# GLOBAL ACTION PLAN ON HIGHLY HAZARDOUS PESTICIDES

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# Introduction

Indiscriminate use of and over reliance on pesticides has been linked to degradation of biodiversity and ecosystems, increased risks to food safety, health of consumers and agricultural workers. It is estimated that most pesticide poisoning cases are caused by a relatively small number of highly hazardous pesticides, particularly in low and middle-income countries.

The FAO/WHO International Code of Conduct on Pesticide Management defines **Highly Hazardous Pesticides (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.

The governing bodies of FAO and WHO, the stakeholders of the Strategic Approach to International Chemicals Management (SAICM), which include FAO, UNEP and WHO, and many other organizations have expressed concern about the harms that HHPs can cause to people and the environment.

Global action is needed on the part of all stakeholders to reduce the risks posed by pesticides, and in particular the risks of HHPs.

This Global Action Plan aims to consolidate the commitments and efforts of diverse organizations that have interests and responsibilities in eliminating the risks from HHPs, in order achieve significant and measurable change over a specific timeframe.

## 1.1 Background and Rationale for the Action plan on HHPs

The understanding that some pesticides are more hazardous than others is well established. Recognition of this is reflected by the World Health Organization (WHO) Recommended Classification of Pesticides by Hazard (WHO 2020), which was first published in 1975. In 2002, the Globally Harmonized System of Classification and Labelling of Chemicals (UNECE, 2019) was introduced, which in addition to acute toxicity also provides classification of chemicals according to their chronic health hazards and environmental hazards.

The Rotterdam and Stockholm conventions and the Montreal Protocol also identify pesticides that are of particular concern because of the risks they pose to human health and/or the environment. These mechanisms define criteria 1 to 7 of the listing of pesticides that are considered to be HHPs (Box 1) according to the FAO/WHO guidelines on Highly Hazardous Pesticides

### Box 1. Characterisation of HHPs

In 2008 the FAO/WHO Joint Meeting on Pesticide Management (JMPM), defined highly hazardous pesticides as having one or more of the following characteristics:

- Pesticide formulations that meet the criteria of classes Ia or Ib of the WHO Recommended Classification of Pesticides by Hazard;

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 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 in its Annex III;

or

- Pesticides listed under the Montreal Protocol;

or

- Pesticide active ingredients and formulations that have shown a high incidence of severe or irreversible adverse effects on human health or the environment.

In addition to the pesticides listed under the mechanisms above, pesticides that have shown a high incidence of severe or irreversible adverse effects on human health or the environment can also be designated as HHPs under an eighth criterion of the listing (Box 2). Which pesticides meet criterion 8

depends largely on information and experience related to their use and impacts in national or regional contexts.

## Box 2. Adverse effects on human health and the environment

While the following factors may be associated with all pesticides, the relatively small number of HHPs disproportionately account for the negative impacts of pesticide on human health and environment. Evidence indicates that reducing or mitigating the impacts of HHPs would significantly reduce the following negative impacts from pesticides overall.

1) **Acute poisoning**
   Human exposure to pesticides among applicators, agricultural workers and other family and community members is common and the consequences can be severe. Recent reviews of poisoning studies and surveys suggest that unintentional acute pesticide poisoning has increased by orders of magnitude since the cited estimates of 1 million (WHO 1990), especially in farming communities in low and middle income countries (Boedeker et al. submitted, PAN UK 2020). Suicides resulting from pesticide poisoning are a very significant problem in many stressed, rural agricultural communities in LMICs. A review of global pesticide suicides estimated that there were 160,000 every year (Karunarathne et al, 2020). There is strong evidence that a high proportion of such suicides can be averted completely by making HHPs less accessible and so pesticide suicides should be considered part of an occupational exposure (Eddleston, Lancet 2020) .
2) **Chronic health effects**
   Epidemiological studies have found associations between pesticide exposure and serious chronic illnesses including cancers, neurological illnesses such as Parkinson's disease and reproductive, hormonal and developmental disorders (Ntzani et al., 2013; Koutros et al., 2015 ). Children are much more vulnerable to the toxic effects of pesticides for a variety of physiological and behavioral reasons. Women of child bearing age are also particularly vulnerable to toxic effects due to pesticides that can be passed through the placenta to fetuses and in breast milk.
4) **Contamination of food threatens health and jeopardizes trade**
   Pesticide residues in food crops jeopardize food safety, a key dimension of food security, and international food trade. Most detentions of imports from the developing countries are for pest or microbial contamination and pesticide residue violations. In 2010 it was estimated that the total losses from rejections of internationally traded agricultural products in China due to excessive pesticide residues was 7 billion USD per year (Food Quality and Safety 2014 (4): 14-16, in Chinese)
5) **Killing of beneficial insects and ecosystem damage**
   Pesticides enter the environment where they can kill, inhibit or alter the functions of non-target organisms. Many of these non-target organisms are beneficial. According to global monitoring data of 452 invertebrate species there has been a 45% decline of invertebrate populations over the past 40 years (Dirzo 2014). Up to one million species are threatened with extinction - agriculture and pollution are key factors. Exposure of pollinators to pesticides can be decreased by reducing the use of pesticides, seeking alternative forms of pest control and adopting a range of specific application practices (IPBES 2016).
6**) Water contamination and aquatic organisms**
   The use of agrochemicals within the agricultural sector and improper disposal of agricultural wastes is a source of significant pollution to both surface and groundwater resources (Anamika Srivastava et al, 2018; Gabriel Pérez Lucas et al 2018;). Agrichemicals, including pesticides, contribute to water scarcity by contaminating water sources, thereby undermining national attainment of SDG6 on clean water and sanitation (FAO, 2017).
7) **Killing of terrestrial animals**
   Pesticide use has contributed to declines in bird populations, insects, amphibians and aquatic communities (Beketov, 2013), (Kennedy, 2013), (Hallman, 2014), (Goulson, 2014**).** Monocrotophos and carbofuran have caused a high number of bird kills around the globe (Mineau et al., 2012, Odino and Ogado, 2008, Pain et al., 2003).
8) **Environmental contamination**
   Negative impacts of pesticides on soil organisms and soil functions are well recorded. Some organochlorine pesticides, for example, suppress symbiotic nitrogen fixation, resulting in lower crop yields. Furthermore, pesticide contaminated land poses a risk when taken up from the soil by growing food crops. Due to their persistence in soils, pesticide residues can contaminate food even 30 years after their last application, (Levillain et al. 2012).

The reduction of risks posed by HHPs has become a priority issue within international chemicals management policies:

- The **FAO Council** requested specific attention for HHP risk reduction, including consideration of a progressive ban on HHPs (2006) (Paragraph 86 of the report)
- The **WHO** issued a policy brief on public health concerns related to HHPs (2010)
- The **FAO/WHO** International Code of Conduct on Pesticide Management (2014) specifically addresses reduction of risks posed by HHPs (articles 3.6, 7.5 and 9.4.1).
- The **fourth session of the** International Conference of Chemicals Management (ICCM4), in 2015, adopted a resolution that recognizes HHPs as an issue of international concern and calls for concerted action to address HHPs. Furthermore, a Global Strategy on HHPs developed by FAO, UNEP and WHO was welcomed, aiming at reducing risks from highly hazardous pesticides through

### Box 3. Main focus areas for concerted action from HHP Strategy welcomed at ICCM4

Awareness-raising is required in order to:

(a) Raise the awareness of pesticide regulators and other relevant Government authorities, farmers, the private sector, consumers, workers, trade unions, health-care providers, research and development institutions, academia and the press (mass media) about the risks of highly hazardous pesticides, the availability of safer alternatives and the desirability of making a transition to more sustainable agro-ecological approaches to pest management;

(b) Identify and share information about viable alternatives to highly hazardous pesticides, including cultural and environmental management measures, biological controls, biopesticides or less hazardous pesticides;

(c) Identify and share information about risk reduction measures in cases for which highly hazardous pesticides cannot be replaced and continue to be used.

Capacity-building in regulatory control is required to:

(a) Support Governments in strengthening pesticide registration schemes, risk assessment and review of registered pesticides;

(b) Support Governments in strengthening of the regulatory framework with regard to manufacturing, formulation, distribution, storage, sale, use and disposal of highly hazardous pesticides;

(c) Support Governments in the development and adoption of effective enforcement mechanisms as part of the regulatory system for pesticides;

(d) Support access to suitable laboratory facilities in order to facilitate adequate analysis of pesticide products and residues;

(e) Provide assistance to health and occupational health professionals in identifying, diagnosing, treating and reporting pesticide poisonings to promote efficient surveillance and identification of highly hazardous pesticides.

Piloting and the mainstreaming of alternatives are crucial to:

(a) Provide assistance to small-scale and large-scale farmers to enable them to phase out highly hazardous pesticides, or prevent unacceptable risks from highly hazardous pesticides that cannot be replaced, while maintaining their agricultural livelihoods;

(b) Support the design and implementation of appropriate prevention-based programmes to phase out highly hazardous pesticides and replace them with sustainable and less hazardous pest management tools and methods based on integrated pest management and integrated vector management.

awareness-raising, capacity-building in regulatory control as well as piloting and mainstreaming of alternatives (Box 3).

HHPs undermine vital ecosystem services and health for present and future generations. There is often a mis-perception that HHPs need to remain available because there are no good alternatives. However, in the majority of cases, there are alternatives that pose less risk. These may include suitable non-chemical pest management approaches or biopesticides , less hazardous chemicals, or different pesticide formulations or delivery mechanisms that pose less risk. The move to safer and more sustainable approaches to pest management based on Integrated Pest Management (IPM), Integrated Vector Management (IVM) and more ecologically based solutions has been widely shown to be successful and viable.

In public health, much has already been done to reduce the use or risks of the most hazardous pesticides. However, as a result of the relatively small market share for vector control insecticides within the global pesticide market, investments into the development of alternative products has been limited. In view of these constraints and limitations, the WHO Integrated Vector Management (IVM) approach promotes rational use of insecticides in vector control to minimize the potential effects of insecticides on human health and the environment, and to reduce the selection pressure for insecticide resistance. Where no alternatives to the use of HHPs exist, their controlled use, applied under the professional supervision of vector control services, need to be considered if the public health benefits outweigh the risks associated with the targeted use of these pesticides.

The global use of pesticides has risen to more than 4 million tonnes per year[1]. HHPs are considered to represent a fraction of all registered pesticides worldwide; in some cases as small as 6 % (Southern African countries), while in other cases as high as 30 % of the registered products[2]. HHPs continue to be widely used without necessary risk mitigation measures particularly in Low and Middle Income Countries (LMIC) where their conditions of use commonly result in higher levels of exposure[3]. At the same time, suicide rates from consumption of HHPs is alarmingly high and reflects the easy availability of extremely toxic compounds in situations where they cannot be safely managed[4]. Prioritising the most hazardous pesticides for regulatory action is achievable and has demonstrable results. As an example, by removing just seven HHPs from use, Sri Lanka is estimated to have prevented 93,000 deaths[5]. Similar

[1] FAOSTAT, 2019

[2] https://apps.who.int/iris/bitstream/handle/10665/330659/9789241517065-eng.pdf?ua=1

[3] Emine Selcen Darçın et al, **Occupational Risk Factors for Acute Pesticide Poisoning among Farmers in Asia, Intech Open 2017**

[4] Ayanthi Karunarathne et al, How many premature deaths from pesticide suicide have occurred since the agricultural Green Revolution?, Clinical Toxicology 2020, VOL. 58, NO. 4, 227–232

[5] Knipe DW[1], Gunnell D[1], Eddleston M[2].Lancet Glob Health. 2017 Jul;5(7):e651-e652. doi: 10.1016/S2214-109X(17)30208-5. Preventing deaths from pesticide self-poisoning-learning from Sri Lanka's success.https://www.ncbi.nlm.nih.gov/pubmed/28619217

examples are found in China[6], Bangladesh[7], South Korea[8] and elsewhere. Importantly, such gains have been achieved without reduced agricultural productivity[9, 10].

Barriers to adopting necessary measures include:

- limited ability of governments to adopt and implement regulatory reforms;
- low capacity regarding the adoption of fiscal incentives;
- limited access to best practices and cost-effective alternative measures;
- limited access to information for decision makers to make informed decisions.

Considering the EU's new Farm to Fork Strategy, China's efforts to reduce HHP use, India's recent review of 27 pesticides on safety and environmental grounds or the rapid growth in the biopesticide industry in recent years, there is no doubt that there is a significant and widespread movement towards safer and more sustainable approaches to agricultural and public health pest management.

This Global Action Plan seeks to expand and accelerate that shift by supporting actors on national, regional and global level to improve occupational health, food safety and environmental standards. In addition, it will help countries to meet the changing requirements of export markets for agricultural produce, such as more stringent standards on residues.

## 1.2 Previous and current action on HHPs

### *Sustainable Development Goals*

The 2030 Agenda for Sustainable Development contains the 17 Sustainable Development Goals (SDGs) which call for, *inter alia*, efforts to promote sustainable agriculture (Goal 2), healthy lives and well-being (Goal 3), sustainable management of water (Goal 6), decent work (Goal 8), sustainable consumption and production patterns (Goal 12), the sustainable use of terrestrial ecosystems and halt of biodiversity loss (Goal 15), multi-stakeholder partnerships for sustainable development (Goal 17). In each of these goals,

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[6] Page A[1], Liu S[2], Gunnell D[3], Astell-Burt T[4], Feng X[4], Wang L[2], Zhou M[2]J Affect Disord. 2017 Jan 15;208:418-423. doi: 10.1016/j.jad.2016.10.047. Epub 2016 Nov 2. Suicide by pesticide poisoning remains a priority for suicide prevention in China: Analysis of national mortality trends 2006-2013.

[7] Fazle Rabbi Chowdhury, Gourab Dewan, Vasundhara R Verma, Duleeka W Knipe, Ishrat Tahsin Isha, M Abul Faiz, David J Gunnell, Michael Eddleston. **Bans of WHO Class I Pesticides in Bangladesh—suicide prevention without hampering agricultural output.** *International Journal of Epidemiology*, Volume 47, Issue 1, February 2018, Pages 175–184, https://doi.org/10.1093/ije/dyx157

[8] Eun Shil Cha, Shu-Sen Chang, David Gunnell, Michael Eddleston, Young-Ho Khang, Won Jin Lee April 2016. **Impact of paraquat regulation on suicide in South Korea** *International Journal of Epidemiology*, Volume 45, Issue 2, April 2016, Pages 470–479, https://doi.org/10.1093/ije/dyv304

[9] Gunnell D[1], Knipe D[2], Chang SS[3], Pearson M[4], Konradsen F[5], Lee WJ[6], Eddleston M[4]Lancet Glob Health. 2017 Oct;5(10):e1026-e1037. doi: 10.1016/S2214-109X(17)30299-1. Epub 2017 Aug 11. Prevention of suicide with regulations aimed at restricting access to highly hazardous pesticides: a systematic review of the international evidence.

[10] Manuweera G., Eddleston M., Egodage S. and Buckley, N.A. **Do Targeted Bans of Insecticides to Prevent Deaths from Self-Poisoning Result in Reduced Agricultural Output?** April 2008 Environmental Health Perspectives Vol. 116, No.444 https://doi.org/10.1289/ehp.11029

a reduction in the use of highly hazardous pesticides would make a significant contribution by reducing exposure to, and hence adverse impacts on health and the environment from toxic chemicals.

*The following section describes the work that has already been done and is ongoing on the part of UN organizations, industry and NGO/academic organizations.*

### *FAO prioritises HHPs*

Pesticide risk reduction is one of the priority areas in FAO's pesticide management programme, confirmed by the FAO Council at its 131st session in 2006, which suggested that priority activities for FAO within SAICM "could include risk reduction, including the progressive ban on highly hazardous pesticides". Subsequently, a New Initiative for Pesticide Risk Reduction was presented to the FAO Committee on Agriculture (COAG), the guiding governing body for the Agriculture Department, during its 20th Session in 2007.

The FAO Pesticide Registration Toolkit is a comprehensive instrument designed to assist countries to build their capacities to maintain accounts of harmful agrochemicals. The toolkit is accompanied by training. To date, approximately 400 individuals in over 64 countries have benefitted from this capacity building. The toolkit provides a spreadsheet tool which can be used to document the HHP identification process. This can be done for individual pesticides, or for lists of registered pesticides.
The tool can be also download **here.**

To date (2020), FAO has supported several national and regional programmes to tackle HHPs in Africa, South East Asia, Caribbean and Pacific regions. Using the FAO/WHO Guidelines on HHPs, a number of countries including Botswana, Malawi, Tanzania, Zambia, Zimbabwe, are at different stages of identification, risk assessment and risk mitigation of HHPs. In East and Southern Africa, regional strategies in addressing HHPs have been drafted and will be further developed and rolled out in the near future. On the basis of this work, it is expected that a regional strategy will be elaborated shortly. In West and Central Africa work is ongoing to identify and phase out HHPs in some CILSS[11] countries and in Cameroon and the work will be up-scaled.

In the Pacific, FAO together with Australia has supported 5 islands that are collaborating on HHP risk reduction. Countries in Asia agreed to collectively strengthen the life cycle management of pesticides, including review HHP products and explore alternatives, stop production and importation, cancel registration and prohibit sales, recall product for disposal, and conduct monitoring and enforcement. In China, the risk assessment process has recently started, in collaboration with the Association of Southeast Asian Nations (ASEAN). In Myanmar, the identification process identified HHPs in use and discussions are ongoing on measures to reduce the risks of these pesticides.

In the Caribbean, 299 HHP products out of more than 2 873 registered pesticides in Antigua & Barbuda; Dominican Republic; Dominica; Guyana; St Lucia; Suriname; Trinidad and Tobago, Jamaica, St Kitts & Nevis; St Vincent Grenadines have been identified. Capacity building programmes are on-going in 11 islands, as well as cooperation with academia and civil society on alternatives to HHPs.

[11] The Interstate Committee for Drought Control in the Sahel. Member countries: Benin, Burkina Faso, Cape Verde, Chad, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Mali, Mauritania, Niger, Senegal, Togo.

FAO has also worked at mainstreaming the HHPs issue into regional programmes for food security in Asia and Africa to ensure that sound chemicals management is an integral part of sustainable agriculture while contributing to SDGs. In South East Asia the capacity was strengthened to innovate and scale-up Integrated Pest Management (IPM) and pesticide risk reduction training for sustainable intensification of crop production in collaboration with KEMI the Swedish Pesticide Regulatory Agency.
The East African Community (EAC) and Southern African Development Community (SADC) through the Southern African Pesticide Regulators Forum (SAPReF) has urged FAO to expedite work in the sub-region to address HHPs. A first regional discussion was held in Dar es Salaam in October 2017. A back-to-back national training for the Tropical Pesticides Research Institute (TPRI) took place in Arusha, Tanzania to identify HHPs. Twenty HHPs were shortlisted for further risk assessment. Similarly, in 2016, during training on HHP risk reduction and the Rotterdam Convention, SAPReF members drafted a regional HHP strategy whose elements include development of a database for safer alternatives to HHPs commonly used across the sub region

FAO organized a webinar in 2018 to share progress made and the lessons learned in the first three years of implementation of the FAO/WHO guidelines on HHPs, with the participation of representatives from countries, civil society, academia, NGOs and private sector.

*WHO*

Insecticides used in vector control constitute essential core interventions to reduce or prevent transmission of vector-borne diseases, such as malaria and dengue, and to mitigate the impact of these disease. The WHO promotes integrated vector management as an approach to achieve vector control objectives and reduce risks from and reliance on the use of pesticides. The WHO advises countries on the use of most effective and appropriate vector control tools and strategies for the control of vector-borne diseases. WHO has removed all pesticides that currently meet the first 7 HHP criteria other than DDT from its recommended list. DDT is currently covered by a WHO policy recommendation on its use in malaria vector control, however it is not prequalified by WHO for this purpose. DDT has been maintained due to the lack of suitable alternatives in a limited number of settings, and the WHO recommendation for its continued use is regularly reviewed to ensure that it will be removed as soon as possible. WHO prequalifies new vector control tools on the basis of efficacy, safety and quality assessments[12], and makes policy recommendations on their use in vector-borne disease control.

The WHO International Programme on Chemical Safety (IPCS) evaluates chemical hazards, including pesticides, and publishes objective information that helps informed decision making about chemicals. IPCS publishes The WHO Recommended Classification of Pesticides by Hazard (https://apps.who.int/iris/rest/bitstreams/1278712/retrieve) which was most recently updated for pesticide evaluations available up to 2019 and which provides the data for Criterion 1 of the HHP Criteria.

WHO has included HHPs among its 10 Chemicals of major public health concern, and has published a range of norms, guidelines, information and training materials. https://www.who.int/health-topics/chemical-safety#tab=tab_2 . WHO joined with FAO and UNEP in the development of the strategy to address highly hazardous pesticides in the context of the Strategic Approach to International Chemicals Management' (Box 3)

[12] https://www.who.int/pq-vector-control/en/

### *FAO and WHO partnership on pesticide risk reduction issues.*

The **FAO/WHO Joint Meeting on Pesticide Management** (**JMPM**) works as an advisory body to FAO and WHO on the lifecycle management of pesticide in agriculture and public health.

The JMPM supported the development of the eight criteria that define HHPs, the development of the International Code of Conduct on Pesticide Management in 2014 that included a definition of HHPs for the first time, and the Guidelines on Highly Hazardous Pesticides, among many other contributions.

Guidelines on Highly Hazardous Pesticides have been published by FAO and WHO under the International Code of Conduct on Pesticide Management (http://www.fao.org/3/a-i5566e.pdf) to help countries address HHPs including setting out eight criteria to identify HHPs (Box 1). These include three steps for taking action on highly hazardous pesticides: identification, risk assessment and mitigation.

The 2014 edition of the Code of Conduct had adopted the term 'Highly Hazardous Pesticides', stating in Article 7.5 that: *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'.*

Together with WHO, FAO published the brochure *Detoxifying agriculture and health from highly hazardous pesticides: A call for action* in 2019 *(*http://www.fao.org/3/ca6847en/ca6847en.pdf).

### *United Nations Environment Programme (UNEP)*

FAO, UNEP and WHO developed the 'Strategy to address highly hazardous pesticides in the context of the Strategic Approach to International Chemicals Management' (described below). The joint approach to address the significant risks of highly hazardous pesticides has made significant progress in implementing the strategy. The strategy emphasizes the promotion of agro-ecologically-based alternatives and strengthening national regulatory capacity to conduct risk assessment and risk management. UNEP, with FAO, WHO and other relevant stakeholders, are developing guidance on alternatives to highly hazardous pesticides. The collaborative work on HHPs is included in a review being prepared by UNEP on SAICM implementation to support policy discussions in the framework of the 'Beyond 2020' inter-sessional process[13].

UNEP is preparing a report on the environmental and health impacts of pesticides and fertilizers and ways of minimizing them, which refers to HHPs as a critical issue. This responds to the United Nations Environment Assembly's request (resolution UNEA 3/4 'Environment and health') that, given the lack of data in that regard, asked the Executive Director of UNEP in collaboration with WHO, FAO and other relevant organizations to present the report at the fifth session of UNEA.

The levels of POPs in human milk, ambient air and surface water are monitored in selected sites globally, and reported through the Stockholm Convention Global Monitoring Plan to inform the policy reviews

[13] An intersessional process (from ICCM4 to ICCM5) to prepare recommendations regarding the Strategic Approach and the sound management of chemicals and waste beyond 2020.
http://www.saicm.org/Beyond2020/IntersessionalProcess/tabid/5500/language/en-US/Default.aspx

both at international and national level. Further, tools were developed and technical assistance have been provided for countries to strengthen their laboratory POPs monitoring capacities.

Upon a request by the Conference of the Parties to the Stockholm Convention, UNEP, in collaboration with the Steering Committee of the Global Alliance for Alternatives to DDT and in close consultation with WHO, DDT Expert Group, the Secretariat of BRS Conventions and other stakeholders, developed a Road Map for the Development of Alternatives to DDT. The Road Map is an overarching and holistic framework for action, aiming to empower countries to use locally safe, effective, affordable and environmentally sound alternatives for a sustainable transition away from DDT including environmentally sound management and disposal of obsolete stockpiles of DDT. Based on the global road map, UNEP is currently implementing projects involving countries in Africa to develop and implement national road maps towards sustainable transition away from DDT.

### *SAICM and its strategy on HHPs*

Adopted by the first session of the International Conference on Chemicals Management (ICCM1) on 6 February 2006 in Dubai, the Strategic Approach to International Chemicals Management (SAICM) is a multi-sectoral and multi-stakeholder policy framework to promote chemical safety around the world.

SAICM's overall objective is the achievement of the sound management of chemicals throughout their life cycle so that by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health[14] UNEP has the overall administrative responsibility for SAICM secretariat, which is co-located with the UNEP cluster in Geneva, Switzerland.

At ICCM3, held in Nairobi in September 2012, over 60 countries and other participating organizations called for the Conference to support the development of a list of HHPs, a progressive ban of HHPs, and their substitution with safer alternatives. Whilst no decision was taken at the time, this discussion informed subsequent intersessional meetings and states, including a later proposal for a Global Alliance on HHPs.

Through the 'Strategy to address highly hazardous pesticides in the context of the Strategic Approach to International Chemicals Management'[15], SAICM stakeholders are encouraged to implement the HHP Strategy. SAICM secretariat, who works in coordination with the participating organizations of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), facilitates contributions of stakeholders to the implementation process.

This Global Action Plan provides a mechanism for delivering on the ICCM resolution IV/3, Addressing highly hazardous pesticides, at ICCM4 which:

> "*Encourages relevant stakeholders to undertake concerted efforts to implement the HHP Strategy at the local, national, regional and international levels, with emphasis on promoting agroecologically-based alternatives and strengthening national regulatory capacity to conduct risk assessment and risk management, including the availability of necessary information,*

[14] http://www.saicm.org/About/SAICMOverview

[15] Sustainable Development Goal 15; Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

*mindful of the responsibility of national and multinational enterprises; Welcomes the offer of the Food and Agriculture Organization of the United Nations, the United Nations Environment Programme and the World Health Organization to develop modalities for international coordination in the context of the Inter-Organization Programme for the Sound Management of Chemicals*;"

In addition, the SAICM Quick Start Programme has financed[16] through its multi-donor trust fund several projects to address HHPs in countries. These projects formed the basis of the FAO/WHO Guidelines on Highly Hazardous Pesticides and have removed many HHPs from use in countries in Africa and Latin America. For example, Costa Rica is taking steps to address HHPs supported by SAICM QSP and coordinated by Costa Rica's National University's (UNA) Regional Institute for Research on Toxic Substances (IRET). This included working with the National Secretariat for Chemicals Management. Costa Rica found that 79% of pesticide volumes imported into the country between 1980-2012 qualified as HHPs and 10,000 tons of HHPs were imported in 2015. Field trials were conducted using biological and IPM alternatives to control root-feeding nematodes in pineapple as alternatives to fungicide epoxiconazole for the control of coffee rust disease. HHP phase out is now one of the priority areas planned under the National Policy for Chemicals Safety in Costa Rica.

### *Community of Practice on HHPs*

The SAICM project 'Chemicals without Concern – towards safer products for our environment and health', funded by the Global Environment Facility (GEF), aims to accelerate progress and measure the adoption of national activities on emerging policy issues to achieve the SAICM 2020 goal and support planning for chemical management in the 2030 Agenda for Sustainable Development.
The knowledge management and stakeholder engagement component of this project focuses on developing a SAICM Knowledge Management Platform that is the repository of information for the sound management of chemicals, and a knowledge hub, where countries and other stakeholders can access the up-to-date information, and join communities of practices for peer-to-peer learning exchanges.

The aim is to build a multi-stakeholder platform that will bring the collaborative efforts of governments, industry, intergovernmental organizations, non-governmental organizations, consumers, and citizens. In addition, the project will enhance existing Communities of Practice on HHPs to address issues and foster discussions with relevant stakeholders on the sound management of chemicals and waste beyond 2020. University of Cape Town hosts discussion forums and coordinates outputs on behalf of the project.

### *UN Human Rights Council*

[16] http://www.saicm.org/Implementation/QuickStartProgramme/tabid/5523/language/en-US/Default.aspx

In 2017, a report presented to the UN Human Rights Council[17] pointed out that implementing the right to adequate food and health requires proactive measures to eliminate harmful pesticides. It went on to say that:

> '*while efforts to ban and appropriately regulate the use of pesticides are a necessary step in the right direction, the most effective, long-term method to reduce exposure to these toxic chemicals is to move away from industrial agriculture...Political will is needed to re-evaluate and challenge the vested interests, incentives and power relations that keep industrial agrochemical-dependent farming in place. Agricultural policies, trade systems and corporate influence over public policy must all be challenged if we are to move away from pesticide-reliant industrial food systems.'*

The same report pointed out that people and the environment are still being failed in terms of protection from hazardous pesticides. There needs to be an unambiguous approach from the leading agencies including FAO, WHO and UNE to call for significant reductions in the use of synthetic pesticides, with an emphasis on removing HHPs from use entirely. Coordinated action is needed to harness the resources and will of stakeholders at all levels to achieve a significant shift away from HHPs and towards agroecological farming methods. This includes global actors and frameworks, national authorities, the agricultural research community, the private sector, civil society and rural communities themselves.

### *The Inter-Organization Programme for the Sound Management of Chemicals (IOMC)*

IOMC is a coordinating body of eight UN organizations and OECD[18] that supports action on HHPs through its member Organizations including the production of the IOMC Toolbox for Decision Making in Chemicals Management within which the Pesticide Registration Toolkit (developed by FAO) resides. Resolution ICCM IV/3 invited appropriate organizations of the IOMC to facilitate the implementation of the 'Strategy to address highly hazardous pesticides in the context of the Strategic Approach to International Chemicals Management'.

### *The Rotterdam Convention*

The Rotterdam Convention is a multilateral environmental agreement (MEA) that promotes shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals, in order to contribute to their environmentally sound use and protect human health and the environment from potential harm. It facilitates information exchange about their characteristics, provides for a national decision-making process on their import and export and disseminates these decisions to the Parties. The Rotterdam Convention provides technical assistance to Parties regarding implementation. These efforts are important contributions in terms of reducing the unacceptable risk of hazardous agrochemicals. In addition to the benefits and obligations for all Parties, the Rotterdam Convention provides for developing countries and countries with economies in transition to make proposals for so called severely hazardous pesticide formulations producing severe health or environmental effects observable within a short period of time after single or multiple exposure under conditions of use. Guidance on how to monitor and report incidents leading to severe human health effects has been developed and a desk study on environmental effects will be available by the end of

[17] UN General Assembly. Human Rights Council, Thirty-fourth session 27 February-24 March 2017. Agenda item 3 Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development https://www.pan-uk.org/site/wp-content/uploads/United-Nations-Report-of-the-Special-Rapporteur-on-the-right-to-food.pdf

[18] The IOMC Participating Organizations are: FAO, ILO, OECD, UNEP, UNDP. UNIDO, UNITAR, WHO, World Bank.

2020.
(http://www.pic.int/Implementation/SeverelyHazardousPesticideFormulations/SHPFKit/tabid/3114/language/en-US/Default.aspx).

### *The Stockholm Convention*

The Stockholm Convention is a global treaty to protect human health and the environment from chemicals that are persistent, bioaccumulative and mobile in the environment. It requires the elimination or restriction of production and use, as well as the import and export of the POPs listed in Annex A and B to the Convention, several of which are POPs pesticides. Significant progress is being made in assisting countries to comply with the requirements of the Convention. Many POPs currently listed are being phased out. Currently, Parties to the Convention are to stop the production and use of seventeen Annex A or B listed agrochemicals.

### *The Montreal Protocol on Substances that Deplete the Ozone Layer*

Adopted in 1987, this MEA works to phase down the consumption and production of ozone depleting substances. The Montreal Protocol continues to be adapted over time as new knowledge and challenges emerge. The agriculture sector is important to the achievement of Montreal Protocol objectives. For instance, the pesticide Methyl Bromide widely used in agriculture in the past is a key target for Montreal Protocol phase out attention.

### *The European Union*

As one of the key global entities influencing pesticide regulatory policy, in November 2009, the European Union abandoned its former assessment model based on risks only, and introduced a new pesticide authorisation Regulation 1107/2009/EC,2 which emphasises the need to take intrinsic hazards into account. Accordingly, Reg. 1107/2009 stipulates that pesticides proven to be carcinogenic, mutagenic, toxic for reproduction and endocrine disruptors shall not be authorised in the EU.

In May 2020, the European Commission published *A Farm to Fork Strategy for a fair, health and environmentally friendly food system*. Among other objectives, it aims to reduce the overall use and risk of chemical pesticides by 50% and the use of more hazardous pesticides by 50% by 2030.

The EU Sustainable Use of Pesticides Directive (2009/128/EC) aims to achieve its objective in the EU by reducing the risks and impacts of pesticide use on human health and the environment and promoting the use of Integrated Pest Management (IPM) and of alternative approaches or techniques, such as non-chemical alternatives to pesticides. Many of the actions taken by Member States under the Directive are also relevant to the Biodiversity Strategy and the Farm to Fork Strategy, which includes the adoption of pesticide reduction targets, as mentioned. EU member states have drawn up National Action Plans to implement the range of actions set out in the Directive.

### *Public and private sector actors address HHPs*

Numerous public and private initiatives in production and distribution chains have developed their own prohibited or restricted lists for specific pesticides. ISEAL, for example, is the global membership association for sustainability standards[19]. Its members, such as Fairtrade International and the Better Coffee Platform, seek to strengthen certifications systems for the benefit of people and the

[19] https://www.isealalliance.org/

environment. They have a set of common core indicators that are monitored and mapped against the SDGs. Examples include farm characteristics, livelihoods, biodiversity, health and safety, water and resource management. In 2016, nine ISEAL members came together to form the Integrated Pest Management (IPM) Coalition with the aim of reducing and eventually eliminating the use of highly hazardous pesticides and promoting more sustainable alternatives. The members of the coalition[20] include organisations that, together, influence the practices of millions of farmers worldwide.

Progress on phasing out HHPs is strongly determined by the availability of cost-effective non-chemical approaches. Collaboration with researchers developing sustainable pest management options is an important component of this effort. For this reason, FAO has already established communications with the International Biocontrol Manufacturers International Association (IBMA), a trade association representing the manufacturers of Biocontrol solutions. The International Biocontrol Manufactures Association (IBMA) has over 254 members and is the global representative the biocontrol industry.

BioProtection Global (BPG) is a worldwide federation of biocontrol and biopesticides industry associations with regional associations of biopesticide manufacturers in Africa, Latin America and Asia

CropLife International states that more must be done by all stakeholders, to ensure the safe and responsible use of pesticides, especially highly hazardous pesticides (HHPs) in low income countries (LICs). It seeks to discuss its approach to HHPs with all stakeholders and establish a positive dialogue. It recently reviewed 6400 of its members' products used in LICs of which 15% were identified as HHPs, a proportion of which have since been withdrawn or additional measures taken.

### *Civil Society*

Civil society plays an important role in mobilizing action to remove HHPs from use. Pesticide Action Network International, for example, is a global coalition of around 600 NGOs in 60 countries. PAN International warmly welcomed the FAO's approach to HHPs and stated that it 'would like to encourage individuals, institutions, organizations and companies to develop a plan of action with priorities, timeframes and concrete measures' to eliminate HHPs.' PAN-UK and PAN AP have worked with the Secretariat of the Rotterdam Convention based in FAO to support the identification of HHPs and alternatives in a variety of settings e.g. supporting work to eliminate endosulfan from coffee production, and documenting alternatives to endosulfan, as well as providing assistance to countries to implement them.

IPEN (International Pollutants Elimination Network) is also a global network of public interest organizations working to improve chemicals policy. The influential network previously focussed on POPs pesticides only but has since expanded its range to address HHPs more broadly.

Nationally, civil society organizations play important roles in advocating for change and informing about changes that are being implemented. Consumer associations have been effective in many countries in calling for improved food safety standards that have led to pesticide bans and restrictions and changes

[20] UTZ, Better Cotton Initiative (BCI), Bonsucro, Fairtrade International, Roundtable on Sustainable Biomaterials (RSB), Global Coffee Platform (GCP), Golf Environment Organization (GEO), Sustainable Agriculture Network (SAN), Forest Stewardship Council (FSC).

in farming practices. Environmental groups have effectively monitored local impacts of pesticides on wildlife and environmental resources and advised regulators on otherwise unknown impacts. Organizations working in the health sector have also been able to report on pesticide poisonings and trends that might otherwise have been overlooked. Women's association, cooperatives and other community-based associations are also very active and play a key role in, for example, awareness raising.

The Centre for Pesticide Suicide Prevention (CPSP) works with a number of countries to connect high levels of suicide among farmers and rural communities with the widespread accessibility of HHPs. Where the pesticides found to be most commonly used for suicide are removed from use through regulatory action, suicide levels have been shown to fall dramatically without being replaced by other means of suicide. Similarly, agricultural production has not been negatively affected by the removal of HHPs[21].

## 1.3 Scope of the Action

This Global Action Plan on HHPs sets out to eliminate risks posed to users, the public and the environment from pesticides that are deemed to be particularly hazardous and which are described and defined below. Over the years, many measures have been developed to reduce or control risks from pesticides, yet the negative impacts of widespread pesticide use on health and the environment persist. This Global Action Plan will bring together key stakeholders and initiatives whose common objective is to eliminate the harm caused by HHPs. It will facilitate collaboration and set targets in order to bring about tangible and measurable reductions in deaths, illness, adverse environmental impacts, trade impediments and other harm linked to HHPs. Using the momentum of the SDGs, SAICM and the Beyond 2020 Process, and the actions of individual stakeholders, the intention of the Action Plan is to consolidate the efforts of different organizations and sectors into a coherent effort.

The current plan has been developed by FAO in collaboration with WHO and UNEP as a means of seeking consensus and collaboration to tackle the important issue of Highly Hazardous Pesticides. The main focus is on agricultural pesticides but uses of pesticides for vector control in the health sector, for domestic pest management, for the protection of materials and structures and for veterinary ectoparasite control may also be addressed by partners. The scope of the plan is ambitious. Its objectives are global and the intention is to mobilize a wide range of stakeholders from different sectors to work collaboratively to eliminate all risks from HHPs by 2030, to be aligned with the achievement of the 2030 Agenda for Sustainable Development.

[21] Duleeka Knipe, David Gunnell, Michael Eddleston, Preventing deaths from pesticide self-poisoning—learning from Sri Lanka's success, The Lancet, V5 July 2017

# 2. Stakeholders and Theory of Change

## 2.1 Stakeholders

Achievement of the goal and outcomes of this action plan requires a multi-stakeholder approach. These stakeholders include governments, academics and scientists, the pesticide industry, the food industry, farmers' organisations and civil society. Inter-sectorial collaboration including agriculture, health and environment is essential for effective results. In many cases, regional organizations play an important role in supporting national actions. International organizations including UN organizations, Convention Secretariats and financing bodies can also provide guidance and support for effective national actions. The following stakeholder groups have been identified by the Strategy in the context of SAICM[22]:

### *Regulatory authorities*

Government and regional authorities charged with regulatory control over pesticides and pesticide registration have a primary role in addressing HHPs. They can initiate reviews of registered pesticides and alter the registration status to restrict or cancel their use. They can also facilitate concerted national or regional action to review plant and health protection needs, enforce pesticide legislation, including inspection at border crossings and at points of sale, and develop policies.

### *Agricultural extension services and public health advisory services*

Agricultural extension services and specialized crop protection services usually have a good overview of the type of pesticides that are being used, for what reason and in what manner. As such, they may be able to provide information to regulators on the remaining legal and illegal uses of HHPs, use circumstances and possible alternatives. They also should play a key role in educating farmers on alternatives or other risk reduction measures and ensuring that the tools, knowledge and services required to support alternative approaches are in place.

### *Health services and poison control centres*

Public health services have a key role in ensuring that pesticides recommended or procured for disease vector control are appropriate and effective for the required situation, while minimizing risks to human health and/or the environment. Of note in LMIC, these services are often inadequately funded while the private sector or civil society organizations fill the gaps to achieve universal coverage of populations at risk of vector-borne diseases with a core vector control intervention.

Through health services and poison control centres, ministries of health have a major role in assembling data about poisoning incidences that can point at HHPs that require immediate attention. Information about pesticides and areas of use that are associated with high incidences of poisoning would allow for targeted interventions.

### *Farmers' organizations and networks*

Farmers are the ultimate managers of pests in agriculture and the main users of pesticides; they are the ones who need to understand the risks of using HHPs and possible alternatives in order to make informed decisions and take action to reduce the risks of adverse impacts on their health, the health of their communities and the environment. Extensive networks of farmers may extend to the national, regional and international levels. Such networks can have extensive knowledge of agroecological

[22] http://www.saicm.org/Portals/12/Documents/EPI/HHP%20strategy%20English.pdf

practices /organic farming, including traditional and indigenous knowledge. Such knowledge and depth of experience could be invaluable. The sharing of knowledge is best carried out through a farmer-to-farmer sharing and learning process via a community of practice, such as farmer field school (FFS) programmes. Study tours for farmers, YouTube interviews, social media applications, among other things, can also play a useful role.

*Trade unions and agricultural workers organizations*

End users, including farmers, agricultural workers and pesticide applicators, run the highest risk of exposure to HHPs in the course of their daily work, particularly where there is limited or no use of PPE or safety information. Trade unions and agricultural workers' groups and networks at the national, regional and international levels run campaigns for safer and healthier working conditions and environments. These efforts to create awareness and to curtail the exposure of workers to HHPs are important areas of action. The work of the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations in Africa provides a good example. It involved training and the monitoring of poisoning cases on large-scale plantations with an aim of enhancing compliance with the International Labour Organization conventions and the FAO/WHO International Code of Conduct.

*Private sector*

There is a particular role for food, fibre and renewable raw material processors, large-scale retailers and private standards organizations which determine protocols for growers that include instructions related to pest and pesticide management. Reasons for these entities to remove HHPs from the production chain include corporate or consumer demand related to socially and environmentally responsible production as well as residue requirements in the country of destination (for instance, many HHPs are no longer registered in the European Union, which means that any residues of such compounds on agricultural produce would lead to its rejection for import). This demand may also come from farmer organisations which cannot sell their produce to importing countries if it is contaminated with certain pesticides.

As mentioned in Section 1.2, ISEAL is the global membership association for sustainability standards[23]. Its members, such as Fairtrade International, Rainforest Alliance, Better Cotton Initiative and the Better Coffee Platform, seek to strengthen certifications systems for the benefit of people and the environment. ISEAL defines Codes of Good Practice for its members in setting standards, assuring compliance and monitoring impacts. These sustainability standards determine the pesticide and other practices that are used by many millions of farmers. These organisations are able to deliver changes in practice at farm level at a very significant scale.

The pesticide industry, which manufactures and formulates pesticides, carries important responsibilities with respect to the disclosure of information and protecting the safety of end users and the public, as outlined in the FAO/WHO International Code of Conduct on Pesticide Management. Companies have responsibilities to respond to global concerns and shift away from HHPs in favour of less hazardous products.

Of particular importance will be inclusion of industries that develop, manufacture and distribute alternative pest control tools such as traps, behavioural disruptants and biopesticides. Registering and using non-chemical 'pesticides' requires processes that are significantly different to those that apply to

[23] https://www.isealalliance.org/

chemical pesticides. Promoting alternatives therefore needs the accompaniment of knowledge from producers and experienced users.

Other private sector entities have responsibilities for, and should be invited to contribute to risk reduction efforts, including owners and operators of primary agricultural production facilities (plantations, greenhouses, farms, etc.).

### *Civil society*

Non-governmental organizations within the SAICM community have highlighted the need for action on HHPs in order to protect the health of pesticide users and rural communities exposed to pesticides in their living and working environments, consumers of food carrying pesticide residues and the environment, including biodiversity that is vital to agroecological production. PAN and the International Pollutants Elimination Network (IPEN) have proposed that HHPs should be explicitly listed to better inform pesticide regulators and users; that alternatives to HHPs, particularly non-chemical ecosystem approaches to pest management, should be identified and information about them disseminated; that regulator capacity in LMICs should be strengthened to prioritize action to reduce the risks associated with HHPs; and that farmers should be encouraged and supported on integrated pest management and other agroecological pest management strategies.

SAICM stakeholders noted that in LMIC there are few non-governmental organizations working, or with the requisite capacity, to conduct activities for monitoring pesticide impacts at the local level. The HHP strategy welcomed by SAICM seeks to encourage governments, the private sector and academia to develop and strengthen this type of work by non-governmental organizations[24].

National Consumer Associations can play important roles in advocating for higher food safety standards and raising awareness among the general public and the business community.

### *Academics and scientists*

Academics and scientists play a vital role in developing new agroecological methods and alternatives to HHPs, understanding the impact of interventions and providing information and evidence both about the impacts of HHPs and effective agroecological approaches to pest management, and in working alongside UN organisations and informing decision makers in national and global organisations. Many university research groups around the world have highlighted the need to phase out HHPs. It is essential that they are involved in the effort to tackle HHPs and that systems are in place to disseminate their work and enable farmers to access information regarding best practice.

### *Intergovernmental Organizations*

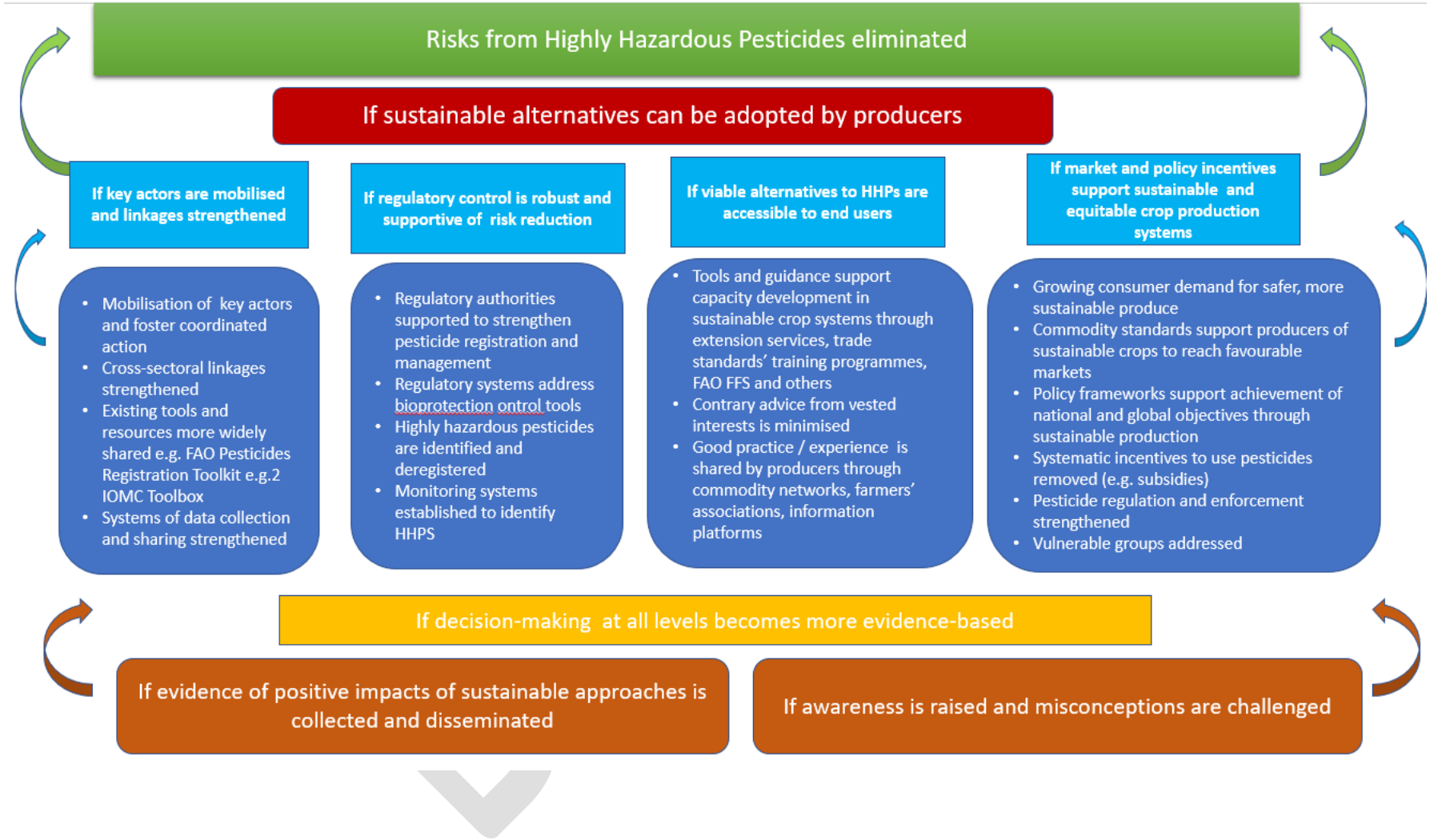
UN agencies and the OECD that are members of the IOMC[25] have been supporting action on HHPs. In particular FAO, WHO and UNEP have all been leading initiatives to act on HHPs in response to demands from their Member States. ILO hosts several conventions, codes of practice and training materials aimed at identifying and eliminating risks in the workplace derived specifically from pesticides. UNDP is actively engaged in a number of efforts, including the green commodity programme. The UNDP Green Commodities Programme works in eleven countries in Africa, Pacific and Latin America to help address

[24] Strategy to address highly hazardous pesticides in the context of the Strategic Approach to International Chemicals Management: Paragraph 24 – adopted as Resolution IV/3 of ICCM4, October 2015

[25] Inter-Organization Programme on the Sound Management of Chemicals whose members are FAO, ILO, OECD, UNEP, UNDP. UNIDO, UNITAR, WHO, World Bank.

the sustainability problems of vital commodities including cocoa, coffee and pineapple. The programme facilitates the establishment of National Commodity Platforms led and owned by governments. The programme supports companies and governments operating in producer countries to pilot innovative ways of assisting farmers to adopt sustainable practices.

## 2.2 The Theory of Change



# 3 Global Action Plan Framework

## 3.1 Goal

The goal of this Action Plan is to facilitate action on the part of national and other decision makers to eliminate risks from HHPs by 2030 in alignment with the SDGs.

## 3.2 Objectives

In order to achieve the goal of this action plan, the objectives will be:

- To mobilize key actors and strengthen linkages and communications between them
- To foster regulatory actions on HHPs
- To address market and policy incentives to support sustainable and equitable crop production systems and to bring new tools to the market.
- To ensure that viable alternatives to HHPs (i.e. safe, sustainable, affordable methods) are being developed and made accessible to end users

## 3.3 Expected Outcomes

- Prevention of deaths and ill health from exposure to HHPs[26]
- Protection of human rights through the removal of HHPs from workplaces, communities and environment
- Smallholder livelihoods and productivity are sustained and costs of production reduced
- The decline in biodiversity and ecosystem services caused by HHPs is halted
- Contamination of food, water, air and soil by HHPs is prevented
- Governance, evidence-based decision-making, and regulatory enforcement for pesticides are strengthened
- Economic impacts that result from HHP pollution[27] are eliminated
- Improved food safety, free of HHP residues, is available to consumers worldwide
- Trade losses resulting from HHP residues are prevented
- An enabling environment is established for innovative and sustainable food systems based on agroecological production methods.

## 3.4 The HHP Coalition

An inclusive, active and low-cost coalition of stakeholders is needed to eliminate the harm of HHPs. This is best achieved by establishing a broad, online coalition with minimal secretariat based at FAO and few or no physical meetings. The HHP Coalition will bring together global and regional actors (including FAO, WHO, UNEP, the secretariats of the MEAs), policy makers, regulators, private sector, researchers and civil society to address HHPs, including the SAICM Knowledge Hub[28]. Given that Coalition Partners are already working on topics relevant to this Action Plan, the main functions of the Coalition will be:

[26] This includes all types of exposure scenarios, accidental or deliberate (e.g. suicide). It also addresses acute and chronic health impacts.

[27] May include cleanup costs for contaminated water, soil or other resources, health care costs, costs of replacing livestock or ecosystem services, etc.

[28] https://sdg.iisd.org/tag/saicm-2020/

- to coordinate actions to avoid duplication
- exchange information on positive and negative lessons learned
- identify gaps and actions to address them
- mobilize additional actors in support of the Action Plan

## 3.5 Activities

The HHP Strategy was developed by FAO, UNEP and WHO in consultation with Strategic Approach stakeholders. It identified several issues concerning HHPs that are in need of concerted action including:

- sharing information;
- identification of HHPs;
- regulatory control, and;
- developing / mainstreaming alternatives.

These issues are all addressed here. In addition, important issues have emerged that broadly come under the heading 'market and policy incentives'. Maximum Residue Limits (MRLs), for example, have been a very significant driver towards the replacement of HHPs in countries producing crops for export to regions with robust enforcement of MRLs, in order to meet the requirements of these markets, and it is addressed in this Action Plan. Many sustainability standards including ISEAL members, are also working to phase out HHPs from their supply chains and to build consumer awareness and markets for sustainably grown produce. They have significant influence over the pesticide products used by millions of producers worldwide. Therefore, a focus area that covers such market and policy related issues has been introduced.

The Action Plan sets out mutually reinforcing actions which will attract the support and concerted action of key stakeholders in the HHP Coalition to achieve significant impact on HHPs by 2030. Specific targets have been proposed for each group of actions to measure progress and ensure progress towards the agreed objectives of the Plan.

Many of the actions will support global efforts to deliver on SDGs, including, as examples:

- SDG 12.4: 'By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment'.
- SDG 12A: 'support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production.'

1. *Mobilisation and coordination of key stakeholders*
    - FAO will invite other UN organizations, including UNEP and WHO to join in establishing a multi-stakeholder HHP Coalition with agreed constitution and Standard Operating Procedures
    - The constitution and operating procedures will set out the roles and responsibilities of those involved in the coalition, which are envisaged to include:

- Make efforts to raise awareness of stakeholders of the risks of highly hazardous pesticides, and prioritizing IPM/IVM that makes optimal use of agro-ecological approaches and reduced reliance on pesticides (All)
- Collect and share information about viable alternatives to highly hazardous pesticides, including cultural and environmental management measures, biological controls, biopesticides or less hazardous pesticides, within and beyond the HHP Coalition, including in the SAICM Knowledge Hub[29], the FAO Agroecology Knowledge Hub and other relevant platforms (All)
- Information on published pesticide assessments and MEA Convention listings which indicate that pesticides meet Criteria 1-7 will be made available (FAO)
- Publish guidance on identifying pesticides under HHP Criterion 8 (FAO/WHO)
- Coalition partners to identify pesticides in registered / approved lists that meet the HHP criteria and take steps to reduce the risks (All coalition partners with such lists)

Progress against agreed indicators will be reviewed on a regular basis, including, for example:

- An active HHP Coalition established with agreed constitution, SOPs and regular online discussions with at least 50% participation by July 2021 (FAO/All)
- Share new information on websites and other media about viable alternatives to highly hazardous pesticides by July 2021 (All)
- Information about pesticide assessments which are relevant to criteria 1-7 is publicly available by April 2021 (FAO)
- Identify pesticides in use and take steps to eliminate the risks from these products by December 2023 (All)

*2. Robust and supportive regulatory control*

- Convention Secretariats will alert Parties of international multilateral environmental agreements on chemicals to their commitments and obligations to transmit relevant information (Convention Secretariats)
- FAO will provide guidance and technical support to governments seeking to strengthen pesticide registration schemes, risk assessment and reviews of registered pesticides (FAO)
- FAO and other coalition partners will support national regulators wishing to identify alternatives and take action to remove HHPs from their registers (FAO)
- Guidance and technical support will be provided to governments seeking to identify opportunities to strengthen their regulatory frameworks and enforcement with regard to the pesticide lifecycle (FAO)
- Guidance will be provided to health and occupational health professionals to identify, treat and report incidents of pesticide poisoning and to promote efficient surveillance and identification of highly hazardous pesticides (FAO/WHO, relevant civil society organization) NB This action could support countries to report against SDG 3.9.3 concerning mortality rate attributed to unintentional poisoning
- Guidance and technical support provided to governments seeking to establish regulations and procedures for the registration of bioprotection solutions (Producers of Bioprotection

[29] https://sdg.iisd.org/tag/saicm-2020/

products, all coalition partners to share relevant experience; FAO to respond to requests from countries for technical support)

- Coalition partners will identify pesticides in their registers / supply chains that meet HHP criteria, including using the guidance produced by FAO, UNEP and WHO to identify pesticides that meet criterion 8 (All coalition partners).
- Relevant Coalition partners will commission need and risk assessments for identified HHPs. Guidance on the scope of such assessments can be found in the FAO/WHO Guidelines on Highly Hazardous Pesticides and in the Pesticide Registration Toolkit. Where data for risk assessments does not exist, steps will be taken to generate the necessary data (National regulators, Sustainability Standard operators)
- FAO will regularly update a database of national regulators (FAO)
- FAO will offer technical support to regional pesticide regulatory bodies and to national authorities which are seeking to establish regional regulatory arrangements where they do not yet exist (FAO)
- Coordinate coalition partners' efforts to establish effective systems for monitoring and reporting environmental and health impacts of pesticides in order to identify HHPs (FAO, WHO, UNEP, ILO)
- FAO will encourage national regulators to assess the usefulness of the FAO Pesticide Registration Toolkit for the evaluation process and provide feedback to FAO

Key indicators:

- Number of regulatory authorities that have strengthened their pesticide registration processes and / or taken steps to reduce risks from HHPs throughout the pesticide lifecycle
- Increased transmission of information by parties to multilateral environmental agreements on chemicals in line with their commitments and obligations and SDG 12.4.1
- Increase in number of countries and other entities monitoring the impact of pesticides on human health and the environment
- Increase in number of countries with operational systems for the evaluation and registration of bioprotection products
- Increase in number of HHPs for which other risk reduction measures are implemented at scale
- % drop in volume sales in HHPs annually
- The existence and completeness of the database of national regulators.

3. *Addressing market and policy incentives to support sustainable and equitable crop production systems and to bring new tools to the market.*

- Sustainability standards and other supply chain operators and coalition partners will identify HHPs in their lists of authorised / recommended pesticides and support risk mitigation measures including seeking viable alternatives (Regulators, Operators of sustainability standards)
- Coalition partners will work to improve access to safe and sustainable alternatives by end users (All)

- Support national authorities wishing to review policies and legislation concerning pesticides to:
    - Remove incentives for pesticide use
    - Introduce incentives for bioprotection solutions / agroecological alternatives
    - Promote agroecological approaches through policy instruments, extension services and communications with stakeholder groups
    - Improve food safety
    - Support growers to meet international standards on MRLs
    - Encourage research organisations to address policy priorities and farmer needs in order to generate low risk, agroecological solutions

  (FAO and other Coalition partners)

- Address the particular challenges facing groups that are highly vulnerable to exposure to HHPs, including children, women and casual agricultural labourers (All)

Key indicators:

- Reduction in rejections of exports due to exceeding MRLs by x%
- Reduction in residues of HHPs in food crops by x%
- The removal of incentives for pesticide use in national policies

4. *Ensure that viable alternatives to HHPs (i.e. low risk, viable, sustainable, affordable methods) are being developed and made accessible to end users*

Coalition partners will:

- Promote and support the identification, piloting and mainstreaming of alternatives to HHPs based on IPM/IVM methods underpinning agroecology and integrated vector management (All)
- Support Farmer Field Schools or other effective training initiatives to build capacity of end users to adopt alternatives including integrated / agroecological options, while maintaining livelihoods (All)
- Help to identify and address gaps in research, advocating and supporting the development, testing and adaptation of integrated, crop-specific and whole farm strategies, making efficacy and economic comparisons part of the feasibility testing process (All)
- Address barriers preventing farmers from accessing viable alternatives (Regulators, Private Sector)
- Ensure information provided to farmers, regulators and other stakeholders is evidence based. Contrary advice from vested interests will be challenged (All)
- Develop and disseminate targeted communications to promote safe, sustainable and affordable alternatives (All)

Key indicators:

- 50m farmers[30] give priority to IPM/IVM that makes optimal use of agro-ecological approaches and reduces reliance on pesticides by 2030
- An additional 25m end users adopt other risk reduction measures with respect to HHPs
- Uptake of bioprotection products increased by x% globally



[30] This represents approximately 10% of small/family farms globally

## Sustainability and financing mechanisms

FAO currently implements HHPs related activities with funding from the European Union, the Global Environment Facility, the Swedish Chemical Agency and its own resources.

The financial sustainability of the Global Action Plan and the achievement of its ambitious outcomes lie in the existence of a multi-faced funding mechanism that includes development partners, national governments, regional economic organizations and the private sector as well as other coalition partners to the extent possible. The Global Action Plan, through existing and prospective funding, will provide the initial resources to build the capacities and lay down the conditions for beneficiary governments to mobilize internal resources towards sustainable agriculture production. It is crucial that in the starting phase development partners and donor agencies sustain national governments, with technical and financial support, in creating the appropriate financial mechanisms to fund interventions at national level. Regional organizations should also collaborate to foster regulatory and financial mechanisms for the promotion of sustainable agricultural practices.

At the core of the financial sustainability, however, there is the acknowledgment that the current costs of HHPs and other agrochemicals do not internalize their associated social and environmental costs. HHPs in developing countries are perceived as effective and cheap, while alternatives, when available, are perceived as more expensive. Because of existing and nationally incentivized agrochemicals markets that focus on a product's performance and price, there is limited interest of the private sector in innovating and registering new and more environmentally sound products. Some policy frameworks for agricultural production and value chain enhancement clearly incentivize unsustainable production practices and large chemical use. Private financial institutions tend to provide loans and other financing mechanisms to producers that are able to guarantee certain production levels and *de facto* encourage unsustainable production methods reliant upon agrochemicals.