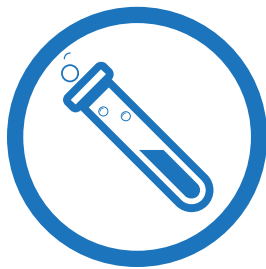


Report of the 16th FAO/WHO Joint Meeting on Pesticide Management

Geneva, Switzerland and online, 6–10 November 2023





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Abbreviations and acronyms

| | |
|---------------|-----------------------------------------------------------------------|
| CLI | CropLife International |
| FAO | Food and Agriculture Organization of the United Nations |
| HHP | highly hazardous pesticide |
| ICCM5 | fifth session of the International Conference on Chemicals Management |
| IITC | International Indian Treaty Council |
| JMPM | Joint Meeting on Pesticide Management |
| JMPR | Joint Meeting on Pesticide Residues |
| JMPS | Joint Meeting on Pesticide Specifications |
| OECD | Organisation for Economic Co-operation and Development |
| PAN UK | Pesticide Action Network United Kingdom |
| UNEP | United Nations Environment Programme |
| WHO | World Health Organization |

1. Introduction

The 16th FAO/WHO Joint Meeting on Pesticide Management (JMPM) was hosted by the World Health Organization (WHO) at its headquarters in Geneva, Switzerland on 6–10 November 2023. It was a hybrid meeting in which participants met physically or joined electronically.

The meeting agenda included the following items:

- summary of developments and actions taken since the previous (15th) JMPM meeting (Rome, 15–18 November 2022);
- review of actions and recommendations from the 15th meeting;
- review of guidance under development;
- planning for the development of new guidance and review of existing guidelines;
- emerging and priority issues in pesticide management, including gaps, challenges and future directions for the Food and Agriculture Organization of the United Nations (FAO) and WHO;
- revision of the International Code of Conduct on Pesticide Management (2014) (“the Code of Conduct”); and
- any other business.

The recommendations of the JMPM are listed in [section 13](#) of this report.

2. Opening of the meeting

Mr Raman Velayudhan (Head, Veterinary Public Health, Vector Control and Environment unit, WHO Global Neglected Tropical Diseases Programme) and Mr Gu Baogen (Senior Agricultural Officer, Pest and Pesticide Management, FAO Plant Production and Protection Division) welcomed the WHO and FAO panel members and observers to the meeting on behalf of the FAO/WHO secretariat. Ms Rorisang Mantule (Ministry of Agriculture and Food Security, Lesotho) and Mr Mohammed Jamal Hajjar (King Faisal University, Saudi Arabia) were introduced as newly appointed panel members for FAO. Several members and observers participated online (see List of participants in [Annex 1](#)).

WHO and FAO received and reviewed the declarations of interest from all JMPM panel members participating in the 16th meeting of the JMPM and concluded that none could give rise to a potential or reasonably perceived conflict of interest related to the subjects discussed at the meeting.

The United Nations Environment Programme (UNEP) has confirmed that it will join the JMPM secretariat, which will ensure that the environmental issues in pesticide

management are adequately addressed. Once UNEP has formally joined, the terms of reference of the JMPM and its panel members will be finalized.

In his opening remarks, Mr Jérôme Salomon (Assistant Director-General, WHO Universal Health Coverage, Communicable and Noncommunicable Diseases division) welcomed the FAO and WHO panel members, invited observers and members of the FAO/WHO joint secretariat to the 16th meeting. He said that large amounts of pesticides are used to control disease vectors and agricultural pests. The use of unregulated, counterfeit and low-quality pesticides poses a serious threat to human health and food security, and many shortcomings in pesticide life-cycle management have become evident from around the globe. Huge stocks of obsolete pesticides, and inadequate capacity for their sound disposal, are a threat to human health and the environment. While pesticide products continue to be needed to protect people from vector-borne diseases and to protect crops from agricultural pests, their production, transportation, storage and use must be regulated through sound management practices. The Code of Conduct serves as a voluntary guiding framework for all pesticide management activities. Within this framework, the JMPM has contributed to the development of valuable guidance documents. However, there remains a strong need to build capacity within countries and regions on sound pesticide management approaches in accordance with the Code of Conduct. Mr Salomon thanked the JMPM for its continuing technical support and officially opened the 16th meeting of the JMPM.

3. Adoption of the agenda

The participants adopted the agenda for the meeting as presented in [Annex 2](#).

4. Meeting procedure

Mr Michael Eddleston (WHO panel member, University of Edinburgh) and Ms Helena Casabona (FAO panel member, Swedish Chemicals Agency) were nominated as co-Chairs of the meeting. Ms Hanna-Andrea Rother (WHO panel member, University of Cape Town) and Ms Friederike Breuer (Agricultural Officer, FAO) were appointed as rapporteurs. Ms Rother also served as co-Chair for the Thursday afternoon and Friday morning sessions. Mr Henk van den Berg (Wageningen University, Netherlands (Kingdom of the)) was appointed as report writer. The meeting was recorded for reporting purposes only. Meeting documents and presentations were shared among the participants in an online folder. Participants were encouraged to propose specific recommendations for consensus, which would be listed by the rapporteurs for decision-making and for inclusion in the formal recommendations by the JMPM panel in its final closed session.

5. Developments and actions since the 15th JMPM meeting

Reports on progress made since the previous (15th) meeting of the JMPM were presented by representatives from several organizations.

Mr Rajpal Yadav (WHO Temporary Adviser) and Mr Richard Brown (WHO Chemical Safety and Health unit) presented progress of work by WHO units and regional offices. Two JMPM publications on pesticide management were produced in the past one year: Guidance on use of pesticide regulation to prevent suicide (1); and Guidance on the monitoring and observance of implementation of the Code of Conduct (2). The second edition of the WHO aircraft disinsection methods and procedures (3), and a course module on public health pesticide management (4) have also been published. Moreover, progress was made in publishing several new guidance documents on insecticide resistance monitoring for specific disease vectors and manuals on operational vector control. Country support included various activities on vector control and pesticide regulation to prevent suicide, and the certification of good-laboratory practice laboratories for quality-assured testing of vector control products in five countries across the WHO regions. WHO prepared and implemented a training package on Children's health and the environment and provided support for poisons centres in several countries. The World Health Assembly adopted a resolution on the health of Indigenous Peoples (5), with a plan of action to support Member States in delivering on commitments to Indigenous Peoples' health. The World Health Assembly also adopted a resolution on the impact of chemicals, waste and pollution on human health (6), which recognizes health consequences of highly hazardous pesticides (HHPs)¹ and the need to prevent pesticide suicide, which gives WHO a mandate to work on HHPs. The WHO Mental Health unit supported several countries to reduce suicide by HHPs. Progress made by the WHO Eastern Mediterranean Region and the WHO African Region was presented, which included various activities in relation to integrated vector management, insecticide resistance monitoring and pesticide waste management; however, lack of resources was highlighted in the regions for capacity-building on pesticide management. In the ensuing discussion, several key issues were raised, which are included in [section 12](#).

Ms Breuer reported on recent progress made by FAO. The FAO/WHO Joint Meeting on Pesticide Specifications (JMPS) and the FAO/WHO Joint Meeting on Pesticide Residues (JMPR) made substantial progress in setting standards, including on microbial pesticides. Under the normative work for JMPM, the endorsed Guidance on aerial application is in the electronic publishing system. Several country and regional trainings on the pesticide registration toolkit have been held, and e-learning modules on registration, HHPs and some other topics have been developed; some new modules are under development. Also, new modules were developed for the pesticide registration toolkit. A webinar was held on pesticide suicide prevention, and several trainings were conducted at

¹ Pesticides that meet the HHP criteria agreed by the JMPM.

country or regional level on topics such as pesticide waste management, risk reduction, biopesticides, integrated pest management (IPM) and mass production of microbials. Support was provided for the development of regional strategies on HHPs.

Regarding progress under the Rotterdam Convention, Mr Gerold Wyrwal (FAO) summarized the achievements on decisions and guidance on several pesticides; capacity-building on registration, HHPs and pesticide exposure; and projects on collecting data on pesticide poisoning. The FAO regional offices in the Latin America and the Caribbean, Asia Pacific, Africa, the Near East and North Africa regions, and in Europe and Central Asia reported on progress in implementing numerous activities on capacity-building on pesticide management, including training for regulators and operators on risk reduction, registration, biopesticides, HHPs and waste management, and support for strengthening legislation and disposal of pesticide waste.

Ms Mihaela Paun (Chemical and Health branch, UNEP) summarized UNEP's activities related to pesticide management. UNEP's guidance on HHPs has been finalized, and fact sheets have been published on several pesticides in relation to the targets under the Global Framework on Chemicals. One participant queried how UNEP guidance is coordinated with JMPM's guidance, and FAO clarified that the coordination is expected to improve once UNEP formally joins the JMPM secretariat (see [section 12](#)).

Several JMPM panel members made informative presentations on the situation of pesticide management within their respective countries and networks, including from China, India, Indonesia, the European Union, Latin America, South Africa and the United States of America. They reported nano-pesticides, drone application, Internet sales and RNA interference (RNAi)-based pesticides as emerging issues in pesticide management.

Representing the Industry, Mr Christoph Neumann reported that CropLife International (CLI) released a new version of the guidance for Industry on the implementation of the Code of Conduct, updated its stewardship strategy and produced several guidelines and training manuals on pertinent issues such as drones, resistance management, container management and HHPs. CLI directs its support towards selected countries for strengthening of infrastructure for pesticide management, for example, for poison centres and pesticide container management. Studies are ongoing to assess the effectiveness of the training programmes by CLI.

Ms Sheila Willis gave an overview of recent work from Pesticide Action Network UK (PAN UK), starting from the farmer level, through their support for organic farmers in Benin and Ethiopia. PAN UK produced information materials on alternatives to paraquat and glyphosate. Using PAN's mobile App, data on acute pesticide poisoning have been collected in 11 countries, demonstrating evidence of high but variable poisoning rates across countries. PAN UK also produced information briefings for decision-makers in relation to biodiversity, the Global Alliance on HHPs and online pesticide sales, among other topics.

Mr Tadesse Amera from the PAN-Ethiopia and International Pollutants Elimination Network (IPEN) outlined recent work in supporting situational analyses on HHPs in countries across three regions. Provisional results from six African countries showed that large numbers of HHPs were registered in some countries. IPEN has been supporting national policy initiatives towards the phasing out of HHPs.

Ms Jane Richardson provided an overview of the activities of the Organisation for Economic Co-operation and Development (OECD). Guidance has been developed on human health risk assessment for RNAi-based pesticides; guidelines have been developed for testing microbial pesticides; efforts have been made to accelerate the registration process of microbial pesticides. A literature review and ongoing work on risk assessment was conducted for drone application, and capacity-building was conducted to counter illegal trade in selected countries.

6. Review of follow-up action plan

Ms Breuer presented a brief review of the implementation of the follow-up action plan for the period since the 15th meeting of the JMPM in November 2022.

The Guidance on use of pesticide regulation to prevent suicide was reviewed and endorsed, and the document has now been published (1). A new draft of the Guidance on options for reducing risk when phasing out pesticides has been prepared for presentation to the 16th JMPM. The comments on the first draft of the Guidance note on illegal trade of pesticides were received, and work is to be continued by FAO. The comments on the revised draft of the Guidance note on online sales of pesticides were included in a new draft for presentation and discussion at the 16th meeting of the JMPM. The concept of a Guidance note on drone application is to be followed up.

The Guidance on aerial application of pesticides has been endorsed through electronic correspondence and is now in the publication procedure with FAO; a review of the use of this document is ongoing in several countries in the Caribbean. The initial draft of the Guidance on data requirements for the registration of pesticides was updated after discussion with a broader group and was ready for endorsement by the JMPM panel members. As a matter of priority, the revision of the Guidance on developing a reporting system for health and environmental incidents has been initiated, a drafting group has been established and work is to be continued.

Regarding the development of new guidance, JMPM at its 15th meeting recommended preparation of guidance on risk communication, protection of Indigenous Peoples, nano-pesticides, online sales (to expand on the guidance note) and illegal trade (to expand on the guidance note). In earlier meetings, several additional topics for new guidance or for revision of existing guidance had been proposed but these have not been followed up so far.

Limited progress has been made regarding the JMPM recommendation to monitor and evaluate the uptake and use of the guidance documents. To improve the user-friendliness of FAO/WHO guidance on pesticide management, a pilot project is ongoing by FAO with support of the Swedish Chemicals Agency.

A webinar on pesticide regulation to prevent suicide was held on 4 September 2023 to enhance communication and raise awareness of the new guidance. However, the recommendations of the 15th JMPM meeting to establish a pesticide management community and to improve visual mapping of guidance documents remain outstanding.

The formal process of revising the Code of Conduct, which was recommended by the 14th JMPM, is yet to start. Regarding the recommendation by the JMPM at its 12th meeting to develop a module on data requirements for biopesticides as part of the registration toolkit, a new module on microbials was started, and e-learning courses are under development. Also, FAO has been supporting the European Union Task Force on Fast Track Registration of Biocontrol Agents.

A working group has been established to finalize the action plan on HHPs, a new structure has been agreed and a first draft was prepared. Despite the expiry of the Letter of Intent in October 2023, the cooperation between FAO and CLI has been only ongoing with the focus on the disposal of obsolete stocks and empty container management.

The procedure of UNEP formally joining the JMPM secretariat, which aims to enhance JMPM's engagement with environmental assessment and risk management, is in its final stage of approval.

7. Review of new guidance under development

7.1 Guidance on online sales of pesticides

The status of the guidance on online sales of pesticides was presented by Mr Tao Chuanjiang (FAO panel member, Ministry of Agriculture, China), together with Mr Zhang Wenjun (Invited Speaker, Ministry of Agriculture, China) and Ms Breuer. Following the 15th meeting of the JMPM, two review rounds were conducted, and a fifth draft of the document was shared for discussion by JMPM at its 16th meeting. The working group also presented the subject for discussion in the forum of the University of Cape Town Pesticide Network, which provided useful insights into what is needed at country level.

The current version of the document now includes definitions; references to other relevant guidance documents; and new sections on shipping, delivery and transportation. The chapter on "Considerations for the regulation of pesticide

online sales” constitutes the main content of the document, in which advertising, supervision and enforcement have been emphasized. Country examples have been removed from the document because of the differences in the existing legislation between countries.

The JMPM participants commented that the document has been substantially improved. Nonetheless, several suggestions for further strengthening the content were provided by several participants:

- The Guidance should emphasize the central importance of e-commerce platforms as the main responsible actors in controlling who they allow to list to sell pesticides online. These platforms urgently need guidance on best practices on sales, to set an example for other potential e-commerce platforms.
- The Guidance should emphasize that regulatory requirements for traditional pesticide sales generally apply to online sales.
- Practices should avoid involvement with illegal sellers and the use of unsound methods of transport and delivery. Best practices could include the requirement that sellers need to submit their identify, a valid license and the use accredited transporting or delivery services.
- Buyers could be required to identify themselves and to specify the intended use and PPE, and packaging should be adapted according to the individual use.
- The aspect of enforcement, the capacity needed, and how this is implemented in practice, requires more attention in the document. For example, a recent study on online pesticide sales by PAN Asia-Pacific in Malaysia showed that substandard packaging and mishandled deliveries resulted in pesticide exposure and spillage, posing health risks to the recipients (7).
- The section on advantages of online sales is contentious and unnecessary for the purpose of this guidance.

Furthermore, the participants observed that the current 32-page version provides a level of depth and detail that goes beyond the requirements for a Guidance note, as was initially intended. Mr Gu explained that a Guidance note is a short document to provide information and raise awareness about an urgent issue that can be available in the short term, whereas a Guidance document is an international policy document that provides details including on regulation practice.

The JMPM recommended that FAO and WHO define as soon as possible the scope and key issues for a Guidance note versus a Guidance document by means of a brief communication.

Given the demand for guidance, the participants noted that a short Guidance note on online sales, which addresses the main issues regarding the e-commerce platforms, should be available to countries as soon as possible but that the title of the Guidance note should not refer to “regulation”.

In addition to a Guidance note, the JMPM at its 15th meeting had suggested that there is value in producing a substantive Guidance document that includes regulation practice. Even though the current document covers regulatory aspects, with links given to the relevant regulatory documents, it was commented that a Guidance document should address accountability issues, describe what relevant legislation should look like, and discuss the practice of how to implement the regulations. These aspects will require more attention.

The JMPM recommended that the current draft of the Guidance note on online sales of pesticides be converted to a full Guidance document; in the meantime a short Guidance note should be prepared from the current draft document for endorsement at the first JMPM Intersessional Meeting in 2024.

7.2 Guidance on developing a reporting system for health and environmental incidents

The JMPM at its 15th meeting had recommended the revision of the 2009 Guidelines on developing a reporting system for health and environmental incidents resulting from exposure to pesticides. Participants suggested starting with a combined guidance on health and environmental incidents with the option of breaking it into two when needed. A working group had provisionally been formed in 2022 but there has been no follow up. WHO has indicated that support could be given by its technical staff to assist in developing the guidance, using WHO's experience in developing a related guidance on suicide surveillance. The structure of such guidance could be used to start developing the new guidance document. At the 16th meeting of the JMPM, a new working group was formed.² One participant noted that health indicators are well developed whereas environmental indicators and the scope of environmental reporting need further work. One participant suggested that gender-disaggregated reporting on health incidences should be included. In conclusion, the JMPM suggested that the FAO/WHO secretariat follow up on the revision of the Guidance on a reporting system for health and environmental incidents under the lead of Ms Nosiku Munyinda (WHO panel member, University of Zambia).

7.3 Guidance note on application of pesticides by drones in agriculture and vector control

In the recently endorsed Guidance for aerial application of pesticides, it was decided to exclude drone application because of the lack of a working definition on drones. However, the JMPM in previous meetings, starting from its 11th meeting in 2018, expressed the need to develop guidance on drone application, as also requested by several stakeholders, because this technology is rapidly expanding across countries in the regions. The FAO/WHO secretariat has searched for

² Working group composed of Mr Tao Chuanjiang, Ms Nosiku Munyinda (Chair), Mr Christoph Neumann, Ms Mihaela Paun, and Ms Sheila Willis.

expertise on the subject but so far without success. In recent communications, CLI and the OECD offered to enquire within their networks about interest and available expertise to contribute to development of the Guidance note.

In the discussions that followed, Ms Rachel Merrick (Invited Speaker, Health and Safety Executive, United Kingdom of Great Britain and Northern Ireland) offered to assist in the search for expertise or collaboration from within the OECD's Drone ad hoc group and the Health and Safety Executive, and to assist in preparing a definition of drones. Several suggestions for developing a Guidance note were provided by the participants:

- JMPM should first define the scope for and gap to be filled by the Guidance note based on what information is currently available (e.g. existing work done by the OECD).
- Ms Archana Sinha (WHO panel member, India) offered to lead in the effort, as India has been developing guidance and standard operating procedures on use of drones.
- PAN suggested that the Guidance note address the issues of exposure of bystanders, responsibility and accountability.
- JMPM should address the link between drone application techniques and the use of nano-pesticides in the context of risk assessment.
- JMPM should develop a communication plan for this guidance in particular and for guidance documents in general.

The JMPM recommended that FAO and WHO outline the scope for a Guidance note on the use of drones for application of pesticides in agriculture and vector control.

7.4 Guidance note on illegal trade of pesticides

The illegal trade of pesticides had been highlighted as an important topic by JMPM at its 13th meeting in 2020, an outline for a Guidance note was endorsed by JMPM at its 14th meeting in 2021, and the first draft of a Guidance note was presented and discussed by JMPM at its 15th meeting, when a recommendation was made to develop a separate, more detailed Guidance document on illegal trade of pesticides. No progress has been made since the 15th meeting of the JMPM because the initial consultant was no longer available.

However, FAO invited a consultant, Mr William Garthwaite (currently under contract with the Legal Division, FAO) will spend 4–6 weeks in early 2024 to revise the draft Guidance note using the four sets of comments received, conduct additional investigation if needed, and submit the next version for possible endorsement at the first Intersessional Meeting in 2024. Mr Garthwaite plans to contact those JMPM participants who provided comments on the existing draft, while several additional participants offered to provide their comments after the meeting. One participant pointed out the opportunity to solicit feedback and inputs on the topic from an existing global discussion forum on pesticide management.

7.5 Guidance on options for reducing risk when phasing out pesticides

There have been several commenting rounds and meetings by the working group on pesticide phase-out that led to the latest revision circulated to the JMPM in advance of its 16th meeting.³ The guidance covers different options for phasing out pesticides and emphasizes risk-reduction measures for the phase-out period. All sections of the guidance have been extensively reviewed by the working group, and the outstanding questions were identified for discussion with the JMPM in advance of the 16th meeting. The scope and key focus of the guidance have been clearly defined and the title has been modified. Major updates in the latest revision included a new table on phase-out assessment, which was adapted from the Health and Safety Executive, and a new table on stakeholder engagement. In the section on legal aspects, the text had been concentrated towards the topic of phase-out. Minor modifications were made to the structure of the document. During the meeting, the participants reviewed the revised document and participants provided minor adjustments to the text and tables.

There was a lengthy discussion on the appropriate way to include the issue of human rights in this and other JMPM documents. The draft Guidance on options for reducing risk when phasing out pesticides proposes to address the ethical issue of gradual removal of a pesticide known to present unacceptable risk. This provides an opportunity to introduce a “human rights-based approach to pesticide management” in JMPM guidance, in line with the proposal by the FAO Legal Division during the 15th meeting of JMPM. The paragraph on human rights drafted by the FAO Legal Division and the meeting’s participants was discussed and could be of potential value for future guidance in the context of United Nations (UN) agencies being bound under their Human Rights Declaration to apply a human rights-based approach across their work, which includes the Code of Conduct. The JMPM identified this topic for inclusion in the list of proposed updates to the Code of Conduct, which is addressed in section 11 of this report. The participants debated whether JMPM has the expertise to address the issue of human rights in the guidance documents or whether external expertise should be sought, such as through direct engagement with Member States. While all participants agreed that human rights was an important issue that may be relevant to include in the Code of Conduct and/or future JMPM guidance, there was no agreement among participants on how to include the topic in the phase-out guidance.

Participants gave several additional suggestions for modification of the document:

- The possibility to stop import, distribution and use while permitting export to countries where the pesticide product is still allowed was debated and, while being factually accurate, this was not an area of agreement because some participants believed the inclusion of the text promotes a double standard; references to import, export and manufacture (more broadly) were deleted from the text.

³ Working group composed of Ms Friederike Breuer, Ms Carmen Bullon, Ms Helena Casabona (Chair), Mr William Garthwaite, Mr Joseph Morrall, Ms Hanna-Andrea Rother, and Mr Lance Wormell.

- Reference to the precautionary principle or the precautionary approach in this and other guidance documents was discussed, suggesting the need for consistency between JMPM documents. There are different interpretations and uses of these terms between countries. It was suggested that references to these terms be removed in this document or that JMPM prepares definitions of the two terms and adds them to the Glossary.
- The chapter on costs of phasing out could also discuss the benefits of phasing out.
- The risks of pesticides for domestic use at community level should be highlighted.
- Regarding secondary legislation for the phase-out of pesticides, it was suggested to add some practical examples in the form of text boxes to the document.

As next steps, the final comments received from the meeting will be included in the final version which is planned to be formatted with the support of a consultant.

The JMPM recommended that, after adequately incorporating input received from panel members on the final draft prepared following the 16th JMPM, FAO and WHO finalize the draft of the Guidance on options for reducing risk when phasing out pesticides by circulation and obtain endorsement by email communication before the first Intersessional Meeting in 2024.

7.6 Guidance on protecting Indigenous Peoples from negative impacts of pesticides

Ms Andrea Carmen from International Indian Treaty Council (IITC) made the case for using pesticide management to protect the rights of Indigenous Peoples. She explained the uniqueness of protecting indigenous peoples against pesticides in terms of their intricate relation with nature for food and culture, their marginalized political and economic situation, and their right for prior informed consent regarding pesticide management at all relevant stages of the pesticide lifecycle. The IITC provided a background paper and had previously proposed recommendations for specific insertions to the Code of Conduct, for consideration and use by the JMPM in their activities and for future implementation in countries and states. Ms Carmen requested the JMPM to propose the next steps.

Mr Gu thanked the IITC for its commitment and recalled that since the 15th meeting of the JMPM several meetings have been held with IITC, including a side event at the UN Permanent Forum on Indigenous Peoples (New York, United States of America); FAO and WHO are providing high-level support on the subject. The JMPM at its 15th meeting had recommended the initiation of the process of revision of the Code of Conduct, taking into account issues discussed in that meeting, including Indigenous Peoples, and the development of a separate Guidance document on regulations of pesticides in indigenous territories. Mr Gu reminded the meeting that it would take several years to revise the Code of Conduct and that development of a guidance note on the regulatory and technical

practice to improve pesticide management for Indigenous Peoples would address the outstanding issues in the shorter term while also serving as a reference document in support of the planned revisions of the Code of Conduct.

In the ensuing discussions, the participants commented that questions remained about what should constitute the technical content of a guidance note. One JMPM panel member suggested that special expertise on Indigenous Peoples should be sought to assist in preparation of the document. Participants also suggested that a working group be formed to familiarize itself with the subject matter and prepare the scope, outline and timeline for the guidance note for presentation at the first Intersessional Meeting in 2024. A suitable expert should then be identified to draft the document. However, one JMPM panel member suggested that, in view of the limited capacity of the JMPM, there is the option to merge the guidance note with the planned guidance on the gender and human rights-based approach to pesticide management. FAO agreed to re-examine the submission from the IITC in light of discussions during the 16th meeting to provide a starting point for an initial outline, including the guidance note's objectives, ahead of the first Intersessional meeting in 2024.

8. Revision of existing guidelines or guidance documents

8.1 Guidance on data requirements for the registration of pesticides

The guidance document on data requirements for the registration of pesticides, together with its annexes, is at an advanced stage of development. After the 15th meeting of the JMPM, and after receiving comments from an external reviewer (the former chair of JMPS, Dr Markus Müller), a new table was added to Annex B, and modifications were made to Chapter 8.4 and Annex H.

At the 16th meeting of the JMPM, a participant from CLI suggested deleting specific footnotes from Tables H1 and B2-bis, but several panel members objected. This issue will be followed up as soon as possible by CLI and Ms Breuer through discussion with external experts. Some other minor comments by the participants included the need for definitions of some terms used.

The JMPM recommended that FAO and WHO obtain final comments within a short period on the Guidance on data requirements for the registration of pesticides, highlighting recent changes and open questions, and then obtain its endorsement through email communication before the first Intersessional Meeting in 2024.

8.2 Glossary of terms and definitions on pesticide management

The Glossary of terms and definitions on pesticide management, which provides a point of reference for developers and readers, was first developed in 2011 and was updated in 2022, with a total of 156 terms and definitions. The JMPM at its 15th meeting recommended that the Glossary be reviewed and revised by a working group. No progress has been made since then.

At the 16th meeting of the JMPM, some participants confirmed that several new terms are not included and that some other terms need revision. The participants reiterated the need for a working group to lead the revision. There was a discussion about the form in which the Glossary should become publicly available, as a dynamic webpage on which terms can be updated and added at any time, or as a standalone document that could be updated in future versions as needed. One participant pointed out the need for archiving of version history of JMPM documents in existing archives of FAO and WHO.

The JMPM recommended that FAO and WHO establish a working group to review the updated Glossary of terms and definitions on pesticide management for its publication as a standalone document.

9. Planning the development of new guidance and review of existing guidance

Over the past few years, several titles have been proposed by the JMPM for the development of new guidance or revision of existing guidance, but a limitation has been the human and financial resources available to JMPM. Hence, the secretariat should provide input and direction to the JMPM about which topics should be prioritized, ideally informed by the perceived urgency of those who plan to utilize JMPM guidance documents. The topics proposed for development of new guidance and adopted in the agenda of the 16th meeting of JMPM were guidance on risk communication and nano-pesticides, whilst existing guidance proposed for revision were the guidance on post-registration surveillance, the guidance on pesticide legislation and the guidance on management options for empty pesticide containers.

9.1 Guidance note on nano-pesticides

The JMPM at its 15th meeting recommended the development of a Guidance note on regulation of nano-pesticides. No progress was reported because FAO could not identify a consultant with the required expertise. At the 16th meeting of the JMPM, the way forward was discussed, which should include the preparation of a scope and an outline of a Guidance note. Also, the definition of nano-pesticides should be clarified; nano-pesticide can refer to the active ingredients or to the

adjuvants, or both. Participants reiterated the importance of the safety aspect of nano-pesticides from the health and environmental perspectives and commented on the potential for nano-pesticides to reduce the amount of pesticide applied and their potential usefulness in precision agriculture.

The JMPM discussed the option of nano-pesticides as a component of a new Guidance note on application of pesticides by drones. The two topics have some commonalities, as it was indicated that nano-pesticides are often applied by use of drones. However, the participants suggested that nano-pesticides warrant a separate Guidance note. Ms Sinha offered to take the lead in starting a working group.

As an example of other emerging pesticide technologies, the issue of RNAi-based pesticides was raised by participants. RNAi-based pesticides are still in the development and testing pipeline but may soon become available commercially. The participants suggested that, in anticipation of the availability of RNAi-based pesticides, the JMPM should start discussing this technology and propose actions, noting that the OECD and the United States Environmental Protection Agency (8) have been working on this topic. It was pointed out that the Guidance on data requirements for the registration of pesticides does not include these emerging technologies. Participants discussed whether to combine several emerging pesticide technologies into a single Guidance note for awareness-raising, a discussion which is to be continued. For nano-pesticides, however, the participants suggested initiating the process of developing a separate Guidance note.

The JMPM recommended that the topic of emerging technologies (e.g. nano-pesticides, RNAi-based pesticides), and how JMPM should address these, be discussed at the first JMPM Intersessional Meeting in 2024.

9.2 Guidance on risk communication

The topic of risk communication has been referred to in several guidance documents, most prominently in the draft Guidance on options for reducing risk when phasing out pesticides. Because the topic has been considered central to the work of the JMPM and with a scope beyond that of individual guidance documents, the JMPM at its 15th meeting recommended the development of a Guidance document on risk communication. Ms Rother pointed out that the University of Cape Town offers a dedicated MSc course on pesticide risk communication. The available teaching materials under that course could serve as a starting point for JMPM to select the most pertinent elements for incorporation in a new Guidance document on risk communication. It was suggested that participants explore within their own institutions available methods and strategies for risk communication with relevance to pesticide management.

The Guidance document should address awareness-raising but also provide practical methods on how to plan and implement risk communication activities, while its target audience should not be limited to pesticide regulators but include decision-makers and other relevant stakeholders. In addition, some participants

proposed that risk communication could be addressed in the form of training. Specifically, a training module on risk communication for the pesticide registration toolkit, covering agricultural and public health pesticides, was posed as a promising option. The meeting noted that implementation of training is beyond the scope and capacity of the JMPM.

The JMPM recommended that FAO and WHO develop a Guidance document on risk communication on pesticides, using existing tools provided by JMPM participants as a starting point for discussion at the first Intersessional Meeting in 2024.

9.3 Guidelines on post-registration surveillance and other activities in the field of pesticides

Post-registration surveillance refers to the monitoring of pesticide management practices in the stages of the pesticide lifecycle after registration; it includes manufacturing, quality control, packaging, labelling, imports, licensing, retail, advertising, use and application, storage, transport and waste disposal, in the context of implementing national and international pesticide legislation. At its 15th meeting, the JMPM recommended a discussion on the possible revision of the Guidelines on post-registration surveillance and other activities in the field of pesticides (published in 1988).

Given the broad scope of this topic, which covers many stages of the pesticide lifecycle, participants suggested first conducting a visual mapping of the existing guidelines and guidance to identify where elements of post-registration surveillance have been addressed. This visual mapping would help in the scoping of the contents for the revision of the Guidelines on post-registration surveillance and other activities in the field of pesticides. Several participants expressed interest in joining a working group for the revision. One participant asserted that a revision should take into consideration the limited human and financial resources for implementing post-registration surveillance in many low- and middle-income countries.

The JMPM recommended that FAO and WHO conduct a review of the current "*Guidelines on post-registration surveillance and other activities in the field of pesticides*"; and prepare an overview of available guidance related to post-registration (including licensing documents) including suggestions for follow-up work, and submit the same for discussion at the first Intersessional Meeting in 2024.

9.4 Guidelines on pesticide legislation

The 15th meeting of JMPM recommended that the Guidelines on pesticide legislation be considered for revision to incorporate the legal aspects presented in more recent or new guidance. At the 16th meeting of JMPM, however, participants

suggested that the FAO/WHO secretariat should start the revision of the Guidelines on pesticide legislation only after revising the Code of Conduct.

9.5 Guidelines on management options for empty pesticide containers

At its 15th meeting, the JMPM had recommended the revision of the Guidelines on management options for empty pesticide containers (published in 2008). FAO reported on recent progress in pesticide container management. A component for a new Global Environment Facility project has been developed on agricultural plastics, pesticide containers and waste management. In addition, many FAO projects in which pesticides are now used include a component on pesticide container management. CLI mentioned that it has pesticide container management programmes in many countries, as part of its stewardship programme which aim to increase container collection rates (9). The participants pointed out that pesticide container management and recycling is also related to the UN Global Plastics Treaty, even though stricter rules apply for pesticide containers because of the pesticide residues.

FAO commented that the existing Guidelines on management options for empty pesticide containers, and some older guidance and tools, do not meet current needs and developments. Revision of the guidelines would address this gap. It was recalled that the University of Cape Town has a module on pesticide container management which, being 10 years old, is now being updated. Moreover, efforts have been made by countries of the Southern African Development Community (SADC) to develop a subregional project on pesticide container management, but these have not been funded yet.

WHO mentioned that pesticide container management should not be limited to agriculture but include public health pesticide containers, especially those dumped in large amounts resulting from government programmes (e.g. on malaria vector control). Another participant called for a separate section on household pesticide containers which pose a high risk to human health because of poor regulation and their availability within the household. Some participants expressed interest in establishing a working group to initiate the revision, under the lead of Ms Mantule.

The JMPM recommended that FAO and WHO provide an outline for revising the existing "*Guidelines on management options for empty pesticide containers*"; for discussion at the first Intersessional Meeting in 2024.

Also, the JMPM recommended that FAO and WHO leverage the expertise from non-regulatory sectors to develop and support the use of improved pesticide packaging to prevent or minimize problems associated with the disposal of pesticide containers.

10. Emerging and priority issues in pesticide management, including gaps, challenges and future directions for FAO and WHO

10.1 Reporting on ICCM5, including the potential Global Action Plan on HHPs

The [fifth session of the International Conference on Chemicals Management](#) (ICCM5) adopted, among others, the Global Framework on Chemicals – For a Planet Free of Harm from Chemicals and Waste, and the Bonn Declaration. However, it was pointed out that the targets on HHPs require the development of indicators to have the most meaningful impacts. The JMPM acknowledged the agreed targets of ICCM5 in relation to HHPs, target A7 and D5,⁴ and encouraged FAO and WHO to take concrete action in supporting countries to operationalize these targets in the phasing out of HHPs where the risks have not been managed. The JMPM suggested prioritizing the development of those guidance documents that will aid countries in implementing the targets and resolutions of ICCM5.

The JMPM recommended that FAO and WHO ensure that the Global Framework on Chemicals, for a planet free of harm from chemicals and waste (as an outcome of the ICCM5), be monitored, reflected and made consistent with the entire JMPM guidance documents, both published and under development. This could include documents on HHPs, surveillance, alternatives and training on the use of alternatives.

The JMPM acknowledged that FAO takes the lead in setting up a Global Alliance on HHPs, an endorsed position from ICCM5, in collaboration with the other UN agencies and invites other interested stakeholders to become members. Participants noted to the UN bodies that follow-up discussion on developing the Global Alliance should include preparation of clear targets, milestones for progress and working mechanisms. It was suggested that the example of the Lead Paint Alliance by UNEP and WHO could serve as an example. FAO noted that specific indicators, such as the number of identified or banned HHPs in countries, need to be developed as part of the Global Action Plan on HHPs and hoped that the JMPM will provide its technical support.

Participants queried the availability of safer and affordable alternatives to HHPs. Participants also commented that biocontrol products for plant protection, as well as data on their costs and benefits, exist as alternatives to HHPs but that countries

⁴ Target A7 set at ICCM5: "By 2035, stakeholders have taken effective measures to phase out highly hazardous pesticides in agriculture where the risks have not been managed and where safer and affordable alternatives are available, and to promote transition to and make available those alternatives." Target D5: "By 2030, Governments implement policies and programmes to increase support to safer and more sustainable agricultural practices, including agroecology, integrated pest management and the use of non-chemical alternatives, as appropriate."

should find ways to roll out these alternatives for availability at the farmer level, for example, by establishing authorization systems for biopesticide and biocontrol products, as successfully adopted in Brazil. Participants also highlighted the need for farmer training programmes to enable use of alternative products, methods or strategies.

Participants commented that financial mechanism for implementation of the Global Action Plan on HHPs still needs to be fully developed, with support from information-based advocacy activities to attract funding. One participant suggested that domestic funding should be sought in addition to international funding, for example, to develop sustainable national schemes for pesticide container management.

FAO and WHO expect the JMPM to provide technical support for implementing the Global Action Plan on HHPs, including on the identification of HHPs, surveillance methods, development of indicators, and possibly the identification and training on alternatives.

The JMPM also recommended that FAO and WHO take note of the outcomes of ICCM5 and take concrete actions, among others, in setting up a Global Alliance on HHPs, while acknowledging the endorsed SAICM resolution.

10.2 Reducing pesticide risks and Kunming–Montreal Global Biodiversity Framework

The Kunming-Montreal Global Biodiversity Framework, adopted at the 2023 UN Biodiversity Conference, sets out goals and targets to reach the global vision of a world living in harmony with nature by 2050. Ms Kim-Ahn Tempelman (FAO) explained that target 7 refers to reducing pollution risks and the negative impact of pollution from all sources by 2030, including by “reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management”. FAO plans to initiate a process of expert review to select indicators in relation to the environmental concentration of pesticides and to develop monitoring methods and requested the JMPM to propose candidate experts. One participant referred to a relevant briefing on the topic of indicators developed by PAN (10). Another participant questioned the feasibility of monitoring indicators in low- and middle-income countries.

11. Revision of the Code of Conduct

At its 15th meeting, the JMPM recommended initiating a revision of the 2014 version of the Code of Conduct, taking into account the issues of Indigenous Peoples and human rights. A revision provides an opportunity to include other pertinent issues in the Code of Conduct. A revision will be a lengthy process that includes adoption of the revised document by the governing bodies of FAO and

WHO, and of UNEP following it formally joining JMPM. It was noted that the JMPM has an advisory role in the revision of the Code of Conduct and that the FAO leads the process, including the drafting of proposed revisions.

Mr Rajpal Yadav posited that the 2014 revision can provide some guidance and lessons learnt about the procedure. For the 2014 revision of the Code of Conduct, the process started 6 years earlier when amendments were proposed to expand its scope to include public health pesticides, other non-agricultural pesticides and environmental concerns. Subsequent steps involved the approval by FAO's Committee on Agriculture (COAG) to initiate the revision, several rounds of drafting, and review which involved circulating the draft for comments to FAO Member States and stakeholders, final approval by COAG, submission for adoption to the FAO Conference and, finally, submission for adoption by the WHO Executive Board, after which the joint FAO/WHO document was published. Lessons learnt are that the process could be shortened by defining the scope of the revision upfront (e.g. to allow specific insertions rather than making major changes in the existing text), starting the consultation with Member States and stakeholders earlier in the process, and devoting adequate human resources for conducting the revision.

A discussion was held on the way forward for the upcoming revision. Participants suggested that, given the long and intensive procedures for the revision process, specific insertions are preferable to a complete revision. A list should be compiled of topics to be considered for inclusion in the revision. A distinction was made between topics that have been mandated by UN agencies and topics to be proposed by the JMPM. The only UN-mandated topic referred to Indigenous Peoples. Experts from FAO and WHO suggested that the JMPM also propose human rights and gender equity for the revision because these topics are being mainstreamed across UN agencies and because these topics should become embedded in JMPM's work on pesticide management.

The JMPM recommended that FAO and WHO engage with their Member States to develop a standard text on human rights in relation to pesticides for inclusion in the Code of Conduct and for inclusion in JMPM guidance, as appropriate.

Other issues that have already been considered by the JMPM for inclusion in the revision are environmental issues, antimicrobial resistance, biodiversity, One Health, Sustainable Development Goals, suicide prevention and others. Some participants proposed as additional topics: biodiversity, traditional products, export of banned pesticides, and emerging issues in pesticide technologies. It was also noted that terms and definitions in the Code of Conduct should be updated.

As a plan for follow up after the 16th JMPM meeting, it was suggested that the FAO/WHO secretariat should solicit from JMPM participants topics with a brief rationale or justification for each topic, to compile and circulate the list for two commenting rounds by JMPM by the end of 2023. The FAO will then draft a letter requesting the COAG for a broad mandate for a revision. The letter should be

reviewed by JMPM at the Intersessional Meetings in 2024 before sending it to COAG in advance of their meeting in September 2024. In addition to these steps, the FAO/WHO secretariat will prepare a road map of the next steps in the revision process, with timelines and responsibilities, for discussion at the first Intersessional Meeting in 2024.

The JMPM recommended that FAO and WHO prepare a written overview of the procedure to be used for revision of the Code of Conduct, including a timeline and responsibilities.

12. Other issues

- In the Guidance on aircraft disinsection, participants suggested that the component on risk communication about aircraft disinsection ought to be taken further than only informing passengers on board about spray. A panellist commented that passengers should be informed prior to their travel about the spraying of aircraft. This is a topic requiring further discussion by JMPM. WHO and FAO advised that this is a national regulatory issue and beyond the practical scope of the Guidance document.

- A panel member commended WHO's progress in developing guidelines on insecticide resistance monitoring of specific groups of vectors and proposed that FAO also develops similar guidelines for agricultural pests.

The JMPM recommended that FAO makes a list of most important agricultural pests (e.g. fall armyworm) and then explore the possibility to develop guidance for pesticide resistance monitoring, as WHO has done for major mosquito vectors for specific pesticides used in vector control.

- A participant commented on a limitation in the WHO manual on indoor residual spraying: the risk communication section is one-way only, with messages directed towards the users and communities receiving spray.

The JMPM recommended that WHO explores the development of a communication section for inclusion in the manual on indoor residual spraying for vector control to obtain feedback from users and communities in the targeted intervention areas.

- Participants suggested that guidance documents and other materials should be made available to countries in their own languages.

The JMPM recommended that translations of pesticide management guidance into requested national languages should be facilitated, where needed.

- Participants emphasized the need for labelling of pesticide containers in local languages in countries. One participant noted that the US-EPA is implementing a plan for voluntary requirements to make bilingual pesticide labelling accessible

to farmworkers (11). Another participant added that in Zimbabwe, colour coded pesticide labels have been included in school curricula.

- Participants suggested that synergies between UN agencies and their regional offices should be maximized to avoid duplication and ensure consistency in preparation and dissemination of guidance related to pesticide management. This will help to ensure that target audiences in countries are receiving what they need. Members of JMPM should also circulate guidance within their networks, thereby concentrating on distribution of recently updated or new publications and of currently relevant information.

The JMPM recommended that FAO and WHO prepare an outline for a structured communication plan for wider dissemination of JMPM guidance documents, for discussion at the first Intersessional Meeting in 2024.

- Participants reiterated the importance of monitoring and evaluating the use of JMPM guidance by countries and suggested that the disconnect should be addressed by using existing fora and regional offices to obtain feedback from pesticide regulators on the usefulness and implementation of the guidance documents, and through monitoring the number of downloads of guidance documents from the FAO/WHO websites.

The JMPM recommended that FAO and WHO consider, where appropriate, the use of existing fora and networks to present guidance to stakeholders for their inputs and feedback.

- FAO and the Swedish Chemicals Agency are implementing a pilot project in Zimbabwe on testing and evaluating the knowledge transfer and implementation of JMPM guidance, which is expected to produce useful lessons.

The JMPM recommended that FAO and WHO explore how to improve information exchange on JMPM guidance between JMPM and users to inform future needs and priorities for guidance development. The JMPM recommended that the work conducted in this regard in the pilot project in Zimbabwe be considered as an example.

- A participant noted that, considering the very high costs of environmentally sound disposal of obsolete pesticide stocks, many obsolete stocks, for example, procurements or donations in response to outbreak emergencies, could have been prevented through improved decision-making regarding procurements or donations, quality testing and information sharing before import, and by structuring programmes to prioritize prevention. Participants noted that in future the Guidelines on prevention of accumulation of obsolete pesticide stocks be updated.

The JMPM recommended that FAO and WHO engage with pesticide regulators and importers to inform them about the need for prevention of obsolete pesticide stocks.

- Also in the context of reducing pesticide use and accumulation of obsolete stocks, one participant noted that structural and sustained efforts are needed to change farmers' behaviour on pesticide reliance by transitioning to IPM or

similar approaches. While FAO's farmer field schools have shown promise, participants noted that they tend to be offered once, without the possibility of sustained learning opportunities.

The JMPM recommended that FAO supports countries and programmes on IPM-based farmer fields schools to develop their own sustainability strategies to ensure long-term benefits in relation to pesticide management.

- One participant raised the issue of gender mainstreaming as an approach to be adopted in pesticide management for inclusion in JMPM guidance. For example, gender mainstreaming should take into account appropriate personal protective equipment for female sprayers, and child protection measures against pesticide exposure.

The JMPM recommended that FAO and WHO appoint a focal point and/or establish a JMPM Working Group to identify the key gender issues in relation to pesticide management and to address gender mainstreaming in the JMPM guidance to be developed/revised in the future.

- A participant commented that, in the implementation of guidance at the country level, the issue of financing through domestic or external funds is critical to the effectiveness and sustainability of activities.

The JMPM recommended that JMPM working groups address the topic of financing for activities such as used pesticide container management, risk communication or post-registration surveillance, in the relevant guidance documents.

- The JMPM stressed the urgency of finalizing the Terms of Reference for the JMPM and their panel members. Specifically, there is a need for clarity and transparency on procedures for the JMPM, for JMPM meetings, for working mechanisms and for developing guidance. FAO acknowledged the issue and noted that the Terms of Reference are nearing finalization, although UNEP joining the JMPM may influence the timing of finalization. There is also need for structured planning of the JMPM's activities.

The JMPM recommended that FAO and WHO finalize as soon as possible the terms of reference for the JMPM and its panel members to clarify the formal procedures.

The JMPM recommended that FAO and WHO update the JMPM Action Plan with clear timelines and responsibilities; actions that have been completed or paused could be archived and kept in the record history.

- Finally, the FAO/WHO secretariat and the JMPM participants thanked both Professor Hanna-Andrea Rother and Professor Michael Eddleston, who are at the end of their term as WHO panel members, acknowledging their invaluable contributions to the JMPM over a period of many years.

13. Recommendations

New guidance/revision of guidance

The JMPM recommends:

1. that FAO makes a list of the most important agriculture pests (e.g. fall armyworm) and then explores the possibility of developing guidance for pesticide resistance monitoring, as WHO has done for major mosquito vectors for specific pesticides used in vector control.
2. that the current draft of the Guidance note on online sales of pesticides be converted into a full Guidance document; in the meantime, a short Guidance note should be prepared from the current draft document for endorsement at the first JMPM Intersessional Meeting in 2024.
3. that, after adequately incorporating input received from panel members on the final draft prepared following the 16th JMPM annual meeting, FAO and WHO finalize the draft of the Guidance on options for reducing risk when phasing out pesticides by circulation and obtain endorsement by email communication before the first Intersessional Meeting in 2024.
4. that FAO and WHO obtain final comments within a short period on the Guidance on data requirements for the registration of pesticides, highlighting recent changes and open questions, and then obtain its endorsement through email communication before the first Intersessional Meeting in 2024.
5. that FAO and WHO outline the scope for a Guidance note on the use of drones for application of pesticides in agriculture and vector control.
6. that FAO and WHO develop a Guidance document on risk communication on pesticides, using existing tools provided by JMPM participants as a starting point for discussion at the first Intersessional Meeting in 2024.
7. that FAO and WHO conduct a review of the current Guidelines on post-registration surveillance and other activities in the field of pesticides (12) and prepare an overview of available guidance related to post-registration (including licensing documents) including suggestions for follow-up work, and submit the same for discussion at the first Intersessional Meeting in 2024.
8. that FAO and WHO provide an outline for revising the existing Guidelines on management options for empty pesticide containers (13) for discussion at the first Intersessional Meeting in 2024.
9. that FAO and WHO establish a working group to review the updated Glossary of terms and definitions on pesticide management for publication as a standalone document.

10. that FAO and WHO appoint a focal point and/or establish a JMPM working group to identify the key gender issues in relation to pesticide management and to address gender mainstreaming in the JMPM guidance to be developed/ revised in the future.

Communication and stakeholder feedback

The JMPM recommends to FAO and WHO:

1. that translations of pesticide management guidance into requested national languages be facilitated, where needed.
2. that FAO and WHO prepare an outline for a structured communication plan for wider dissemination of JMPM guidance documents for discussion at the first Intersessional Meeting in 2024.
3. that FAO and WHO consider, where appropriate, the use of existing fora and networks to present guidance to stakeholders for their inputs and feedback.
4. that WHO explores the development of a communication section for inclusion in the manual on indoor residual spraying for vector control to obtain feedback from users and communities in the targeted intervention areas.
5. that FAO and WHO explore how to improve information exchange on JMPM guidance between JMPM and users to inform future needs and priorities for guidance development. The JMPM recommends that the work conducted in this regard in the pilot project in Zimbabwe be considered as an example.

Revision of the Code of Conduct on pesticide management

The JMPM recommends:

- that FAO and WHO engage with their Member States to develop a standard text on human rights in relation to pesticides for inclusion in the Code of Conduct and for inclusion in JMPM guidance, as appropriate.
- that FAO and WHO prepare a written overview of the procedure to be used for revision of the Code of Conduct, including a timeline and responsibilities.

Actions

The JMPM recommends:

1. that FAO and WHO leverage the expertise from non-regulatory sectors for developing and supporting the use of improved pesticide packaging to prevent or minimize problems associated with the disposal of pesticide containers.

2. that FAO and WHO engage with pesticide regulators and importers to inform the need for prevention of obsolete pesticide stocks.
3. that FAO supports countries and programmes on IPM-based farmer fields schools to develop their own sustainability strategies to ensure long-term benefits in relation to pesticide management.
4. that FAO and WHO update the JMPM Action Plan with clear timelines and responsibilities, whilst actions that have been completed or paused could be archived and kept in the record history.
5. that FAO and WHO define as soon as possible the scope and key issues for a Guidance note versus a Guidance document by means of a brief communication.
6. that the topic of emerging technologies (e.g. nano-pesticides, RNAi pesticides), and how JMPM should address these, be discussed at the first Intersessional Meeting in 2024.
7. that JMPM working groups address the topic of financing for activities such as the used pesticide container management, risk communication or post-registration surveillance, in the relevant guidance documents.
8. that FAO and WHO finalize as soon as possible the Terms of Reference for the JMPM and the panel members to clarify the formal procedures.

Outcomes of ICCM5

The JMPM recommends:

- that FAO and WHO ensure that the Global Framework on Chemicals, for a planet free of harm from chemicals and waste (as an outcome of the ICCM5), is monitored, reflected and made consistent with the entire JMPM guidance documents, both published and under development. This could include documents on HHPs, surveillance, alternatives and training on the use of alternatives.
- that FAO and WHO take note of the outcomes of ICCM5 and take concrete actions, among others, in setting up a Global Alliance on HHPs, while acknowledging the endorsed SAICM resolution.

14. Closing

After the formal exchange of courtesies, the meeting was closed. It was decided to hold the next (17th) JMPM meeting in late 2024. The meeting will be hosted by FAO, which will announce the exact date and venue around mid-2024.

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Annex 1. List of participants

FAO panel members

Ms Helena Casabona (Co-chair), Strategic Adviser, Department of Development of Legislation & Other Instruments International unit, Swedish Chemicals Agency, Sundbyberg, Sweden

Mr Tao Chuanjiang, Chief Agronomist, Institute for the Control of Agrochemicals, Ministry of Agriculture, Beijing, China

Mr Mohammed Jamal Hajjar, Professor of Pesticides Science and Toxicology, College of Agriculture and Food Sciences, King Faisal University, Hufuf, Saudi Arabia

Ms Rorisang Mantule, Chief Crop Production Officer, Ministry of Agriculture and Food Security, Government of Lesotho, Maseru, Lesotho

Mr Andre Carrapatoso Peralta, Agricultural Inspector, Ministry of Agriculture, Livestock and Food Supply, Brasília, Brazil

Mr Andi Trisyono, Department of Plant Protection, Faculty of Agriculture, Universitas Gadjah Mada, Yogyakarta, Indonesia

Mr Lance Wormell, Associate Director, United States Environmental Protection Agency, Office of Chemical Safety & Pollution Prevention, Mission Support Division, Washington DC, United States of America

WHO panel members

Mr Michael Eddleston (Co-chair), Professor of Clinical Toxicology, University of Edinburgh, Honorary Clinical Toxicologist, National Poisons Information Service – Edinburgh and Royal Infirmary of Edinburgh, Edinburgh, United Kingdom of Great Britain and Northern Ireland

Mr Joseph Paul Leslie Morrall, Director, Agvet Chemicals Branch, Department of Agriculture, Water and the Environment, Australian Government, Canberra, Australia (online)

Ms Eliana Rosa Munarriz, Group Leader, Agricultural and Environmental Biosciences Research Institute, National Research Council, Buenos Aires, Argentina

Ms Nosiku Sipilanyambe Munyinda, Lecturer, School of Public Health, Department of Environmental Health, Pollution Control and Toxicology Unit, University of Zambia, Lusaka, Zambia

Ms Hanna-Andrea Rother, Professor, Head of the Environmental Health Division, School of Public Health and Family Medicine, Honorary Professor of the Department of Public Health, Environments and Society, Faculty of Public Health and Policy, London School of Hygiene & Tropical Medicine, Health Sciences Campus, University of Cape Town, Cape Town, South Africa

Ms Archana Sinha, Ministry of Agriculture & Farmers Welfare, Government of India, New Delhi, India

Intergovernmental organizations

United Nations Environment Programme

Ms Mihaela Claudia Paun, Programme Management Officer, Knowledge and Risk Unit Economy Division, Chemical and Health branch, UNEP, Geneva, Switzerland (online)

Organisation for Economic Co-operation and Development

Ms Jane Richardson, Principal Administrator, Pesticides and Biotechnology, Food, and Feed Safety Programmes, Environment, Health and Safety Division, Environment Directorate, OECD, Paris, France (online)

Observers

CropLife International

Mr Christoph Neumann, Vice-President, Regulatory Policy and Stewardship, CLI, Brussels, Belgium (online)

Mr D’Arcy Quinn, Director of Anti-Counterfeiting, CLI, Brussels, Belgium (online)

International Biocontrol Manufacturers Association

Ms Roma Gwynn, Vice President, IBMA, Brussels, Belgium (online)

Ms Jennifer Lewis, Executive Director, IBMA, Brussels, Belgium (online)

Pesticide Action Network

Ms Sheila Willis, Pesticide Action Network UK, Brighton, United Kingdom of Great Britain and Northern Ireland

IPEN Pesticides Working Group

Mr Tadesse Amera, IPEN Co-Chair, Director of Pesticide Action Nexus Association, Addis Ababa, Ethiopia

International Indian Treaty Council

Ms Andrea Carmen, Executive Director, IITC, Tucson AZ, United States of America (online)

FAO representation

FAO headquarters (JMPM secretariat)

Mr Gu Baogen, Senior Agricultural Officer, Pest and Pesticide Management, FAO Plant Production and Protection Division, Rome, Italy

Ms Friederike Breuer, Agricultural Officer (JPO), Pest and Pesticide Management, FAO Plant Production and Protection Division, Rome, Italy

Ms Carmen Bullon, Legal Officer, FAO Legal Division, Rome, Italy (online)

Ms Luisa Cruz, Legal Consultant, FAO Legal Division, Rome, Italy (online)

Ms Rachel Merrick, (invited for agenda item on drone application), Pesticides Policy Branch (HSE), York, United Kingdom of Great Britain and Northern Ireland (online)

Ms Oxana Perminova, Agricultural Officer, Pest and Pesticide Management, FAO Plant Production and Protection Division, Rome, Italy (online)

Ms Kim-Anh Tempelman, Agricultural Officer, Pest and Pesticide Management, FAO Plant Production and Protection Division, Rome, Italy (online)

Mr Gerold Wyrwal, Agricultural Officer, Rotterdam Secretariat Team leader, FAO Plant Production and Protection Division, Rome, Italy (online)

Mr Wenjun Zhang (invited speaker for agenda item on online sales), Researcher/ Former Deputy Chief Agronomist, Institute for the Control of Agrochemicals, Ministry of Agriculture, Beijing, China (online)

FAO regional offices

Ms Tania Santivanez, Agricultural Officer, FAO Regional Office for Europe and Central Asia, Plant Production and Protection Division, Budapest, Hungary (online)

Mr Thaer Yaseen, Regional Plant Protection Officer, Regional Office for the Near East and North Africa Region, Cairo, Egypt

WHO representation

WHO headquarters (JMPM secretariat)

Mr Henk van den Berg, Consultant (report writer), Visiting Scientist, Laboratory of Entomology, Wageningen University, Wageningen, Netherlands (Kingdom of the)

Mr Richard Brown, Technical Officer, Chemical Safety and Health unit, Department of Environment, Climate Change and Health, Geneva, Switzerland

Ms Alexandra Fleischmann, Scientist, Department of Mental Health and Substance Use, Geneva, Switzerland (online)

Ms Susana Lidia Reyes Gomez, Consultant, Gender, Equity and Human Rights team, Geneva, Switzerland (online)

Ms Pauliina Nykanen-Rettaroli, Unit Head, Gender, Equity and Human Rights team, World Health Organization, Geneva, Switzerland

Mr Raman Velayudhan, Head, Veterinary Public Health, Vector Control and Environment unit, Global Neglected Tropical Diseases Programme, Geneva, Switzerland

Mr Rajpal Yadav, WHO Temporary Adviser, Gurugram, Haryana, India

Ms Qingxia Zhong, Technical Officer, Veterinary Public Health, Vector Control and Environment unit, Global Neglected Tropical Diseases Programme, Geneva, Switzerland

WHO regional offices

Mr Emmanuel Chanda, Technical Officer, WHO Regional Office for Africa, Brazzaville, Congo (online)

Annex 2. Adopted agenda

16th FAO/WHO joint meeting on pesticide management

6–10 November 2023

Venue: WHO, Geneva, Switzerland

In person and online

Adopted Agenda

| Monday, 6 November 2023 | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Meeting of the FAO and WHO JMPM secretariat (at WHO HQ, M building room no. M505) | 09:00–10:00 |
| Closed session (only FAO/WHO secretariat and JMPM panel members) | 10:00–10:30 |
| Welcome <ul style="list-style-type: none">▪ WHO▪ FAO | |
| Declarations of interest | |
| Panel working procedures and programme of work | |
| Any other matters | |
| Tea/coffee break | 10:30–11:00 |
| Open session | 11:00–12:30 |
| 1. Opening and welcome notes <ul style="list-style-type: none">▪ Welcome (WHO)▪ Welcome (FAO)▪ Introduction of participants▪ Declaration of Interests▪ Opening remarks | |
| 2. Appointment of Chairperson, Co-Chairs and Rapporteurs | |
| 3. Adoption of agenda | |
| 4. Meeting procedure, working arrangements and housekeeping matters | |
| Lunch break (WHO cafeteria in B building) | 12:30–14:00 |

Monday, 6 November 2023

5. Summary of developments and actions taken after the 15th JMPM in 2022 14:00–16:30

Brief reports (10' max) on progress on pesticide management and initiatives by:

- WHO, FAO/Rotterdam Convention, UNEP, OECD, nongovernmental organizations and industry
- FAO and WHO Regional offices, and JMPM Panel Members on pesticide management activities in their countries and collaboration in their regions.

6. Review actions and recommendations from 15th JMPM meeting (quick review)

Review of updated "Follow-up Action Plan"

Reception hosted by WHO in B building cafeteria 17:00

Tuesday, 7 November 2023

7. Review of (new) guidance documents under development 09:00–10:30

- a. Guidance note on online sales of pesticides (by Tao Chuanjiang/Friederike Breuer/Zhang Wenjun)

Morning tea/coffee break 10:30–10:45

7. Review of (new) guidance documents under development (cont'd) 10:45–12:30

- b. Guidance on developing a reporting system for health and environmental incidents
- c. Guidance note on application of pesticides by drones (by Friederike)
- d. Guidance note on illegal trade of pesticides (second draft) (by FAO)

Lunch break (WHO cafeteria in B building) 12:30–14:00

7. Review of (new) guidance documents under development (cont'd) 14:00–15:45

- e. Guidance on reducing risk during phase-out of pesticides (by Helena Casabona)

Afternoon tea/coffee break 15:45–16:00

Tuesday, 7 November 2023

7. Review of new guidance documents under development (cont'd) 16:00–17:30

- f. Guidance on pesticide management for indigenous peoples (Lance, IITC TWG, and JMPM secretariat)

Note: Rapporteurs to work on drafting recommendations 17:30–19:30 (flexible)

Wednesday, 8 November 2023

8. Guidance on data requirements for the registration of pesticides 09:00–10:45

- a. 2009 guidance on data requirements for the registration of pesticides (Friederike)

Morning tea / coffee break 10:45–11:00

9. Planning development of new guidance and review of existing guidelines (and related issues) (cf. List of FAO/WHO Code of Conduct guidelines/guidance) 11:00–13:00

- a. Proposals for new guidance/resources
 - i. Glossary of terms and definitions
 - ii. Guidance notes on nano pesticides
 - iii. Guidance on risk communication
- b. Review of existing guidance
 - iv. Guidelines on post-registration surveillance and other activities in the field of pesticides
 - v. Guidelines on pesticide legislation
 - vi. Guidelines on container management
- c. Next steps

Lunch break 13:00–14:00

9. Planning development of new guidance and review of existing guidelines (and related issues) (cf. List of FAO/WHO Code of Conduct guidelines/guidance) 14:00–15:30

Afternoon tea/coffee break 15:30–15:45

10. Emerging and priority issues in pesticide management, including gaps, challenges and future directions to FAO and WHO 15:45–17:30

- a. Reporting on ICCM5, including addressing Development of the potential Action Plan on Highly Hazardous Pesticides (HHPs). (UNEP, FAO and WHO)

Dinner in Geneva (contributory)

Thursday, 9 November 2023

10. Emerging and priority issues in pesticide management, including gaps, challenges and future directions to FAO and WHO (cont'd) 09:00–10:45

- b. Reducing pesticide risks and Kunming-Montreal Biodiversity Framework
- c. Other issues to be identified (with advanced contributions from JMPM members and observers, industry associations and NGOs)

Morning tea/coffee break 10:45–11:00

11. Revision of the International Code of Conduct on Pesticide Management (2014) 11:00–13:00

- a. Issues to be considered for revision of the Code of Conduct. Such as Indigenous peoples and human rights, gender equity, environmental issues, antimicrobial resistance, biodiversity, ONE Health, Sustainable Development Goals, and others
- b. Working group, road map, timeline

12. Any other business

Lunch break 13:00–14:00

Closed session (only secretariat and JMPM panel members) 14:00–15:30

13. Drafting and discuss JMPM recommendations

Afternoon tea/coffee break 15:30–15:45

13. Drafting and discuss JMPM recommendations 15:45–17:00
(continued)

Note: Rapporteurs to finalize JMPM recommendations 17:00–19:00
(flexible)

Friday, 10 November 2023

Closed session (only secretariat and JMPM panel members) 09:00–10:30

14. Finalizing JMPM recommendations

Morning tea/coffee 10:30–10:45

Open session 10:45–12:00

15. Presentation of JMPM recommendations

16. Closing 12:00–12:15

For further information, contact:

Global Neglected Tropical Diseases Programme
World Health Organization

20 avenue Appia
1211 Geneva 27
Switzerland

Website: <https://www.who.int/teams/control-of-neglected-tropical-diseases>

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