plans;
 - Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
 - Develop/strengthen national chemicals legislation;
 - Use assistance and advice provided by international, regional organizations and national agencies of the countries;
 - Encourage voluntary programmes by industry; and
 - Conduct public information campaigns.
3. How could countries work together to raise awareness throughout the region of POPs problems?
4. What regional network could be employed to exchange information and expertise about POPs among countries in the region?
5. What are the POPs-related problems that are common to a number of countries in the region and which could be addressed more efficiently through regional co-operation?
6. In which other ways might countries in the region work together more effectively to address POPs related problems?
7. Which regional/international fora are, could or should be involved in POPs issues?

Report Session 2

A round of presentations was made by countries and participating sectors on the immediate action that could be taken in them.

ARGENTINA

Establishment of national coordination mechanisms that involve government actors and the public and private sectors as instruments for the proposed actions.

- a. Development and adaptation of specific legislation.
- b. Development of inventories of PCB residues and PCBs in use.
- c. Development of inventories of the pesticide POPs.
- d. Development of a survey of potential sources of dioxins and furans.
- e. Realization of sectoral educational campaigns and promotion of voluntary sectoral programs (in industry and NGOs).
- f. Introduction of alternative technologies and of cleaner technologies.

BOLIVIA

The immediate actions proposed are:

- a. Initiation of regulation and the standardization of the importation, marketing, use, and handling of POPs.
- b. Establishment of a lateral cooperation networks for information exchange on POPs.
- c. Establishment of training programs and technology transfer.
- d. Meetings for the dissemination of results.
- e. Presentation of a report on restricting POPs at the meeting on the Environment and Trade.

All this is intended to take place with the participation of the policy-makers, civil society, and NGOs.

The establishment of a program to raise awareness regarding the use and handling of POPs is an important way to implement the actions identified above.

Bolivia proposes the creation of a regional multilateral fund for the implementation of priority actions.

BRAZIL

A strategy should be implemented that includes the activities mentioned, with the following order of priorities:

- a. Promotion of national integration that includes all the actors involved, with the focus on POPs, to ensure that the current situation regarding these products is known.

- b. Scheduling of national meetings for the dissemination of information, especially regarding the situation with respect to POPs in Brazil.
- c. Identification of experts in the field, taking into account training, monitoring, and maintenance of a network of experts linked to the work on POPs.
- d. Preparation of inventories of sources of emissions of dioxins and furans, and facilities with PCBs; review of the legislation; and investigation of existing alternative technologies.

The entire process should be accompanied by greater awareness by society to provide a solid basis for decision-making.

CHILE

Priority is being given to finalizing the Regulation on Hazardous Waste, which will make the existing law operational.

The Chilean regulation envisages compulsory submission of information on potential sources of dioxins and furans by the manufacturers and also by the owners of equipment with PCBs.

- a. Identification of sources of dioxins and furans and a census of PCBs.

PARAGUAY

Proposed as the first priority is the involvement of related sectors and the formation of working teams; in addition:

- a. Preparation of suitable legislation.
- b. Realization of inventories.
- c. Improvement of the availability of information.

URUGUAY

The following were identified as short-term actions:

- a. Development of inventories of owners of equipment containing PCBs.
- b. Development of an inventory of potential sources of dioxins and furans, based on the current inventory of emissions, carried out within the framework of the Montreal Protocol, and the census of industries.

GREENPEACE

Transparency in the management of information during each step of its acquisition is important for the success of any program.

INDUSTRY

The industry has programs for responsible management in countries of the Region and they are available for collaboration through that network; the subjects include alternative technologies and environmentally sound waste management and disposal. Currently part of the program for responsible management are Argentina, Brazil, Colombia, Chile, and Venezuela.

ARGENTINE FEDERATION OF LIGHT AND POWER WORKERS - ARGENTINE UNION SECTOR

The Argentine union described its work on the determination of sites where there is equipment containing PCBs, for which it is contributing its own resources. It also suggested that there be periodic exchange of information, such as is occurring in this workshop.

RECOMMENDATIONS OF THE WORKING GROUP

In the projects and programs dealing with the POPs, the various actors in society should be involved: diverse institutions in the government, industry, NGOs, the community, and workers. This should be accompanied by information dissemination and public awareness campaigns.

There is a real need for more appropriate legislation, which would allow better control of the POPs.

The development of inventories of existing PCBs and of potential sources of dioxin and furan emissions is indispensable for developing programs for the management and disposal of POPs.

The lack of national capacity in the treatment and final disposal of materials containing PCBs is a common problem in the countries of the Region, and thus a search for regional solutions should be envisaged.

With respect to information exchange and dissemination, technology transfer, and the training of experts, it was agreed to utilize the regional networks of the Centers for the Basel Agreement, the Centers for Cleaner Technologies, and PAHO, as well as the network of POPs focal points.

In addition, utilization of the institutional mechanisms of MERCOSUR (subgroup on the Environment) was agreed upon to articulate common actions for the countries that make up this market. In this same vein, Chile and Bolivia would utilize equivalent mechanisms in the Andean Pact countries.

Working Group Pesticides
Session 1:
Status of Releases and Levels in Countries
and Needs for Further Information and Research

Guidance Questions

1. What is known with regard to sources and releases of POPs in countries?
 - Which POPs are still in use, for which purpose and to what extent?
 - What is known about sources and quantities released of POPs?
 - What type(s) of monitoring/estimation is currently used to determine releases?
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 - Have concentrations been measured on any systematic basis for any of the POPs?
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5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Report Session 1

The Working Group on Pesticides, made up of representatives from Argentina, Brazil, Bolivia, Chile, Paraguay, and Uruguay, discussed the questionnaire prepared by UNEP, which is attached.

With regard to **Question 1**, the general response was that pesticide POPs are not manufactured in the Region, except for mirex (in Argentina).

The products still registered in the Region are:

Mirex Argentina, Uruguay (not prohibited in Paraguay)
 In Chile this active ingredient has not been registered.

Chlordane Argentina, only for ant control; under review.

Heptachlor Brazil, only for wood.

Aldrin Brazil, only for wood.

There were comments on information concerning the importation of POPs pesticides from the United States of America, but their entry was not confirmed.

In this regard, a delegate from the Argentine Republic proposed the need for verifying, with the cooperation of the Ministry of Foreign Affairs, the (non certifiable) entry of shipments from First World countries as exports to the country but about which the following is not known:

Identification of the importer

Lot size

Pest being controlled

Storage conditions, application, handling of containers, waste, overdue shipments, etc.

Concerning Question 2, in general what has been studied most in all the countries is the aquatic environment (Plate River, Uruguay River, Paraná River, BíoBío River, and in Paraguay, 18,000 ha in rice fields), but there are also isolated soil studies.

Concerning Question 3, the products whose restricted, prohibited, or permitted use generates the most concern in the field of health have been dodecachlor, lindane, heptachlor, DDT, and BHC. The need for data on the actual entry of these products into the area was mentioned.

Concerning Questions 4 and 5, which were combined, the Group understood that the greatest need for support was in the following areas:

- Training at all levels
- Epidemiological studies in humans

- Monitoring of wildlife
- Monitoring of the air in the environment
- Regional plan for monitoring the environment with international financing
- Destruction of stocks of pesticide POPs
- At the same time, the group was in agreement about acquainting itself with the data from the formulary distributed by UNEP.
- Decontamination of potentially contaminated areas

Session 2:

Possible National Actions and Regional Cooperation to address POPs issues.

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Report Session 2

Argentina, Bolivia, Brazil, Chile, Paraguay, and Uruguay

Q1.

ARGENTINA

It was pointed out that use of many pesticides has been discontinued; the majority are POPs and are disposed of in unsuitable places. There was mention of four cases that have already been reported (resulting in removal in one case); the concern is about the unknown.

There is an urgent need to implement a more effective system of identification, elimination, and/or temporary storage of residual pesticides whose use is currently banned.

BRAZIL

The countries of the Region are generally aware of the existence of illegal deposits (at one time their burial was allowed). This means that regulation of their elimination and storage is needed to permit better control of the problem.

URUGUAY

The immediate actions of the Ministry of Health were reported in the cases of the product Gamersal in a laboratory and of cyanide stored in a port for the fumigation of ships. Also mentioned was the storage, in houses and on small agricultural holdings, of aldrin and dieldrin, which ought to be included in an inventory.

The countries present were generally in agreement on:

1. The creation of a single registry at the national level that facilitates the control of pesticide POPs.
2. The conducting of simple campaigns that teach how pesticides should be stored, which products should be utilized, and which are prohibited. These should be mass campaigns with evaluation before and after, reaching all sectors and all levels with broad dissemination and promotion.
3. Education is a very important factor that should have priority in the ministries involved with these products, raising the awareness of all sectors, even at the household level, since the use of these products often involves the family nucleus.
4. The information should be widely disseminated by means of publicity, the appropriate institutions, and commercial regulation through labeling.
5. Training for inspectors via courses, talks, and symposia and, in addition, provision of adequate means to achieve effective control.

6. Updating of the regulation so that it includes the concept of the vulnerability of man and the environment.
7. It is proposed that those who have undeclared deposits of prohibited POPs in the country be held responsible.
8. Improvement of the mechanisms for reporting cases of intoxication linked with POPs.
9. Inclusion of alternatives, either chemical products or cleaner technologies, in case authorization of POPs is continued in the country while the mechanisms to ban them are being developed.

Q2.

- a) A national plan of action for POPs.
- b) Utilization of the assistance of international and regional organizations, the national agencies of other countries, and others, after an analysis that sets the priorities for that assistance.
- c) Establishment of a network among the countries for reporting on transportation, exports, imports, or purchase orders from the industries or sale by the manufacturers.
- d) Turning to the international and regional organizations concerned with the use of pesticide POPs, such as UNEP, FAO, PAHO, ILO, UNIDO, and OECD.

Q3.

- a) Utilizing the same focal points and designated national authorities that are already working toward the implementation of the Basel, Montreal, and IFCS agreements.
- b) Holding periodic meetings of the countries to discuss common problems.
- c) Increasing communication among the scientific and research centers in the countries of the region.
- d) Promoting workshops on problems that affect the different countries, utilizing the experts already mentioned.
- e) Establishing informal communication mechanisms among the actors of the different countries.
- f) Facilitating the realization of joint research projects.

Q4.

- a) See Question 2, d) for formal networks.
- b) Informal communication networks that involve scientific societies, among others.

Q5.

- a) Of general concern is the utilization of products that, although banned , have been found to be linked to poisonings and illegal use, such as dodecachlor, lindane, heptachlor, DDT, and BHC.
- b) Their undeclared cross-border transportation is also a matter of concern.

Q6.

- a) Utilizing the focal points and the national authorities that are already implementing agreements, signed by the countries, that involve chemical substances.
- b) Organizing periodic meetings among the countries and joint workshops on POPs, and, moreover, taking into account the research conducted by scientific centers in the countries of the Region and the reports prepared by the NGOs.

Q7.

All forums dealing with chemical substances, plus the international agencies, such as UNEP, FAO, PAHO, ILO, UNIDO, OECD, COSAVE, and the International Office of Epizootics.

Kranjska Gora, Slovenia
11-14 May 1998

Working Group Industrial Chemicals and Contaminants

Session 1:

Status of Releases and Levels in Countries and
Needs for Further Information and Research

Guidance Questions

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Report Session 1

Q1:

Poland: Poland produced PCBs and organochlorine pesticides. 2,4-D is still produced. PCDDs/Fs were found in transformer oil. There is little data on POP levels in Poland. Two laboratories are able to analyse PCDDs/Fs in Poland but because of high prices their services are not utilized. There is no monitoring system of POPs running on a regular basis.

Macedonia: All data will be provided, according to the UNEP questionnaire in next 10 days and it will be sent to UNEP Chemicals.

Czech Republic: PCBs and HCB are not produced at the present time, their levels are monitored in ambient air, drinking water, soils, food. PCBs are still used in capacitors. With regard to PCDDs/Fs, the broad measurements of emission factors as a base for real emission inventory of POPs in CR, is realized during a period of 1995-1999. According to the Czech Air Act, the measurements of PCDD/F emissions from waste incinerators are realized yearly. The first emission inventory was carried out in 1993. PCB inventory was prepared in 1995.

Slovakia: PCBs and HCB are regularly monitored in drinking and surface water, food and other environmental and biological matrices according to a monitoring programme, legislation or research projects. PCBs are still used in power capacitors. PCB manufacture in Slovakia was stopped in 1984 after about 21 500 t had been produced. Out of 4 000 t PCBs used on the territory of Slovakia, a part has been destroyed abroad by incineration, a part is landfilled, a part is in use (power capacitors) and the rest, about which there is no data, could release into the environment (more than 2 000 t). PCB levels found in the Slovak general population are considerably higher in comparison with European countries except CR. Because of elevated PCB and HCB levels in the Slovak human general population a national or at least case study focused on exposure and risk assessment is a matter of great urgency.

Bosnia and Herzegovina: No information on POPs production and monitoring. PCBs can still be found in many closed systems but there are no exact data.

Slovenia: There has been no PCBs production in the country. POPs can be formed in few incinerators that operate in Slovenia. In the past, there was an accident involving PCBs contamination of environment in Jemic around the Krupa river. Electrical devices containing PCBs were replaced. PCBs and HCB monitoring continues in drinking and surface water, food and environmental matrices.

Romania: The manufacture of transformers and capacitors containing PCBs was stopped in 1986.

Bulgaria: POP inventory has started. The use of POPs is regulated by acts. Monitoring runs in limited extent.

Albania: PCB analysis in transformer oils was performed. Transformer oil and oil from used cars can be a source of POP contamination. No production of POPs, no ongoing monitoring goes on a regular basis. There are no waste incinerators in Albania.

Hungary: Hungary has a completed background material containing general information on POPs, emission data and the use of POPs.

All the international questionnaires were completed as requested. Most of POPs is banned in Hungary. POP inventories were performed based on TNO emission factors. Major sources of emission in Hungary for PCBs are: power plant combustion (55%), pyrogenous emissions from household and industry; for PCDDs/Fs: waste incineration (44.9%), household firing (24.7%), power plant combustion (13.2%); for HCB: emissions from the decomposition of residential waste were calculated only.

Croatia: There is no manufacture of PCBs in Croatia. In 1997, more than 2 000 t of PCB oils from various countries were imported. There are 405 users of 22 532 PCBs capacitors and 293 users of PCB transformers in Croatia. There is no PCB destruction capacity in the country. A part of PCB transformer and condenser oils were exported to France for destruction. The data related to monitoring the PCB releases to Kupa river in 1982, and data related on the monitoring of soil, ground water, surface water and human exposure should be verified.

Q2:

Poland: There is little knowledge on POP levels in various media. There is a lack of central information system and database containing facts on concentrations in various media. These gaps in knowledge exist specially in the case of PCDDs/Fs.

Czech Republic: Few monitoring programmes concerning POP environmental levels exist in the CR – 10 years of monitoring of POPs on a regional level in all the environmental compartments in the area of Košetice observatory, south Bohemia, Teplice, Silesia, and Prague projects.

Slovakia: On a systematic basis, PCBs, HCB, PCDDs/Fs were monitored for one year (1996-97) in Slovakia's ambient air (PHARE programme). Currently, the monitoring does not continue due to a lack of financial means. PCBs and HCB are regularly analyzed within a monitoring programme. A pilot project aimed at the levels of POPs in the Slovak human general population was realized in a period of 1994-96. A case study focused on PCBs and HCB levels in the environment, food and humans in a district highly contaminated by PCBs has started in 1998. A detailed PCB inventory involving inspections of PCB disposal sites and equipment (capacitors and transformers) that are supposed to contain PCBs is urgently needed in order to reveal highly contaminated sites and take measures to safe PCB destruction.

Q3:

PCBs contamination was identified as significant in few countries (Slovakia, Slovenia, CR, Croatia). Sediments and soils in all the countries are probably contaminated or in some specific cases heavily contaminated by PCBs and pesticides. As PCB concentrations are expected to be decreasing one can expect a decrease in risk, as well.

Q4:

Based on existing monitoring and research data especially in the CR, Slovakia, and Slovenia some estimates on trends of POPs in environmental media can be realized. The countries of the region need emission inventories based on real measurements of emission factors, effective monitoring systems and a scientific, research and information network focused on POPs. In some countries of the region there is no monitoring of POPs due to unsuitable analytical background and financial problems. Some countries from the region with good expertise in the field of POP monitoring, inventories, exposure and risk assessment could be involved in monitoring, inventory activities and research programmes within the region.

Q5:

All the countries in the region have insufficient financial resources needed for better understanding releases and levels of POPs. Information on POP problems on the governmental, industrial and public levels is insufficient, as well. Legislation regarding POPs should meet the EU legislation as soon as possible.

Session 2:

Possible National Actions and Strategies to Address Relevant POPs Issues

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems? E.g.,
 - Develop an inventory of POPs releases;
 - Develop an inventory of PCB -containing equipment;
 - Develop an inventory of potential sources of dioxins and furans;
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 - Establish a network of experts dealing with POPs;
 - Establish an information exchange network on POPs hazards and risks;
 - Develop case studies on most urgent POPs problems, including identification of risks and possible alternatives;
 - Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
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2. What are the possible ways and means to implement actions identified above? E.g.,
 - Develop guidelines and other tools on POPs management;
 - Develop national action plans;
 - Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
 - Develop/strengthen national chemicals legislation;
 - Use assistance and advice provided by international, regional organizations and national agencies of other countries;
 - Encourage voluntary programmes by industry; and
 - Conduct public information campaigns.

3. What steps do countries need to undertake in order to prepare national positions for the upcoming POPs convention negotiations? E.g.,
 - Inter-ministerial consensus-building efforts; and
 - Meetings with stakeholders

Report Session 2

Q1:

- Each country needs inventories of POP emissions, releases, contaminated equipment, sources of POPs , especially of PCDDs/Fs
- Some regional inventories can be used for other countries in the region (similar technologies, similar state of technologies, similar economical conditions)
- All the countries need to develop:
 - **on the national level:**
 - an inventory of POP emissions and releases
 - an inventory of sources of POPs including hot spots and contaminated equipment
 - establish network of experts dealing with POP problems
 - prepare:
 - list of experts,
 - list of POP information (reports, papers, databases...)
 - list of POP activities(conferences, symposia, workshops, seminars..)
 - **on the regional level:**
 - establish an expert network on POP problems
 - establish an information exchange network on:
 - governmental level
 - expert level
 - **on the regional/global level:**
 - establish center for exchange of technological alternatives, new technologies...
 - collect the information:
 - UNEP questionnaires
 - common information
 - regional database
 - Prepare regional case studies - with impact to whole region:
 - PCBs – Slovakia – former producer + all countries were/are users – national level of contamination + disposal programme
 - Disposal of pesticides in Poland
 - To establish dioxin laboratory as a central laboratory equipped with appropriate analytical technique (high resolution mass spectrometry, etc.) and highly experienced research staff able to analyse dioxins and related compounds on ultratrace levels + the network of local PCDDs/Fs

laboratories which are now able analyse PCDDs/Fs which will collect samples, prepare samples for the central dioxin laboratory and analyse samples containing higher amounts of PCDDs/Fs.

Q 2 and Q 3:

- Each country needs adequate environmental legislation generally based on EU legislative including chemical law, chemical safety law etc.
- Each country needs to establish national co-ordinating mechanisms involving:
 - Relevant government authorities
 - Other national partners
 - Public
- Each country have to prepare “National Action POPs Plan” (main activities in this field, co-ordination between ministries, contacts with industry, with NGO, public information campaigns.
- Each country can use many international experiences, guidelines:
 - European Emission Inventory Guidebook,
 - EU Guidelines
 - US EPA
 - Canada
 - OECD
- Create mechanisms for overcoming inter-ministerial barriers (resortism)

Session 3:

Possible Regional Cooperation to Manage POPs

Guidance Questions:

1. How could countries work together to raise awareness throughout the region of POPs problems?
2. What regional networks could be employed to exchange information and expertise about POPs among countries in the region?
3. What are some of the POP s-related problems that are common to a number of countries to the region?
4. Of the problems identified, which could be addressed more efficiently through regional co-operation?
5. How might countries in the region work together more effectively to address POPs-related problems? (This response should not be limited to those problems addressed in questions 3 and 4.)
6. Which regional international fora are, could or should be involved in POPs issues? Are the fora currently engaged in POPs issues sufficient to deal with the most significant problems? Are their efforts co-ordinated effectively? Should other fora be encouraged to become engaged?
7. Are there opportunities to build partnerships among the countries in the region, regional intergovernmental organizations, technical international organizations with regional presence, international financial institutions and non-governmental groups (including environmental and industry) to address regional POPs problems in a more strategic manner? Please describe those identified.

Report Session 3

1. Leaflets on POPs translated into National languages; follow-up technical meeting.
2. Start up with 2-3 persons “ Initiative Group” to build up network concerning POPs with cooperation of UNEP and others
3. Common items- need for Inventory; implement PIC procedure regionally ; analyses of POPs of concern; in particular dioxin and furans; looking for cost - effective methods ; destruction/disposal of obsolete chemicals - BASEL focal points; harmonized/ unified questionnaire POPs.
4. All of 3
5. Common projects of implementation to have better cooperation between neighboring countries; including exchange of information -experts, labs, clearing house.
6. EBRD.., need for more industry association participation; environmental public interest groups including labour.
 - Initiative for National network on POPs & regional work on POPs trough follow- up meeting;
 - UNDP - UN Development Programme and World Bank ; IMF - International Monetary Fund
 - WHO / FAO assistance Programme

Working Group Pesticides
Session 1:
Status of Releases and Levels in Countries and
Needs for Further Information and Research

Guidance Questions

1. What is known with regard to sources and releases of POPs in countries?
 - Which POPs are still in use, for which purpose and to what extent?
 - What is known about sources and quantities released of POPs?
 - What type(s) of monitoring/estimation is currently used to determine releases?
2. What is known with regard to levels of various POPs in different media?
 - Have concentrations been measured on any systematic basis for any of the POPs?
 - Do data show any significant levels or give rise to concern for any of the POPs?
 - Are there any trends visible in the concentration levels?
3. Based on the existing data, which of the twelve POPs can be considered of significance for countries in the region?
 - Has any of the POPs been identified as significant in a number of countries?
 - Do data give rise to particular concerns for any specific POPs or medium?
 - Do data trends provide indications of potential future increases or decreases in risks?
4. What further information is needed to assess releases and exposures to POPs in countries?
 - Is there a need to carry out further release estimates/monitoring for any of the POPs or for a particular media?
 - Is it possible to identify trends with the estimation and monitoring systems/programmes, which could assist in evaluating successes of actions to reduce/eliminate releases?
 - Which tools, such as inventories and networks, would be needed to make information more easily accessible and useable?
5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Report Session 1

Results of discussion:

- Present status of using POPs pesticides was expressed by representants of participating countries - there is no legal use of POPs pesticides in the region. Table in Annex I. present status of POPs pesticides use in participating countries. In some respect POPs are not directly banned but they are not listed for use in registers (Albania, Croatia, Czech Republic, Slovak Republic).
- Potential risk is linked with storage of not used pesticides including POPs. In this respect Poland has evidence of storage more than 10 000 tones of unused pesticides (mixture of different pesticides including POPs). This was identified as a possible hot spot in the region. Slovenia has no identified problems in this respect.
- It was expressed by some of the countries that higher concern is needed also in respect of present use of other pesticides which are persistent in the environment that are not included in POPs in the present time
- Some of the countries - Bosnia and Herzegovina - lack of information about use, import and storage of POPs pesticides has been expressed. Macedonia will complete information later directly to UNEP Chemicals.
- In some of the countries (for example Bulgaria) it was recognised that concentrations of POPs pesticides in environmental media decreased on such low levels that no further systematic monitoring is needed. Different situation could be found in Albania where still relatively high concentrations are measured in water and sediments (DDT). In the Slovak Republic measured data show high exposure to HCB from not known source which resulted in fact that critically high concentrations could be found in human tissues
- Either monitoring of POPs pesticides in some countries is now done for more than 20 years measurements and data processing were not done in every case by systematic way. This resulted to need of comprehensive and detailed inventory of excessible data and improvement of status where needed.
- All of the countries expressed need for continual monitoring of agricultural products mainly imported from other countries outside of the region

Further information/needs:

- - exchange of information between countries in the region about actual situation and data from continual monitoring, regional evaluation of trends
- - strengthening of the practical co-operation in the region (Danube River)
- - co-operation in respect of technologies for detoxification of unused pesticides and environmental friendly agricultural practice
- - call for co-ordination between different sectors on national and international level

- - action for identification of hot-spots - regional co-operation and international support
- - increase the level of understanding between decision makers and scientists and support of consultancy capacities in national level

Barriers:

- 1 country - access to information through internet (Albania)
- Language on national level - to involve interested parties working in POPs problems and chemicals management

Session 2:

Possible National Actions and Strategies to Address Relevant POPs Issues

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems? E.g.,
 - Develop an inventory of POPs releases;
 - Develop an inventory of PCB -containing equipment;
 - Develop an inventory of potential sources of dioxins and furans;
 - Develop an inventory of unwanted POP pesticide and other POPs stockpiles;
 - Establish a network of experts dealing with POPs;
 - Establish an information exchange network on POPs hazards and risks;
 - Develop case studies on most urgent POPs problems, including identification of risks and possible alternatives;
 - Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
 - Introduce more efficient and effective waste disposal technologies and techniques.

2. What are the possible ways and means to implement actions identified above?
 - Develop guidelines and other tools on POPs management;
 - Develop national action plans;
 - Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
 - Develop/strengthen national chemicals legislation;
 - Use assistance and advice provided by international, regional organizations and national agencies of other countries;
 - Encourage voluntary programmes by industry; and
 - Conduct public information campaigns.

3. What steps do countries need to undertake in order to prepare national positions for the upcoming POPs convention negotiations? E.g.,
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 - Meetings with stakeholders

Report Session 2

Possible National Actions and Strategies to Address Relevant POPs Issues

In discussion about present situation in the Region in respect of pollution by POPs pesticides in the environmental media, it was stated that detailed information were collected by the international team conducted the Regional Pesticide Study (Project No.. 950100). It was expressed high interest of participating countries to receive copy of the project reports to the POPs Focal points. Request will be addressed to PCU Vienna.

Inventory of unwanted POPs - Poland has expressed they offer to develop methodology (Guidelines) covering experiences of the country in this field. It was recognised that inventories on different level of complexity is available in most of the countries:

Albania –inventory completed

Bulgaria – inventory 1996

Croatia - POPs National profile

Hungary - inventory for dangerous chemicals, PIC procedure - exports and imports

Poland - inventory ongoing

Romania - inventory for POPs pesticides 1992 – completed

Macedonia – information will be sent directly to UNEP chemicals

Slovak and Czech Republic

Slovenia - inventory completed, no POPs pest in stock

Information - Meeting for pesticides - 5th Forum - June 1998 in Bilbao

Network for registration, production and use of pesticides is working in the countries of region. In this respect we cannot see a need for establishment of specific network for POPs pesticides.

Information on POPs hazards was identified to be satisfactory. For existing risks a case studies with share of information to be done

- Slovakia- HCB - information exchange

- Risks to population and to the environment from- stock - Poland

- Albania - DDT

- Poland -Case study - animal feed import outside the subregion - POPs pesticides, information network

Waste Disposal Technologies – not available in the subregion

Poland – semi-mobil incinerator (tender phase)

Chemical legislation - in most countries ongoing process of harmonisation with EU legislation

- Albania - chemical legislation – need for advisory

CEUREC – Organization of Central and Eastern European is working –

Mr. Zoltan Ocko, Ministry of Agriculture

V. Kossuth ter 11, Budapest, Hungary

Pesticides use data - Guidelines UK - EU- OECD-available. To ask OECD to invite as observers for specific topics non-OECD countries.

It was suggested to include in the Budapest Pesticides Forum POPs

GIFAP EUFAP

National Association of Producers of Pesticides - proposal for legislation
Information Campaign

Community groups - involve them in campaigns for incineration.

Forum of NGOs - support by information share

high quality of technical information - available also single language

Slovenia, Croatia and Hungary presented their activities to co-ordinate the work on chemical management including POPs on National level. National structures are presented in annexes..

Annex 1: Structure of the Central Co-ordinating Uniting Facilitating Advisory
Body in Slovenia

Annex 2: Government Commission for Safe Chemical Management in Croatia

Session 3:
Possible Regional Cooperation to Manage POPs

Guidance Questions:

1. How could countries work together to raise awareness throughout the region of POPs problems?
2. What regional networks could be employed to exchange information and expertise about POPs among countries in the region?
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4. Of the problems identified, which could be addressed more efficiently through regional co-operation?
5. How might countries in the region work together more effectively to address POPs-related problems? (This response should not be limited to those problems addressed in questions 3 and 4.)
6. Which regional international fora are, could or should be involved in POPs issues? Are the fora currently engaged in POPs issues sufficient to deal with the most significant problems? Are their efforts co-ordinated effectively? Should other fora be encouraged to become engaged?
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Report Session 3

Results of discussion:

Regional Cooperation should be supported and encourage in several levels:

- support and increase activities done by existing structures – Forum in Budapest, ACA and Pesticides Forum (Denmark), activities of UNEP, FAO, etc.
- exchange information between POPs focal points in the region
- organising regional workshops on different topics related to POPs and chemicals management
- initiate case studies relevant in the region in co-operation with international bodies and financing institutions

They are agreed candidates for case studies relevant in this respect for POPs management:

- Risks linked to the storage of unwanted pesticides, inventory and management (responsible country to prepare frost draft proposal – Poland)
- Danube river POPs pollution – advanced study focusing to identify Hot Spots (responsible country to prepare frost draft proposal – Bulgaria)
- Population exposure and risk assessment to HCB (responsible country to prepare frost draft proposal –Slovak Republic)
- Inventory of available technologies, management tools for safe disposal, handling and liquidation of POPs pesticides – targeting needs of the countries in the region (responsible country to prepare frost draft proposal – Albania)
- Priority setting on the national and regional level – managing POPs, POPs candidates and Chemicals Management (responsible country to prepare frost draft proposal – Slovak Republic)
- Control of POPs residues in animal feed (responsible country to prepare frost draft proposal – Poland)

Responsible country should send the short proposal to the UNEP chemicals and countries in the region till end of May 1998.

There was presented offer to involve NGOs in the region into the process of public education, capacity building and others. Contact address is included as Annex 1.

**Abu Dhabi,
United Arab Emirates
7-9 June 1998**

Working Group Industrial Chemicals and Contaminants

Session 1:

Status of Releases and Levels in Countries and
Needs for Further Information and Research

Guidance Questions

1. What is known with regard to sources and releases of POPs in countries?
 - Which POPs are still in use, for which purpose and to what extent?
 - What is known about sources and quantities released of POPs?
 - What type(s) of monitoring/estimation is currently used to determine releases?
2. What is known with regard to levels of various POPs in different media?
 - Have concentrations been measured on any systematic basis for any of the POPs?
 - Do data show any significant levels or give rise to concern for any of the POPs?
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3. Based on the existing data, which of the twelve POPs can be considered of significance for countries in the region?
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4. What further information is needed to assess releases and exposures to POPs in countries?
 - Is there a need to carry out further release estimates/monitoring for any of the POPs or for a particular media?
 - Is it possible to identify trends with the estimation and monitoring systems/programmes, which could assist in evaluating successes of actions to reduce/eliminate releases?
 - Which tools, such as inventories and networks, would be needed to make information more easily accessible and useable?
5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Report Session 1

This report summarises the views expressed by the country participants on POPs releases from activities other than pesticides use. The participants are from different departments, excepting a few who belonged to POPs focal points, therefore their views are individualistic and cannot be construed as their country views.

In the foregoing paragraphs the list of probable sources of POPs in different countries, barriers in trying to understand releases and levels of POPs and recommendations for managing this issue are highlighted.

Sources of POPs in different countries

1. BAHRAIN

Aluminum and Cement Plants
Leaded Gasoline
Electrical Equipment's
Steel Factory.
Illegal Copper Wire Reclamation Units
Refinery
Medical Waste Incinerators

No inventory is available for PCB's but PCB's are included in the list of banned chemicals.

2. KUWAIT

Municipal and Medical Waste Incinerators
Electrical equipment's ?
A case study on PCB's has been undertaken by the authorities and a report is available in Arabic for circulation.

3. LEBANON

Cement Plants
Leaded Gasoline
Electrical Equipment's
Open Burning of Solid Waste
Refinery

4. OMAN

No information is available with the representative. However, a new department for chemicals has been established recently to deal with this issue.

5. PALESTINE

Medical Waste Incinerators

Open Burning of Solid Waste.
Illegal Import and Dumping of Toxic Waste.
Lack of Control on Israeli Industries within Palestinian Territories.

6. QATAR

Electrical Equipment's
POPs from other sources are not known to the representative

7. SYRIA

Cement Plants
Leaded Gasoline
Electrical Equipment's
Refinery
Composting Plants.

8. UNITED ARAB EMIRATES

Waste Incinerators (Medical/ Municipal)
Municipal Waste Burning
Aluminum and Cement Plants
Leaded Gasoline
Electrical Equipment's
Steel Factory.
Chlorine Industry.
Compost Plant
Refinery
PVC Plant

Barriers Faced in Trying to Understand Releases and Levels of POPs

Awareness among general public on POPs
Communications within each state at all levels.
Availability of infrastructure and expertise to measure POPs.
Non-availability of PCB destruction capability

Recommendations

- * UNEP format for collection of relevant information on POPs must be made available to national focal points of all states in the region. It will be provided by UNEP-chemical, Directorate to all focal points on request for necessary action.
- * PCB destruction capability information is requested by UNEP from national focal points must be forwarded to them as early as possible.
- * Focal points should create awareness and co-ordinate with relevant departments such as electricity, agriculture and industrial departments, etc., on POPs
- * Devise regional co-ordination and planning strategies on eliminating POPs.
- * Encourage periodic regional and national POP awareness programs.
- * Focal points to undertake necessary measures to minimize potential sources of POPs releases, one such suggestion is to encourage breast feeding.
- * National Institutional Capacity Building on the following issues
 - Identifying POPs of concern to each state
 - Training on monitoring POPs in all media and biota.
 - Regional co-operation in PCB destruction capability.
 - Improving communication at all levels.

Session 2:

Possible National Actions and Strategies to Address Relevant POPs Issues

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems? E.g.,
 - Develop an inventory of POPs releases;
 - Develop an inventory of PCB -containing equipment;
 - Develop an inventory of potential sources of dioxins and furans;
 - Develop an inventory of unwanted POP pesticide and other POPs stockpiles;
 - Establish a network of experts dealing with POPs;
 - Establish an information exchange network on POPs hazards and risks;
 - Develop case studies on most urgent POPs problems, including identification of risks and possible alternatives;
 - Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
 - Introduce more efficient and effective waste disposal technologies and techniques.
2. What are the possible ways and means to implement actions identified above?
 - Develop guidelines and other tools on POPs management;
 - Develop national action plans;
 - Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
 - Develop/strengthen national chemicals legislation;
 - Use assistance and advice provided by international, regional organizations and national agencies of other countries;
 - Encourage voluntary programmes by industry; and
 - Conduct public information campaigns.
3. How could countries work together to raise awareness throughout the region of POPs problems?
4. What regional networks could be employed to exchange information and expertise about POPs among countries in the region?
5. What are some of the POPs-related problems that are common to a number of countries to the region and which could be addressed more efficiently through regional co-operation ?
6. In which other ways might countries in the region work together more effectively to address POPs related problems?
7. Which regional/international fora are, could or should be involved in POPs issues?

Report Session 2

The participants in the session agreed on the following points:

1. Concerning the actions that could be immediately taken at national and regional levels, the following was considered the main important issues:
 - Developing an inventory on PCB containing equipments
 - Developing an inventory on potential sources of dioxins, furans, and industrial contaminants
 - Introducing chemical and non-chemical alternatives to POPs as well as cleaning technologies. More attentions should be directed to non-chemical solutions since it may be more sustainable.
 - Introduction of effective waste disposal techniques and technologies.
2. Regarding the means and ways to implement the actions identified above , the following took a major priority:
 - Developing guidelines and other tools on POPs management.
 - Establishing national coordination mechanisms involving government authorities and other national partners and stakeholders. As well as NGOs
 - Developing national action plans that contain a component regarding industrial chemicals and contaminants.
 - Encourage voluntary programs by industries related to the subject.
 - Conduct public information campaigns.
3. Regarding how countries can work together, each country should establish a focal point who will be responsible for the action plan in his country. He will collaborate with focal points in the region.
Non governmental voluntary organizations in each country must act to encourage the reduction, reuse and recycling of waste.
4. There are sub regional, regional organizations, in addition there are international agencies such as UN agencies eg. UNEP for West Asia, ROPME for the Gulf, WHO,...
5. All industrial POPs are relevant to the region
PCB is a priority regarding inventory preparation and disposal , Dioxins are also a priority regarding open burning of waste, medical waste incineration, and copper cable burning.
6. Exploring the capabilities of cooperation among the countries of the region regarding the disposal of hazardous waste including PCBs , research projects and center of excellence for monitoring and analysis.
Financial contribution for capacity building is appreciated.
7. International organizations are: UNEP, WHO, IFCS
Regional organizations are: ROPME (Regional Organization for the Protection of Marine Environment), PERSGA (Protection of the Environment in the Red Sea and the Gulf of Aden)

Working Group Pesticides
Session 1:
Status of Releases and Levels in Countries and
Needs for Further Information and Research

Guidance Questions

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 - Is it possible to identify trends with the estimation and monitoring systems/programmes, which could assist in evaluating successes of actions to reduce/eliminate releases?
 - Which tools, such as inventories and networks, would be needed to make information more easily accessible and useable?
5. What are the barriers faced in trying to better understand releases and levels of POPs in countries?

Report Session 1

Q1. All POPs are:

- a. Completely Banned in Agriculture and Public Health use: - In UAE, Syria, Lebanon, Kuwait
- b. Banned in Agriculture: only in Bahrain
- c. In Palestine officially Banned by Israel, but some POPs are available in the markets.

Q2. There is no systematic monitoring in any of these Arab Countries for all POPs pesticides.

Environmental levels or Levels in imported foods (vegetables, fruits, canned food, dairy products etc.) are not known.

There may be some data from research studies, but not readily available - published.

Q3. With the exception of Palestine POPs pesticides are not believed to be a priority problem with these Arab Countries.

For Palestine POPs is an important issue.

Q4. a. There is need to develop environmental monitoring programmes to examine different media.

b. There is need to strengthen laboratory facilities.

c. Training of Native Staff in analytical techniques is very essential.

d. Need for information sharing - development of Regional networks.

e. Inter-ministerial Committees and activities would be beneficial in Arab Countries.

UAE and Lebanon has such committees,
Bahrain is forming such committee.

Q5. No Monitoring System:

- Environmental media
- Food imports

Information on Pesticides used by countries from which foods are imported is lacking; Some Ministries of Agriculture monitor imported foodstuffs, but not specifically on POPs.

Analysis of foods imported one are not properly and routinely carried out. Plus what is monitored above,

- There is bad need for Regional Law issued by Arab League, which should be very strong and implemented strictly.
- There is a need for Technical Committee to review all pesticides in use and recommend banning any which are discovered to be highly toxic to humans.

Session 2:

Possible National Actions and Strategies to Address Relevant POPs Issues

Guidance Questions:

1. What kinds of immediate actions could be taken at the national and sub-national levels to assess and address POPs problems? E.g.,
 - Develop an inventory of POPs releases;
 - Develop an inventory of PCB -containing equipment;
 - Develop an inventory of potential sources of dioxins and furans;
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 - Establish a network of experts dealing with POPs;
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 - Develop case studies on most urgent POPs problems, including identification of risks and possible alternatives;
 - Introduce alternatives, both chemical and non-chemical, and including cleaner technologies; and
 - Introduce more efficient and effective waste disposal technologies and techniques.

2. What are the possible ways and means to implement actions identified above?
 - Develop guidelines and other tools on POPs management;
 - Develop national action plans;
 - Establish national co-ordinating mechanisms involving relevant government authorities, other national partners/stakeholders and the concerned public;
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 - Use assistance and advice provided by international, regional organizations and national agencies of other countries;
 - Encourage voluntary programmes by industry; and
 - Conduct public information campaigns.

3. How could countries work together to raise awareness throughout the region of POPs problems?

4. What regional networks could be employed to exchange information and expertise about POPs among countries in the region?

5. What are some of the POPs-related problems that are common to a number of countries to the region and which could be addressed more efficiently through regional co-operation ?

6. In which other ways might countries in the region work together more effectively to address POPs related problems?

7. Which regional/international fora are, could or should be involved in POPs issues?

Report Session 2

- Q1.** Agree with all items listed except last concerning “more efficient and effective waste disposal technologies and techniques”. With regard to the later it was felt that it was too costly for individual countries to build their own and either use should be made of “safe” effective/efficient facilities already existing in other countries or the possibility of building regional facilities should be explored.
- Q2.** Agree that all are necessary steps.
- Q3.** Build on national co-ordinating mechanisms once established
Work with communication media - press, TV, radio, etc.
Target specific groups to raise their awareness, for example: factory workers, agriculture workers and agriculture extension groups, etc.
- Q4.** Lebanon-Syria Interministerial Committee (Ministers of Environment and others) - an effective mechanism for dealing with problems as they arise or with special topics – extend to other countries.
- GCC** (Gulf Co-operation Council) – overall mechanism – mandate includes environmental issues – participants inform Committee through their national government, departments/ministries.
- Q5.** Only Palestine has remaining regarding use of DDT
- Q6.** Work through **GCC** and **ROPME** (Regional Organization for the Protection of the Marine Environment).
- Q7.** See above

Participating Countries at Subregional Awareness Raising Workshops on POPs

Venue	Region	Countries
St Petersburg, Russian Federation	Commonwealth of Independent States and Baltic Countries	Armenia Azerbadjan Belarus Georgia Estonia Kazakhstan Kyrgyzstan Latvia Lithuania Moldova Russian Federation Tajikistan Turkmenistan Ukraine Uzbekistan
Bangkok, Thailand	Asia and the Pacific	Bangladesh Bhutan Brunei Cambodia China India Indonesia Iran I.R. of Korea, R. of Korea, DPR of Lao PDR Malaysia Maldives Mongolia Myanmar Nepal Pakistan Philippines Singapore Sri Lanka Thailand Viet Nam S P R E P (16 Pacific Island States) Australia Japan New Zealand
Bamako, Mali	Francophone and West Africa	Algeria Benin Burkina Faso Cameroun Central African Republic Congo D. R. of Equatorial Guinea Gambia Ghana Guinea Guinea-Bissau Ivory Coast Liberia Madagascar Mali Morocco Nigeria Senegal Sierra Leone Tchad Togo

Venue	Region	Countries
Cartagena, Colombia	Latin America and the Caribbean	Barbados Belize Colombia Costa Rica Cuba Ecuador Guatemala Jamaica Mexico Nicaragua Panama Peru St Kitts and Nevis Surinam Trinidad and Tobago Venezuela
Lusaka, Zambia	East and South Africa	Angola Botswana Burundi Egypt Ethiopia Kenya Lesotho, K.of Malawi Mocambique Namibia Rwanda Seychelles Somalia Sudan South Africa R. of Tanzania Uganda Zambia Zimbabwe
Iguazu Falls, Argentina	Conosur Countries	Argentina Bolivia Brazil Chile Paraguay Uruguay
Kranjska Gora, Slovenia	Eastern and Central Europe	Albania Bosnia-Herzegovina Bulgaria Croatia Czech Republic Hungary Macedonia, F.Y.R. of Poland Romania Slovakia Slovenia
Abu Dhabi, United Arab Emirates	West Asia	Bahrein Kuwait Lebanon Oman Qatar Palestine Syria United Arab Emirates