

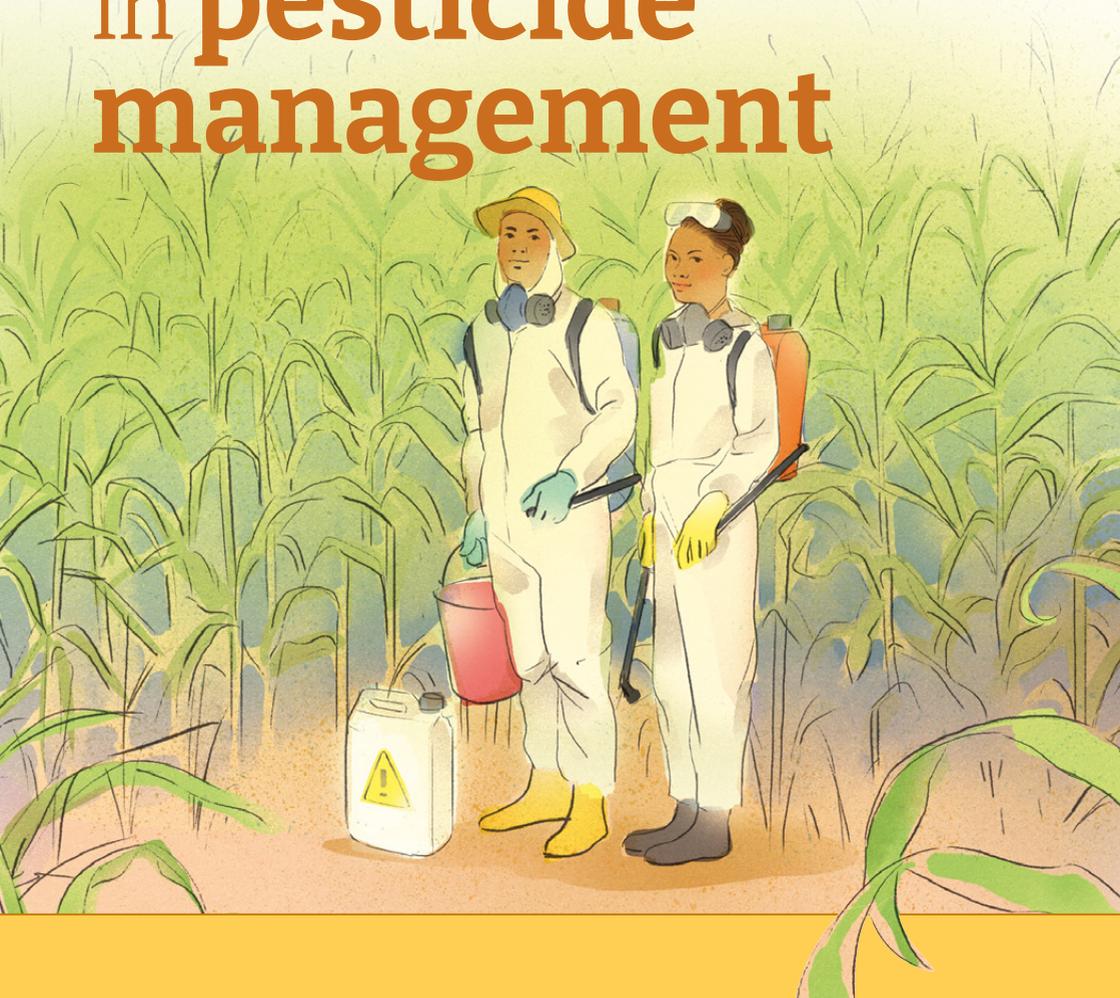


Food and Agriculture
Organization of the
United Nations



ROTTERDAM CONVENTION

Addressing gender issues in pesticide management



Key facts

Pesticides and other agrochemicals are commonly used in agriculture, particularly on industrial farms and plantations but also on many smallholder farms

Agriculture is one of the top-three most hazardous sectors in terms of work-related injuries, illnesses and diseases. **Agricultural hazards include exposure to pesticides**

(International Labour Organization [ILO], 2009)

Global pesticide use in agriculture has almost doubled since the early 1990s, reaching **4.2 million tonnes, or 0.6 kg per person, in 2019**

(Food and Agriculture Organization of the United Nations [FAO], 2021)

Globally, pesticide sales have soared since the 1970s and are projected to reach **USD 309 billion by 2025**

(United Nations Environment Programme [UNEP], 2021)



Alternatives to pesticides, as well as good examples of sustainable agricultural practices, are widely available

Gender-related key facts

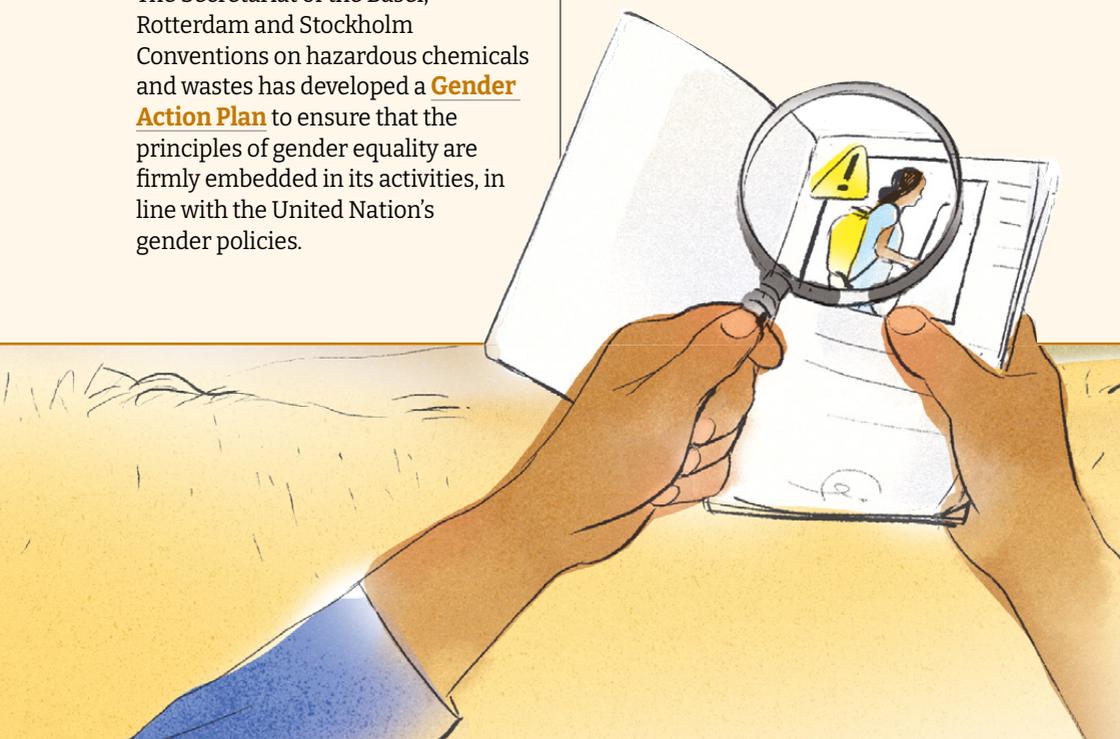
Women's exposure to pesticides tends to be higher than recognized, and cases of poisoning often go unreported, particularly in low-income countries that rely on less sophisticated agricultural technologies (UNEP, 2021)

Gender-related dimensions are often overlooked in pesticide management policies and programmes



The gender perspective in regulatory frameworks for pesticide management and in international labour standards

- The **International Code of Conduct on Pesticide Management** explicitly mentions vulnerable groups such as children and women, and includes specific provisions for public and private entities to protect them.
- The **Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade** strengthens the capacities of its parties for managing pesticide risks and addresses the needs of the most affected groups, including women.
- The Secretariat of the Basel, Rotterdam and Stockholm Conventions on hazardous chemicals and wastes has developed a **Gender Action Plan** to ensure that the principles of gender equality are firmly embedded in its activities, in line with the United Nation's gender policies.
- In 2016, the Committee on the Elimination of Discrimination against Women adopted **General recommendation No. 34 on the rights of rural women**, which includes specific recommendations on pesticide use and exposure, and promotes occupational health and safety measures.
- The **Safety and Health in Agriculture Convention** of the International Labour Organization (C184 of 2001) sets standards for the safe use of chemicals (including pesticides) in agriculture.



The role of women in pesticide management

Women assume important roles throughout agrifood value chains to ensure food security and nutrition at community and household levels. They account for 37 percent of the rural agricultural workforce worldwide, rising to 48 percent in low-income countries only (FAO, 2020).

The gender distribution of labour in pesticide use and handling varies greatly from country to country, depending on household needs, traditional decision-making patterns and labour availability. Pesticide management decisions tend to be made by household heads, whether male or female. However, in some countries, women are reported to make up 85 percent or more of all pesticide applicators on commercial farms and plantations, often working whilst pregnant or breastfeeding. There is evidence that they make less use of protective equipment and are injured by pesticides more often than men (Women in Europe for a Common Future, 2015).



Examples of women's roles and responsibilities with regard to pesticide management in selected countries

LATIN AMERICA AND THE CARIBBEAN

On banana plantations in **Costa Rica**, women often apply fungicides in the packing plant to prevent rotting of bananas during transportation

(London *et al.*, 2002).

In **Chile**, 19% of the temporary women workers reported direct handling of pesticides, and only 20% of them used any type of protective equipment

(London *et al.*, 2002).

EUROPE AND CENTRAL ASIA

Women from **Armenia, Belarus, Georgia, Kyrgyzstan, Republic of Moldova and Ukraine** are involved, to different extents, in direct pesticide handling, with three countries showing their participation as ranging between 55% and 98% (UNEP, 2016).

AFRICA

In northern **Ghana**, male farmers are much more likely than female farmers to apply pesticides in smallholder rice production (UNEP, 2016).

South African women and men are equally responsible for spraying on their farms (UNEP, 2016).

ASIA AND THE PACIFIC

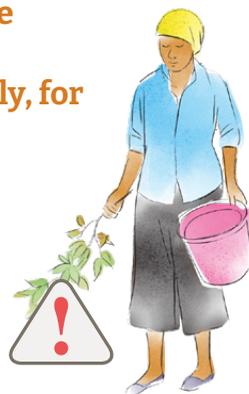
An estimated 30 000 women in **Malaysia** spray pesticides during 262 days per year on average. Eighty percent of the spraying is carried out with leaky handheld equipment (Pesticide Action Network Asia and the Pacific, 2010).

In **Indonesia**, women spray highly hazardous pesticides on oil palm plantations under unsafe conditions (e.g. with leaking backpack sprayers and without personal protective equipment) for very low wages. (UNEP, 2016).

Health-related implications of hazardous pesticide use

The use of pesticides can have a range of adverse effects on the environment and can cause severe acute and chronic health problems for both the workers handling them and, directly or indirectly, for rural families living nearby, including children.

Moreover, limited use of personal protective equipment amongst farmers is widespread due to the scarce understanding of the risks entailed, the lack of availability in certain areas and the costs involved. No segment of the population is fully protected against exposure to pesticides, and certain groups shoulder its serious health effects differently and disproportionately – especially women. Indeed, women's exposure to pesticides is significantly higher than recognized, and cases of poisoning of women are often under-reported and underdiagnosed.



The commonly used practice of applying pesticides with a branch (an unsafe application method)

Risks, hazards and exposure linked to pesticides

FAO's **International Code of Conduct on Pesticide Management** defines pesticides as “any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling any pest, of regulating plant growth”.

Risk is the probability and severity of an adverse health or environmental effect occurring as a function of a hazard and the likelihood and extent of exposure.

Hazard is the inherent property of a substance, agent or situation having the potential to cause undesirable consequences (e.g. properties that can cause adverse effects or damage to health, the environment or property).

Exposure to pesticides can occur during a wide range of tasks, from manufacture and packaging of the pesticide to distribution, storage, use and disposal.

Source: **FAO & World Health Organization (WHO)**. 2014. *The International Code of Conduct on Pesticide Management*. Rome, FAO.

Women's exposure along the life cycle of pesticides (through ingestion, inhalation and skin absorption)

During preparation:

- when mixing different pesticide formulations;
- when preparing and mixing pesticides with no protection, even with their bare hands;
- when loading spraying equipment without taking due care.



During use:

- when applying pesticides by hand or using handheld leaky backpack sprayers;
- when repackaging pesticides without adequate protection to sell them in local markets;
- when thinning, weeding and picking of sprayed crops.



After application:

- when entering recently sprayed fields for harvesting;
- when cleaning empty pesticide containers for re-use (for example to store food) and disposing of them without due protection;
- when washing contaminated clothes together with the family laundry.



Pesticide exposure during different stages of women's lives

While exposure to pesticides affects both women and men, women are more vulnerable to the effects of this exposure for physiological reasons.

Women have a higher percentage of adipose tissue and therefore tend to bioaccumulate lipophilic chemicals, such as persistent organic pollutants, in their fatty tissues. Pesticide exposure affects women at different stages in their lives, including adolescence, pregnancy, lactation and menopause. Even low doses can generate irreversible effects, depending on the pesticide encountered and the level and frequency of exposure (ILO, 2021).



Health-related impacts on women

- breast cancer;
- pesticides in breast milk;
- decreased ovarian reserves;
- impaired menstrual cycles;
- higher risk of endometriosis;
- infertility;
- spontaneous abortions;
- effects on the immune system;
- skin disorders;
- neurological or psychological effects;
- respiratory diseases.

Impact of exposure in pregnancy

- premature births
- perinatal deaths
- neuro-behavioural consequences
- foetal growth retardation
- congenital malformations
- early childhood cancer



Economic and social factors aggravating women's exposure to pesticides

A number of economic and social factors explain why women tend to be more exposed to pesticides than men, such as:

- **Unequal and gender-determined roles and responsibilities, at household level and when employed**, can exacerbate women's exposure to pesticides. Women, especially in rural areas, are often in disadvantaged positions. The lack of decent work opportunities, women's likelihood to engage in jobs with low productivity and low wages and their insufficient representation make them more vulnerable to pesticide exposure. The COVID-19 pandemic has had more serious effects on women than on men: women have been disproportionately impacted by job losses, with less access to training and resources and a higher burden of household chores and childcare.
- **Women's overrepresentation in the informal sector**, which falls outside of the purview of labour laws, leaves many exposed to low pay and unsafe working conditions, and without social benefits such as pensions, sick pay and health insurance. Thus, women are less equipped to deal with the adverse impacts of pesticide use.
- **Lower educational levels and a lack of training and information** among female workers about the type of pesticides used and the danger they represent for their health and that of their children means that women are more vulnerable to the effects of pesticide use. UNEP's 2016 Global Gender and Environment Outlook notes that "women may be at greater risk of adverse effects from pesticides partly because of lower literacy rates, as well as limited access to training and to personal protective equipment" (UNEP, 2016, p. 38).

- **Women's lower access to finance and credit** worldwide affects their investment capacity and adoption of agricultural inputs and technologies, including for pesticide management (African Union Development Agency, New Partnership for Africa's Development, 2021). Less sophisticated pesticide application technologies are associated with higher exposure risks to pesticides (UNEP, 2021).
- **Inadequate design of personal protective equipment**, traditionally made for the Western male body, increases women's exposure to pesticides (ILO, 2021) either because they discard it or because it does not fit.



Case study on women rice farmers in Thailand

A survey of female rice farmers in Thailand found that:

- Men, who are trained more than women, often emigrate to find better jobs in urban settings, leaving the women to work the fields.
- Women are often unable to participate in basic training in pesticides handling (due inter alia to time conflicts with childcare and household duties).
- Women are less informed about the risks of pesticide exposure.

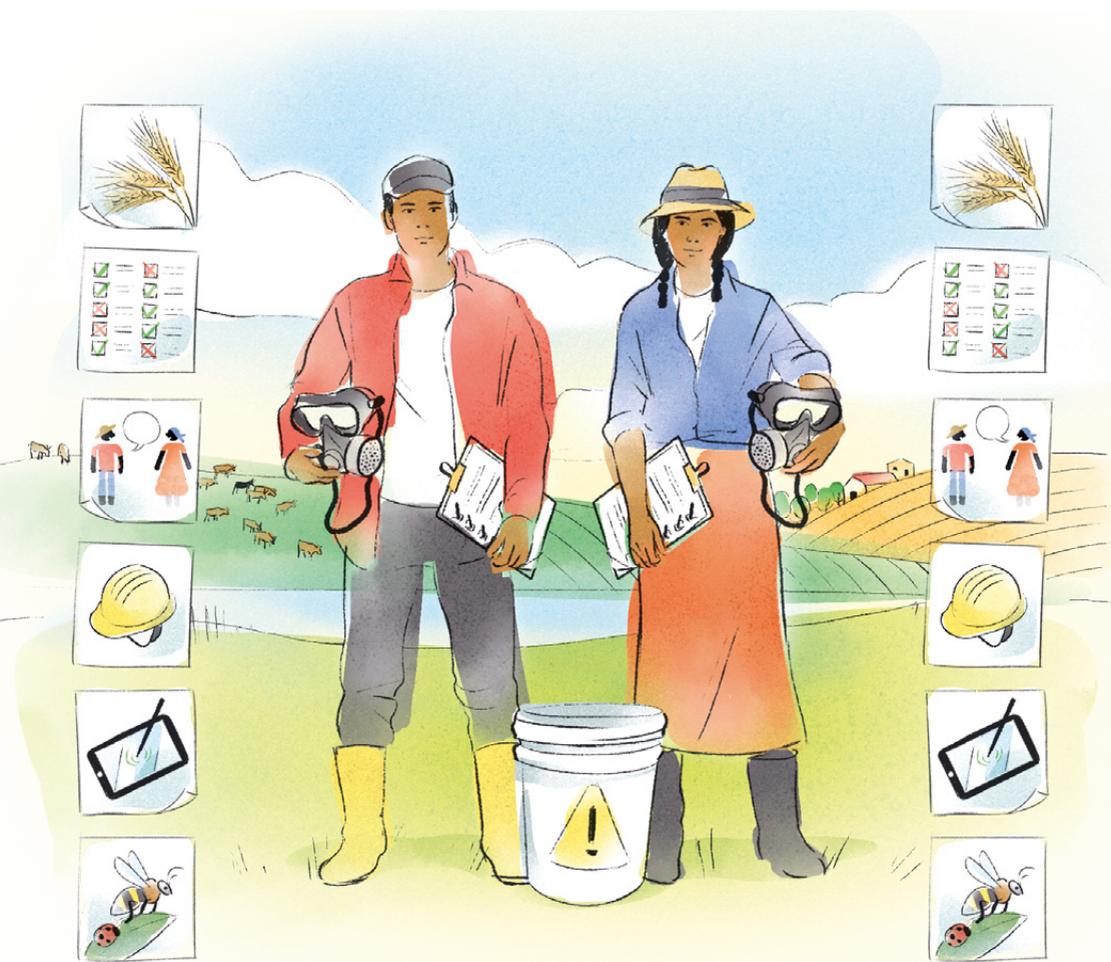
Source: **Women in Europe for a Common Future (WECF)**. 2015.

The role of FAO

FAO's technical competencies and network of partners give the organization an added advantage to intervene on gender and pesticide management, by:

- **advocating for** gender-related pesticide risks and engaging key partners in the dissemination of gender-sensitive practices;
- **building capacities**, at multiple levels, for the reduction of pesticide risks and the adoption of sustainable practices to empower women economically;
- **promoting access to safe and healthy working environments** for both women and men;
- **enhancing the collection of sex-disaggregated data** on pesticide use and practices, to identify the most affected groups and high-risk exposure scenarios;
- **supporting the formulation of agricultural policies and regulations** sensitive to health and safety, in the interest of both women and men;
- **stimulating the development of knowledge products** to address the gender-pesticide nexus; and
- **promoting alternatives strategies and practices to the use of hazardous chemicals in agriculture** (integrated pest management, agroecology, etc.).





The FAO Policy on Gender Equality 2020–2030 (FAO, 2020), which aims to achieve equality between women and men in sustainable agriculture and rural development for the elimination of hunger and poverty, also guides the Organization's work on gender and pesticide management.

The policy focuses, for instance, on providing men and women with equal decision-making power and equal access to agricultural resources. It also promotes decent employment and supports equal access to services (training, information, etc.).

Addressing the gender–pesticides nexus: a field experience

In 2019, the Secretariat of the Rotterdam Convention, together with the FAO Representation in Morocco, UN Women, the International Organization for Migration and the United Nations Development Programme, developed training sessions aimed at raising awareness on pesticide exposure among women farmers in Morocco. The results of the work were presented at the 2019 International Agricultural Exhibition in Morocco (SIAM).

A number of sensitization activities were developed specifically for the exhibition, including a body mapping exercise to identify signs and symptoms of pesticide exposure, the drawing of agricultural plots by farmers (considering agricultural in- and outputs), an exercise to identify good and bad practices in pesticide management, and a role play on pesticide exposure (in two settings: at the selling point and on the farm). These activities were welcomed very positively; they help farmers understand the risks of hazardous pesticides for men and women, identify dangerous exposure scenarios and know the alternatives to hazardous pesticides.



Call for action

The following actions need to be sustained by FAO and its partners to advance the gender and pesticide agenda:

- **raise awareness and disseminate information** on gender and pesticide risks at global, regional and national levels;
- **support gender-sensitive occupational safety and health research** on pesticide exposure and its adverse effects, for better evidence-based policies;
- **build the capacities of partners and FAO Members** to collect and disseminate sex-disaggregated data on pesticide exposure scenarios and impacts;
- **support the integration of gender dimensions in international frameworks** for the management of pesticides and other chemicals;
- **sensitize community-based organizations** to the gender-specific risks of hazardous pesticides and to the related needs of vulnerable groups and women;
- **promote sustainable farming practices that do not rely on the use of hazardous pesticides**, building on women's knowledge of and role in the management of natural resources;
- **encourage the promotion of safety and health measures** in agriculture, and promote decent employment for all; and
- **create an enabling environment to improve women's access to pesticide-related services**, such as information, training and health care.

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