

ENVIRONMENTAL AND SOCIAL MANAGEMENT GUIDELINES

Environment and Social Standard 5 (E&SS5)

E&SS5 Pest and Pesticide Management

Online: <http://www.fao.org/environmental-social-standards/en/>

Introduction

1. E&SS5 defines pesticides as any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling any pest¹, or regulating plant growth.
2. E&SS5 recognizes that pesticides can contribute to effective crop and food protection during production and in storage. Pesticides are also used in forestry, livestock production and aquaculture to control pests and diseases. At the same time pesticides are designed to be toxic to living organisms, are intentionally dispersed in the environment and are applied to food crops.
3. It recognizes that exposure to pesticides poses risks to the people who use them, to others nearby, to consumers of food and to the environment. Risks are often elevated by overuse or misuse. Many countries also lack effective regulatory control thereby compounding problems.
4. E&SS5 follows the guidance on the life-cycle management of pesticides as provided by the International Code of Conduct on Pesticide Management² and its supporting technical guidelines that are drawn up by a FAO\WHO expert panel and expand on specific articles.

Objectives

- a. To primary objective is to promote sustainable agriculture through Integrated Pest Management, reduce reliance on pesticides and avoid adverse impacts from pesticide use on the health and safety of farming communities, consumers and the environment during and after the project life-cycle. Pesticide can be part of that. If so, their use needs to be managed carefully.

¹ A pest is defined as any species, strain or biotype of plant, animal or pathogenic agent injurious to plants and plant products, materials or environments and includes vectors of parasites or pathogens of human and animal disease and animals causing public health nuisance.

² The International Code of Conduct on Pesticide Management, FAO/WHO 2014.

http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf

Scope of application

5. The applicability of E&SS 5 is determined during environment and Social screening and applies to any FAO supported activity that provides or facilitates the use or the disposal of pesticides in any quantities.
6. Include the application of subsidies, voucher schemes or incentives for the provision of pesticides as well as direct provision of pesticides, and the indirect provision as treatments on seeds and other planting materials.
7. Applies to FAO activities that in an indirect manner may increase pesticides use, such as establishment of irrigation schemes, crop intensification, etc. ESS5 should also be triggered by any activities that require pesticides to be used or handled in projects, even if the pesticides were not supplied through the project.

Requirements

General

8. FAO promotes Integrated Pest Management (IPM) as a pillar of sustainable agriculture- IPM means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human and animal health and/or the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms.

Pest Management Plan

9. If provision or use of large volumes of pesticides is foreseen, a Pest Management Plan (PMP) needs to be prepared to demonstrate how IPM will be promoted to reduce reliance on pesticides, and what measures are taken to minimize risks of pesticide use. Such a PMP needs to be an integral part of the Environment and Social Commitment Plan.

Selection of pesticides

10. If after having considered available IPM approaches, pesticide use is deemed to be justified, then careful and informed consideration should be given to the selection of pesticide products. Factors to be taken into account include hazards and risks to users, selectiveness and risk to non-target species, persistence in the environment, efficacy and likelihood of development or presence of resistance by the target organism. Minimum environment and social analysis are needed.
11. FAO does not maintain a list of permitted or non-permitted pesticides because many locally specific conditions govern which pesticides may be used. However, in line with the provisions of the FAO/WHO International Code of Conduct on Pesticide Management and relevant multilateral environmental agreements that include pesticides, the following list of criteria will need to be met in order for a pesticide to be considered for use in an FAO project:

- a. The product should be registered in the country of use, or specifically permitted by the relevant national authority if no registration exists. Use of any pesticide should comply with all the registration requirements including the crop and pest combination for which it is intended.
- b. Users should be able to manage the product within margins of acceptable risk. FAO will not supply pesticides that meet the criteria that define Highly Hazardous Pesticides (HHPs)³. Pesticides that fall in WHO Hazard Class 2 or GHS Acute Toxicity Category 3 can only be provided if less hazardous alternatives are not available and it can be demonstrated that users adhere to the necessary precautionary measures⁴.
- c. Preference should be given to products that are less hazardous, more selective and less persistent, and to application methods that are less hazardous, better targeted and requiring less pesticides.
- d. Any international procurement of pesticides must abide with the provisions of the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for

³ **The criteria for HHPs have been listed by WHO and FAO as follows:**

- 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](http://www.who.int/ipcs/publications/pesticides_hazard/en/index.html));
- or
- 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
- 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
- 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
- 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
- Pesticide active ingredients and formulations listed by the Rotterdam Convention (www.pic.int) in its Annex III;
- or
- Pesticides listed under the Montreal Protocol (www.ozone.unep.org/Ratification_status/montreal_protocol.shtml);
- or
- Pesticide active ingredients and formulations that have shown a high incidence of severe or irreversible adverse effects on human health or the environment.

⁴ The hazard classification concerns the formulated product. Formulations with a low concentration of active ingredient are less hazardous than formulations with a high concentration of the same active ingredient. The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification (http://www.who.int/ipcs/publications/pesticides_hazard/en/) classifies technical products based on acute oral and dermal toxicity. It includes a conversion table that allows determination of the hazard class for the pesticide formulation under consideration. Towards 2008, this list will be replaced by the Globally Harmonized System of Classification and Labelling of Chemicals, which in addition to acute toxicity also takes into consideration chronic health risks and environmental risks (http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html). The term "pesticide formulation" means the combination of various ingredients designed to render the product useful and effective for the purpose claimed; the form of pesticide as purchased by users. The term "active ingredient" means the biologically active part of the pesticide.

Supply of pesticides by FAO

12. FAO apply the following requirements to all pesticides that are being supplied directly by FAO and to pesticides supplied by others within the framework of FAO projects.
 - a. Proceeded by a thorough risk assessment, which should lead to adequate measures to reduce health and environmental risks to acceptable levels.
 - b. Quantities to be provided should be based on an accurate assessment of actual needs. Pesticides should not be provided as fixed components of input packages of projects, credit schemes or emergency assistance.
 - c. Provided pesticides should be packaged and labelled in accordance with FAO standards. Labels should be in the national language. The remaining shelf-life should be at sufficient to permit all pesticides to be used before expiry and within the scope of the project (i.e. no expired pesticides will be left behind after the project).
 - d. Appropriate application equipment⁵ and personal protective equipment that offers adequate protection from the specific pesticides to be used. If it is not available, it needs to be provided by the project.
 - e. Users of the pesticides must have been trained to ensure they are capable of handling the supplied pesticides in a proper and responsible manner.
 - f. Proper storage of pesticides in accordance with FAO guidelines should be ensured for all supplies.
 - g. Empty pesticide containers should be triple rinsed, punctured and disposed of in an environmentally sound manner in compliance with FAO guidance⁶

13. If pesticides are to be purchased for seed treatment (seed storage chemical or seed treatment), the following additional conditions must be met:
 - a. The treatment of seeds must be done in an appropriately equipped facility that ensures full containment of the pesticides.
 - b. Users of seed treatment equipment should be provided with suitable application equipment and instructed on calibration, use and cleaning of the equipment.
 - c. Treated seeds must be dyed using an unusual and unpalatable colour to discourage consumption.
 - d. All packages containing treated seeds must be clearly marked "Not for human or animal consumption" and with the skull and crossbones symbol for poison.

⁵ <http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/code/list-guide-new/en/>

⁶ *Guidelines on management options for empty pesticide containers.* FAO/WHO, Rome/Geneva.

2008. [text at: <http://www.fao.org/agriculture/crops/core-themes/theme/pests/pm/code/list-guide/en/>]

- e. Those handling treated seeds during distribution or use in the field should be informed that the seeds are treated with pesticides which can have toxic effects on their health, the health of others and on the environment. They should be instructed to wear gloves, dust masks and clothes that fully cover their body. Gloves and dust masks must be provided if these are not available.
- f. Packaging from treated seeds should not be reused for any purpose.

Disposal

- 14. Projects dealing with the disposal of obsolete pesticides, pesticide contaminated soil and materials should follow the guidance in the FAO Environmental Management Toolkit for obsolete pesticides⁷.
- 15. Such disposal projects reduce risk by eliminating hazardous waste problems, but also create risk through the handling and movement of hazardous waste. Suitable risk evaluation, management and mitigation measures as provided by the Toolkit, must be applied in all such activities.

Responsibility

- 16. Whenever pesticides are provided by FAO it should be established in advance which institution, and which person(s) within that institution, will be responsible and liable for the proper storage, transport, distribution and use of the products concerned in compliance with the requirements of E&SS5.
- 17. Procurement of pesticides by FAO is subject to an internal clearance procedure as provided by the ESS Manual. The same applies to the contents of Pest Management Plans.

ANNEX

Application Form for Pesticide Procurement

Information to be submitted with requests for clearance of pesticide supply

This form provides the technical background information necessary to formulate appropriate interventions on pest management issues and to serve as a reference for technical appraisal and clearance of proposed interventions.

Complete this form as much as possible on the basis of available information.

Full completion of questions is compulsory for highlighted numbers #.

Answers to non-highlighted questions will enable AGP to provide better advice.

⁷ <http://www.fao.org/agriculture/crops/obsolete-pesticides/resources0/en/>

Complete one form for each pesticide proposed to be procured and attach as Annex to the request for clearance.

I. Nature of the pest problem

1.1 Affected crop(s):

1.2 Pest(s) or disease(s):

1.3 Estimated area to be treated:

1.4 Specific causes of the current spread
of the pest problem, if such causes
have been identified

II. Pest and pesticide management practices

2.1 Describe any local IPM practices related to this pest problem?
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.....
.....

2.2 Which options for management of the pest/disease have been investigated and why was the the proposed method selected?
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.....

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.....
.....

2.3 If pesticides currently are being used against the pest concerned, what is the typical number of applications per crop\season

What products are involved

- 2.4 How are application decisions taken
- fixed schedules (calendar spraying)
 - confirmation of pest presence
 - based on thresholds
 - Other:

2.4 Protective clothing ⁸:

- type recommended
- quantity required
- availability sufficient insufficient, needs to be ordered

2.5 Application technique ⁹

- recommended application equipment
- quantity required
- availability sufficient insufficient, needs to be ordered

⁸ Appropriate protective gear should be provided in adequate quantities along with the pesticides, unless it is explicitly confirmed that the recommended gear is already sufficiently available.

⁹ The specified formulation has to reflect the application technique to ensure that products are used accordingly. It should be verified that adequate application equipment is available in sufficient quantities.

2.6 What will be done with contaminated
empty containers?
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III. Specification of requested pesticides

3.1 Product requested
a. Active ingredient, common name
b. Formulation (% , g/l, g/kg, EC, WP, DP, GR, UL, etc.)¹⁰
c. Trade name (if a specific product is envisaged)

3.2 Has confirmation been obtained that the product is registered (permitted) for the envisaged
use in the country? This requirement is obligatory. Yes, No

3.3 Quantity to be ordered¹¹:
- If known: Area to be treated in ha
- If known: Application dose (l/ha, kg/ha):

3.4 Type of packaging¹²
- container type/material
- unit size

3.5 Label language(s)¹³

¹⁰ Please use the codes according to the "Crop Life International Coding System for Product and Formulation Types" (published in the *FAO Manual on the development and use of FAO Specifications*).

¹¹ The quantity ordered should only cover the actual amount necessary, which will be used within a defined period of time

¹² The pesticides ordered should be delivered in their final-use container-size to avoid local repackaging. The container type and size has to be specified according to user requirements and use conditions.

¹³ The label is the most important and often the only, source of information on the judicious use of the pesticide and therefore needs to meet requirements specified in the *FAO/WHO International Code of Conduct on Pesticide Management* and associated guidelines on labelling. The end user

Label information must be in line with the FAO International Code of Conduct, Article 10.

3.6 Hazard Class of formulated product: (Indicate WHO ¹⁴ or GHS)

3.7 Alternative products if known (active ingredients)

IV Assignment of Responsibilities

4.1 Has the Government agreed to accept liability for storage, distribution, use and disposal of the product concerned ?¹⁵ yes no

4.2 Receiver of the pesticides (person/institution)

Complete address:

.....

.....

Where will the pesticides be stored?:

4.3 Responsible/accountable institution/department/person for:

- Proper use of the product (including availability of adequate protective gear and application equipment)

- Proper transport and distribution of the product

- Proper storage of the product

- Proper disposal of empty pesticide containers

.....

should find all the necessary information on the label in a language he/she understands. This sometimes means that more than one language has to be used.

¹⁴ This information is important to determine precautionary measures. Follow the "WHO Recommended Classification of Pesticides by Hazard" if the toxicity class is not stated on the label.

¹⁵ e.g.: through a standard Hold-harmless clause in the project document

DECLARATION

The responsible officer who prepared this Application Form, declares that:

- The above information is correct;
- Use of the requested products is approved in the country concerned for the intended purpose;
- Adequate application equipment and protective gear will be available in sufficient quantities;
- The requested quantity of pesticides does not exceed the direct need on the basis of the area to be treated and application rate per unit area;
- Alternatives that involve use of less pesticides and/or use of less hazardous products have been investigated, and it can be justified that the requested product is the best option;
- Pesticide users will be able to properly handle the supplied pesticides. Training will be provided if necessary;
- Storage locations meet at least the minimum requirements (dedicated to pesticides, dry, well-ventilated, secured, impermeable floors, protected from sun light, capability to deal with leakage).

Date: Name: Signature: