United Nations Environment Programme
برنامج الأمم المتحدة للبيئة • 联合国环境规划署
PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT • PROGRAMA DE LAS NACIONES UNIDAS PARA EL MEDIO AMBIENTE
ПРОГРАММА ОРГАНИЗАЦИИ ОБЪЕДИНЕННЫХ НАЦИЙ ПО ОКРУЖАЮЩЕЙ СРЕДЕ

Chemicals
Telephone: +41 22 917 81 11 Direct: 8195
Cables: UNITERRA, GENEVA
Facsimile: +41 22 797 34 60
E-mail: bow@unep.ch

Substances chimiques
11-13, chemin des Anémones
CH - 1219 Châtelaine
Genève, Suisse

First Meeting of the Advisory Group to the Global Network for the Monitoring of Chemicals in the Environment, UNEP Chemicals, Geneva, Switzerland, 13 to 14 May 2002

REPORT OF THE MEETING

General:

The 1st meeting of the Advisory Group to the Global Network for the Monitoring of Chemicals in the Environment (GNM) was held at UNEP Chemicals in Geneva on 13 and 14 May 2002. The agenda is attached to the report.

The meeting was attended by experts from the Environmental Agencies of Australia, China, and Japan, from University of La Plata-Argentina, North American Commission for Environmental Cooperation (NACEC), International Council for the Exploration of the Sea (ICES), National Institute for Environmental Studies-Japan, Shimadzu Techno Research Inc.-Japan, the Arctic Monitoring and Assessment Programme (AMAP), University of Pretoria-South Africa, University of Stockholm-Sweden, the International POPs Elimination Network (IPEN), UNEP GRID-Geneva and UN-ECE Convention on Long Range Transboundary Air Pollution (LRTAP), (see attached List of Participants).

Mr. Bo Wahlström, Senior Scientific Advisor at UNEP Chemicals, chaired the meeting.

1. Opening of the meeting

Mr. John Whitelaw, Deputy Director, UNEP Chemicals, opened the meeting with a presentation of UNEPs work with chemicals with a focus on POPs and the Stockholm Convention. The convention has received 151 signatories and has been ratified by nine countries. The Global Monitoring Network is set up to give the effectiveness evaluation of the convention a fast start and has a clearinghouse function. It will also try to find resources to build capacity in developing countries to monitor the POPs.

2. Background

Dr. Bo Wahlström, UNEP Chemicals, presented the background of the Global Network activities and its links to the Stockholm Convention, which contains a demand for an effectiveness evaluation. This says that a mechanism to acquire comparable monitoring data of the POPs has to be established. In some regions there are monitoring programs ongoing, but in others there is a lack of this kind of information. An ongoing project, Regionally Based Assessment of Persistent Toxic Substances (RBA PTS), is collecting the presently available information on the POPs and some other persistent chemicals worldwide. The results and outcome of the project will be very useful for the development of the Global Network.

3. Presentations from participants

The participants gave short presentations of activities within their organizations of relevance to the Global Network. Most of the presentations are attached as appendices to this report.
Dr. Juan Colombo, Laboratorio de Química Ambiental y Biogeoquímica, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, described a study of POPs in Rio de la Plata Estuary and the Paraná river, the major affluent to the system. The suspended material in the rivers is settling in the bay and high levels of the POPs are found there and close to Buenos Aires city. Also fish and clams contain high levels, specially of PCBs, and the maximum consumption with no adverse effect in man was calculated to be lower than 1g of fish per person per day for some species of fish based on the PCB content.

Mr. David Atkinson, Environment Australia, presented the situation in Australia where a National Dioxins Program is to about to commence. This will assess levels in the environment and the Australian population, and help build a database. The results will be useful in determining trends. It was noted that because of the unique environment, particularly the occurrence of bushfires and the relatively low level of industrialisation, the dioxins levels may be very different to those reported elsewhere. Bush fires are estimated to be a significant source and specific investigation is planned for this. The potential exists to assess other chemicals and to also draw upon a long-term air sampling station at Cape Grim on the west coast of Tasmania, as well as assessing levels of chemicals in Antarctica.

Dr. Joanne O`Reilly, North American Commission for Environmental Cooperation (NACEC), presented activities in the NAFTA countries, under the NACEC. In a program called Pollutants and Health, high priority is given to the Sound Management of Chemicals (SMOC) initiative and priority has been assigned to dealing with persistent, bioaccumulative and toxic substances (PTSs). North American Regional Action Plans (NARAPs) have been developed for PCBs, DDT, mercury and chlordane. A NARAP dealing with environmental monitoring and assessment is currently being finalized. The objectives of this NARAP is: to expand the awareness of monitoring needs, to share information and experiences between the countries, to undertake monitoring in support of the NARAPs and to expand and integrate the networks across North America. It will also include a periodic assessment of PTSs, a base line survey of human blood and the establishment of a North American reference network.

Ms. Janet Pawlak, International Council for the Exploration of the Sea (ICES), demonstrated the database of ICES, which holds data for several programs, such as OSPAR, HELCOM and AMAP. The present version of the database is going to be replaced by a more user-friendly version in September. As an example was mentioned that the base contains some 148 000 results of PCB determinations, but the individual data are not accessible to the public. ICES has tried to open the database for public access, but some of the data producers are still not allowing that. There are screening programs to check the data entered into the system and a strict quality control is done via the QUASIMEME program.

Dr. Hartmut Heinrich, Federal Agency for Shipping and Hydrography, Germany, gave a short presentation of OSPAR and a more detailed description of the EU Water Framework Directive. The latter makes it mandatory for the member states to measure both chemical and ecological status of ground water, transitional waters, inland surface waters and coastal waters. The first characterizations of water bodies and pressures are expected to be finished 2004, while the monitoring programmes are expected to be running from 2006. A list of 33 priority substances to be investigated has been identified, but also national hazardous

substances and the compounds listed in the Dangerous Substances Directive have to be taken into account.

Dr. Yasuyuki Shibata, National Institute for Environmental Studies, Japan, presented the monitoring programs for POPs in Japan. Dioxins have been given a high priority in a new program that started this year, and during 2002 air, water, sediment and biota will be analyzed. Soils and human samples will be investigated later in the program. The programs will cover all POPs, but for Toxaphene and Mirex only surveys will be performed, as these substances have never been found in Japanese samples. A spatial trend study showed interesting differences in the distribution of dioxins and PCB in squid sampled in the Pacific from Japan to USA. The dioxin concentrations were higher closer to the Japanese coast and lower in the open ocean, while the concentration of PCB was almost the same in all samples. Similar trends could be seen for TBT (higher levels closer to the coast) while TPT levels were almost constant.

Mr. Yue Ruisheng, State Environment Protection Administration (SEPA), China, described the situation in China, where very little monitoring of POPs has been done. Data on production, import and export are gathered, and some analyses of pesticides are being performed in agricultural products. China has formed a steering committee with people from several ministries to look at the problems connected to POPs and PTS.

Professor Egmont Rohwer, University of Pretoria, South Africa, painted a dark picture of the situation in South Africa. There is no monitoring (in the chairman's definition of comprehensive studies over time and space) of POPs being done, but some pesticides are being analyzed since more than 20 years. A serious problem is the degrading of the scientific community and there is an urgent need for support. GEF will be approached regarding support for a dioxin laboratory in the Southern African region.

Dr. K. Senthil Kumar, Shimadzu Techno Research Inc., Japan, presented a large number of analyses of several POPs in a variety of biota from different regions, such as India, Japan, Korea, Thailand, USA, Germany, Alaska, the Arctic and the Antarctic. The two most produced insecticides in India are HCH (36%) and DDT (6%). High concentrations of these substances were found in birds and Ganges River dolphins of India. Wintering migrant birds acquire DDTs and HCHs in India resulting in trans-boundary contamination of organochlorines. Bird samples from Japan showed high concentrations of dioxins and dioxin-like PCBs. Dugongs from Thailand had higher levels of dioxins/furans than dugongs from Australia. Sediment from Korea had high TEQs, particularly from industrialized areas. Continued elevated toxicity by dioxin-like PCBs in bald eagles and common tern egg was also reported from the Great Lakes. A temporal trend study on white-tailed eagles from the German coast showed higher concentrations of DDTs, PCBs and dioxins in 1970's samples as compared to samples from 1998. Species-specific accumulation of dioxins and dioxin-like PCBs has been noticed for black vulture and turkey vultures. Contamination by dioxins and PCBs is considerable in sediment and mussel tissue from Lake Kentucky.

Mr. Vitaly Kimstach, Arctic Monitoring and Assessment Programme (AMAP), announced a new AMAP report to be released in October, which will be printed as five separate volumes. The program covers ten areas for monitoring, which include the POPs plus several other compound groups, such as PCN, CP, PAH and current use pesticides. The effects monitoring of the program has identified hermaphrodites among polar bears, an effect which probably is the result of high concentrations of pollutants in the animals. A project addressing food

security, supported by GEF, is looking at POPs plus PBB and PBDE in indigenous people of the Russian North. The chlorinated, but not the brominated, compounds could be detected.

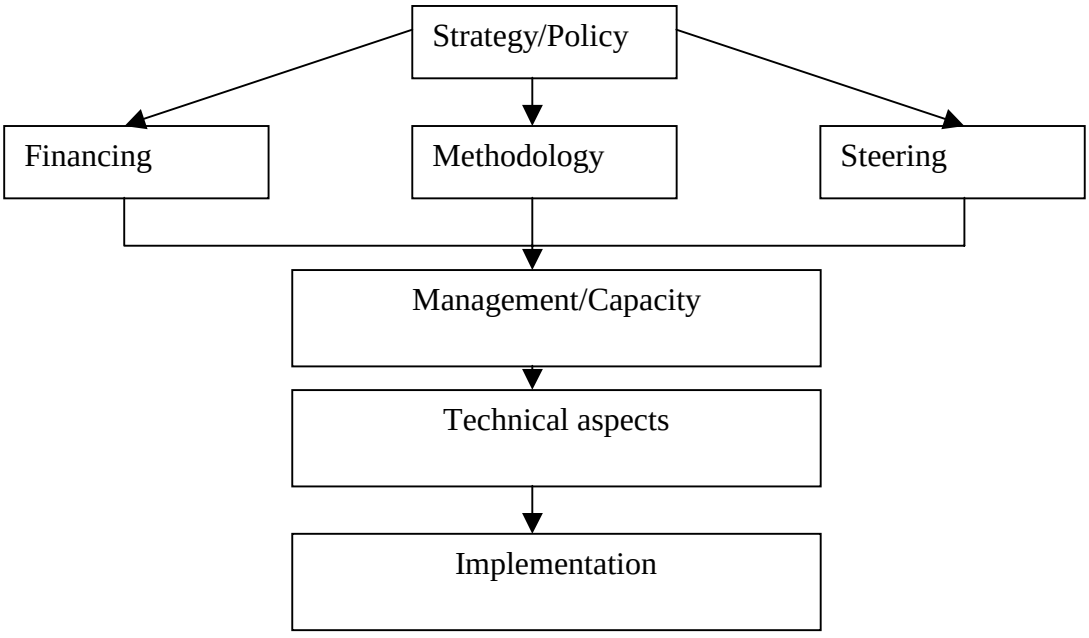
Fouad Abousamra, Mediterranean Action Plan, gave a description of the monitoring activities in the MEDPOL Program. The third phase of the monitoring started 1995 and is focused on determinations of temporal trends. Both coastal zones and hot spots are investigated, and there is also biological effects monitoring in the program. The effectiveness of the Strategic Action programme(SAP) is also monitored through the determination of level monitoring and sources reduction monitoring on the basis of a Baseline Budget for each pollutant included in the programme of POPs, such as chlorinated pesticides, PCBs, HCB, dioxins and furans. The quality control of the measurements in the monitoring is guaranteed by cooperation with the IAEA in Monaco.

Mr. Keith Bull, UN-ECE LRTAP, presented the monitoring of POPs under the UN-ECE Convention on Long-Range Transboundary Air Pollution (LRTAP). A POPs protocol was signed in 1998 by 36 signatories. Today 9 of the necessary 16 ratifications required for entry into force have been obtained. An approach with a combination of emission inventories, modeling and measurements is being used. The measurements include many of the POPs in air and in precipitation. The ECE Committee on Environmental Policy has also established an ad hoc working group on environmental monitoring and under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes there is a working group on Monitoring and Assessment.

4. Monitoring Network Strategy

Ms. Cenni from UNEP Chemicals presented the Global Network Strategy. Following the presentation, participants made several suggestions concerning the strategy.

The strategy of the Global Network should be further developed as a step-by-step process with well-established mid-term objectives. After its definition, a description of different elements should follow. An example of strategy development is schematically described in the below drawing:



Participants were of the opinion that the monitoring activity should have one strategy for developed countries and a different one for countries under development. The strategy should also makes benefit of the RBA PTS. The Global Network could be the place where developing countries could find donors to collaborate with for the implementation of the Stockholm Convention requirements. A pilot monitoring activity in a country where data is presently not available was described in the strategy. Participants suggested widening the project to cover a region instead of concentrating on a single country.

Some participants observed that the effectiveness evaluation of the Stockholm Convention should include an overall evaluation of socio-economical and environmental aspects related to POPs. Therefore environmental monitoring should be coupled with an assessment of implementation measures that the country has implemented. The assessment should be designed in parallel to the monitoring activity and a workshop to define assessment recommendations could be organised by the secretariat. It was suggested that environmental monitoring and monitoring of emissions be compared to confirm that any temporal trend is the result of source reductions.

Participants raised issues and suggestions on the role of the Global Network. They inferred that the activity should concentrate on finding more information on existing laboratories and network of laboratories and existing regional monitoring programmes. Importance must be given to accreditation of laboratories and to information on reference materials. In addition, a future role of the Global Network could be to assure that all programmes dealing with POPs monitoring for the Convention make use of the same reference material for POPs analyses. The communication of data between the monitoring programmes and the secretariat was considered problematic because of data ownership. Therefore, it was suggested that the Global Network should explore the possibilities of developing Memoranda of Agreement with countries that own the data in order to allow for their wider communication and distribution.

A discussion followed on the structure of the Global Network. The Global Network could eventually be developed as a regionally based structure making benefit from the existing regional monitoring programmes. Countries performing monitoring activities would communicate raw data to data centers as, for instance, some Regional Seas Conventions are doing. Moreover, the data centers could be in charge of data quality assurance/quality control, run exercises between laboratories, coordinate the exchange of reference material and run statistical programmes on raw data. The data centers, after having treated the data, could communicate them to the secretariat. For this purpose, participants suggested to build a warehouse software that would be able to download data from different sources. The structure of the Global Network could eventually be an issue for a possible future workshop on capacity building.

5. Workshop on Monitoring of POPs in the Environment

A proposal for a workshop on Chemicals Environmental Monitoring was presented. The ensuing discussion covered all relevant aspects of the workshop. The draft programme is attached (Annex 3).

Objectives

The overall objective of the workshop would be to develop recommendations for a global monitoring programme focusing initially on POPs. The recommendations would be used to

develop guidelines for implementing such a programme in developing countries or other regions where such programmes do not exist.

Title

Participants agreed on a broad scope of the workshop in terms of the substances that could be addressed. Though the focus should be on the twelve POPs, the title might reflect that more chemicals might be added in a future second tier. In consideration of the RBA PTS project some participants suggested to include in the title a focus on PTS.

Venue

The workshop would be held at UNEP Chemicals in Geneva, unless there was a serious offer to host it somewhere else. Such an offer would imply covering the full costs of the workshop.

Dates

Many participants underlined the importance of considering the results of the RBA PTS project within the framework of the workshop. Considering the finalization of the regional reports from this project towards the end of 2002 it was agreed that the workshop should be postponed from December 2002 to January-March 2003. The results of the workshop could then be presented to the INC in late spring of the same year. For this reason March 2003 was considered the latest date possible. In any case the drafters of the background paper should consider the priority setting meeting and reports from the RBA PTS project before setting options for substances selection in each region. Recommendations should be already available before the workshop.

Scope of the workshop

Many participants thought that the management issues of the monitoring activities should be addressed in the workshop as well as the technical issues. In particular, before starting a workshop on technical issues some management decisions should be addressed as for example the specific objectives of the monitoring activity. Should the monitoring activity be focused on trends or should it also consider spatial trends? The objectives of the monitoring activity would change if the intention were to evaluate trends within a region or to evaluate transport between regions or global transport.

The problem of building or strengthening capacities for monitoring in regions was seen as a very important issue. Even if adding a working group on monitoring capacity building would complicate logistics for the technical workshop, participants suggested adding a paper on capacity building in order to start addressing the problem. The capacity necessary to develop a programme according to the recommendations of the workshop should be addressed within each of the working groups at the workshop. Even if the workshop on environmental monitoring would address the problem of effectiveness evaluation of the Stockholm Convention and propose solutions, this would not completely solve the matter. Effectiveness evaluation should be performed both through monitoring and an evaluation of the measures that countries have put in place to implement the convention. The need for different recommendations for different audiences was identified. The audiences identified are: POPs INC, GEF, individual countries, national and regional monitoring programmes and the public at large. A background paper on how to implement the recommendations was discussed as well as the need to write guidelines on how to use and assess the data.

The importance of modeling was discussed and sources of POPs and transport modeling were seen as a big issue, maybe worth a workshop in itself. The role of modeling to select stations and to reduce the number of samples analyzed was considered.

The indicators approach to monitoring was described and pointed out as a cost effective solution. Some monitoring programmes that couple trends indicators with effects indicators follow this approach. Several participants expressed their concern towards this approach because of the lack of agreement on their reliability within the scientific community.

Data comparability was seen as an almost insurmountable target by some participants. Achieving comparability of data between regions was seen as very costly and unnecessary if only time trends were of interest.

Representatives from developing countries supported the idea that the workshop should deal with the problem of implementing the Stockholm Convention requirements on assessment in countries that are not capable to measure POPs in their environment.

Background Papers

General comments:

It was stressed by all participants that needs from developing countries should be considered. The drafters should be giving instructions on how to implement a monitoring programme considering the different capacities and stages of development of countries. The recommendations should consider a step-by-step approach or different schemes for developing countries. Each background paper should contain a paragraph on capacity building evaluation for the aspect developed.

An additional paper on capacity building was considered as necessary. Some participant suggested having multiple authors for the background papers. The background paper should preferably be reviewed by the advisory group or by some of its members according to their specific expertise.

Background paper on substances and analytical techniques:

Participants underlined the importance of substance selection before the workshop in order to select participants in relation to their expertise. The drafter of this paper should preferably wait for the regional reports of the RBA PTS project and outline possible options for substance priority setting on a regional basis.

A step-by-step capacity building process should be designed for the introduction of the analytical techniques in developing countries. Alternative, less costly techniques and methodologies should be described.

Background paper on Site Selection, Matrices and Sampling Techniques:

Sites should be selected within the same systems such as river basins; urban areas or open sea and the same typology of environment should (if possible) be chosen in different regions. The relevance of each matrix for trends monitoring, global transport monitoring, etc should be described.

Background paper on Quality Assurance/Quality Control (QA/QC), Data Treatment and Data Communication:

The group on quality assurance/quality control should consider the problem of laboratory accreditation. Some participants suggested the collection of data in regional data centers. The data centers are in charge, within the Regional Seas conventions of the quality assurance/quality control and they can run the exercises between laboratories, coordinate the exchange of reference material and run statistical programmes on the raw data.

Participants suggested to split the issue of data communication from this paper and to establish another group for that discussion. The data communication paper could address indications for a meta-database and the necessary information to collect. This information should be already available for discussion at the workshop. A dictionary with definition of possible metadata fields could be necessary for this paper. Furthermore the paper should define how to report the data e.g. raw data, aggregated data and define the standard for information exchange, define the scope of data availability and a policy for the data owners. In this regard the group should consider how to build collaboration with countries for the production and transfer of data.

Background paper on capacity building:
An additional background paper on capacity building for monitoring was requested. A strong regional structure was conceived as an important issue for this paper. Each working group would have a person reporting on the capacity building needs that the group would identify. At the end of the workshop a report on capacity building needs would be drafted compiling the information from each of the other four working groups.

Suggestions on authors for the background papers

Participants suggested some authors for the background papers at the meeting. UNEP Chemicals would compile a roster of possible authors based on the suggestions from participants and distribute it to the Advisory Group for comments.

Suggestions on the participants to invite to the workshop

The participants underlined the importance of including the network of experts gathered through the RBA PTS project. These experts are very knowledgeable of their regions and should be considered in inviting participants to the workshop.
The other two criteria identified for participants selection was their field of expertise and geographical coverage.

6. Future work

A concept note on the development of analytical capacities in developing countries is developed for GEF. Some participants from developing countries expressed concern that there might be problems in building such capacity in a sustainable way. The importance of adding this capacity to the universities or institutions that are already training people was underlined. The necessity of further work on assessing analytical capacity in different countries was stressed. Three different types of laboratories were identified: laboratories that are able to analyze pesticides with different techniques, laboratories equipped with GC-MS and laboratories equipped for dioxins analysis. Participants believed that the first two types of laboratories were already quite widespread, while only a few laboratories worldwide could do full isomer specific dioxin/furan analyses. Participants underlined the importance of having the same reference material for analyses and quality control exercises. More information in this field was seen as necessary and considered as an added value to the networking activity.

The experience of the North American Commission for Environment Cooperation was seen as example of “sistering” system in consideration of its collaboration with Mexico.
A richer country could assist another country in the establishment of the analytical capacity in training and funding. The Global Network could be the platform to enable the discussion between countries. Countries willing to collaborate in the development of the analytical capacity of another country could come forward their candidature and look for partnerships

and additional funding from other interested parties. The UNECE working group on environmental monitoring was also considered as an example of such activities.

The establishment and use of specimen banks was discussed. This was seen as an inherently useful tool, in particular for retrospective studies and time trends but it was agreed that it is very expensive. There is a need for further discussion and increased knowledge about this field. It was proposed to develop a discussion on this theme within one of the electronic discussion groups. The web site could be used to actively seek information on existing specimen banks as well to establish links to them.

UNEP Chemicals described the present situation with regard to funding and the issue of further funding for the Global Network. A paper concerning the Global Network initiative submitted to the INC 6 was introduced and discussed. The INC 6 will address the issue and consider the usefulness of the Global Network activity in contributing towards implementing the requirements of Article 16 of the Stockholm Convention. Depending on the outcome of the INC-6 discussions the focus and the scope of the activity might change.

Annex 1

First Meeting of the Advisory Group to the Global Network for the Monitoring of Chemicals in the Environment

at

UNEP Chemicals, International Environment House, Geneva, 13-14 May 2002.

PROVISIONAL PROGRAMME

Monday 13 May 2002		
10.00-10.30	**1 Opening of the meeting** Opening statements. Introduction of participants.	John Whitelaw Deputy Director, UNEP Chemicals
10.30-11.00	**2 Background** Presentation of the needs for monitoring of chemicals in the environment e.g. in the Stockholm Convention on POPs.	Bo Wahlström, UNEP Chemicals
11.00-11.15	Coffee break	
11.15-12.30	**3. Presentations from participants** **Participants will be given the opportunity to give brief presentations on their monitoring activities**	All
12.30-13.30	**Lunch**	
13.30-14.30	**Item 3. continued**	All
14.30-15.00	**4. Monitoring Network Strategy** Presentation of the Global Network for the Monitoring of Chemicals in the Environment.	Francesca Cenni. UNEP Chemicals
15.00-15.20	Coffee break	
15.20-around 18.00	**Item 4. continued.** **Discussion of the general strategy to implement the objectives of the Network and a possible structure of the Network.**	

Tuesday 14 May 2002

9.30-10.30	**5. Workshop on Monitoring of POPs in the Environment** Presentation of a planned Workshop on Monitoring of POPs in the Environment. Discussion of issues to be presented at the workshop, structure, participants, suggestions for authors of working papers and workshop outcome.	Francesca Cenni, UNEP Chemicals
10.30-10.50	Coffee break	
10.50-12.00	**Item 5. continued**	
12.00-13.00	**Lunch**	
13.00-14.00	Follow up and summarizing of discussions under items 4 and 5.	
14.00-15.00	**6. Future work** Discussion on follow up to the workshop and other issues e.g. collaboration schemes for QA/QC procedures between programmes, "sistering" programmes for capacity building among monitoring programmes, sample banking, central database, GEF project on POPs labs, round robins.	Bo Wahlström, UNEP Chemicals
15.00-15.20	Coffee break	
15.20-16.00	**7. Conclusions and recommendations.** **8. Any other business** **9. Next Meeting.**	
Around 16.00	**10. Closure of the meeting.**	

Annex 2

FIRST ADVISORY GROUP MEETING TO THE GLOBAL NETWORK FOR THE MONITORING OF CHEMICALS IN THE ENVIRONMENT

Geneva, Switzerland, 13, 14 May 2002

LIST OF PARTICIPANTS

Dr. Fouad Abousamra
MED/POL Programme Officer,
UNEP/MAP,
48, Vas. Konstantinou Ave.,
11635 Athens,
Greece
Phone: +30 (10) 72 73 116
Fax: +30 (10) 72 53 196 or 197
E-mail: fouad@unepmap.gr

Mr. David Atkinson
Director, Chemicals Risk Management Section,
Environment Australia,
GPO Box 787,
CANBERRA ACT,
Australia
Phone: +61 (2) 6250 0795
Fax: +61 (2) - 6250 0387
E-mail: David.Atkinson@ea.gov.au

Mr. Timothy H. Brown
Director,
Delta Institute,
53 Wst Jackson Boulevard, Suite 1604,
60604 Chicago,
United States of America
Phone: +1 (312) 554-0900 x13
Fax: +1 (312) 554-0193
E-mail: thbrown@delta-institute.org

Dr. Juan C. Colombo
Laboratorio de Química Ambiental y Biogeoquímica,
Facultad de Ciencias Naturales y Museo,
UNLP
Av. Calchaqui km 23500,
F.Varela (1888), Buenos. Aires.,
Argentina
Phone: +54 011 4275-8266
Fax: +54 (011) 4275-8266
E-mail: laqab@arnet.com.ar

Dr. Hartmut Heinrich
Bundesamt für Seeschifffahrt und Hydrographie,
Bernhard-Nocht-Str.78,
D-20359 Hamburg,
Germany
Phone: +49 40 3190 3510
Fax: +49 40 3190 5035
E-mail: hartmut.heinrich@bsh.de

Prof. Bo Jansson
Institute for Applied Environmental Research, Stockholm University,
10691 Stockholm,
Sweden
Phone: +46 (8) -674 7220
Fax: +46 (8) -758 1360
E-mail: bo.jansson@itm.su.se

Dr. Senthil Kumar Kurunthachalam, Ph.D
Technical Scientist,
R&D Department, Analytical Division,
Shimadzu Techno Research Inc.,
1, Nishinokyo-Shimoaicho,
604-8436 Nakagyo-ku, Kyoto,
Japan
Phone: +81-75-811-3182
Fax: +81-75-811-3278
E-mail: kskumar@shimadzu-techno.co.jp

Mr. Vitaly Kimstach
Deputy Executive Secretary,
Arctic Monitoring and Assessment Programme (AMAP),
P.O. Box 8100 Dep.
Strømsveien 96,
0032 OSLO,
Norway
Phone: +47 (23) 24 16 34 (dir.), +47 23 24 16 30
Fax: +47 (22) 67 67 06
E-mail: vitaly.kimstach@amap.no

Mr. Noriya Nakajima
Environmental Health and Safety Division,
Ministry of Environment,
1-2-2, Kasumigaseki,
100-8975 Chiyoda-ku, Tokyo,
Japan
Phone: +81 5521-88261
Fax: +81 (3) 3580 3596
E-mail:
NORIYA_NAKAJIMA@env.go.jp

Dr. Joanne O'Reilly
North American Commission for Environmental Cooperation,
393 rue St. Jacques Ouest Bureau 200,
H2Y 1N9 Montreal,
Canada
Phone: +1 (514) 350-4355
Fax: +1 (514) 350-4314
E-mail: j_oreilly@vl.videotron.ca

Ms. Janet Pawlak
ICES Environment Adviser,
International Council for the Exploration of the Sea,
Palaegade 2-4,
1261 Copenhagen K,
Denmark
Phone: +45 (33) 15 42 25
Fax: + 45 33 93 42 15
E-mail: janet@ices.dk

Prof. Egmont Rohwer
Professor - Department of Chemistry,
University of Pretoria,
Lynnwood Road,
0002 Pretoria,
South Africa
Phone: (+27 12) 420 2518
Fax: (+27 12) 362 5297
E-mail: erohwer@postino.up.ac.za

Mr. Vic Shantora
Head, Pollutants and Health Program,
North American Commission for Environmental Cooperation,
393 rue St. Jacques Ouest Bureau 200,
H2Y 1N9 Montreal,
Canada
Phone: +1 (514) 350-4355
Fax: +1 (514) 350-4314
E-mail: vshantora@ccemtl.org

Ph.D Yasuyuki Shibata
Section head ,
Environmental Chemodynamics Section,
Environmental Chemistry Division,
National Institute for Environmental Studies,
16-2 Onogawa, Tsukuba,
305-8506 Ibaraki,
Japan
Phone: +81 (-298) -50-2450
Fax: +81 (-298) -50-2574
E-mail: yshibata@nies.go.jp

Mr. Ruisheng Yue
Deputy Director General, Department of International Cooperation,
State Environment Protection Administration,
115, Xizhimennei Nanxiaojie,
100035 Beijing,
China
Phone: +86 10-6615 1933
Fax: +86 10-6615 1762
E-mail: yuers@zhb.gov.cn

Dr. Bo Wahlstrom
Senior Scientific Advisor,
UNEP Chemicals,
11, chemin des Anémones,
1219 Châtelaine (Ge),
Switzerland
Phone: +41 (22) 9178 195
Fax: +41 (22) 797 34 60
E-mail:BWahlstrom@chemicals.unep.ch

International Organisations

Mr. Keith Bull
Executive Secretary of Convention on LRTRAP,
UNECE, Environment and Human Settlements Div.,
Palais des Nations,
1211 Geneva,
Switzerland
Phone: +41 (-22) -9172354
Fax: +41 (-22) -9170621
E-mail: keith.bull@unece.org

Ms. Carolien ten Oever
GIS & Remote Sensing officer,
UNEP/DEWA/EUROPE and GRID-Geneva,
11, chemin des Anémones,
1219 Châtelaine (Ge),
Switzerland
Phone: +41 (22) 917 86 13
Fax: +41 (22) 917 80 29
E-mail: carolien.ten-oever@grid.unep.ch

Secretariat

Francesca Cenni
Consultant
UNEP Chemicals
11, chemin des Anémones,
1219 Châtelaine (Ge),
Switzerland
Phone: +41 22 9178 334
Fax: +41 22 797 34 60
Fcenni@chemicals.unep.ch

Annex 3

Workshop on Monitoring of POPs in the Environment

Provisional Agenda

First day

10.00 a.m. - Plenary session.
Introduction: background of the networking activity within UNEP Chemicals. Presentation of the Stockholm Convention on POPs and needs for an international action on harmonization of monitoring activities focused on chemicals in the environment. Objectives of the workshop: a path towards comparability and accessibility of data on chemicals in the environment.

12.30 p.m. - Lunch break.

2.00 p.m. - Plenary session.
Presentation of background papers.
Paper on POPs environmental transport and modelling.

4.30 p.m. - Group session.
Participants to be divided into working groups (3 to 4 groups) Each group will discuss one of the background papers. After the session, the chairs meet with UNEP to adjust the structure of the groups as necessary.

Second day

9.00 a.m. - Plenary session.
The chairs of the groups report on the objective of each group and the subjects to be discussed.

10.00 a.m. - Group session.
Morning discussion. Each group focuses on one background paper

12.30 p.m. - Lunch break.

2.00 p.m. - Group session (continued).

5.00 - 6.00 p.m. - The chairs of the groups meet UNEP to report status of the discussion and the obstacles faced. During the evening the chairs and the rapporteurs prepare a presentation on the activities to be presented on day three.

Third day

9.00 a.m. - Plenary session.
Reports from the working groups. Discussion of the results of the previous day.

10.00 a.m. - Group session.

12.30 p.m. - Lunch break.

2.00 p.m. - Group session (continued).

5.00- 6 p.m.- The chairs and rapporteurs of the groups meet with UNEP to report status of the discussion and obstacles faced. During the evening the chairs and rapporteurs draft a report on the activities to be discussed on day four.

Fourth day

9.00 a.m. – Group session.
Definition and drafting of the final report.

12.30 p.m. - Lunch break.

2.00 p.m. - Plenary session.
Presentation of the reports, discussion.
Conclusions and recommendations.

Subjects to be discussed during the different sessions

Working group on **Substances and Analytical Techniques**.
How to set priorities for substances in different regions. How to get comparable data on chemicals environmental levels in the environment. Discussion based on working paper n° 1.

Working group on **Site Selection, Matrices and Sampling Techniques**
How to choose sites. Description of the relevance of each matrix. The working group will focus the attention on recommendations concerning matrices relevant for the assessment of chemicals environmental levels. The discussion is based on paper n° 2

Working group **Quality Assurance/Quality Control (QA/QC), Data Treatment and Data Communication**
This working group will focus on necessary schemes for QA/QC procedures and on possible fields of collaboration between laboratories performing analysis of hazardous chemicals in the environment. The working group will as well draw recommendations on statistics, how to treat non-detected; on the definition of metadata, standards for data communication, informative systems and GIS standards. The discussion is based on paper n°3.

Proposal For The Development Of Working Papers For The Workshop On Monitoring of POPs in the Environment.

Paper N°	Title	Description	Author
1	Substances and Analytical Techniques	**How to set priorities** between substances; what to measure in each region; what to measure in each mixture or group of congeners; which substances should be measured everywhere, giving an evidence of the opportunity to measure ratio between isomers/congeners; how to get comparable data.	
2	Selection of Sites, Matrices and Sampling Techniques	**Selection of Sites:** Give criteria for site selection, sampling frequencies in consideration of the site position, the matrix and representativeness of the site. Definition of a minimum grid of stations. Description of the difference between targeted sampling with the indication of a gradient between targeted and not targeted samples (what is a targeted sample? How to classify a sample?). Definition of criteria to choose sites for background level versus hot spot level measurements. Consider the needs for measurements by models of POPs transport in the environment. **Matrices:** Definition of criteria for matrices selection, especially concerning biota, description of relevance of the matrix (response time, compatibility etc.). Definition of metadata for each sample. Sampling, sample storage techniques, specimen banking. Biomonitoring.	
3	Quality Assurance/Quality Control, Data Treatment and Data Communication	**Quality Assurance/Quality Control:** define the needs in training, reference materials, and inter-calibration between laboratories. Description of quality control procedures and definition of a scheme for a sister laboratory system. Definition of the needs for the production of comparable data, at least regionally. **Data Treatment:** How to treat non-detected. How to identify trends. GIS standards. **Data Communication:** Draft metadata structure for data storage and data publication in Internet, define a possible structure for the communication of data between monitoring programmes and to the public.	

Questions for the advisory group meeting participants

- Considering the structure proposed for the Workshop, would you suggest an additional list of subjects to be discussed by working groups?
- Are the subjects chosen sufficient to address the issue of data comparability and accessibility?
- Is there a need for additional background papers for discussion during the workshop?
- Could you advice UNEP on the name of experts for the creation of the background papers?
- Could you advice or give to UNEP an indication on experts to invite to the workshop?
- Could you list some suggestions for issues to be developed in the background paper.

Workshop on Monitoring of POPs in the Environment

Day One

10.00 – 12.30	Plenary session
12.30 – 14.00	Lunch break
14.00 –16.30	Plenary session
16.30-18.00	Group session
18.00-19.00	Chairmen session

Day Two

9.00 – 10.00	Plenary session
10.00 – 12.30	Group session
12.30 –14.00	Lunch break
14.00-18.00	Group session
18.00-19.00	Chairmen session

Day Three

9.00 – 10.00	Plenary session
10.00 – 12.30	Group session
12.30 –14.00	Lunch break
14.00-18.00	Group session
18.00-19.00	Chairmen session

Day Four

9.00 – 12.30	Group session
12.30 –14.00	Lunch break
14.00-18.00	Plenary session