Oslo, June, 2001.

Arctic Council Action Plan to Eliminate Pollution of the Arctic (ACAP):

List of approved activities and proposals for future activities

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Introduction

The ACAP has been designed to facilitate expeditious response to identified priorities, and therefore to change over time. Annex A to this Action Plan sets forth a list of co-operative activities that are agreed ACAP actions. Annex A may be amended as additional actions are approved. Annex B sets forth possible future co-operative activities that may be moved to Annex A in the future. Annex C sets forth activities being conducted by Arctic States, Permanent Participants and Observers that address issues relevant to ACAP. Activities to be included in Annex C must be reported specifically. Annexes B and C should be amended as appropriate. The updated Annexes will appear on the Arctic Council web site. Proposals shall be prepared in accordance with Rules of Procedure and address the criteria set forth in the strategy (3.2).

Priorities

Based on the documentation provided by AMAP, and the criteria for priority setting, ACAP will in its first phase give priority to the following issues:

- Persistent Organic Pollutants (POPs)
- Heavy metals
- Radioactivity
- Depletion of the ozone layer.

Status of projects and proposals in the annexes

Projects (co-ordinator) ***Annex A***	**Status and participation**	**Present financial commitments** (In addition comes in-kind contributions, such as national experts**)**
1. Multilateral Co-operative Project for phase-out of PCB use, and management of PCB-contaminated wastes in the Russian Federation (AMAP-secretariat / PCB-steering group).	Phase II initiated. Project meeting, June 6, 2001. Participation prioritised by all countries	USA: 100' USD, Can: 50' CAD, Nor:450' NOK, Fin: 50' USD Ice: 5' USD, Swe: 30' USD, Netherlands: 15' USD (?) Den: 115' USD (?)
2. Evaluation of Dioxins and Furans in the Russian Federation (Sweden).	Implementation process initiated. Planning meeting; March, 2001. Participation prioritised by Sweden, Finland, USA, Russia. UNEP Chemicals will become a partner.	USA: 160' USD Swe: 40' USD
3. Development of fact sheets on Arctic contaminants for use by AC countries delegations in other fora (AMAP-secretariat).	Fact sheets on POPs, HM and Radioactivity are developed.	Financed by Denmark (POPs, HM) and Norway

4. Reduction of atmospheric mercury releases from the Arctic states (Denmark).	Planning process started. Approved and can be initiated autumn 2001. Participation prioritised by Canada, Finland, Norway, USA, Russia. UNEP chemicals will participate.	Can: 30' CAD, Nor: 425' NOK, USA: 50' USD, Den: 100-200' USD (?) (all phases);
5. Environmental sound management of stocks of obsolete pesticides in the Russian Federation (Sweden).	Planning process started. Approved can be initiated autumn 2001. Participation prioritised by Canada, Norway, Finland, USA, Sweden, Russia. UNEP Chemicals will participate.	Can: 25' CAD, Nor: 300' NOK. Swe: 100' SEK, USA: 50' USD,
7. Implementation of Cleaner Production, Eco Efficiency and Environmental Management Systems in the Production Units and Management of the OJSC Norilsk Mining Company in the Arctic City of Norilsk. (Russia).	A proposal for a CP project on Norilsk Mining Company is developed for SAOs consideration. Can be initiated autumn 2001. Participation prioritised by USA, Russia.	USA: 75' USD (available in the end of 2001 / beginning of 2002).
Annex B		
6. Guidelines for performing Environmental Impact Assessments of handling and storage of radioactive waste in Russia (Norway).	Further development awaits pilot project. The project will be discussed at next ACAP-meeting. Participation prioritised by Norway, Finland, Russia.	No present financial commitments. Finland will provide expert assistance.
Annex C		
8. Support for the Global Component of the «Regionally Based Assessment of Persistent Toxic Substances» being undertaken by UNEP-Chemicals. (Canada).		No present financial commitments.
9. Environmental Management Programme for the Murmansk region (Russia).		No present financial commitments.

(?): not confirmed
Note: The co-ordinator of each activity is put in brackets.

Annex A: Co-operative activities agreed as ACAP actions.

1. Multilateral Co-operative Project for phase-out of PCB use, and management of PCB-contaminated wastes in the Russian Federation (Co-ordinator: AMAP-secretariat)

ACAP Priority

Persistent Organic Pollutants

Objective

Develop and implement pilot remedial actions that may serve as a model for the Russian Federal programme oriented on:

- prevention of resuming of PCB production / retrofit of facilities for production of alternatives to PCB;
- development and construction / retrofit of facilities for production of alternatives to PCB;
- environmentally sound decommissioning of PCB stocks and contaminated equipment and containers;
- rehabilitation of PCB-contaminated territories.

Actions

1. At the First Ministerial meeting of the Arctic Council (September 1998), the ministers supported the above project as an example of a co-operative project under ACAP, and endorsed its Part (Phase) 1.
2. The Arctic Council is expected to endorse Phase 2 of the Project at its meeting in 2000, and encourage the Participating Parties to allocate financial resources for its implementation.
3. Arctic Council countries provide technical and financial support to the Russian Federation in implementation of one or more pilot projects selected at the Phase 2 of the project. The Arctic Council appeals to the International financial organisations for supporting the Arctic Council countries in these efforts.

Responsible parties/participants

Countries: all Arctic Council countries
International Organisations: NEFCO

Project description

The project consists of three phases covering all stages, from evaluation of the situation to implementation of demonstration projects.

Phase 1: Evaluation of the current status of the problem with respect to environmental impact, and development of proposals for priority remedial actions:
- characterisation of PCB production;
- characterisation of PCB use in production of equipment and materials;
- characterisation of PCB-containing equipment use;
- waste related characterisation;
- release inventory;
- prioritisation of actions.

Note: Phase 1 is finalised. The report will be presented in September.

Phase 2: Feasibility Study, will cover the following issues:
- Implementation / cost benefit analysis;
- selection of alternatives for replacement of PCB, with acceptable environmental characteristics and feasible production;
- selection of the site for construction / retrofit of a prototype facility for production of alternative fluids;
- selection of the site for construction / retrofit of a prototype facility for use of non-PCB alternative compounds in a major PCB use sector;
- selection / development of environmental sound technology for destruction of PCB-containing liquids
- selection / development of environmental sound technology for destruction of PCB-contaminated containers, equipment and their elements;
- selection / development of standard / innovative technology for rehabilitation of PCB-contaminated areas.

Phase 3: Implementation of demonstration projects:
- production of alternative fluids;
- prototype facility for use of non-PCB alternative compounds;
- facilities for destruction of PCB-containing fluids;
- facilities for destruction of PCB-contaminated containers, equipment and their elements;
- rehabilitation of PCB-contaminated area in the Russian Arctic or in adjacent regions

Workplan and timetable:

1. Project initiation: 1 May 1999.
2. Completion of Phase 1: 30 June 2000.
3. Initiation of Phase 2: 1 January 2001.
4. Completion of Phase 2: 31 December 2002.
5. Implementation of recommended pilot projects can be initiated before completion of the whole Phase 2, based on results of specific feasibility studies and availability of financial resources.

Reporting

Reports on progress will be provided at all SAO and Arctic Council meeting.

Costs

1. Cost of Phase 1 of the Project is 160,000 US Dollars, excluding in-kind contributions of the Russian Federation and the other Arctic Council countries.
2. Preliminary cost estimate of Phase 2 of the Project is 490,000 US Dollars, excluding in-kind contributions of the Russian Federation and the other Arctic Council countries.
3. Preliminary cost estimate of implementation of recommended pilot project can be made at specific feasibility studies during Phase 2 of the Project.

2. Evaluation of Dioxins and Furans in the Russian Federation (Co-ordinator: Sweden).

ACAP priority

Persistent Organic Pollutants (Dioxins / Furans)

Rationale

Interest in the Persistent Organic Pollutants (POPs) in the Arctic aquatic and terrestrial ecosystems arises mainly from concerns that northern and indigenous peoples depending on traditional food for most of their diet may be adversely affected by chronic exposure to these pollutants. Information on the presence of POPs in Arctic ecosystems is not new. Their presence in Arctic ecosystems has been well known among scientists interested in the global distribution of these chemicals, but information on spatial trends in these contaminants was earlier very limited. In 1997 Arctic Ministers committed to take the AMAP findings and recommendations into consideration in policies and programmes. They further agreed to increase efforts to limit and reduce emissions of contaminants into the environment and to promote international co-operation in order to address the serious pollution risks reported by AMAP.

The AMAP Assessment Report states that POPs can be transported to and within the Arctic via several pathways and in different media. Rivers and oceans can be important pathways of contaminants. Several surveys indicate declines in emissions for some countries of selected POP's primarily due to improved technologies. The majority of circumpolar countries have taken actions to reduce inputs to the environment of POPs but sources of POPs in the Arctic are not well documented in most cases. Arctic sources are the result of accidental spills or deliberate and inappropriate disposal of contaminants. Combustion, especially of municipal garbage is a common sight in the Arctic and could be a source.

This project aims to reduce emissions of POPs in the Russian Federation. The AMAP program and other investigations have shown that Russia, as other countries in the Arctic, is a source of POPs into the Arctic environment. Industrial activities in Russia responsible

for contamination of the environment includes chemical manufacture, especially those of chlorinated phenols (2,4,5-T, 2,4-D) and PCB. Soils on production, handling, and application sites are highly contaminated. Further, downstream from large cities, sediments may be highly contaminated with dioxins and furans (especially downstream pulp mills using chlorine bleaching and with direct discharges into the aquatic environment). So far there are only a few measured data existing from Russia and often these data are scattered and hard to find. In the Russian Federation, there are ongoing activities underway to identify and quantify sources of dioxins and furans. Some of the data however, have been generated with techniques that are not state-of-the-art methods.

Polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans (dioxins and furans) are two classes of compounds to be regulated under the UN-ECE LRTAP Convention and the upcoming POPs Convention.

UNEP Chemicals is preparing a toolkit to assist countries to establish an inventory of dioxin and furan sources. This toolkit will be widely distributed and will enable countries to perform an estimate of sources and releases of dioxins and furans according to harmonised methods.

The characterisation of dioxin and furan emissions from Russia is subject of joint activities under EMEP, especially of the centre in Moscow, MSC-E, where co-operation between the centre and UNEP Chemicals has been established.

US-EPA-project
US-EPA has funded a project (Inventory of Dioxin Emissions in Russia) to establish a dioxin and furan inventory as Phase IV under the American-Russian partnership project to ”Reduce Levels of Persistent Organic Pollutants in Human Beings and the Environment”. The US-Russian project will be the first in its kind to systematically compile potential sources of dioxins and furans.

The outcomes will highlight potential big emitters but there will be a limited generation of new data and no in-depth evaluation of the findings. Once the sources of dioxins and furans have been identified there will be an urgent need to verify these estimates. The ACAP-projects aims to fill in this gap.

The US-Russian and the ACAP-project should be co-ordinated in order to avoid duplication of work. The US-Russian project can be regarded as a pilot project to the ACAP-project. Involvement of Russian experts is of major importance and project results should be transformed to Russian authorities as a basis for future actions and reporting.

Objectives

- Reduction of dioxins and furans from major sources in Russia;
- Identification of potential sources of dioxins and furans e.g. is metal smelters, waste incinerators and pulp and paper mills;
- Technology and information transfer to bring Russian sampling techniques and analytical capabilities harmonised to European standards;

- The project will facilitate Russia to establish a dioxin and furan inventory and to gain new information on sources of dioxins and furans and the magnitude of their releases;
- The information and data generated will open possibilities for technical and practical measures to reduce the dioxin and furan releases from major sources, including other parts of the Arctic;
- The project will facilitate Russia to ratify and implement the LRTAP POP:s protocol and the upcoming global convention on POP:s;
- The characteristics and specifics identified in Russia will assist other CIS countries and countries in Eastern Europe and the Baltic States to better understand dioxin and furan issues in their own countries.

Project description

Phase I – Evaluation of major dioxin/furan sources

1. Based on the results of the Russian Dioxin Release Inventory obtained with the aid of UNEP Chemicals' toolkit and from the US-Russian project the source categories identified should undergo a more detailed evaluation. In a first step, the expert emission estimates should be verified for the most important sources by actual measurements at these plants. This work will be directed by Russian partners with all stakeholders involved but also involve foreign expertise. More precisely, it is anticipated that the sampling will be performed mainly at large stationary sources, which will be either stack emissions or effluents.

2. Once some major point sources have been identified, the next step is to develop an emission inventory and a sampling plan and analysis plan that includes a beforehand inspection of selected facilities to be targeted. When the field testing activities have been finalised in writing, an experienced sampling team with accreditation in e.g. stack sampling will take the samples as described in the study design. The analyses will be performed by a laboratory with international accreditation for analysis of dioxins and furans in e.g. stack gases (from stationary sources) or effluents from industrial processes.
   The results of this activity will be made available to the international community.

Phase II – Identifying existing technology of source type

1. Identified plants should be evaluated in order to find primary technical measures to reduce dioxin and furan emissions. This task should be undertaken jointly between Russian and international experts (with practical experience) to find the most cost-efficient options. Measures to optimise cost-effectiveness should be applied. It is known that sometimes simple and cheap actions are capable to reduce dioxin emissions.
2. Development of applicable regulations and standards in Russia.
3. Implementation should take place at sites where the impact on the Arctic environment and human health are greatest.

Phase III - Prototype demonstration

This phase should be developed at a later stage.

Preliminary workplan/timetable

The project will use a tiered approach. The different phases shall be seen as partly independent projects that can be performed as funds become available.

Phase I can start this year provided decision on secretariat assistance. It is not possible at this stage to estimate time frame for phase I.

Phase II can start parallel to phase I as results become available.

Draft budget

Project outline summary:

Phase I – Evaluation of major dioxin/furan sources	US $
- source inventory of existing data	20
- select source type e.g. pulp and paper: (based on Russian and donor country experience), including selection of source types for emission testing	10
- emission measurements on selected source type	50
- Quality Assurance/Quality Control (QA/QC)	20
- develop emission inventory	20
	120
Phase II – Identifying existing technology of source type	
- evaluate cost effectiveness	50
Identify critical environmental criteria: - Arctic impact - impact on human health	 20 30
- Applicable regulations and standards in the Russian Federation.	20
	120
Phase III - Prototype demonstration	
- apply critical environmental criteria used in phase II	
- select site for demonstration project retrofit/conversion/construction/operational modification	

3. Fact sheets on Arctic contaminants for use by Arctic Council countries' delegations in other fora. (Co-ordinator: AMAP Secretariat)

The objective of this proposed project it to further ensure that Arctic issues are communicated to other fora so that Arctic concerns are more likely to be considered when such fora are formulating and implementing actions which may have an impact on the Arctic. The fact sheets will be used for information in different types of international negotiations regarding what the Arctic Ministers at present have decided to do and the scientific background for those decisions.

Fact sheets on POPs, HM and radioactivity have been produced.

4. Reduction of Atmospheric Mercury releases from Arctic States (Co-ordinator: Denmark)

ACAP Priority

Heavy metals (Mercury)

Rationale

Mercury is a bioaccumulative and toxic metal that is of concern for both human and the environment. Mercury accumulates in biota such as fish and marine animals. This is of particular concern for the health of indigenous people in the Arctic who are highly dependent on food from the marine food web. Mercury is a volatile compound and emissions within and outside the Arctic can be sources for input of mercury to the Arctic.

The AMAP reports emphases the need for more knowledge about the sources, transport, fate and behaviour in the Arctic. Despite this need for more information the AMAP reports concludes that actions should be taken to reduce the anthropogenic input of mercury to the Arctic environment. Although sources for mercury pollution of the Arctic are not well known and important sources might be located outside the region, it is likely that sources within the Arctic states contribute significantly to the input of mercury to the Arctic environment.

The heavy metal protocol under the UN/ECE-LRTAP convention oblige the ratifying countries to undertake measures to reduce emissions of mercury into the environment through use of Best Available Technology and other actions. All Arctic states except Russia have signed the protocol, but only two countries have so far ratified the protocol. A possible reason for Russia not signing the protocol is the uncertainty is the uncertainty about its capability to fulfill the reguirements of the protocol. Today there is a lack of knowledge (to a varying degree in the Arctic countries) with regard to quantification and

prioritisation of the main source categories of mercury emissions and knowledge of cost effective measures to reduce the inputs.

In terms of the ACAP criteria, the proposal is addressing a “common” (potential similarity in national problems) and “shared” problem (transboundary movement of heavy metals to the Arctic). The AMAP reports and other publications have drawn attention to the potential severity of mercury contamination in the Arctic and the linkages to sources within the Arctic as well as distant sources. There are clear and established concerns for human health and the project is aimed at facilitating controls on Mercury releases to the environment from Arctic countries.

Objective

Identify important anthropogenic source categories for mercury emission within the Arctic region and to initiate cost effective reduction measures at one or a few specific sources or plants that could serve as pilot projects.

It is important in all phases of this project not to duplicate other ongoing work, but co-operate with other possible projects and activities within other regions or countries (e.g. EMEP activities under LRTAP, UNEPs global assessment of mercury). The results will be useful for other countries and regions and should be made public available.

Actions

- Identification of main anthropogenic source categories for mercury emission within the Arctic Region;
- Use this information to identify and prioritise source categories for possible reduction measures, and promote development of action plan or strategies for mercury emission;
- Identify and propose cost effective measures at one or a few specific sources or plants at sites where progress in reduction activities is slow;
- Initiate reduction measures through fund raising, technology transfer and technical assistance.

Responsible parties/participants

Arctic countries together with fund raising agencies. Relevant international funding organisations should be involved already in the first phase, not necessarily to share Phase 1 costs, but to facilitate their financial involvement in phase 2.

The work should be co-ordinated with a Nordic initiative under UN-ECE, lead by Denmark, on anthropogenic emissions of mercury.

Project description

Phase I Prioritisation:

Assessment and prioritisation of major source categories of mercury emission and identification of possible reduction measures.

Activity 1 Source category identification

Through use of existing reports, emission inventories, literature and other information examine and identify the main source categories as far as possible estimate existing and potential quantities of mercury emissions from all the Arctic states. The source category identification should include:

Task 1 Release inventory

Identify main national sources to estimate total annual release to the environment from eg. metalurgical and mineralurgical industry, waste incineration, coal fired power plants, chloroalkaline industry, and other production facilities or activities to the extent such information can be provided. A questionnaire covering main national sources should be filled out by the Artcic nations. This should be carried out in a transparent way.

Where emission measurement data is lacking, emission factors, based on eg. production volum, could be applied. With the questionnaire, a suggestion on how to estimate emissions will be given.

Task 2 Mercury use characteristics

Identify mercury use (former and present). Identify total production of mercury containing equipment, numbers of such equipment production facilities and their location. Rank the uses in order of magnitude to the extent such information can be provided

Task 3 Waste related characterisation

Estimate state of storage and handling of mercury-containing wastes including facilities put out of operation or abandoned, amounts of wastes and locations of storage sites.

Task 4 Production, release and use prioritisation

Based on results and analysis of tasks 1-3 and considering both release and use, establish selection criteria and prioritise actions that potentially have the highest impacts to the Arctic environment.

Activity 2. Action plans and source category prioritisation.

Action plans or strategies for mercury emission reductions should be developed and promoted in the countries that do not have such plans. Based on source category evaluation and the identification of existing emission control technologies, engineering solutions and pollution prevention measures select the most cost-effective approach to achieve reduction of mercury emissions.

A report describing and assessing the collected information will be prepared.

Phase II Pilot project selection

Selection of cost-effective, prototype pilot demonstration projects.

Activity 1. Selection of specific sources for reduction activities

Based on results from phase I select (prioritise) one or a few specific sources within one or more category of sources for a pilot project implementation. To achieve this an evaluation

of potential projects will be carried out, taking into account cost / efficient and technological options. To ensure the success of the pilot project, the local infrastructure will be important to assess, making sure that local authorities interact with the management of a potential company ("the specific source"). A local project group could be established as a link between the project steering group and local parties, securing rapid communication and interactions..

Emphasis should be placed on the environmental benefits resulting from the pilot project in order to provide a basis for "learning by experience" that can be transferred to a other categories of anthropogenic mercury emission sources.

Phase III Implementation of pilot projects.

Dependent on the financial possibility, projects will be implemented. If identified, feasible projects within Russia should be prioritised.

Preliminary workplan/timetable

Phase I is preliminary estimated to take 1 year with start mid 2001.
Phase II is preliminary estimated to take 1 year with start beginning of 2002.
Phase III is preliminary estimated to take 3 years with start end of 2002

Table: preliminary workplan

Time ✍ Phases/Activities	**----------2001----------->**				**----------2002----------->**			
Phase I: Prioritisation			**xxx**	**xxxx**	**xxxx**	**xxxx**	**x**	
Activity 1: Source category identification			xxx	xxxx	xx			
Activity 2: Action plans and source prioritising				xx	xxxx	xxxx	x	
Phase II: Pilot project selection					**xxxx**	**xxxx**	**xxxx**	**xxxx**
Activity 1: Selection of specific sources for reduction activities					xxxx	xxxx	xxxx	xxxx
Phase III: Implementation of pilot project							**xxxx**	✍

Reporting

Reports on progress will be given at SAO and Arctic Council meetings.

A report from phase I will be made available for all interested parties. The report should give a summation of mercury discharges to air from the Arctic countries, and main sources

compiled. Also a report covering feasible emission control technologies, engineering solutions and pollution prevention measures should be provided.

Reporting of results of specific actions under phase II will be made public available as far as possible and in line with the reporting requirements of the participating agencies or others.

Cost

Phase I is estimated to cost roughly $ 130 000. This would cover estimation of emissions (where data is not available), collation and assessment of data submitted from the countries. Available data contributed by the Arctic nations would be considered as an in kind contribution.

Of the total cost $ 100 000 should be allocated to assist Russian experts to gather data in Russia. The tasks would be: (1) Inventory of anthropogenic mercury production facilities and sources, production and emission levels and their locality, (2) Identification of mercury use, production of mercury containing equipment, and (3) Inventory of mercury collection and recycling schemes. The cost would cover elaboration of a work-plan with timetable for the Russian experts, travelling and meeting costs and reporting on Russian anthropogenic sources.

The initial cost of phase 2 is estimated to $ 30 000. The cost estimate is based on an hourly consultant rate of $100 pr. hour. The cost would cover developing a work-plan for the implementation of a few pilot projects and presented in a report. The cost of the second part of phase II will be significantly higher dependent on realistic pilot projects, but is preliminary set to $ 50 000.

Phase I

Activity 1 (task 1 – 4) (in USD)	
Russian experts	
Establish working group and develop work-plan.	$ 15 000
Quantification of emissions	$ 65 000
Meeting costs and reporting	$ 20 000
Other activities	
Development of questionnaire	$ 10 000
Compilation and reporting	$ 10 000
Activity 2	
Action plans	$ 10 000
Total	$130 000

Phase II

Activity 1	
Pilot project prioritisation	$ 30 000
Pilot project selection	$ 50 000
Total	$ 80 000

Phase III is not possible to estimate at present.

5. Environmentally sound management of stocks of obsolete pesticides in the Russian Federation (Co-ordinator: USA)

ACAP priority

Persistent Organic Pollutants (Pesticides)

Rationale

Thousands of tons of obsolete pesticides, many of them POPs, are being stored across Russia and other countries of the Commonwealth of Independent States (CIS) under poor conditions that results in their releases into the environment. In Russia over 21,000 tons are stored in numerous locations, mostly in its European part. However, significant amounts are also stored in some areas with intensive agriculture in Siberia, namely in the Altai Territory, Omsk Region, etc. A large proportion of these stocks is represented by HCH, DDT and mercury compounds. However, storage of significant amounts of pesticides preparations of unidentified composition (up to 40-50 % of the total quantities) is a very sensitive issue for many regions of Russia. Among other CIS countries, Ukraine as well as Kazakhstan and Uzbekistan should be mentioned in this respect. UNEP Chemicals initiated pilot case studies to clarify the current status of the problem in Kazakhstan and Uzbekistan. In Kazakhstan, e.g. about 2,000 tons of obsolete pesticides are reportedly being waiting for the safe disposal.

To tackle the problem, a pilot project has been implemented by UNEP Chemicals for compiling an inventory of stocks of obsolete pesticides in four regions of Russia, namely in Bryansk, Krasnodar, Tver and Voronezh. The project is funded by US EPA and UNEP Chemicals (budget was US $ 62, 000). The Russian authorities (at the federal and local levels) provided over US $ 30,000 plus made in-kind contribution locally. FAO approaches and experience was taken into consideration; this included the use of the FAO form for inventory of obsolete stocks. Partners in Russia were the State Chemicals (Pesticides) Commission of the Ministry of Agriculture and Foodstuffs, Centre for International Projects (CIP) of the Ministry of Natural Resources as well as regional agriculture environment and health authorities. Evaluation of the results from the pilot project, covering over 4,000 tons of obsolete pesticides stocks, which included data on about 500 storage facilities in the Tver Region alone, was in focus of an expert meeting held in Tver, Russia, 19-20 February 2001. Preparation of the final report is currently being in progress.

The ACAP project should be considered as an initial part of a future countrywide programme aimed at the safe disposal of the stockpiles of obsolete pesticides in Russia. Phase I of the ACAP project dealing with inventory will be based on the methodology and results of the UNEP / US EPA pilot project for Russia.

The project should also undertake to encourage the involvement of finance agencies such as the World Bank, GEF and also the chemical industry. This is especially important for the destruction / disposal Phase III of the project.

Objectives

- To supplement the pilot project inventory;
- To reduce releases of stocks of obsolete pesticides into the Arctic environment, and, in this way;
- The project will facilitate implementation by Russia of the LRTAP POPs protocol and the global Stockholm Convention on POPs;
- The success of the project will help to promote similar activities in other CIS countries as well as in the Baltic States (former USSR).

Actions

- Selection of 15-20 priority regions of Russia (in Siberia and the European part) sensitive for the Arctic Region;
- Preparation of guidance (terms of reference) for compiling regional inventories;
- Collection of data on existing stocks;
- Sampling and analysis of unidentified stocks;
- Consolidation and evaluation of data, reporting;
- Identification of adequate (cost effective) preparatory / preventive measures / procedures for improving storage conditions to reduce risks for human health and the environment as well as to facilitate future destruction / disposal action;
- Implementation of best proposed preparatory / preventive measures / procedures;
- Identification of the original producers for negotiating implementation of destruction / disposal;
- Evaluation and selection of existing technologies and techniques / facilities for environmentally sound and cost effective destruction / disposal;
- Development of destruction / disposal action plan;
- Pilot plant operation, including adaptation of existing facilities;
- Destruction and disposal.

Responsible parties/participants

Arctic counties with fund raising / development assistance agencies and UNEP Chemicals. Relevant international funding organisations should be involved from Phase 2 on.

Project description

Phase I - Inventory

An inventory will include data from 15-20 regions of Russia (of the existing 89 regions of Russia an inventory has been compiled for 4 regions located in its European part) which are of priority in terms of POPs pesticides (long range) transport to and deposition in the Arctic Region .

Activity 1. Selection of priority regions

Selection of 15-20 regions in Siberia and the European part of Russia will be made by AMAP jointly with the Russian State Chemicals (Pesticides) Commission and UNEP. The selection will be based on data on pollution of the Arctic Region with POPs pesticides via

atmospheric and riverine pathways as well as on location of major sources of this pollution on the territory of Russia.

Activity 2. Preparation of guidance (terms of reference) for compiling regional inventories
Guidance (terms of reference) will be prepared by State Chemicals (Pesticides) Commission jointly with UNEP, based on the experience and results received in the recent pilot project funded by US EPA, UNEP and Russia. This will include the relevant FAO table as supplemented for the purpose of the pilot project to meet the Russia's specific conditions.

Activity 3. Collection of data on the existing stocks
Based on the regional estimate data on the obsolete pesticides stocks collected in 1999-2000, the State Chemicals (Pesticides) Commission will organize collection of data on the existing stocks in the priority regions through inspection of the storage facilities by the regional Plant Protection Stations, Ministry of Agriculture and Food-stuffs.

Activity 4. Sampling and analysis of the unidentified stocks
Sampling and analysis of the stocks with unidentified composition / origin found through the above-mentioned inspection, will be implemented by the regional Plant Protection Stations in collaboration with regional health and environment authorities under the supervision of the State Chemicals (Pesticides) Commission and in co-ordination with the Ministry of Health and Ministry of Natural Resources by the use of regional / local analytical laboratories. Besides, analysis of complex pesticides mixtures and samples of pesticides preparations with complex composition will be implemented in a centralized manner by the use of federal facilities, under the same auspices.

Activity 5. Consolidation and evaluation of data, reporting
Data collected through inspection of the storage facilities will be consolidated with data obtained from sampling and analysis of stocks with unidentified composition / origin found in those facilities. The results from each region should be evaluated and reported by preparation and facility. Locations of the storage facilities and their status, including storage conditions, will be described in detail for their use in Phase II.

Phase II – Preparatory/Preventive Measures and Destruction/disposal Action Plan

On the basis of the results of the inventory, some preparatory / preventive measures, aimed at improvement of storage conditions and redeployment / consolidation of stocks, should be selected and introduced into practice, and action plan for future destruction / disposal phase should be developed.

Activity 1. Identification and selection of preparatory/preventive measures
Taking into consideration the current storage conditions and location of stocks, in order to reduce their increasing risks for human health and the environment and facilitate the implementation of the future destruction / disposal action, certain urgent measures should be introduced into practice while adequate destruction / disposal technologies / techniques are being identified and planned. These measures, including repackaging of certain lots / stocks, partial reparation of storage facilities, improvement of security measures as well as redeployment / consolidation of small stocks, where necessary, should be selected and planned by regional Plant Protection Stations in collaboration with local government authorities, under the guidance of the State Chemicals (Pesticides) Commission.

Activity 2. Implementation of the selected preparatory/preventive measures
The above-mentioned measures will be implemented / introduced into practice in the anticipation of and in order to facilitate future destruction / disposal action by the local partners concerned.

Activity 3. Negotiations with original producers/exporters
While selecting and implementing preparatory (preventive) measures, negotiations with original producers / exporters (foreign and domestic) will be organized to explore their interest in the removal of the stocks concerned for their future use as raw materials / by-products or their destruction / disposal.

Activity 4. Evaluation and selection of technologies and techniques/facilities
Review of existing destruction / disposal technologies and techniques / facilities will be prepared. Their efficiency should be evaluated from the point of view of their environmental and health safety and cost effectiveness. The most suitable of them will be selected and proposed for future use.

Activity 5. Development of destruction/disposal action plan
The selected technologies and techniques / facilities will be studied vis-à-vis the existing stocks, taking into consideration the following aspects: needs for adaptation of the technologies / facilities, capacity and location of each individual facility, quantities and locations of stocks, costs of transportation, destruction / disposal and other operations involved. As a result a destruction / disposal action plan will be developed for its implementation in phase 3.

Phase III – Destruction/disposal Action

The above-mentioned destruction / disposal action plan will be implemented starting with pilot plant operation, which may require adaptation of the existing facilities.

Activity 1. Pilot plant operation
Pilot plant operation stage will be implemented for each selected technology, incineration and others. This may require adaptation of the existing facilities.

Activity 2. Destruction/disposal of the existing stocks
Dependent of the financial resources, this significant undertaking should result in the complete destruction / disposal of the obsolete pesticides stocks in the given regions of Russia.

Preliminary workplan/timetable

Phase I is preliminary estimated to take 10 months with start in the 3rd quarter of 2001.
Phase II is preliminary estimated to take 1 year with start in the 2nd quarter of 2002.
Phase III is preliminary estimated to take 2 years with start beginning of 2003.

Table:Proposed workplan overview and estimate costs (for 20 regions)

Time ✍ Phases/Activities	**Estimat costs**	**------ 2001 ------**				**-------2002------**				**-------2003-------**			
Phase 1: Inventory				**x**	**xxx**	**xxx**	**xxx**						
Activity 1: Selection of regions	5,000			x									
Activity 2: Preparation of guidance (terms of refrences)	10,000				xx								
Activity 3*: Collection of data	90,000				x	xxx							
Activity 4*: Sampling and analy	120,000					xx	x						
Activity 5: Consolidation and evaluation of data, reporting	45,000						xxx						
Total, US $:	270,000												
Phase 2:Prep./prevent. measure and destr./disposal action plan							**xxx**	**xxx**	**xxx**	**xxx**			
Activity 1*: Selection of preparatory / preventive measur	30,000						xx						
Activity 2*: Implementation of preparatory / preventive measur	140,000						x	xxx					
Activity 3: Negotiations	15,000							xx	x				
Activity 4: Evaluation & selectio of technologies, etc.	45,000							xx	xx				
Activity 5: Development of destruction / disposal action plar	60,000								x	xxx			
Total, US $:	290,000												
Phase 3: Destruction/disposal										**xxx**	**xxx**	**xxx**	**xxxx**
Activity 1: Pilot plant operation										xxx	xxx		
Activity 2: Destruction / disposa											x	xxx	xxx
Total, US $:										Continued in 2004			

* *In addition, contribution from regional/local funds from Russia, including in-kind contribution, is also envisaged***.**

REPORTING

Reports on progress will be given at SAO and Arctic Council meetings.
A report from Phase I will be made available to all interested parties including NGOs and the public.
Reports from Phases II and III, including interim reports on its individual activities, if needed, will be made available to all interested parties with due respect to confidentiality of commercial data in line with the reporting requirements of the participating agencies and others concerned.

COSTS

The costs of Phases I and II including their indivial activities, are provided in the Table in Section 7 on Workplan / Timetable as calculated for 20 regions of Russia. It is presently impossible to estimate the cost of Phase III which will be significantly higher dependent of

the pilot phase cost as well as of the cost of destruction / disposal operations per ton and the total tonnage.

6. Implementation of Cleaner Production, Eco Efficiency and Environmental Management Systems in the Production Units and Management of the OJSC Norilsk Mining Company in the Arctic City of Norilsk.
(Co-ordinator: Russia)

ACAP Priority

Heavy Metals

Rationale

The Programme for Cleaner Production was established in 1994 under the environmental co-operation between Russia and Norway, on recommendation i.a. from the Barents Council. Its main objective has been to provide an instrument for capacity building on Cleaner Production, Eco-Efficiency and Environmental Management Systems in Russian industrial companies and public utilities. To facilitate further dissemination of cleaner production in Russia by experts trained under the programme, an autonomous non-profit organization (ANO) Center "Cleaner Production". (CP Centre) has been established in Moscow with branches in several Northwest Russian regions.

Cleaner production is the continuous application of an integrated preventive environmental strategy applied to processes, products and services to increase eco-efficiency and reduce risk to humans and and the environment (definition by UNEP). CP includes conserving raw materials, water and energy, eliminating toxic and dangerous raw materials and reducing the quantity and toxicity of emissions and wastes at source.

Since the start, more than 1000 Russian engineers in about 300 companies have been trained and certified through their participation in interactive training courses, where each of them have developed a number of economically profitable environmental investment projects. The annual economic benefits of the initial projects alone amount to 5-7 times the value of the donor investment. The environmental results, as well as the effects on working conditions and the general welfare and sustainability of the local communities are very considerable, in particular as they are gained practically without any noticeable financial burden to the companies.

The need to extend programmes of this kind further into the Arctic regions has been recognized by the Arctic Council. In the European part of the Arctic, comprising the northern parts of the Barents Region, regional programmes have been introduced to the Oblasts of Arkhangelsk and Murmansk, and a presentation of the Programme has been made to the authorities of the Nenets Okrug. The Programme is also active in the Komi Republic.

The probably greatest point source of air pollution in the whole Arctic area, also affecting the Barents Region, is the mining and smelting complex belonging to the OJSC Norilsk Mining Company, a subsidiary of the RAO Norilsk Nickel Corporation, in the Arctic City of Norilsk, located east of the Barents Region. In the opinion of the experts of the

Norwegian-Russian Cleaner Production Programme Organization, this is the company in the Arctic area where pollution abatement measures based on Cleaner Production can be made most cost efficiently, and which therefore should be given the highest priority for abatement of air pollution from sources in the Arctic itself.

Objective

The CP Centre proposes to plan, organize and undertake a separate in-company programme in Norilsk, where the objective is to carry out a full CP Assessment of all production units and utilities in the city of Norilsk, and to introduce other available instruments of eco-efficiency to these units as appropriate. The CP Centre already has available in Russia the necessary organization, experts and training materials to commence the project in 2001.

The project aims to train engineers and advisers for the company, to achieve economically sound environmental improvements in the participating units.

The main objective will be to reduce emissions to the atmosphere, at present amounting to nearly 3 million tons per year of sulfurous anhydride, as well as non-ferrous metals dust and other toxic substances. As a general target in the full programme period (3-4 years), the company should, i.a. by means of the CP programme, aim at a reduction of these emissions by 30-40%, by means of technology improvement and resource saving.

Based on experience, the results of the CP activities show on an average that Russian companies, without external financing, may easily reduce their water consumption and corresponding wastewater discharges to one third of their previous levels. Energy consumption is reduced by 25% and the production of solid wastes is reduced by 20% as a result of “good housekeeping” measures alone.

Actions

1. The CP Centre proposes, on entering agreement with the OJSC Norilsk Mining Company, to arrange an introductory seminar for the top managers of the relevant units in Norilsk, to ensure their full support and participation in the project.

2. Based on the results of the introductory seminar, the CP Centre will present a progress plan to the company, and start the training of engineers and other personnel in the basic methodology of Cleaner Production according to this plan. The training will be interactive, meaning that concrete environmental projects will be developed in all participating production units and public utilities, and implemented as part of the training courses. A system for further continual improvements will be established.

3. A local Centre for Cleaner Production an Eco-Efficiency, to be manned with trained and certified engineers and other relevant experts from the Company will be established. The objective of this centre will be to promote and support the continual improvement of eco-efficiency in Norilsk after the conclusion of this project.

4. The CP Centre will, as appropriate, offer similar supplementary training of engineers and managers in Norilsk, in topics such as project management, business economy and financial engineering, as well as full preparatory training and organizational implementation of Environmental Management Systems, such as ISO 14001, in preparation of future ISO certification of the company or of selected production units.

5. A separate Internet homepage for the programme will be included.

Responsible parties/participants

Countries**:** Arctic Council countries.
International organisations**:** Interested IFIs.
Project executive organisation: The Autonomous non-profit organisation (ANO) Center "Cleaner Production". Programme Director Alexander Tsygankov, 129226 Moscow, Selskohozyaistvennaya Str. 15/1, Building 2, Office 405, Russia.
Telephone: (+7095) 189 42 96 Telefax: (+7095) 189 57 70
E-mail: edcentcp@deol.ru Internet homepage:
http://www.deol.ru/users/edcentcp

Project description

The full programme will be implemented in three stages:
- Cleaner Production training, improvement project development and implementation;
- Additional training in Financial Engineering in preparation of investment projects;
- Preparation of implementation of EMS through training of relevant staff.

The project offers full training of the relevant company staff members through participation in on-site interactive training programmes, which include individual project development, assessment and implementation by the trainees before certification as CP Company Advisors. The CP training programme will be organised according to the recommendations of the OECD Best Practice Guide for Cleaner Production.

Additional training of relevant staff members in Business Economy and Financial Engineering to install a capacity within the company to carry out full feasibility studies of economically sound environmental investment projects, and to work out Business Plans for these improvement projects.

The CP Centre offers through this project a multipurpose programme, specially designed to demonstrate the advantages gained by combining CP with EMS.. The project aim in this respect, is to train CP engineers and advisers for the company, to achieve economically sound environmental improvements in the participating units. The aim is further to utilize these results in the development of local or company wide environmental management systems, especially in setting EMS Objectives and Targets. The established in-company CP organization will act as a driving agent for further and continual improvements, as required i.a. by international standards.

Workplan/timetable

Time ✍ Phases/Activities	----------2001---------->				----------2002----------			
Phase 1: Programme introduction								
1. Conclude project agreement	Done							
2. Top management seminar		Done						
3. Project preparations								
4. First CP Programme Run								
2. Second CP Programme Run								
3. Third CP Programme Run								.
4. Project Visits by External CP Adviser (6)								
Phase 2: Financial Engineering								
1. Analysis and selection of projects								
2. Negotiations with management								
3. Formation of project Group (8 pr.)								
4. "F. E."- Programme Run (2 sessions)								
5. Finalizing 8 Project Business Plans								
Phase 3: Introduction to ISO 14001								
1. Initial Company EMS Audit								
2. Top Management Seminar								
3. Staff Training Course (Med. Level)								
4. Consultancy and Advice								
5. Evaluation and Recommendations								
Estimated costs ✍ (1000 USD)	2,0	9,0	9,0	25,0	25,0	39,0	35,0	74,0

Sum estimated costs: 218.000 USD

Reporting

Reports on the progress of the project will regularly be submitted to the SAO and Arctic Council meetings.

Costs

The need for external financing to cover hard currency project costs, development and other expenses not covered by the company, to complete the above presented version (with 3 CP training programmes, F.E. and ISO as shown in the workplan above) has been estimated at 218 000 USD.

Annex B: Potential future co-operative activities.

7. Guidelines for performing Environmental Impact Assessments of handling and storage of radioactive waste in Russia (Co-ordinator: Norway)

ACAP Priority

Radioactivity

Rationale

EU and several western countries have seen the importance of implementing projects in North West Russia with the aim to reduce the risk of radioactive pollution of the environment. These projects need to be carried out in an environmentally satisfactory way. Among other factors, the technical solutions selected must contribute to a minimum of negative consequences when it comes to pollution of the environment. Further on, it is important that projects are supported by the Russian government, that they meet the criteria of Russian legislation, and that the projects satisfy international recommendations. For a contributor to a project, it is important to achieve knowledge about possible negative environmental consequences, how these questions are handled by Russian authorities, and whether Russian authorities will support further development of the project.

Risk management aims to reduce risk in a manner that optimises the use of resources to achieve the highest possible reduction of risk for a given resource investment. The characterisation of relative risk should consider both the risks posed by operational exposures from existing sources and practices and risks associated with potential exposures from potential sources, practices or accidents.

International attention has been brought to the protection of the environment against radioactive pollution, and not only man. Traditional radiation protection has been focused on man, and as long as man is protected, the environment is assumed also to be protected. This is not always the case. Before action to reduce risk or to restore areas is taken, it is important that an environmental impact assessment (including non-human species) is performed. International projects often neglect this requirement, or assume that Russian regulations comply with EU- or other national requirements.

The concentration and number of nuclear installations and the potential for releases cause concern, especially since the vulnerability of Arctic populations is much greater than for populations in temperate areas due to the importance of terrestrial semi-natural exposure pathways. The largest threat to the environment and the population in the Arctic today is connected to potential accidents in nuclear power plants, during handling and storage of nuclear weapons, decommissioning and refuelling of nuclear powered vessels and during storage of radioactive waste.

It is imperative that remedial or preventive actions are based on risk and impact assessments, and that the results of such actions are evaluated. Currently, communication and interaction is poor between the existing Risk and Impact assessment Programs devised to assess and monitor contamination in the Arctic and the Action Programs tasked to devise strategies and respond to existing radioactive contamination sources by implementing short- or long-term solutions. It is vital to bridge this gap and foster interdependence between the Risk Assessment and Practical Programs to improve monitoring, response strategies and the implementation of action plans.

International agencies and institutions all require Environmental Impact Assessments (EIA) of projects before support can be given. Lack of such information will result in delays in the implementation of important remedial actions. Development of sound EIA guidelines will contribute to a satisfactory implementation of projects aimed at preventing radioactive pollution. The guideline, through the results of using it, may contribute to reduce delays in the process of approval of projects on handling and storage of radioactive waste (eg. applications for support from international financing institutions).

Objective

To develop guidelines for performing Environmental Impact Assessments of handling and storage of radioactivity, based on Russian regulations.

Actions

- Identification of weak points / gaps in present Russian guidelines / practices on EIA;
- Development of draft guidelines;
- Evaluate the draft guidelines through use in case studies;
- Evaluate and revise the guidelines.

Responsible parties/participants:

A close co-operation with Russian authorities is essential.
A joint pilot study has been launched by Norway-Russia, involving the State Committee on Environmental Protection (Goscomecologia), the Local Committee on Environmental Protection (Goscomecologia) in Murmansk, the Norwegian Radiation Protection Authority, the Norwegian Ministry of Environmental Protection, and local authorities in Finnmark county. The pilot study will describe Russian EIA procedures. A comparison with relevant other procedures will be done.

Countries: Arctic Council countries. Sweden (Swedish Radiation Protection Institute), Finland (Finish Radiation Protection Institute) and USA (Department of Energy) have expressed their interest in this project. Depending on the results from the pilot project, Norway is willing to finance part of the proposed project.
International organisations: IAEA, IUR, EU-commission.

Project description

Russian guidelines / practices and other relevant guidelines on EIA will be assessed before developing a draft guideline. The draft guideline will be used to assess possible

environmental impacts in selected case studies, where further progress in remedial action is awaiting EIA clarification.

The guideline will include a list of requirements and criteria of an EIA needed for the carrying out of projects in north-west and north-east Russia with the aim of reducing the risk of radioactive pollution of the environment.

A handbook pointing out the main differences between Russian regulations and international regulations will be produced. The handbook will also describe which institutions and authorities are responsible for approval of EIAs related to radioactive practices.

Case studies

There are a number of relevant case studies:

a) The Lepse project
b) Decommissioning of the waste storage Murmansk Special Combinat "RADON"
c) New storage for low- and intermediate level radioactive waste in NW Russia
d) The construction of a new vessel for transportation of spent nuclear fuel
e) The handling of strontium-90 sources taken out of lighthouses (RITEG).

The Lepse-project has halted, partly due to lack of detailed decommissioning plans and EIA. Gosatomnadzor (GAN), together with Swedish and Norwegian Authorities are now working on documents describing the legal structure of radioactive safety connected to the Lepse-project, and the proposal is to use the Lepse-project as a case study to describe what is needed for an EIA in this specific case.

Use of case studies will make the work on the guideline more concrete. It will at the same time contribute to ensure that the mentioned cases are dealt with in an environmental sound manner. I.e. that the decommissioning of nuclear installations and building of new facilities are environmentally acceptable, and that the risk for radioactive releases to the environment are decreased, identification of relevant agreements and conventions that would provide a regulatory framework for specifying safe procedure and minimising risks. The presentation of EIAs for the cases will in turn reduce the risk of further delays in the cases.

Proposed workplan/timetable

First draft of guidelines for a system to perform EIA on radioactive waste handling and storage.
Recommendations on regulatory work to ensure EIA.

- Synthesize national and international legislation on EIA.
- Development of guidance for risk management in Arctic areas.
- Development of EIA in Arctic areas connected to radioactivity.
- Development of a strategy for implementing action with focus on risk management and EIA.
- Perform a case study using risk management and EIA approaches developed in this project.

Reporting

Reports from the project will be produced for AMAP, SAO and the EU commission. The project period is 1-4 years, depending on the number of case studies.

Costs

It is estimated that each case study will cost about US$ 65 000 (man power: 40, meetings 10, reporting 15).
In addition, a workshop on defining and identifying differences in practice is proposed, US$ 20 000.

Annex C: Reported activities being conducted by Arctic States, Permanent Participants and Observers that address issues relevant to ACAP.

8. Support for the Global Component of the «Regionally Based Assessment of Persistent Toxic Substances» being undertaken by UNEP (Chemicals).
(Co-ordinator: CANADA)

Acap Priority

Persistent Organic Pollutants (POPs)

Objective

The proximate objective of the complete UNEP project is to assess the nature and comparative severity of damage and threats posed by Persistent Toxic Substances PTS[1] at national and regional levels throughout the world in order to assist decision making at national, regional and global levels on the assignment of priorities for preventative and remedial actions.

The ultimate objective for the Arctic Council is to assist in achieving follow-up actions (not a part of this project) that will lead to eventual reduction and /or elimination of PTSs of concern that reach the Arctic environment from locations elsewhere.

Actions

To complete the overall project, UNEP has divided the world into a number of regions, one of which is the Arctic. UNEP considers that the information needed for this Arctic segment essentially exists within the AMAP reports and that the task for the Arctic region consists of extracting the relevant information and re-packaging it to conform to the methodology of the global assessment. Support to do this has been located and therefore the Arctic segment is not the topic of the present proposal.

In this proposal, Arctic Council countries are invited to assist with the non-Arctic components of the global assessment, particularly with a view to facilitating those regions comprised primarily of developing countries or countries with economies in transition.

[1]PTS is a term used to describe a set of substances which are similar to POPs but which are not necessarily captured by the criteria used to identify the 12 POPs currently under negotiation for global control. All of the latter 12 would be considered as PTS.

This may be achieved by supporting one or more elements that could include *inter alia* the following:

?? Provision (at no cost to the UNEP project) of scientific and technical expertise and/or services relevant to the over-all project description. The UNEP project proposal provides an indication of the types of expertise and services required.

?? Provision to UNEP of financial resources to assist project delivery.

Responsible parties/participants:

Countries: Arctic Council countries (to be determined and as detailed in the «Actions» section).
International Organizations: UNEP Chemicals; GEF.

Project description

A global agreement for the control of Persistent Organic Pollutants (POPs) is presently being prepared by an international negotiating committee (INC). The scope of the anticipated agreement is contained in Decision 13C as adopted by the Governing Council to the United Nations Environment Programme (UNEP) at its 19th session (GC19/13C). At that time, many developing countries pointed out a number of related concerns. They included the fact that the 12 substances to be the focus of the original global POPs agreement do not include all of the persistent toxic substances which present difficulties for them in the environment or through human exposure. Furthermore, their information base is so poor that in many cases they are unable to assess their priorities either for themselves or for development assistance agencies. Consequently, GC19/13C describes a number of cooperative actions which countries and international organizations were asked to undertake to address these broader issues. One such response is the Global Regionally Based Assessment of Persistent Toxic Substances described in this proposal.

UNEP-Chemicals expects to begin the project in the third quarter of 2000 with confirmed funding assistance from GEF. This proposal describes activities and contributions that the Arctic countries may undertake to assist UNEP in completing regional assessments that involve developing countries in non-arctic regions of the world[2]. The project (now on the GEF work plan) will be regionally based with each regional assessment being conducted by a regional coordinator. UNEP will establish coordinators for each region who will then regionally complete the following activities:

a) Identification of major sources of PTS.
b) Assessment of the impact of PTS on the environment and human health.
c) Assessment of transboundary transport.

[2] UNEP considers that the information needed for the Arctic segment essentially exists within the AMAP reports and that the task for the Arctic region consists of extracting the relevant information and re-packaging it to conform with the global assessment. This latter activity is not the topic of the present proposal.

d) Assessment of the root causes of PTS related problems, and regional capacity to manage these problems.
e) Identification of national and regional priority PTS related environmental issues.

In terms of the ACAP Criteria, the proposal is addressing a «shared» problem (transboundary movement of POPs to the Arctic. The AMAP reports and other publications have drawn attention to the potential severity of POPs contamination in the Arctic and the linkages to distant sources. There are clear and established concerns for human health and the project is aimed at facilitating controls on POP releases to the environment in source areas

Work-Plan and Timetable

The following overall timetable has been provided by UNEP.

1) PROJECT INITIATION: Late 2000
2) PROJECT COMPLETION: Late 2002
3) MILESTONES:
a) Late 2000: Completion of country data.
b) Mid 2001: Completion of enhanced data collection and evaluation.
c) Late 2001: Finalization of the regional reports.
d) Late 2002: Finalization of the global assessment and priority identification report (by UNEP Chemicals).

Reporting:

Individual Arctic Council counties will individually determine their level of participation. Reports on progress will be made to whatever oversight mechanism is determined for this project. Reports on progress will also be provided at all SAO and Arctic Council Ministerial meetings.

Costs

The costs for the entire (global) UNEP project is estimated at $4,287,800 M (US) of which $2,020,073 M (US) is expected to be derived from co-financing. Activities undertaken to assist the assessments in developing countries, and countries with economies in transition may be accounted by UNEP as contributions in kind or as cash contributions from potential donor countries.

9. Environmental Management Programme for the Murmansk region (EMP Murmansk) (Co-ordinator: Russia)

GENERAL INFORMATION

Title	Environmental Management Programme for the Murmansk region (EMP Murmansk)
Donor(s)	Norwegian Ministry of Environment
Recipient(s)	The State Committee on Environmental Protection of the Murmansk region
Contractor(s) (Executor)	Svanhovd Environmental Centre, Norway
Place of realisation	The Murmansk region
Type of support (*grant, loan, …*)	grant
Character of the support (*feasibility study, research, education, goods, equipment, etc.*)	Education, equipment, feasibility studies, reports publishing
Date of start	01.06.1996
Date of finish	
Status of the project	Under realisation

Aims / objectives (*briefly*)

The main objective is to strengthen the environmental management in the Murmansk Region. Furthermore, the four sub-objectives of the project are the following:

- Contribute to the continuous development of a well adapted and professional environmental administration in the Region.
- Contribute to improvement of in the legal basis for the environmental tasks in the Region.
- Contribute to the establishment of mechanisms that will improve and stabilise the economic situation for the executing institutions in the Region.
- Ensure that a minimum of needed equipment and infrastructure is available.

Received results (*on the moment of presenting/up-dating information*)

Three seminars on general environmental management in Norway, and in Russian Federation with the focus on regional environmental management in Murmansk. Participants – representatives of environmental management authorities from the Nordic countries, and the Murmansk region.

Thematic seminars and workshops (in co-operation with bilateral Russian-Norwegian working groups on terrestrial ecosystems, biological diversity and marine ecosystems), like «Environmental pollution control in Russia and Norway», «ISO14001», «EIA of off-shore oil-and-gas industries. Russia and Norway», «The Arctic Summit». Participants: representatives of environmental management institutions of the Russian Federation (central, regional and municipal levels), and Nordic countries.

Elementary and advanced English courses for representatives of the environmental management institutions of the Murmansk and Arkhangelsk regions and Nenets

Autonomous Area, held in Murmansk (3), Arkhangelsk (1), Narian-Mar (2), Kandalaksha (1) and Nikel (1).
Feasibility study of the prospects for eco-tourism development in the Murmansk and Arkhangelsk regions in co-operation with the regional environmental protection committee and state nature reserves.
Education materials about flora of the Kola peninsula (video and CD), Harp seals (video), Nature chronicle of Kandalaksha state nature reserve (CD).
Creation of the local computer network and connection to the Internet for the regional environmental protection committees in Murmansk and Arkhangelsk regions, The Republic of Karelia and Nenets Autonomous Area.

Total budget / costs of the project *(for the year 2000, USD)*	300000
Part / income of the western side	
confirmed	190000
not-confirmed	100000
Part / income of the Russian side	10000

Source of information Svanhovd Environmental Centre, Norway

Notes

The applications for 100000 USD (not-confirmed) on certain projects for the Murmansk region environmental management capacity building are to be presented to Norwegian Ministry of Environment, The Barents Secretariat, Swedish Environmental Protection Agency.

Date of completing information for the project 15.03.2000
Date of up-dating information for the project 14.03.2000

Project Description

Aims/Objectives

The main objective is to strengthen the environmental management in the Murmansk Region. Furthermore, the four sub-objectives of the project are the following:

- Contribute to the continuous development of a well-adapted and professional environmental administration in the Region.
- Contribute to improvement of in the legal basis for the environmental tasks in the Region.
- Contribute to the establishment of mechanisms that will improve and stabilise the economic situation for the executing institutions in the Region.
- Ensure that a minimum of needed equipment and infrastructure is available.

Received results

1. Three seminars on general environmental management in Norway, and in Russian Federation with the focus on regional environmental management in Murmansk. Participants – representatives of environmental management authorities from the Nordic countries, and the Murmansk region.
2. Thematic seminars and workshops (in co-operation with bilateral Russian-Norwegian working groups on terrestrial ecosystems, biological diversity and marine ecosystems), like «Environmental pollution control in Russia and Norway»,

«ISO14001», «EIA of off-shore oil-and-gas industries. Russia and Norway», «The Arctic Summit». Participants: representatives of environmental management institutions of the Russian Federation (central, regional and municipal levels), and Nordic countries.

3. Elementary and advanced English courses for representatives of the environmental management institutions of the Murmansk and Arkhangelsk regions and Nenets Autonomous Area, held in Murmansk (3), Arkhangelsk (1), Narian-Mar (2), Kandalaksha (1) and Nikel (1).
4. Feasibility study of the prospects for eco-tourism development in the Murmansk and Arkhangelsk regions in co-operation with the regional environmental protection committee and state nature reserves.
5. Education materials about flora of the Kola peninsula (video and CD), Harp seals (video), Nature chronicle of Kandalaksha state nature reserve (CD).
6. Creation of the local computer network and connection to the Internet for the regional environmental protection committees in Murmansk and Arkhangelsk regions, The Republic of Karelia and Nenets Autonomous Area.
7. Creation, publishing and distribution of the reports on:
   - Environmental management system in Norway (English, Russian).
   - Environmental management system in the Russian Federation (English, Russian).
   - Environmental management institutions in Norway and The Russian Federation (English, Russian, Norwegian).
   - Industrial pollution control in Norway and Russia (English, Russian).
   - Land use legislation in Norway (English, Russian)
   - Offshore emergency oil spill liquidation plan for the Russian Arctic (English - limited distribution).

Efficiency of the project (comparing the aims / objectives set and results received)
The co-operation and project organisation is efficient. The major challenges for project realisation is:

- General financial situation of the Russian environmental authorities (cut staff and budget).
- General skills of the environmental management personnel (English – as a working language – preliminary step for competence transfer).
- Public environmental education (environmental friendly thinking).
- Different cultures (organisation, management, etc.) in Russia and Nordic countries.

Results recommended for distribution in other regions

All the project outcomes (seminars, courses, reports, etc.) and project organisation structure recommended to be applied step-by-step in other Northern regions of the Russian Federation, first of all in Akrhangelsk region, The Republic of Karelia, and Nenets Autonomous Area (The Russian part of The Barents Euro-Arctic Region).
In the Murmansk region there will be brought the environmental activities in Murmansk region a step forward, and established Murmansk region as a Pilot Region for Environment. Within the «Pilot Region» project there should be implemented complex of the environmental management capacity building activities and created the model structure for the regional environmental management. It should be established the system of regional environmental management which, from one side, will take into account particularities of the Murmansk region as a borderline and Arctic territory with both heavy industry and pristine nature areas, and, from other side, can be an example of the

system implemented in other regions of Russian Federation. The joint work will be done in developing regional legislation, economical nature protection methods and environmental management. Environmental pollution control, oil spill prevention and establishment of new industries in the Murmansk region will be the focus areas for the project development.

CONTACT INFORMATION

Organisation(s)-donor(s)

Name	Norwegian Ministry of Environment
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Contact person, position	Magne Roed, Director General
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Fax	+47 22 24 27 55
e-mail	magne.roed@md.dep.no

Organisation(s)-recipient(s)

Name	The State Committee on Environmental Protection of the Murmansk region
Address	20 Profsoiuzov street, 183038 Murmansk, Russia
Contact person, position	Ivan Vishniakov, Chairman
Telephone	8152 45 25 85
Fax	8152 45 91 68, 8152 45 66 27
e-mail	emp@envir.murmansk.ru

Organisation(s)-contractor(s)

Name	Svanhovd Environmental Centre
Address	N-9925 Svanvik, Norway
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FINANCIAL INFORMATION

The total budget/costs of the project (estimated/used), USD

For the years:

1997	310000 / 310000
1998	310000 / 310000
1999	310000 / 310000
2000 (/ used for 2 months)	300000 / 30000
Part / income of the western side, USD	
Confirmed	190000
Not-confirmed	100000
Estimated / planned	
For one year (incl. certain related projects)	400000
Used *(for the year 2000)*	30000

Among them, in fact came / transferred to Russia (as payment for service of Russian experts, equipment and goods delivery, etc., by evaluation of Russian participants)

For two months of the year 2000	10000
Part / income of the Russian side, USD	
Estimated / planned *(for the year 2000)*	10000
Used *(for two months of the year 2000)*	1500

Additional information concerning finances:

Financing of some certain capacity building projects in the Murmansk region go in co-operation with other financial institutions, like The Norwegian Barents Secretariat, Swedish Environmental Protection Agency.