



Hazardous work of children and regulation of hazardous chemicals

How can better regulation and awareness of pesticides and chemicals contribute to reduce hazardous work of children in agriculture? Are vulnerable groups taken into consideration when identifying risks related to pesticides or to industrial chemicals? Do pesticide registrars consider data related to children's exposure to hazardous pesticides?



Young boy spraying insecticides on plants. (Copyright © ILO)

Did you know?

- Worldwide 215 million children are child labourers, of whom 115 million are engaged in hazardous work.
- About 60% of child labourers aged between 5-17 years work in agriculture. Rural children, particularly girls, tend to begin work at a very young age, sometimes between 5-7 years old.
- Agriculture is among the three most dangerous sectors to work in at any age, and even more dangerous for children. The number of boys aged 15-17 years engaged in hazardous work rose by 10.5 million from 2004 to 2008, while in the same period, it decreased for younger boys and for girls.

Children's vulnerability

Children are much more vulnerable to chemicals exposure than adults for reasons ranging from metabolism to maturity and risk assessment capacity. The smaller size and low body weight, the skin-surface-area/body weight ratio, different patterns or habits in drinking (7 times more water at 6 months of age than an average adult), in eating (4 times more for 1-5 year-olds) and in breathing (twice air intake than an adult). Because their organs are still developing, children's ability to successfully detoxify and excrete toxins is lower than adults'. In addition, children have a lower capacity to assess risks and often cannot read warning labels. While some children mix and apply these pesticides, most children suffer from environmental exposure. Children who work or live around pesticides face additional risks to be poisoned.

Potential health consequences

Evidence shows that occupational exposure to pesticides can result in both chronic and acute health effects for adults. Pesticides are particularly hazardous for developing children. Exposure to pesticides and other chemicals can damage brain functions, behaviour and mental health, reproductive systems and may cause cancer. Children handling, mixing, spraying agrochemicals, or being exposed to pesticides in other ways can suffer from injuries and illnesses. Studies show that:

- children working in agriculture have far greater incidence rates of acute occupational pesticide-related illnesses than children working in other sectors (Blondell et. al, 1997).

- childhood occupational exposure to pesticides may result in significant neurological dysfunction, including motor and attention deficits, difficulties in concentration, difficulties in remembering and understanding, numbness, extreme dizziness, headache, blurred vision, and depression (Rasoul et al., 2008).
- young boys occupationally exposed to pesticides face the risk of abnormal sexual development and problems with the synthesis of necessary sex hormones (Saiyed et al., 2003).
- exposure to pesticides may increase the risk of leukaemia in childhood as well as increasing the risk of developing cancer later in life (Zahm, 1998).¹

Environmental exposure

Children can be exposed to pesticides even when they are not directly involved in agricultural operations: living nearby sprayed fields, or in homes where pesticides are stored and prepared, or where personal protective equipment of adults is stored or cleaned, greatly exposes children to the toxic substances. Situations such as babies on the back of their mothers in workplaces where hazardous substances are used, or even while spraying chemicals, have high risks of contamination. Children can be exposed through contact with the skin, hair, and clothing of family members handling pesticides, such as when washing their working gear, personal protective equipment and pesticide containers.

¹ Complete references are available in IPEC: *Children in hazardous work* (Geneva, ILO, 2011). Available at: www.ilo.org/ipeinfo/product/viewProduct.do?productId=17035.

International instruments on child labour, occupational safety and health and pesticides trade

Child labour is defined based on a child's age, hours and conditions of work, activities performed and the hazards involved. Child labour is work that interferes with compulsory schooling and damages health and personal development.

The **ILO Minimum Age for Employment Convention No. 138 (1973)** sets the minimum age for children to work at 15 years of age in general (the convention allows for certain flexibilities in specific circumstances). For work considered hazardous, the minimum age is 18.

The **ILO Worst Forms of Child Labour Convention No. 182 (1999)** defines worst forms of child labour as all forms of slavery, trafficking of children, forced recruitment for armed conflict, use of children in illicit activities, sexual exploitation, and hazardous work. Hazardous work, defined nationally, is work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children.

Ratification of Convention No. 138 and Convention No. 182 entails the development of national Hazardous Work Lists, by the competent authority and in consultation with employers' and workers' representatives, to indicate tasks and occupations prohibited for children below the age of 18 under any circumstance. ILO Conventions No. 138 and No. 182 are part of the eight core Conventions on fundamental principles and rights at work and are thus binding for all ILO member-countries irrespective of ratification.

ILO Recommendation No. 190 (1999) includes among hazardous work, work which is carried out in an unhealthy

environment, which may expose children to hazardous substances, agents or processes.

ILO Conventions No. 187 (Promotional Framework for Occupational Safety and Health (OSH) Convention), No. 155 (Occupational Safety and Health Convention), and No. 184 (Safety and Health in Agriculture Convention) provide guidance on OSH and on national policies and systems to promote better OSH.

The **Rotterdam Convention** has the objective to protect human health and the environment from the risks posed by pesticides and industrial chemicals. The Convention establishes a right to know, relating to the information concerning hazardous chemicals being traded, and a capacity to decide if the country is prepared to handle the risks and hazards of those chemicals. It facilitates information collection on exposure to chemicals, and policy development to improve chemicals management.

The ILO Convention No. 182 and the Rotterdam Convention are two international instruments that can complement each other in regulating hazardous work of children. The Rotterdam Convention can provide information on chemicals considered dangerous, thereby contributing to national drafting or revision of hazardous work lists. The 2011 Conference of the Parties of the Rotterdam Convention is an opportunity to raise awareness and reassert the need to regulate the trade and use of hazardous pesticides, by integrating the challenge of child labour and protecting children, youth and their environment.

Youth employment

The Rotterdam Convention, together with ILO's occupational safety and health (OSH) conventions (No. 187, No. 155, and No. 184) can contribute to achieving and maintaining safe and decent work for all. Youth who have reached the minimum legal age for employment can be safely employed in agriculture if good safety and health at work are ensured. The elimination or substitution of hazards such as pesticides can help transform hazardous work of children above the minimum age into youth employment.

What can be done

Synergies between ILO's child labour Conventions, ILO's OSH Conventions and the Rotterdam Convention can contribute to strengthen workplace safety and health for all workers and reduce hazardous work of children by:

- bringing attention to substances that are hazardous for children. This, in turn, may be integrated into Hazardous Work Lists;
- protecting children from exposure to such substances and protect the child's environment;
- contributing to developing safer agriculture practices and technologies, such as integrated production and pest management (pesticide use reduction and progressive elimination, development of safe alternatives).

Possible way forward

- Pesticide registrars integrating data related to children exposed to hazardous pesticides;
- Pesticide importing countries considering pesticide and chemicals data related to children;
- Community health monitoring programmes and other institutions collecting data on children in agriculture, exposure to pesticides and pesticide poisoning;
- National Occupational Safety and Health (OSH) systems and programmes integrating knowledge on hazardous pesticides;
- Private sector (manufacturing and trading companies) promoting transparent information, appropriate training, clearer users' guides, adequate packaging and labelling, and adhering to existing good practices and specific codes;
- National and international agriculture, labour and health institutions promoting safer agricultural technologies to protect youth and reduce hazardous work of children, such as integrated production and pest management, organic agriculture and agroecology, and promoting awareness and training on child protection linked to pesticide management.



For further information, visit:

ILO's International Programme on the Elimination of Child Labour (IPEC): www.ilo.org/ipecc

Food and Agriculture Organization of the United Nations (FAO): www.fao.org

Food, Agriculture and Decent Work Website: www.fao-ilo.org

Rotterdam Convention: www.pic.int

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