



Forest Stewardship Council®



FSC Pesticides Policy

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The Forest Stewardship Council® (FSC) is an independent, not for profit, non-government organization established to promote environmentally appropriate, socially beneficial, and economically viable management of the world's forests.

FSC's vision is that the world's forests meet the social, ecological, and economic rights and needs of the present generation without compromising those of future generations.

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Introduction

FSC certified Organizations are required to use integrated pest management (IPM) to avoid, or aim at eliminating, the use of chemical pesticides in FSC certified Management Units, and thus minimize risks to human health and environment while maintaining an economically viable management.

However, in certain circumstances, after having considered all available pest management strategies and practices, the use of chemical pesticides might be needed as a last resort. The FSC Pesticides Policy regulates the use of chemical pesticides in these situations.

The first version of this Policy was approved in 2002 to facilitate the implementation of the FSC Principles and Criteria (V4). The Policy was developed following a hazard approach which identified chemical pesticides that, due to their high toxicity, were prohibited in FSC certified forests unless the FSC Board of Directors had granted a temporary derogation for their use.

In line with the objectives of the 2015-2020 FSC Global Strategic Plan and stakeholder feedback, the Policy has been revised to incorporate a risk-based approach that considers not only the hazard of the active ingredient but also how the chemical pesticide is used.

In this revision process the FSC Pesticides Policy has been aligned with most recent version (V5-2) of the FSC Principles and Criteria.

A Objective

This Policy provides FSC's position for managing the use of chemical pesticides in FSC Management Units with the short term objective of reducing the use of chemical pesticides and their associated risks to human health and environment, while moving towards the long term ambition of phasing out the use of chemical pesticides in FSC certified forests.

B Scope

This Policy applies to the use of chemical pesticides for the protection of vegetation, human health, livestock and native species in FSC certified Management Units, including certified nurseries within, adjacent or outside the forest areas, as well as worker infrastructure within the forest areas.

Explanatory note for public consultation

The Policy does not apply to third party nurseries. However, it encourages Organizations to source seedlings from nurseries where no FSC prohibited HHPs are used.

This Policy does not cover biopesticides nor chemical pesticides used with a different purpose than pesticide (eg. as fertilizer), impurities in fertilizers, and the use of chemical pesticides once the forest products have left the forest gate.

The Policy does not apply to workers infrastructures outside of the forest area.

C Effective and validity date

Approval date	dd mmmmm yyyy
Publication date	dd mmmmm yyyy
Effective date	dd mmmmm yyyy
Period of validity	dd mmmmm yyyy (or until replaced or withdrawn)

D References

The following referenced documents are relevant for the application of this document. For undated references, the latest edition of the referenced document (including any amendments) applies.

FSC-STD-01-001 FSC Principles and Criteria

FSC-STD-01-002 FSC Glossary of Terms

FSC-STD-60-004 International Generic Indicators (IGI)

FSC normative documents superseded and replaced by this Policy:

FSC-STD-30-001 V1-0 EN Indicators and Thresholds for the identification of 'highly hazardous' pesticides (HHP)

FSC-STD-30-001a EN FSC List of 'highly hazardous' pesticides

FSC-PRO-30-001 V1-0 EN Pesticides Derogation Procedure

FSC-PRO-30-001a EN List of approved derogations for the use of "highly hazardous" pesticides

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E Terms and definitions

For the purposes of this Policy, the terms and definitions provided in *FSC-STD-01-002 FSC Glossary of Terms*, *FSC-STD-01-001 V5-2 FSC Principles and Criteria for Forests Stewardship*, *STD-60-004 FSC International Generic Indicators*, and the following apply:

Active ingredient: part of the product that provides the pesticidal action (Source: *FAO International Code of Conduct on Pesticide Management*).

Emergency (in the context of FSC prohibited HHPs): sudden invasion or infestation of a pest, which threaten economic viability, ecological stability and long-term functioning of the forest ecosystem or human well-being.

Emergency situations require immediate action and cannot feasibly be controlled by pesticides not listed on the FSC list of prohibited HHP. Events that happen cyclically and scenarios which are predicted through planning, monitoring or the application of an integrated pest management system cannot be described as an emergency.

Environmental and Social Risk Assessment (ESRA): methodology to review the environmental and social effects of a well-defined action. In the context of the FSC Pesticides Policy, of chemical pesticide use.

Fair compensation: Remuneration that is proportionate to the magnitude and type of services rendered by another party or of the harm that is attributable to the first party (Source: *FSC-STD-60-004 V1-0 EN International Generic Indicators*)

Governmental order (in the context of FSC prohibited HHPs): the use of a specific FSC prohibited HHP is ordered or carried out by governmental authorities independent of The Organization.

Highly hazardous pesticide (HHP): chemical pesticides that are acknowledged to present particularly high levels of acute or chronic hazards to health and environment according to internationally accepted classification systems, or are listed in relevant binding international agreements or conventions, or contain dioxins, or heavy metals.

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 (Source: Based on *FAO International Code of Conduct on Pesticide Management*).

Integrated pest management (IPM): 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 forest with the least possible disruption to ecosystems and encourages natural pest control mechanisms (Source: Based on *FAO International Code of Conduct on Pesticide Management*).

The Organization: The person or entity holding or applying for certification and therefore responsible for demonstrating compliance with the requirements upon which

FSC certification is based (Source: *FSC-STD-01-001 V5-2 Principles and Criteria for Forest Stewardship*).

Pest: 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 (Source: *FAO International Code of Conduct on Pesticide Management*).

Pesticide: any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling any pest, or regulating plant growth (Source: *FAO International Code of Conduct on Pesticide Management*).

Repair: Process of assisting the recovery for environmental values and human health.

Risk: The probability of an unacceptable negative impact arising from any activity in the Management Unit combined with its seriousness in terms of consequences (Source: *FSC-STD-01-001 V5-2 Principles and Criteria for Forest Stewardship*).

In the context of pesticide use, risk is the probability and severity of an adverse health or environmental effect occurring as a function of a hazard and the likelihood and the extent of exposure to a pesticide (Source: *FAO International Code of Conduct on Pesticide Management*).

Verbal forms for the expression of provisions

[Adapted from ISO/IEC Directives Part 2: Rules for the structure and drafting of International Standards]

“shall”: indicates requirements strictly to be followed in order to conform to the document.

“should”: indicates that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required.

“may”: indicates a course of action permissible within the limits of the document.

“can”: is used for statements of possibility and capability, whether material, physical or causal.

F Version history

FSC-POL-30-601 Chemical Pesticides in Certified Forests: Interpretation of the FSC Principles & Criteria: Initial version. Approved by the FSC Board Pesticides Committee in July 2002.

FSC-POL-30-001 EN Pesticides Policy (2005) Approved in December 2005 at the 40th meeting of FSC Board of Directors.

FSC-POL-30-001 V3-0 EN Pesticides Policy [To be completed after approval of the document.](#)

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Part I – Approach and Policy elements

1 FSC approach to the use of chemical pesticides

- 1.1 FSC requires the use of integrated pest management and silviculture systems which avoid, or aim at eliminating, the use of chemical pesticides.
- 1.2 FSC recognizes that in certain circumstances, and after having considered other available pest management strategies and practices, the use of chemical pesticides can be the only feasible way of controlling pests.
- 1.3 FSC approach to reduce and phase out the use of chemical pesticides, and to promote an adequate use that mitigates associated impacts, includes the following elements (see Figure 1):
 - a) Identification of highly hazardous pesticides (HHPs) according to their short and long term toxic characteristics, for humans and the environment.
 - b) Prioritization of these characteristics (hazard groups and criteria), and categorization of HHPs in multiple lists.
 - c) Regulation of the use of HHPs in each list taking into account the risk they pose to human health and environment, with risk being a function of the toxicity (a fixed feature of the active ingredient and representing the hazard) and the local exposure to humans and environment.
 - d) Repairing and compensating damages to environmental values and human health caused by inadequate development or implementation of environmental and social risk assessment.
 - e) Monitoring of the impact of the FSC Pesticides Policy.

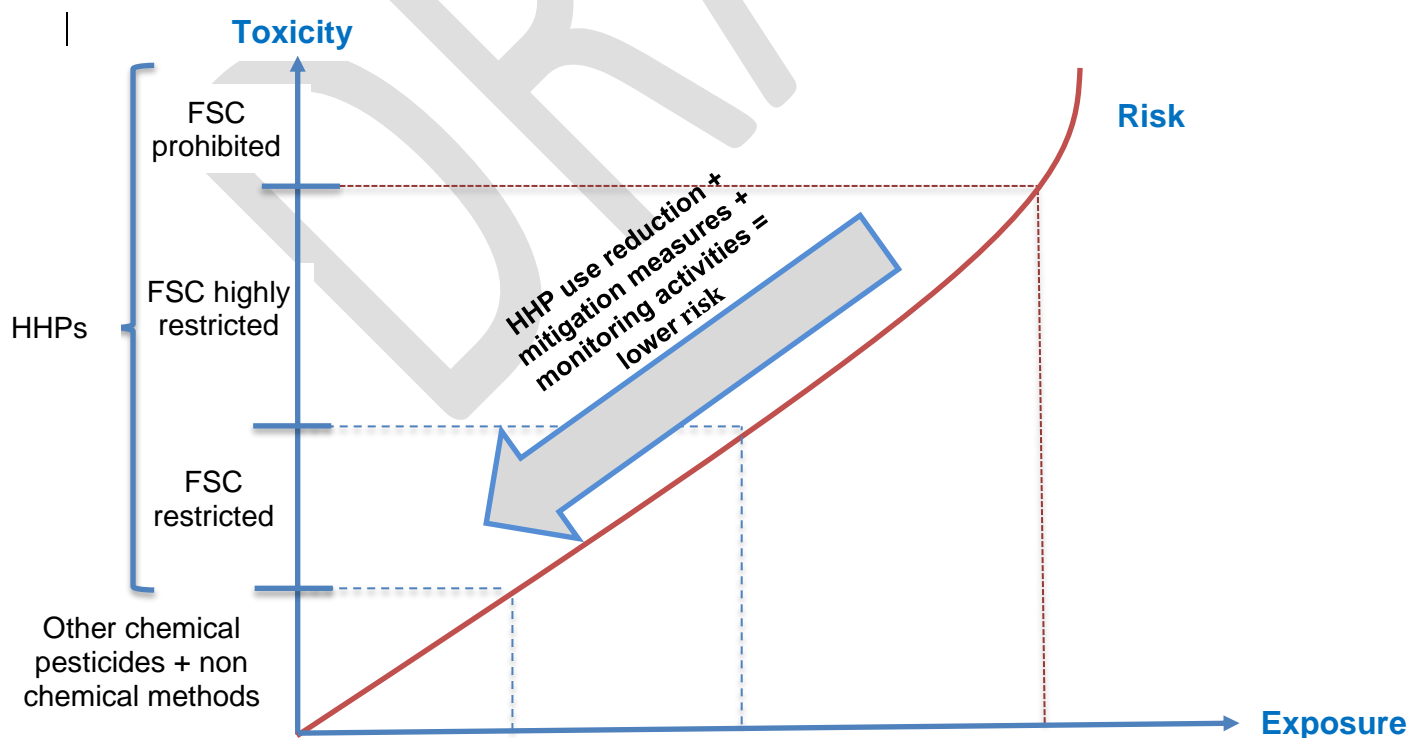


Figure 1. Risk is a function of toxicity and exposure and as it increases, the Organization shall intensify the activities undertaken to mitigate it.

Explanatory note for public consultation

FSC recognizes the challenge for certificate holders to immediately stop the use of all highly hazardous pesticides (HHPs).

To facilitate the process of reducing and phasing out the use of HHPs in FSC certified forests, FSC proposes an approach for the FSC Pesticides Policy, that prioritizes HHPs based on their toxicity and allocates them into three subgroups or sublists.

The use of the HHPs in each sublist is regulated according to their risk of use, taking into account the level of toxicity of the active ingredients and how they are used within the Management Unit.

With this approach, FSC seeks to immediately eliminate the use of the most hazardous chemical pesticides in FSC certified forests, as hazard is not manageable, and progressively phase out other hazardous pesticides, that may only be used if adequate Environmental and Social Risk Assessment is applied and the associated mitigation measures implemented.

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Part II - Implementation

2 Identification of HHPs

2.1 FSC identifies HHPs according to the following internationally recognized hazard groups and criteria, and the associated indicators and thresholds listed in Annex 1:

a) **Relevant international agreements or conventions:**

- Stockholm Convention on Persistent Organic Pollutants.
- Rotterdam Convention on the Prior Informed Consent Procedure.
- Montreal Protocol on Substances that Deplete the Ozone Layer.

b) **Acute toxicity** (a substance causes harmful or lethal effects following oral, dermal or inhalation exposure in a short space of time).

c) **Chronic toxicity** (a substance causes harmful effects over an extended period, usually following repeated or continuous exposure to very low doses).

Chronic toxicity includes:

- **Carcinogenicity** (ability of a substance to induce cancer or increase its incidence in humans).
- **Mutagenicity** (ability of a substance to induce an increased occurrence of mutations in cells and/or organisms).
- **Developmental and reproductive toxicity** (ability of a substance to cause adverse effects on unborn children and induce adverse effects on sexual function and fertility in adults).
- **Endocrine disruptors** (substances that interfere at very low concentrations with hormones and hormonal balance).

d) **Environmental toxicity** (a substance has harmful effects on the environment, threatening ecosystems and/or accumulating into water and soil).

Environmental toxicity includes:

- **Aquatic toxicity** (effect of a substance to organisms – vertebrates, invertebrates and plants – living in the water).
- **Persistence in soil or water** (ability of a substance to resist to environmental degradation and accumulate in soil, sediment and aquatic environments).
- **Soil sorption potential** (characteristic based on the combination of the persistence and the water solubility of a chemical substance, and its soil sorption coefficient (Koc), which measures the mobility of a substance in soil).
- **Bioaccumulation** (increase in the concentration of a substance in a biological organism over time, as the organism absorbs the toxic substance at a rate greater than that at which the substance is eliminated from its body).

- **Biomagnification** (increase of the concentration of a substance in the tissues of organisms as it travels up the food chain).
- e) **Dioxins (residues or emissions)** (persistent environmental pollutants (POPs), that are highly toxic and can cause reproductive and developmental problems, damage the immune system, interfere with hormones and cause cancer).
- f) **Heavy metals (arsenic, cadmium, lead, and mercury)** (systemic toxicants known to induce multiple organ damage, even at lower levels of exposure).

Explanatory note for public consultation

FSC follows a scientific approach to identify highly hazardous pesticides.

The internationally recognized hazard evaluation criteria selected by FSC were established by WHO/FAO in 2007 and further developed by PAN to make them workable.

Based on the recommendations of a technical working group, FSC added three additional criteria: acutely toxic for rats and birds, dioxins and heavy metals.

The last revision of the criteria and the associated indicators and thresholds to identify HHPs was done by a panel of experts appointed by the FSC Board of Directors and approved by the FSC Board in 2015. The revision process was done in line with ISEAL requirements and FSC-PRO-01-001 The Development and Revision of FSC Normative Documents.

The indicators and thresholds selected by FSC are benchmarked by the best science available and are defined by international authorities, including the World Health Organization (WHO), US Environmental Protection Agency (EPA) and the Globally Harmonized System (GHS) followed by extensive consultation with social, environmental and economic stakeholders.

Other ISEAL sustainability standards use similar criteria to identify HHPs as the basis for their pesticides policies.

Please, see Annex 1 for more information.

- 2.2 The HHPs identified by FSC according to the criteria above and associated indicators and thresholds are listed in the addendum to this Policy.
 - 2.3 The FSC lists of HHP will be updated by two or more independent technical experts appointed by FSC at least every 3 years and approved by a chamber balanced body.
- ### 3 Prioritization and categorization of HHPs
- 3.1 To support Organizations to reduce and phase out the use of chemical pesticides following a stepwise approach, FSC has prioritized the hazard groups and criteria to identify HHPs and categorized HHPs as follows:
 - a) **FSC prohibited HHPs:** chemical pesticides i) listed in the International Conventions or, ii) acutely toxic and carcinogenic or, iii) containing dioxins or iv) containing heavy metals.

b) **FSC highly restricted HHPs**: chemical pesticides scoring two or three out of three of the following hazard groups: i) acute toxicity, ii) chronic toxicity and iii) environmental toxicity.

c) **FSC restricted HHPs**: chemical pesticides scoring one of the following hazard groups: i) acute toxicity, ii) chronic toxicity and iii) environmental toxicity.

3.2 Chemical pesticides that do not fall in any of the above categories are not considered highly hazardous by FSC.

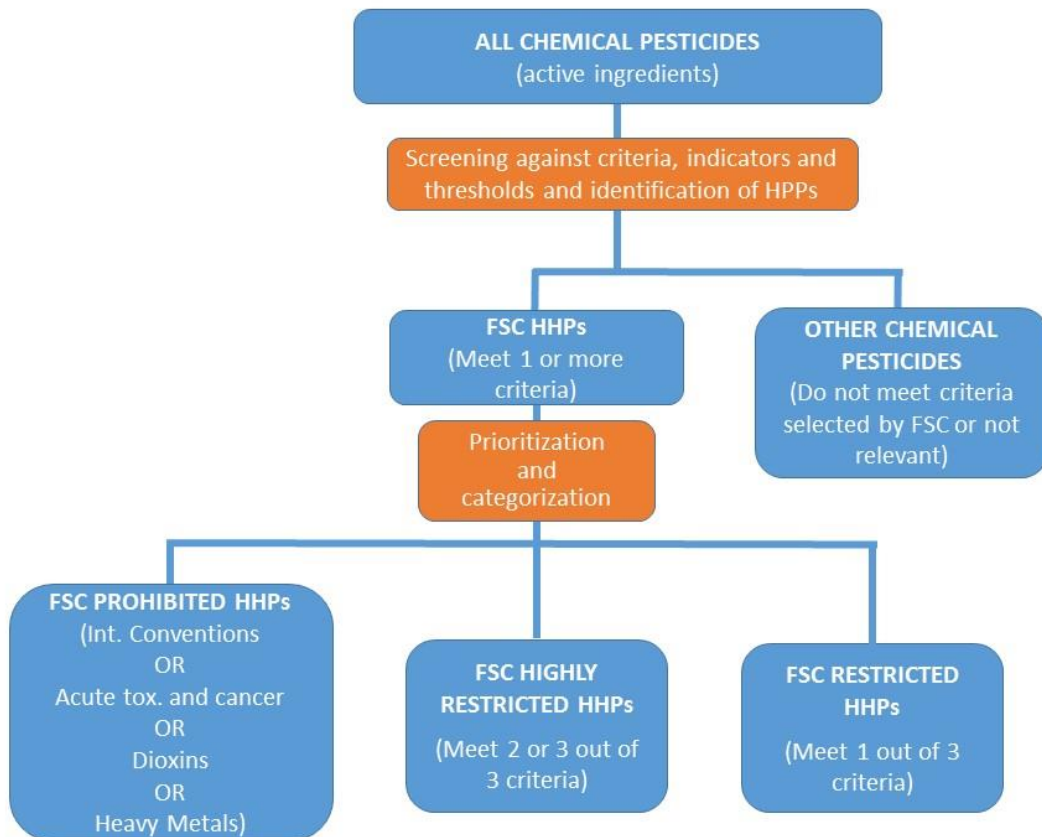


Figure 2. Classification of chemical pesticides and categorization of HHPs.

4 Regulation of the use of HHPs

4.1 The prioritization of criteria and categorization of HHPs results in the prohibition or restriction of their use according to the risk they pose to human health and environment.

Prohibited HHPs

- 4.2 Due to their high toxicity even at low exposure, FSC considers the risk associated to the use of FSC prohibited HHPs to be unacceptable and they shall be prohibited from use in FSC certified Management Units (MUs).

Explanatory note for public consultation

The working group would like to hear during the consultation about the impact of the FSC list of prohibited HHP in FM operations, in particular if Methyl bromide is used and in which situations.

- 4.3 The Organization shall not use any FSC prohibited HHPs in the MUs, except in case of an emergency situation or a governmental order.

Explanatory note for public consultation

See definition of emergency and governmental order in E. Terms and definitions above

- 4.4 The Organization should request third part suppliers to avoid the use of FSC prohibited HHPs on seedlings and other materials entering to the Management Unit.

Highly restricted HHPs and restricted HHPs

- 4.5 The Organization may only use FSC highly restricted HHPs and FSC restricted HHPs when, following an Environmental and Social Risk Assessment (ESRA), they have identified and assessed the associated risks and are controlling risk through the implementation of mitigation measures.

At a minimum mitigation measures shall include use of personal protective equipment (PPE), training, research on alternatives, warning to affected stakeholders and long term monitoring relevant to the recognized hazard(s).

- 4.6 The Organization shall use the least hazardous pest management alternative available, unless they can prove through ESRA that the risk mitigation measures for a more hazardous alternative are more cost-effective and have equal or greater social and environmental benefits.

Explanatory note for public consultation

Forest managers shall strive to move toward less hazardous alternatives for several reasons:

- Risks associated to less hazardous alternatives are generally easier to control.
- The classification of HHP is dynamic and as science progresses, HHPs can be upgraded to a more restrictive category.

However, in some situations using a more hazardous alternative might be a possibility if the measures identified to reduce risk of a more hazardous HHP are more effective.

- 4.7 ESRA shall be conducted, and the associated measures implemented, according to the scale, intensity and risk (SIR) of the forest operation and their pesticides use.

Explanatory note for public consultation

The consideration of scale, intensity and risk implies that, as risk increases, risk control will be intensified. Therefore, the use of a FSC highly restricted HHP will require a higher level of risk management than the use of a FSC restricted HHP.

4.8 To replace HHPs with less hazardous alternatives and support decision making, the Organization and certification bodies shall consult the online database provided by FSC for information exchange on alternatives and monitoring procedures.

4.9 FSC encourages certificate holders to collaborate with research institutions and other certificate holders on research programs.

Other chemical pesticides

4.10 The Organization may use other chemical pesticides not listed in the FSC lists of HHPs in the Management Unit following the requirements in the applicable National Forest Stewardship Standard.

Note: The fact that a pesticide is not included in the FSC lists of HHPs, doesn't mean that it is safe. When pesticides are used in FSC certified forests, the selection of the pesticide, application method, timing and pattern of use shall offer the least risk to humans, non-target species and the environment.

5 Repairing damages to environmental values and human health

5.1 The Organization shall prioritize risk prevention and mitigation over damage repair and compensation.

5.2 If damages to environmental and/or human health occur from the use of HHPs, they shall be repaired according to their magnitude (see FSC Principles and Criteria V5-2, Criterion 6.3 regarding environmental damage and Criterion 2.6 regarding occupational injuries).

5.3 When reparation is not possible, the Organization shall provide fair compensation (Note: mechanism to be developed).

6 Monitoring of the impact of the FSC Pesticides Policy

6.1 FSC will monitor, evaluate and regularly report on the impact of the FSC Pesticides Policy, in particular on the trends in the number and amount of HHPs used per area unit and in the injuries and accidents rates related to chemical pesticide use.

Annex 1. Criteria, Indicators and Thresholds for identifying highly hazardous pesticides (HHPs)

Introduction

Following a science based approach, FSC identifies HHPs according to internationally recognized criteria, and associated indicators and thresholds.

The basis for selection of the criteria, indicators and thresholds was discussed in detail in the paper: *Use of Chemical Pesticides in Certified Forests: clarification of FSC Criteria 6.6, 6.7 and 10.7* (S. Radosevich, M. Lappé & B. Addlestone (2000) FSC-US). This work was reviewed in *Review of the Forest Stewardship Council's Pesticide Indicators and Thresholds* (2005) by Pesticides Action Network-UK followed by revisions of the indicators and thresholds by a panel of experts in 2007 and 2013.

The global criteria selected to identify highly hazard pesticides were initially established by WHO/FAO in 2007 and included: acute toxicity, chronic health hazards (carcinogenicity according to GHS evaluation, reproductive and mutagenic effects) as well as high incidence of severe or irreversible adverse effects on human health or the environment.

To make them workable, PAN further developed these criteria, and added pesticides fatal if inhaled, carcinogenic and probably carcinogenic according to IARC/EPA and endocrine disrupting chemicals.

FSC has added three additional criteria: acute toxicity for rats and birds, dioxins and heavy metals.

The indicators and thresholds selected by FSC are benchmarked by the best science available and are defined by international authorities, including the World Health Organization (WHO), US Environmental Protection Agency (EPA) and the Globally Harmonized System (GHS) followed by extensive consultation with social, environmental and economic stakeholders.

Criteria evaluated in the determination of hazard.

FSC has selected the following criteria to be evaluated in the determination of hazard:

Hazard group	Number	Criteria
Relevant International Agreements or conventions	1	Relevant International Agreements or conventions
Acute toxicity	2	Acute toxicity to mammals and birds
Chronic toxicity	3	Carcinogenicity
	4	Mutagenicity to mammals

Hazard group	Number	Criteria
Chronic toxicity	5	Developmental and reproductive toxicity
	6	Endocrine disrupting chemical (EDC)
Environmental toxicity	7	Acute toxicity to aquatic organisms
	8	Persistence in soil or water and soil sorption potential and bio-magnification and bio-accumulation
Dioxins	9	Dioxins (residues or emissions)
Heavy metals	10	Heavy metals

Table 1. Hazard groups and criteria for the identification of highly hazardous pesticide.

Criteria, indicators and thresholds for the identification of FSC highly hazardous pesticides (HHPs)

Hazard Group	Criteria	Indicators and thresholds for the identification of FSC highly hazardous pesticides (HHPs)	Sources of information
RELEVANT INTERNATIONAL AGREEMENTS OR CONVENTIONS	Criterion 1. Relevant International Agreements or conventions	<p>1.1 A pesticide is considered 'highly hazardous' if:</p> <ul style="list-style-type: none"> a) It is banned by international agreement under the Persistent Organic Pollutants POP convention (Stockholm Convention), OR b) It is listed in Annex III of the Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, OR c) It is listed as ozone depleting substance under the Montreal Protocol on Substances that Deplete the Ozone Layer. 	<p>Stockholm Convention on Persistent Organic Pollutants (POPs) at http://www.pops.int</p> <p>Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade at http://www.pic.int</p> <p>Montreal Protocol on Substances that Deplete the Ozone Layer at http://ozone.unep.org/</p>

Hazard Group	Criteria	Indicators and thresholds for the identification of FSC highly hazardous pesticides (HHPs)	Sources of information
ACUTE TOXICITY	Criterion 2. Acute toxicity to mammals and birds	<p>2.1. A pesticide is considered 'highly hazardous' if it contains any active ingredient that is:</p> <ul style="list-style-type: none"> a) 'Extremely hazardous' (Class Ia) or 'Highly hazardous' (Class Ib), according to <u>WHO¹ Recommended Classification of Pesticides by Hazard</u>, OR b) Acutely toxic for rats and birds: acute oral LD50 for rats/birds \leq 200 mg/kg body weight (or most sensitive mammal/bird), OR c) 'Fatal if inhaled' (H330) according to the <u>GHS²</u> as classified by national/ international authorities. 	<p>WHO & IPCS: The WHO recommended classification of pesticides by hazard and guidelines to classification. International Programme on Chemical Safety (IPCS) & World Health Organization (WHO). Geneva.</p> <p>The FOOTPRINT Pesticide Properties DataBase: http://sitem.herts.ac.uk/aeru/footprint/index2.htm</p> <p>The Pesticide Manual British Crop Protection Council (BCPC): https://www.bcpc.org/</p> <p>Regulation (EC) No 1272/2008 of The European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 and its amendments and other national legislation implementing the GHS</p>

1 World Health Organization

2 Globally Harmonized System of Classification and Labelling of Chemicals

Hazard Group	Criteria	Indicators and thresholds for the identification of FSC highly hazardous pesticides (HHPs)	Sources of information
CHRONIC TOXICITY	Criterion 3. Carcinogenicity	<p>3.1. A pesticide is considered 'highly hazardous' if it contains any active ingredient that is in any of the following categories by classification systems:</p> <p>a) Group 1: 'The agent (mixture) is carcinogenic to humans' or Group 2A: 'The agent (mixture) is probably carcinogenic to humans', according to the <u>IARC</u>³, OR</p> <p>b) Group A (Carcinogenic to Humans) (1986 Guidelines) or Group B (Probably Carcinogenic to Humans) (1986 Guidelines) or Known/Likely human carcinogen (1996 Guidelines) or Carcinogenic to humans (1999 and 2005 Guidelines-current) or Likely to be carcinogenic to humans (1999 and 2005 Guidelines - current), according the <u>EPA</u>⁴, OR</p> <p>c) Category IA (Known to have carcinogenic potential for humans) or category IB (Presumed to have carcinogenic potential for humans), as classified by national/ international authorities according to <u>classification for carcinogens of the GHS</u>⁵.</p>	<p>US EPA: Chemicals Evaluated for Carcinogenic Potential. Office of Pesticide Programs, U.S. Environmental Protection Agency (US EPA).</p> <p>IARC: Agents reviews by the IARC Monographs. Volumes 1-102 International Agency for Research on Cancer (IARC), Lyon, France</p> <p>Regulation (EC) No 1272/2008 of The European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 and its amendments and other national legislation implementing the GHS.</p>

3 International Agency for Research on Cancer

4 Carcinogenicity classification by the US Environmental Protection Agency

5 Global Harmonized System of Classification and Labelling of Chemicals

Hazard Group	Criteria	Indicators and thresholds for the identification of FSC highly hazardous pesticides (HHPs)	Sources of information
CHRONIC TOXICITY	Criterion 4. Mutagenicity to mammals	<p>4.1 A pesticide is considered 'highly hazardous' if it contains any active ingredient that is in any of the following categories:</p> <p>a) Category IA (Substances known to induce heritable mutations in germ cells of humans) or Category IB (Substances which should be regarded as if they induce heritable mutations in the germ cells of humans), as classified by national/ international authorities according to the <u>classification for mutagenicity of the GHS⁵</u>.</p>	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 and its amendments and other national legislation implementing the GHS.
	Criterion 5. Developmental and reproductive toxicity	<p>5.1 A pesticide is considered 'highly hazardous' if it contains any active ingredient that is in any of the following categories:</p> <p>a) Category IA (Known human reproductive toxicant) or Category IB (Presumed human reproductive toxicant), as classified by national/ international authorities according to the <u>classification for reproductive toxicants of the GHS⁶</u>.</p>	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 and its amendments and other national legislation implementing the GHS.

⁵ 6 Global Harmonized System of Classification and Labelling of Chemicals

Hazard Group	Criteria	Indicators and thresholds for the identification of FSC highly hazardous pesticides (HHPs)	Sources of information
CHRONIC TOXICITY	Criterion 6. Endocrine disrupting chemical (EDC)	<p>6.1 A pesticide is considered 'highly hazardous' if it contains any active ingredient that is classified as:</p> <ul style="list-style-type: none"> a) Category 1 (Substances for which endocrine activity have been documented in at least one study of a living organism) according to the <u>EU⁷ list of potential endocrine disruptors</u>, OR b) Category 2 (Suspected human carcinogens) of the classification for carcinogens of the GHS⁶ AND Category 2 (Suspected human reproductive toxicant) of the <u>classification for reproductive toxicants of the GHS⁶</u> 	<p>EC (2000): Towards the establishment of a priority list of substances for further evaluation of their role in endocrine disruption – preparation of a candidate list of substances as a basis for priority setting, European Commission, Delft.</p> <p>EC (2004): Commission Staff Working Document SEC (2004) 1372 on implementation of the Community Strategy for Endocrine Disrupters – a range of substances suspected of interfering with the hormone systems of humans and wildlife (COM (1999) 706), European Commission, Brussels.</p> <p>EC (2007): Commission staff working document on the implementation of the "Community Strategy for Endocrine Disrupters" – a range of substances suspected of interfering with the hormone systems of humans and wildlife (COM (1999) 706), (COM (2001) 262) and (SEC (2004) 1372), SEC(2007).</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 and its amendments and other national legislation implementing the GHS.</p>

Hazard Group	Criteria	Indicators and thresholds for the identification of FSC highly hazardous pesticides (HHPs)	Sources of information
ENVIRONMENTAL TOXICITY	Criterion 7. Acute toxicity to aquatic organisms	<p>7.1. A pesticide is considered 'highly hazardous' if it contains any active ingredient that:</p> <ul style="list-style-type: none"> a) has aquatic toxicity LC50/EC50 < 50 µg/l, using Daphnia as the test organism or other invertebrate or vertebrate aquatic organisms that show greater sensitivity than Daphnia. Acute test duration up to 96 hours. 	<p>The FOOTPRINT Pesticide Properties DataBase: http://sitem.herts.ac.uk/aeru/footprint/index2.htm</p> <p>The Pesticide Manual British Crop Protection Council (BCPC): https://www.bcpc.org/</p>
	Criterion 8. Persistence in soil or water and low sorption potential AND Bio-magnification, bio-accumulation	<p>8.1 A pesticide is considered 'highly hazardous' if it contains any active ingredient that is considered:</p> <ul style="list-style-type: none"> a) Persistent (DT50> 90 days), COMBINED WITH b) Low soil sorption coefficient (Koc < 300ml/g), AND/OR c) High water solubility (> 30mg/l) <p>AND</p> <p>8.2. it has the potential to accumulate in animal/human tissue:</p> <ul style="list-style-type: none"> a) Bio-concentration factor (BCF) for the active ingredient is ≥ 1000, OR b) Octanol-water partition coefficient (KOW) for the active ingredient is > 1000 i.e. logP (KOW) > 3 <p>Note: BCF data shall supersede the logP (KOW) data.</p>	<p>The FOOTPRINT Pesticide Properties DataBase: http://sitem.herts.ac.uk/aeru/footprint/index2.htm</p> <p>The Pesticide Manual British Crop Protection Council (BCPC): https://www.bcpc.org/</p>

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Hazard Group	Criteria	Indicators and thresholds for the identification of FSC highly hazardous pesticides (HHPs)	Sources of information
DIOXINS	Criterion 9. Dioxins (residues or emissions)	<p>9.1 A pesticide is considered 'highly hazardous' if:</p> <ul style="list-style-type: none"> a) it is contaminated with any dioxins at a level of 10 part per trillion (corresponding to 10 ng/kg) or greater of tetrachlorodibenzo-pdioxin (TCDD) equivalent (TEQ), or it produces such an amount of dioxin(s) when burned. 	Stockholm Convention and national monitoring data
HEAVY METALS	Criterion 10. Heavy metals	<p>10.1 A pesticide is considered 'highly hazardous' if it contains any of the following heavy metals as active ingredient, inert or known impurity:</p> <ul style="list-style-type: none"> a) lead (Pb), OR b) cadmium (Cd), OR c) arsenic (As), OR d) mercury (Hg) 	<p>The Pesticide Manual British Crop Protection Council (BCPC): https://www.bcpcc.org/</p>

Explanatory note for public consultation

The working group has discussed how to identify highly hazardous pesticides (HHPs) and has validated the current criteria used by FSC to identify HHPs, listed in FSC-STD-30-001 V1-0 *Indicators and thresholds for the identification of 'highly hazardous' pesticides (HHP)*, as they are internationally recognized, based on science and have been developed following usual FSC procedures.

Annex 2. Procedure for use of FSC prohibited HHPs in case of emergency situations or governmental orders

1. Before using a FSC prohibited HHP in one of the situations described in Clause 4.3, the Organization shall provide a written notification to its certification body of the intent to use a FSC prohibited HHP including a rationale for its use.
2. Within thirty (30) days of starting the use, the Organization shall submit a report to its certification body describing the rationale for the need to use the FSC prohibited HHP, the environmental and social risk assessment (ESRA) conducted and the control measures, training and monitoring in place to prevent, minimize and mitigate impacts with the correspondent review processes.
3. Certification bodies shall assess compliance with the requirements for emergency or governmental orders exceptions supported by international pesticides experts.
4. Non-compliance with the requirements for FSC prohibited HHPs shall result in the issuance of a major non-conformity and the correspondent corrective action request, including measures for repairing damages for environment or human health.
5. If the non-compliance is proved to be intentional, it shall result in the suspension of the certificate, which in accordance to FSC-STD-20-001 (V4-0) *General requirements for FSC accredited certification bodies* may lead to the withdrawal of the certificate.

Annex 3. Mechanism to implement requirements for FSC highly restricted HHPs and FSC restricted HHPs

1. Standard Development Groups shall adapt global risk assessment indicators (to be developed by FSC) to the regional/national context and develop locally relevant thresholds for risk management of specific HHPs and forest types.
2. The locally adapted indicators shall consider, at least, the type of hazard associated to the HHP used, levels of exposure, workers protection, environmental characteristics of the areas where pesticides are usually applied and targets for reduction.
3. The adapted indicators shall be submitted to FSC for approval.
4. Certification bodies shall assess compliance of the Organization with these requirements as part of the annual audit.

Explanatory note for public consultation

Hazard is global. Therefore, in order to control risk, exposure has to be managed locally.

The WG proposes to create a global framework with global indicators for a risk assessment template to be subsequently adapted to the regional / national circumstances.

To avoid introducing new elements to the FSC system, the WG proposes using the existing structures in the FSC system. Thus, this adaptation will be done by Standard Development Groups and the adapted indicators included in National Forest Stewardship Standards, that will be submitted to FSC for approval.

Certification bodies, with assistance from technical experts if necessary, will check compliance with the requirements for the use of FSC highly restricted HHPs and FSC restricted HHPs, as it occurs with other FSC requirements.

This proposal reduces the burden and costs of the current derogation system, eliminates the centralized decision making and allows local flexibility within a homogeneous framework.