

Public interest: NGO perspective on the selection of appropriate technologies for destruction of obsolete POPs stockpiles

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The most frequently propagated and utilised method of destruction of hazardous waste, including obsolete pesticides, has been incineration in specialised installations or in cement kilns. However, this method has been widely criticised by environmental non-governmental organisations (NGOs) and community activists. The concerns - based on available reporting data and scientific evidence - include:

- creation of toxic by-products and residues, in many cases even more toxic than waste treated, like dioxins, furans, and PCBs;
- dispersion of heavy metals.

Moreover, reservations to waste incineration projects concern also:

- lack of comprehensive analysis of the possibilities of pollution prevention and waste reduction at source, and use of safer treatment methods (waste management plans, EIA);
- lack of public participation and transparency during the planning stage and administrative procedures (most recent examples include Belarus, Mozambique, Poland and Ukraine);
- very high capital and operating costs.

Recognising the above problems, the NGO community has been supporting activities aiming to establish an international legal base for elimination from production and use of harmful substances, development of criteria for the destruction of hazardous waste stockpiles, and demonstration of appropriate non-combustion technologies.

Technologies used for destroying existing stockpiles of hazardous materials must demonstrate a level of performance that is commensurate with the capacity of these wastes to cause harm. Consequently, technologies that are appropriate for the destruction of hazardous waste stockpiles must achieve the following basic performance criteria:

- **Destruction efficiencies of effectively 100 percent for the chemicals of concern.** The determination of 100 percent destruction efficiency is necessarily based on findings of no detectable concentrations of the chemicals of concern in any and all residues, using the most sensitive analytical techniques available world-wide. Analyses of the unmodified residues must be carried out sufficiently frequently to ensure compliance with this criterion during start-ups, shutdowns and routine operations;
- **Complete containment of all residues** for screening and, if necessary, reprocessing to ensure that no residues contain detectable levels of chemicals of concern or other harmful constituents, such as newly formed persistent organic pollutants or other hazardous substances;
- **No uncontrolled releases.**

Following the abovementioned criteria, and general framework created by recently reached agreement on a global Convention on Persistent Organic Pollutants, the United Nations Industrial Development Organisation (UNIDO) in the collaboration with the United Nations Development Programme (UNDP), and Global Environmental Facility (GEF) will execute a project which objective is to demonstrate the viability of available non-combustion POPs destruction technologies and to remove barriers to their adoption and effective implementation in countries with developing economies and economies in transition. It will prepare and implement POPs destruction demonstration activities in Asia (Philippines) and in Eastern Europe (Slovakia). Approaches taken in the Philippines and Slovakia, and lessons learned during the preparatory funding phase and during the full project will be made available to other countries.