



**Open-ended Working Group of the International Conference
on Chemicals Management**

Second meeting

Geneva, 15–17 December 2014

Item 5 (c) (ii) of the provisional agenda*

**Emerging policy issues and other issues of concern:
other issues of concern: highly hazardous pesticides**

**Information note on highly hazardous pesticides prepared by
the Food and Agriculture Organization of the United Nations**

Note by the secretariat

1. The secretariat has the honour to circulate, in the annex to the present note, an information note received from the Food and Agriculture Organization of the United Nations relating to highly hazardous pesticides.
2. In accordance with paragraph 2 of resolution II/6 of the International Conference on Chemicals Management, the Open-ended Working Group is to consider the implementation, development and enhancement of the Strategic Approach to International Chemicals Management, including by:
 - (a) Continuing discussion on work on emerging policy issues;
 - (b) Considering proposals for the inclusion of new activities in the Global Plan of Action;
 - (c) Considering initiatives that are being undertaken and addressing progress and gaps in achieving the goal that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment;
 - (d) Considering the outcomes of regional meetings;
 - (e) Identifying priority issues for consideration for inclusion on the agendas of the sessions of the Conference.
3. With regard to considering the outcomes of regional meetings, the secretariat notes that the importance of highly hazardous pesticides was highlighted at all five of the Strategic Approach regional meetings held between August 2013 and March 2014.
4. Resolutions on highly hazardous pesticides were adopted at the regional meetings held in Latin America and the Caribbean and in Africa in 2013 and 2014, respectively. In those resolutions the regions invited the Food and Agriculture Organization of the United Nations to develop an information paper on safer alternatives to highly hazardous pesticides, taking into account the situations and needs of developing countries and countries with economies in transition. They also encouraged countries to perform surveys of highly hazardous pesticides and recommended that the Strategic Approach regional coordination committees utilize highly hazardous pesticide surveys to present successful cases of intersectoral cooperation in tackling highly hazardous pesticide phase-outs.

* SAICM/OEWG.2/1.

The resolutions also encouraged the development of an online clearing house of highly hazardous pesticide registrations, restrictions and prohibitions in each region.

5. Similar resolutions were proposed at the regional meetings for the Asia-Pacific and the Central and Eastern European regions. While neither region adopted such a resolution, both acknowledged the importance of taking action on highly hazardous pesticides. Furthermore, through its meeting report the Asia-Pacific region invited countries to perform surveys of highly hazardous pesticides and encouraged the exchange of information on the subject.

6. The Open-ended Working Group may wish to review the needs related to and progress made on highly hazardous pesticides and consider making recommendations aimed at the development of further cooperative action for consideration by the International Conference on Chemicals Management at its fourth session.

7. The information note is presented in the annex as received from the Food and Agriculture Organization and has not been edited by the secretariat.

Annex

Information Note on Highly Hazardous Pesticides Prepared by the United Nations Food and Agriculture Organization (FAO)

Background

1. A resolution was proposed at ICCM3 calling for concerted action on Highly Hazardous Pesticides (HHPs), recognizing the hazards presented by HHPs in use and the opportunity offered by acting to remove them from use. The draft resolution was not approved at that time because it was proposed too late for many delegations to consult with their stakeholders, nevertheless, it received broad support during the Conference. All the SAICM Regional Meetings held since ICCM3 have discussed HHPs and agreed that further action is needed, and the regional meetings for Africa and for Latin America and the Caribbean passed specific resolutions on HHPs. Calls for action to eliminate risks from HHPs have also come from the FAO Council, and the newly approved International Code of Conduct on Pesticide Management. There is also a close link between the Rotterdam Convention listing of Severely Hazardous Pesticides Formulations and efforts to identify and reduce risks from HHPs.

What are Highly Hazardous Pesticides?

2. Highly Hazardous Pesticides (HHPs) are those which may be considered too dangerous to use in certain circumstances, and careful consideration should be given to prohibiting or controlling HHPs if other measures aimed at mitigating the risks they present are not working. The UN Food and Agriculture Organization's (FAO) International Code of Conduct on Pesticide Management¹ defines HHPs as: *...pesticides that are acknowledged to present particularly high levels of acute or chronic hazards to health or environment according to internationally accepted classification systems such as WHO or GHS or their listing in relevant binding international agreements or conventions. In addition, pesticides that appear to cause severe or irreversible harm to health or the environment under conditions of use in a country may be considered to be and treated as highly hazardous.*

3. The Code goes on to suggest: *Prohibition of the importation, distribution, sale and purchase of highly hazardous pesticides may be considered if, based on risk assessment, risk mitigation measures or good marketing practices are insufficient to ensure that the product can be handled without unacceptable risk to humans and the environment.*

4. Relatively few pesticides may be defined as Highly Hazardous, yet the harm they cause to health and the environment can be extremely high. An estimate puts the number Disability-Adjusted Life Years (DALY)² caused by pesticides annually at nearly 7.5 million³ with 99% of poisoning cases occurring in developing countries. The UNEP report on the Costs of Inaction on the Sound Management of Chemicals⁴ conservatively estimates the cumulative health costs from pesticide impacts in Sub-Saharan Africa over the period 2005-2020 at \$97 billion. It should be possible to reduce these enormous impacts through action to identify and control a small number of pesticides. This has been referred to as the "low-hanging fruit", meaning that modest effort can generate significant gains in risk reduction.

5. Pesticides play an important role in agriculture and public health to control damaging and unwanted organisms. Some claim that pesticides are essential to producing enough food to sustain a growing global population. In most regions, pesticide use is expanding and the global market in 2012 was valued at about \$40 billion. Most countries have legislation that control pesticide trade and use and a registration system that determines which pesticides can be used and for what purposes.

6. Because most pesticides are used in agriculture, the regulatory and registration authorities are often based in Ministries of Agriculture with involvement of the health and environment authorities. For this reason, processes aimed at strengthening chemical management which are generally based in Environment Ministries sometimes give less attention to pesticide management. This potential

¹ FAO International Code of Conduct on Pesticide Management, 2013

² DALYs are "Disability-adjusted life years", a weighted measure of years of life lost due to premature death, and years lived with disability

³ Prüss-Ustün et al, Knowns and unknowns on burden of disease due to chemicals: a systematic review, Environmental Health 2011, 10:9

⁴ Report on the Costs of Inaction on the Sound Management of Chemicals, UNEP 2012

oversight is particularly important in developing countries where pesticides are among the most widely used chemicals, and where they are often used by untrained and poorly equipped farmers.

7. There are about 800 pesticide active ingredients in use globally at present and these are formulated into many thousands of products that may contain more than one active ingredient. All pesticides are toxic to humans and other organisms to some degree, depending on their chemistry and mode of action. The World Health Organization (WHO) classified pesticides according to the (mainly) acute hazards they present, with Class I pesticides being the most hazardous. The Globally Harmonized System for the Classification and Labelling of Chemicals (GHS) classifies all chemicals, including pesticides, on a number of scales that include chronic, long term health effects.

8. Before they are approved for use, pesticides undergo extensive testing to demonstrate that the benefits they deliver are greater than the risks they present. Nevertheless, some risk is always present, and the level of risk often depends on the conditions in which the pesticide is used.

9. For example, a pesticide that is applied through a tractor mounted well calibrated boom sprayer by an operator sitting in an air conditioned cab will pose significantly less risk to the operator than the same pesticide applied through an un-calibrated leaking back-pack sprayer. Similarly, a pesticide that harms aquatic organisms may have little negative impact when applied far from water bodies, and serious impact when intentionally or accidentally entering rivers or lakes. Conditions of use are therefore assessing the risk from pesticides and determining what controls might be appropriate in mitigating unacceptable risks.

Why are HHPs a problem and for who?

10. Pesticides are indiscriminately toxic and will affect any organism which is exposed to a pesticide and is susceptible to its mode of action. For example, pesticides that act on the nervous system of insects (such as organophosphates and carbamates) will also affect the nervous system of exposed humans; a pesticide designed to prevent chitin formation in insects will have the same action on chitin producers in aquatic environments. Since most pesticides are sprayed in an open environment, it is impossible to target them precisely at the target pests without exposing other organisms.

11. Pesticide users are often ignorant of their possible adverse health and environmental impacts. This ignorance commonly results in inadequate protection of pesticide users, other people who may be exposed inadvertently to the pesticides and the environment. People who are poisoned by pesticides are often in remote rural areas where access to medical care is limited. Pesticide poisoning incidents therefore often go unreported and victims may not seek medical attention. Medical practitioners are also often unable to diagnose pesticide poisoning cases or to treat them adequately. Most developing countries do not have a poison centre that can offer advice on pesticide poisoning diagnosis and treatment.

12. Even where users know that a certain pesticide causes illness or environmental damage, they often believe that there are no alternatives. In fact there are almost always alternatives available. These may be biological controls, cultural methods, mechanical traps or barriers or low risk pesticides. In the rare cases where no alternative is available to a HHP in use, it is always possible to reduce risks through the use of better application and protective equipment, limiting access to specialist pesticide applicators or changing a pesticide formulation to make it less dangerous.

13. Those exposed to pesticides sometimes think of it as a necessary occupational hazard, and often believe that there is nothing to be done to prevent or treat the symptoms of poisoning. As a result pesticide users lose work-days and productivity and hence their own income and the wider economy suffers. Pesticides are also widely used throughout the world as agents of suicide and in cases of illegal poisoning. Experience shows that taking the most hazardous pesticides off the market, or restricting access to them reduces such cases.

14. The effects of highly hazardous pesticides are a problem for users, exposed bystanders (poor rural communities, children in fields, women working in fields (vulnerable populations)), consumers (food residues, drinking water quality), environment (wildlife, ecosystem services (pollinators, natural enemies)). It is also worthy of note that WHO estimates 880,000 suicides annually with pesticides being the most common method used, particularly in developing countries and countries with economies in transition⁵.

⁵ Preventing suicide: A global imperative, WHO, 2014

How many chemicals does this involve?

15. The criteria for HHPs have been listed by WHO and FAO as follows:
- (a) Pesticide formulations that meet the criteria of classes Ia or Ib of the WHO Recommended Classification of Pesticides by Hazard (www.who.int/ipcs/publications/pesticides_hazard/en/index.html); or
 - (b) Pesticide active ingredients and their formulations that meet the criteria of carcinogenicity Categories 1A and 1B of the Globally Harmonized System on Classification and Labelling of Chemicals (GHS); or
 - (c) Pesticide active ingredients and their formulations that meet the criteria of mutagenicity Categories 1A and 1B of the Globally Harmonized System on Classification and Labelling of Chemicals (GHS); or
 - (d) Pesticide active ingredients and their formulations that meet the criteria of reproductive toxicity Categories 1A and 1B of the Globally Harmonized System on Classification and Labelling of Chemicals (GHS); or
 - (e) Pesticide active ingredients listed by the Stockholm Convention (www.chm.pops.int) in its Annexes A and B, and those meeting all the criteria in paragraph 1 of annex D of the Convention; or
 - (f) Pesticide active ingredients and formulations listed by the Rotterdam Convention (www.pic.int) in its Annex III; or
 - (g) Pesticides listed under the Montreal Protocol (www.ozone.unep.org/Ratification_status/montreal_protocol.shtml); or
 - (h) Pesticide active ingredients and formulations that have shown a high incidence of severe or irreversible adverse effects on human health or the environment.
16. There is no list of HHPs per se, rather it is the role of regulators to identify pesticides in use that present unacceptably high risks to people or the environment. Focused action then needs to be taken to replace those pesticides with less hazardous alternatives or to take measures to reduce the risk from continued use of a harmful pesticides. FAO and WHO are working to assist countries in taking appropriate action.
17. A survey of actions related to HHPs that FAO has carried out in several regions shows first that up to 70% of pesticide registered and in use in many developing countries would be classified as HHPs according to the above criteria. The survey also shows that many countries have taken action to eliminate the most hazardous pesticides from use with no adverse consequences on agricultural productivity or public health.

What can you do?

18. The first important step in taking action to reduce risks from HHPs rests with the pesticide regulatory authority. There must be a will to take action which will certainly require decisions and action to be taken. International organizations such as FAO, WHO and UNEP are able to guide and assist these processes.
19. Know that there are alternatives with evidence and experience of their efficacy, while chemicals that have a market will be vigorously defended by the companies that produce and sell them. It is therefore important for regulators to take objective and informed decisions.
20. The process developed under the SAICM QSP Project in Mozambique is being replicated in other countries. Regulators are advised to learn from this experience and adapt processes of identifying, evaluating and taking action to replace or reduce risks from HHPs. FAO and WHO are also developing guidance on HHPs that will be available later in 2013.
21. The key steps are:
- (a) Identify HHPs registered and in use
 - (b) Validate extent and conditions of use
 - (c) Evaluate risk to human health
 - (d) Evaluate hazard to the environment
 - (e) Survey

- (f) Identify alternative options:
 - Non chemical controls
 - Less hazardous chemicals
 - Engineering and regulatory controls to reduce risk in HHP use
- (g) Implement alternatives & phase out HHP use.

22. An example of action taken to reduce risks from HHPs is a QSP Project in Mozambique. FAO has assisted the pesticide regulatory authority to identify HHPs and assess the risks they pose from the extent and nature of their use. Farmers and other users of these pesticides will be helped to find less hazardous alternatives.

23. Ultimately the action that must be taken to regulate and manage chemicals better and in this specific case to take action to reduce risks from HHPs, is in the hands of national regulatory authorities. As a direct result of this action in Mozambique, all HHPs in current use have been officially banned in August 2014, and their use will be phase out over a period of months as alternatives are phase in.

24. Countries are encouraged take appropriate action and keep the issue alive for presentation and discussion at ICCM4 as an example of concrete action to reduce risks from chemicals.
