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**Prevention/sustainable  
development**

# Prevention measures accompanying disposal in Ethiopia

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## Introduction

There is broad consensus among the organisations and individuals dealing with obsolete pesticides issues, that prevention and disposal of obsolete pesticides are equally important. It is expected that wherever a disposal and remediation project takes place, appropriate prevention measures are also put in place in order to ensure that new pesticides do not become obsolete, stockpiles do not accumulate and that there is no need to repeat clean-up operation in the future.

This paper describes the range of prevention measures being developed, implemented and discussed in the context of the obsolete pesticides project currently taking place in Ethiopia.

## Current situation

The prevention and disposal project currently taking place in Ethiopia is the largest of its kind ever undertaken. The initial inventory of obsolete pesticide stocks was completed by Ministry of Agriculture staff in 1995 and identified 1,150 tonnes of products and containers.

A revision of that inventory was completed late in 2000 and has now identified 2,400 tonnes obsolete pesticides in over 900 stores throughout the country. Very severe environmental contamination has occurred as a result of leaked and spilled pesticides in several sites. This has resulted in the contamination of large quantities of soil.

To date, funds have been raised from the US, Netherlands and Sweden and a contract has been issued for the disposal of 1,500 tonnes of obsolete pesticides. Based on the current inventory, committed funds will not suffice to complete the clean-up. Efforts are therefore being made to ensure the rest is removed by seeking funds from other donors.

The Global Crop Protection Federation has made a commitment to pay for the destruction of products attributable to GCPF member companies (the major pesticide manufacturers). Since approximately 50% of identified stocks can be associated with GCPF companies it is expected that industry will make a significant contribution to the clean-up operation in Ethiopia.

## Inventory

At the start of the project, following the appointment of a Project Manager by FAO, a National Coordinating Committee was created to steer the project and ensure that all relevant stakeholders were informed and included. The Committee includes representatives from Government Ministries (Agriculture, Health, Environment, Economic Development), FAO, Donors, Industry and NGOs.

Early in the project, a public awareness campaign was launched. This consisted of radio broadcasts and newspaper articles explaining the need for and the nature of the project. This was designed to inform the public at large that this important progressive step was being taken with the full support of Federal and Regional government authorities. It was also designed to encourage holders of obsolete pesticides to notify the responsible authorities of their existence and release them for disposal.

Prior to commencing a major nationwide re-inventory exercise, local staff from every region was trained over a 5 day period. The training was designed specifically for inventory taking and covered health and safety and environmental protection, gathering and interpreting information about pesticides and wider issues related to pesticide management and the specific needs of a disposal operation. 39 trainees took part in the training.

The re-inventory exercise followed immediately after the training. The project management team went into the field to observe the trainees at work and ensure that the training was being put into practice.

As well as identifying obsolete pesticide stocks, the exercise identified poor stores and poor storage practice and helped to identify the causes of obsolescence. In many cases, this information has proved extremely valuable in developing measures to ensure that obsolescence and accumulation of stocks does not recur in the future.

## Dealing with causes

A major source of obsolete stocks accumulated in the last 5-6 years has been the Japanese funded KR2 programme. This programme allocates funds for agricultural inputs that include pesticides, fertilisers and machinery that must be purchased through Japanese companies. Over the years, excessive quantities of pesticides have been supplied and many remained unused until they became obsolete. In addition, poor distribution of products has resulted in their arrival at their point of use close to, or in some cases after their expiry date. Efforts are currently being made to resolve these problems.

Prevention measures also include the strengthening of import controls. FAO and WHO have recently noted that up to 30% of pesticides entering developing countries do not meet acceptable standards. While Ethiopia has good legislation in place to control imports, there is a need for better collaboration between Customs and Excise personnel at points of entry and the pesticide regulatory team at the Ministry of Agriculture. Analytical laboratories are also being upgraded as part of the project to facilitate better analysis of products to ensure that they meet appropriate quality standards.

In some stores products that have previously been banned in Ethiopia were found that had recently been delivered for use. This was reported to the regulatory authorities who immediately addressed the problem by ensuring that they were no longer distributed. Specifically this included chlordane that was manufactured as long ago as 1987.

Virtually none of the pesticide stores in Ethiopia meet acceptable standards such as those specified by FAO. The project has also found heavily contaminated buildings that could not be effectively decontaminated. Within the framework of the project some stores will be upgraded and will function as regional collection points for the duration of the project. After the project is completed these stores will function as regional distribution points. The most heavily contaminated stores and those made of inappropriate construction materials such as mud and thatch will be demolished and replaced with new constructions.

Local pesticide industry representatives have been involved in the project from early stages to ensure their collaboration in the disposal phase, and also to ensure that companies take responsibility for ensuring that the causes of obsolescence related to distribution and sale of products, are addressed by suppliers.

## Working with NGOs

The local NGO community has also been recruited in support of the project. Initially a number of organisations were informed of the project and its aims. They in turn created a coalition called the Safe Environment Group (SEG) - a network of concerned organisations and individuals that is developing a range of activities related to sustainable agriculture and the impact of pesticides on health and the environment.

Through the SEG, NGOs are represented on the National Coordinating Committee and hence are kept informed of developments in the obsolete pesticides project and can coordinate their activities appropriately.

In November 2000 a Study Tour was organised to address problems with pesticides and to see pesticide free agriculture in action. 41 participants heard presentations, took part in discussions and visited obsolete pesticide stores and farmers who are growing crops without the use of pesticides over a 4 day period. The tour was judged a huge success by all participants and has stimulated new collaborations and projects relevant to pesticide elimination or reduction, researching the health and environmental effects of pesticides and improving pesticide safety.

The host organisations of the SEG intend to develop a resource centre with the support of PAN-UK and proposals and funding applications are currently being prepared.

## National strategy issues

In November 2000 a National IPM workshop was organised by FAO and the Ministry of Agriculture. National and regional experts, policy makers and researchers took part and international experts with experience of IPM implementation in Africa also contributed. This was seen as a catalytic activity on the part of the obsolete pesticides project. Future action on the development and implementation of IPM in Ethiopia will be taken forward by organisations with expertise in this field such as the Global IPM Facility.

Many of the obsolete stocks in Ethiopia arose from the practice of holding strategic pesticide stocks at the ready to deal with migratory pest infestations. Ethiopia suffers from invasions by desert locusts, Quela bird and armyworm. However, when strategic pesticide stocks are left unused because expected infestations did not materialise, the pesticides become obsolete and then need to be replaced with current stocks. A need has been identified to review these migratory pest control strategies. Options are currently being investigated that could prevent these problems in the future.

Disease Vector Control also relies heavily on pesticides in Ethiopia. Ethiopia is one of the countries still using DDT for malaria vector control. DDT is subject to controls under the newly negotiated POPs (Stockholm) Convention and will need to be replaced in time. Efforts are being directed at developing appropriate and effective vector control measures that can first deal with the threat to peoples' health and also prevent pesticide related problems.

Prior to commencing the obsolete pesticides project, Ethiopia was required to ratify the Basel Convention that controls the movement of hazardous waste internationally. Ethiopia also took an active role in negotiations towards the POPs Convention, and following the signing of the Convention in Stockholm in May 2001, Ethiopia will be encouraged to ratify it. The Rotterdam Convention on Prior Informed Consent (PIC) can also help countries like Ethiopia to control the import of hazardous products such as pesticides more effectively. Ethiopia has not signed or ratified this convention and in the framework of prevention measures accompanying the obsolete pesticides project, Ethiopia will be encouraged to ratify it.

## **Conclusions**

In common with all obsolete pesticide projects, prevention measures must accompany disposal activities. In Ethiopia a range of prevention measures have been addressed and have either already been implemented or are being developed. Additional issues may arise during the course of the project and will be addressed appropriately.

The causes of obsolescence and accumulation that have been identified in Ethiopia have led to a range of prevention measures that strengthen national regulation and enforcement and tighten control on pesticide distribution and use. In some cases such as IPM and NGO functions, activities have been initiated and will hopefully continue indefinitely.

The Ethiopian project is the largest obsolete pesticides project ever undertaken. It is being closely observed and is likely to be a model on which many future projects will be based. The disposal activities and their successful implementation are a key element of the project, but prevention is no less important. The measures being put in place in Ethiopia to prevent future accumulation of obsolete pesticides and the way in which they are being developed and implemented can also form a useful model for other similar projects.