

# what is pesticide poisoning?



## ROTTERDAM CONVENTION

This leaflet explains the need for monitoring the health impacts of pesticides. Further information on pesticide poisoning and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade can be found at:

<http://www.pic.int>



## pesticide poisoning

Pesticides kill target organisms by disrupting essential biological processes. Unfortunately, because our bodies often depend on similar processes to function properly, our health can be affected too.

Risks to human health from pesticides include acute effects, ranging from nausea and dizziness to convulsions and death. Long term effects include cancer, birth defects and damage to the nervous system and the functioning of the endocrine (hormone) system.

## who is affected?

Farmers and other users of pesticides are at high risk of pesticide exposure, particularly if they do not use protective measures. Their families and communities may also be at risk. Poverty can increase vulnerability to pesticide poisoning. Anyone can be affected by pesticides in their food or environment<sup>i</sup>.

## scale of the problem

Pesticides are known to cause millions of acute poisoning cases each year, at least one million cases of which require hospitalisation<sup>ii</sup>.

In a study in Burkina Faso over 82% of farmers surveyed reported having experienced symptoms of pesticide poisoning<sup>ii</sup>.

## counting the cost

In addition to the human tragedy that results from pesticide poisoning, there are significant economic implications due to loss of labour and the cost of treatment. These costs tend to be overlooked in cost/benefit analyses.

A study in Sri Lanka<sup>iii</sup> estimated that the health impacts of pesticide exposure cost farmers an equivalent amount to ten weeks income.

## how does pesticide poisoning occur?

Exposure to pesticides can occur at any stage from manufacture and packaging of the pesticide to distribution, use, storage and disposal.

Pesticides can be absorbed by the body through the lungs, skin, stomach, etc.



Boy and father in Ethiopia mixing pesticides in an unsafe manner.

Photo: courtesy of PAN-UK

## what can be done?

The first step in tackling problems related to pesticides is to better understand them. Better information is urgently needed to determine whether the pesticides that are available can be safely used under local conditions.

Pesticide incident reporting systems collect systematic data on cases of pesticide poisoning in order to inform regulatory decision-makers.

Data may come from a variety of sources, including:

- surveys
- medical reports
- death certificates
- poison control centres
- government sources (e.g. work-related morbidity and mortality figures)
- emergency telephone hot-lines
- farmers and agriculture extension services



The investigation of an incident involving pesticides should gather a variety of information relating to the incident, such as where, when and how it occurred. It should also include the identity of the pesticide, the way it was used and any safety precautions taken. If safety advice was not followed, **the investigation should determine whether the advice is practicable under local circumstances.**

Reports of particular types of incidents being repeated can alert authorities to changes that may be needed in order to reduce the occurrence of such incidents in the future.

### sharing information

Article 6 of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade introduces a procedure for countries to share information on health incidents caused by pesticides.

The Convention Secretariat has developed a programme for reporting on incidents with severely hazardous pesticide formulations and is interested in receiving information about health incidents related to pesticides, regardless of its hazard classification.

Incident report forms are available to guide countries as to the information needed. While the information should be as complete as possible, it can still be submitted if it is not possible to obtain all details of a poisoning incident.

By sharing information via the Secretariat of the Rotterdam Convention, other countries can be alerted to potential risks to health caused by pesticides and consideration can be given to risk management measures.

### developing a pesticide incident reporting system

Some countries have struggled to find sufficient resources to establish a national incident reporting system. However, several communities and organisations have begun developing small-scale, community-based health monitoring systems<sup>iv</sup>. Such systems, based on self-surveillance, may provide a good entry point for countries with limited resources or a useful adjunct to established incident reporting systems.

### call to action

Governments are urged to considerably increase their efforts to carry out health surveillance programmes, in accordance with The International Code of Conduct on the Distribution and Use of Pesticides.

The findings should be linked to effective action to prevent similar incidents from happening in the future.

Sharing information about verified pesticide incidents can be very helpful in alerting other countries and preventing similar incidents from occurring. For this reason, governments are encouraged to engage with the programme for Severely Hazardous Pesticide Formulations under the Rotterdam Convention in order to share information with other countries.

### contacts

Comments and queries are invited by e-mail to: [pic@fao.org](mailto:pic@fao.org)



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## references

<sup>i</sup> WHO (2004). *Childhood pesticide poisoning: Information for Advocacy and Action*. World Health Organization, Geneva, Switzerland.

<sup>ii</sup> Toe, A.M. (2010). Pilot study on Agricultural Pesticide Poisoning in Burkina Faso. Secretariat of the Rotterdam Convention.

<sup>iii</sup> Wilson, C. and Tisdell, C. (2001). *Why farmers continue to use pesticides despite environmental, health and sustainability costs*. *Ecological Economics*, 39: 449-462.

<sup>iv</sup> PAN-AP (2010). *Communities in Peril: Global Report on health impacts of pesticide use in agriculture*. Pesticide Action Network Asia Pacific.