

A Demo Project for Eliminating Outdated and Banned Pesticides in the Northern Regions of Russia

1. Project Name: Eliminating Outdated and Banned Pesticides in the Northern Regions of Russia.

2. Project Category: Demo.

3. Project Rationale: At present, the regions of the Russian North are facing some challenges of environmental, production and technological nature associated with an accumulation and persistence of large amounts of pesticides that are either outdated or banned for being used.

Data from AMAP researches and from the first phases of the ACAP projects, which are currently underway and which yielded information on an inventory of the POP's (including pesticides), suggest that there is a substantial adverse influence of the discharge containing dissolved pesticides and pesticide-contaminated soil material in the basin of the Arctic Ocean. Considerable volumes of pesticides, unfit and banned for application, are kept in rooms of buildings that are tumbledown and unsuitable for storage, with the packaging often neglected to the point of being beyond compliance with applicable legislation.

The risk of an unauthorised access to these materials and of an uncontrolled usage thereof for domestic purposes, as well as the extent of the threat this may represent for the local community and the environment (pesticides being highly toxic substances referred to the category of supertoxicants), particularly in the event of emergency natural and man-caused situations (e.g. floods, fires, major accidents, etc.) together call for an urgent phased elimination of outdated and banned pesticides.

Developing new techniques for processing and eliminating this hazardous waste is a priority. De-chemicalization of pesticides is one of such techniques. Mixing pesticides with specially selected reagents leads to a lowering of the hazard class of the resulting blend by two orders with relation to the original one.

The main objective of this demo project is the improvement of the system of handling outdated pesticides forbidden for application in the Northern regions of the Russian Federation, with the participating experts including organizations being Russian and international. The project is aimed at (1) disposal/elimination of a pilot batch of outdated and forbidden pesticides; (2) introduction of technologies and equipment meeting Russian and international standards in a broader industrial use. The judgement statements made by international expert organizations regarding the quality of the processing of the pesticides makes it safe to confirm the compliance with international norms and requirements, including observance of the pivotal principles of controlling transboundary movement of hazardous waste and its removal.

4. Proposed Scope: The plan is first to embark upon a qualitative geochemical testing of various outdated and banned pesticides kept in their temporary storage locations and causing a substantial influence on the Arctic basin.

The next step within the project would be to carry out a de-chemicalization, repackaging and preparation for safe transportation of outdated and forbidden pesticides in compliance with the requirements of the applicable legislation in order to

achieve the highest possible level of safety of pesticide elimination by using high-temperature incineration coupled up with a high degree of treatment of the off-gases.

The elimination of the pesticides will be carried out at a dedicated industrial site, within a special unit devised for destruction of hazardous waste using state-of-the-art technologies tailored to the conditions of the Extreme North.

The said unit is unique. It was specially assembled and installed, then examined by a group of international experts. The unit will be modernized for the needs of this specific project during the second phase of the Project.

It is anticipated that as an outcome of the project, state-of-the-art, technologically viable, economically feasible and environmentally safe technologies involving high-temperature incineration of pesticides, high-level treatment of off-gases and subsequent landfilling of the safe ash residue will be introduced.

The planned pesticide elimination process and the resulting end products are intended to stay in the compliance with national and international standards.

The main phases of the project implementation include:

1. A preparatory phase, including pesticide de-chemicalization.
2. Upgrading the equipment.
3. Transporting the pesticides.
4. Eliminating the pesticides.
5. Monitoring the emissions.
6. Preparing the final report.

5. Expected Result: cleaning the Russian Arctic of outdated and banned pesticides, abatement of the Arctic environment, prevention of pesticide seepage into the Arctic seas, demonstration of an economically efficient technology by eliminating a pilot batch (200 tons) of outdated and banned pesticides, demonstration of an environmentally safe management of all the stages of pesticide management.

6. Current Project Status: the project is ready for being implemented as a great amount of preparatory work has been done already. As a result of implementation of a number of international projects under the auspices of UNEP and the Working Group on the Arctic Contaminants Action Program within the Arctic Council and in line with the Declaration of the Ministers of the Arctic Countries (Salehard, 2006), work was carried out for inventory, collection and placement of outdated and banned pesticides in temporary storage facilities in the Russian regions of Altay Kray, Altay Republic, Sakha Republic, Tomsk Oblast, Archangel Oblast, KMAO and Komi Republic.

7. Project Stakeholders Ministry of Natural Resources and Ecology of : Russian Federation, areas of the Far North and equated localities, RAIPON (Russian Association of the Indigenous Peoples of the North, Siberia and the Far East).

8. Project Scalability Potential: Once completed, the demonstration project will highlight a technology that presents an environmentally safe elimination of outdated pesticides. The technologies and approaches devised to eliminate outdated and banned

pesticides and other halogen-containing organic pollutants and tested during the project may then be applied elsewhere.

9. Project Timeframe: August 2009 – July 2010.

10. Project Funding:

1. The funding earmarked for the project is up to 500,000 US dollars, of which 340,000 US dollars are UNEP/GEF funds and 160,000 US dollars proceeding from a donor fund (US EPA).

2. Funds from Russian federal budget envisaged for the implementation of the subprogram "Development and Use of the Arctic" under the federal target program: World Ocean" (item 19) in amount of up to 400,000 US dollars expressed in rubles. This funds are necessary for the success of the preparatory work scope before the elimination is launched. The preparatory scope includes work to upgrade the necessary equipment and prepare pesticides for transportation (repackaging and chemical tests).