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## BACKGROUND ON THE MANAGEMENT OF OBSOLETE PESTICIDE STOCKPILES IN THE CARIBBEAN

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### Countries

Antigua & Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago.

### Background & Rationale

The Caribbean is in dire need of an on-the ground initiative aimed at managing their stockpiles of obsolete pesticides. In most Caribbean countries, the agricultural industry is the largest and most important. This heavy dependence on agriculture has resulted in increased agro-chemical use. Consequently, the pollution of land, air and water has increased significantly. Over the years, as certain agro-chemicals have been prohibited by domestic and international law, and/or rendered unwanted or otherwise obsolete by various stakeholders, the lack of centralization of efforts, capacity and technical assistance to manage these chemicals have resulted in severe stockpiling. Most Caribbean countries have stockpiles of obsolete pesticides in varying quantities<sup>1</sup>, much of which have yet to be identified, and various locations, most of which are unknown to the national government. This lack of information poses a threat not only to the environment (e.g. site contamination) but also to human health (e.g. poisoning). Thus it is critical that Caribbean countries are enabled, through financing and technical assistance, to efficiently and soundly manage their obsolete pesticide stockpiles.

A recent survey of Caribbean countries on the “Management of Persistent Toxic Substances in the Countries of the Americas” conducted by the OAS has revealed a dire situation facing Caribbean countries in managing obsolete pesticide stockpiles. Firstly, most countries have not done an *inventory* of obsolete pesticide stockpiles. Thus the total amount of obsolete pesticide stockpiles in most Caribbean countries is unknown. One main reason is that they do not know where many stockpiles are located. In most Caribbean countries, stockpiles are not regulated or monitored by the government.

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<sup>1</sup> See. <http://www.fao.org/ag/AGP/AGPP/Pesticid/Disposal/en/49274/103422/index.html>. The FAO conducted an inventory from 2000-2002 of pesticide stockpiles in some Caribbean countries. The quantities for only a few countries were ascertained. For example: Belize (06/2000) -**14,958 kg**; Dominica (04/2002) - **443 kg**; St Lucia (01/2002)- **6,433 kg**; St. Vincent & the Grenadines (10/2000) -**1,330 kg**; Trinidad & Tobago (06/2000) -**71,406 kg**. Therefore, the total *reported* amount for the region from 2000-2002 is **94,570kg**.

Private entities are responsible for managing, including storing, their own obsolete pesticides, as evidenced in the June 2000 Inventory of Obsolete Pesticides in Trinidad & Tobago, and supported by reports from Jamaica, Haiti and St. Lucia<sup>2</sup>. It is this decentralized system which results in stockpiles in various locations unbeknownst to the central governments.

Secondly, in most countries there are no special *storage facilities* specifically for obsolete pesticides, or other obsolete chemicals. This is the case in countries such as Trinidad & Tobago, Jamaica, Haiti, St. Lucia and the Bahamas. Again, private entities are the ones generally responsible for identifying their own storage facilities. Further evidence of this can be seen in the National Hazardous Waste Inventory for Trinidad & Tobago (2003) conducted by the Caribbean Environmental Health Institute (CEHI). The inventory showed that obsolete pesticides were being stored in places such as private laboratories, ports, agro-chemical shops and sugar cane estates. Most Caribbean countries have no regulations addressing storage facilities for obsolete pesticides or other obsolete chemicals, and so private entities are not monitored to ensure that the structure and environment are ideal for storing such chemicals. Further compounding the problem is that most of these facilities are either never or infrequently inspected.

The storage problem is not just limited to physical structure; it extends to the containers in which the pesticides/chemicals are stored. The inventory of obsolete pesticides in Trinidad & Tobago revealed that many of the storage containers were seriously damaged. For example, the fungicide Chlorothalonil (Daconil) was being stored in a paper bag that was seriously damaged. Another example is the chemical Chloropyrifus (Pestban TC) which was being stored in a seriously damaged plastic bottle. While not all the containers, (such as plastic bags, glass bottles, paper bags, cloth bags and metal kegs) were seriously damaged, more than half had minor damages. Additionally, the labeling of storage containers raises serious concerns. Antigua & Barbuda has reported that improper labeling concerns them greatly<sup>3</sup>.

These seriously damaged containers undoubtedly raise the third issue of site contamination. Many countries, such as the Bahamas, the Dominican Republic, Jamaica and Trinidad & Tobago, have yet to carry out an inventory of sites contaminated by persistent toxic substances (PTS). Haiti and St. Lucia have, and of course, the sites were heavily contaminated.

Fourthly, all the Caribbean countries have no special *disposal facilities* for their obsolete stockpiles, and so they send much of their hazardous wastes overseas. The concern however is some countries, such as Jamaica and Trinidad & Tobago, lack a concrete hazardous waste management plan. The CEHI (previously mentioned) inventory highlighted that private entities needed to develop an 'adequate disposal system'. The inventory also indicated that Trinidad & Tobago has no legal provisions which

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<sup>2</sup> "Preliminary & Supplemental Questionnaire on the Management of Persistent Toxic Substances in the Countries of the Americas" (Unpublished), Department of Sustainable Development, Organization of American States (2007).

<sup>3</sup> See. <http://www.who.int/ifcs/documents/latincarib/carib-report-2000.pdf>

specifically address the disposal of hazardous wastes. Some hazardous wastes in Trinidad & Tobago are disposed of in landfills. This situation is similar in Jamaica.

Lastly, most Caribbean countries have *international obligations* under the Stockholm, Basel and Rotterdam Conventions. However, many are not in compliance with, namely, the Stockholm Convention, since they have not been managing their stockpiles in an environmentally sound manner as required by Article 6(1) (c), and as shown above. Also most of the countries have some form of legislative framework via Pesticide Control Acts, Waste Management Acts, and Environmental Protection/Management Acts, to address pesticides and other hazardous wastes/chemicals. Additionally, many have institutional frameworks via Pesticide Control Boards and Environmental Protection/Management Agencies. However, surveys and reports have shown, that a lack of funding to these institutions and technical capacity preclude the sound management of chemicals, especially stockpiled obsolete pesticides. Such deficiencies cripple the efficient implementation of regulations needed to properly manage obsolete pesticide stockpiles.

In light of all the above, the following have been identified as the priorities of Caribbean countries in managing their obsolete pesticide stockpiles:

1. Identification of sites storing obsolete pesticide stockpiles.
2. An inventory of the obsolete pesticide/ chemical stockpiles.
3. Development of a clean-up, removal and disposal plan.
4. Technical assistance in conducting tests of sites possibly contaminated by the obsolete pesticide stockpiles to ascertain the environmental and health effects.
5. Technical assistance for government agencies to develop a comprehensive chemical management plan. This includes training and information exchange.
6. Technical assistance to private entities for identifying and implementing best practices.
7. Identification of proper storage and disposal facilities.
8. Harmonization agencies and legislation.

***In closing, Caribbean countries have listed chemical management, particularly as it pertains to their obsolete pesticide stockpiles, as one of their top priorities for which they need immediate help.***