



REPORT

7TH FAO/WHO JOINT MEETING ON PESTICIDE MANAGEMENT

and

**9TH SESSION OF THE FAO PANEL OF EXPERTS ON PESTICIDE
MANAGEMENT**

**15–18 October 2013
Geneva**



**World Health
Organization**



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Abbreviations

ACP-MEAS	Asian, Caribbean and Pacific countries-Modernizing Extension and Advisory Services
AGPMC	FAO Pesticide Management Group
ANVR	African Network on Vector Resistance
APPPC	Asia and Pacific Plant Protection Commission
ASEAN	Association of Southeast Asian Nations
AU-IAPSC	African Union-InterAfrican Phytosanitary Council
CAN	Comunidad Andina de Naciones (Andean Community)
CARICOM	Caribbean Community and the Common Market
CCPR	Codex Committee on Pesticide Residues
CEO	Chief Executive Officer
CGPC	Coordinating Group of Pesticide Control Boards of the Caribbean
CILSS	Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel
COAG	FAO Committee on Agriculture
COP	Conference of Parties
CSP	Comité Sahélien des Pesticides
DDT	dichlorodiphenyltrichloroethane (insecticide)
DNA	Designated National Authority
EAC	East African Community
ECOWAS	Economic Community of West African States
EDCs	endocrine disrupting chemicals
EECCA	Eastern Europe, Caucasus and Central Asia
EHC	WHO Environmental Health Criteria
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GAP	good agricultural practice
GCO	UNEP Global Chemicals Outlook
GEF	global environment facility
GHS	globally harmonized system of classification and labelling of chemicals
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (Germany)
GMP	WHO Global Malaria Programme
GMS	Greater Mekong Subregion
HHP	highly hazardous pesticide
IBMA	International Biocontrol Manufacturers' Association
ICCA	International Council of Chemical Associations

ICCM	International Conference on Chemicals Management
ICM	integrated crop management
ICSC	International Chemical Safety Card
IGO	intergovernmental organization
ILO	International Labour Organization
IOMC	Inter-Organization Programme for the Sound Management of Chemicals
IPEN	International POPs Elimination Network
IPM	integrated pest management
IVM	integrated vector management
JMPM	FAO/WHO Joint Meeting on Pesticide Management
JMPR	FAO/WHO Joint Meeting on Pesticide Residues
JMPS	FAO/WHO Joint Meeting on Pesticide Specifications
KemI	Swedish Chemicals Agency
LLIN	long-lasting insecticidal mosquito net
MCPR	Malaria Control Programme Review
MDGs	Millennium Development Goals
MRL	maximum residue limit
NGO	nongovernmental organization
NTD	WHO Department of Control of Neglected Tropical Diseases
OECD	Organisation for Economic Co-Operation and Development
PFC	perfluorinated chemical
PHE	WHO Department of Public Health and Environment
PIC	Prior Informed Consent (Rotterdam Convention)
POP	persistent organic pollutant
PPE	personal protective equipment
PSMS	pesticide stock management system
QR code	quick response code
RAF	FAO Regional Office for Africa
RAP	FAO Regional Office for Asia and the Pacific
RNE	FAO Regional Office for the Near East
SADC	Southern African Development Community
SAICM	Strategic Approach to International Chemicals Management
SAPReF	Southern African Pesticide Registrars Forum
SECE	UNEP Scientific Expert Group on Chemicals and the Environment
SNC	FAO Subregional Office for the Gulf Cooperation Council States and Yemen
SPC	South Pacific Community
SPREP	South Pacific Regional Environment Programme

TCP	FAO Technical Cooperation Programme
UCT	University of Cape Town
UEMOA	Union Economique et Monétaire de Ouest Africaine
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
VCAG	WHO Vector Control Advisory Group
WHO	World Health Organization
WHOPES	WHO Pesticide Evaluation Scheme

1. Introduction

The 7th FAO/WHO Joint Meeting on Pesticide Management (JMPM) and the 9th Session of the FAO Panel of Experts on Pesticide Management were held at the headquarters of the World Health Organization (WHO) in Geneva, Switzerland from 15 to 18 October 2013. The JMPM was established following the signature of a Memorandum of Understanding between FAO and WHO on cooperation in a joint programme for the sound management of pesticides. Since its inception, the JMPM has consisted of members drawn from the FAO Panel of Experts on Pesticides Management and the WHO Panel of Experts on Vector Biology and Control. The JMPM held its first session in 2007. The JMPM advises FAO and WHO on matters pertaining to pesticide regulation and management, alerting them to new developments, problems or issues that otherwise merit attention; in particular, on the implementation of the International Code of Conduct on Pesticide Management (hereinafter “Code of Conduct”).

Panel members invited to the JMPM are selected for their personal expertise and experience in specific aspects of pesticide management, both in agriculture and in public health. They do not represent the position of governments or institutions they may belong to, but are appointed in their personal capacity by either FAO or WHO. All Panel members are requested to declare any interests they may have which could affect their opinion or advice. In addition to Panel members, representatives from intergovernmental organizations (IGOs) pesticide industry associations and nongovernmental organizations (NGOs) attended the open sessions of the meeting as observers.

On behalf of WHO and as joint secretariat of the JMPM, Mr Rajpal Yadav, Scientist-in-Charge, WHO Pesticide Evaluation Scheme (WHOPES), WHO Department of Control of Neglected Tropical Diseases (NTD), welcomed the FAO and WHO JMPM Panel members and observers to the 7th Session of the FAO/WHO JMPM at WHO headquarters in Geneva. The meeting had a full agenda with many important issues on pesticide management to be discussed. Participants were invited to introduce themselves (see List of participants provided in Annex 1) and Mr Mark Davis was asked to give opening remarks on behalf of FAO.

Mr Mark Davis, Senior Officer, FAO Pesticide Management Group (AGPMC), welcomed the participants to the meeting on behalf of FAO. Since the last JMPM meeting, the revised FAO Code of Conduct had been presented first to the FAO Council and then to the Conference; the Conference had adopted it unanimously, attesting to the quality of the revision. The group was acknowledged for its considerable effort in producing the new Code of Conduct.

The FAO Director-General had written to the WHO Director-General, inviting WHO to adopt the Code of Conduct as an official document. If WHO accepted the invitation, the Code of Conduct would carry the two United Nations logos, enabling FAO and WHO to move forward together formally in using it to help countries manage pesticides more effectively throughout their life-cycle. The FAO had also been in contact with the United Nations Environment Programme (UNEP) about also formally endorsing or adopting the Code of Conduct.

2013 had been a busy year, with follow up to some of the issues identified in the August 2012 SAICM conference being addressed in regional meetings in Latin America and Eastern Europe, particularly in relation to highly hazardous pesticides (HHPs), which the JMPM has identified as a priority area.

Panel members Mr Eric Liégeois, Mr Gary Whitfield and Ms. Kimberly Nesci were unable to attend the meeting in person but might connect electronically for certain agenda items. Amadou Diarra had retired and was unlikely to continue working with the JMPM. Mr Yongfan Piao, an FAO regional staff member covering Asia and the Pacific (RAP), was welcomed to the meeting.

Mr Davis looked forward to a productive meeting and welcomed the opportunity to think strategically about how to use the new Code of Conduct to help countries address pesticide management issues more effectively and comprehensively.

Mr Yadav invited Mr Lorenzo Savioli, Director, NTD, to give the opening address.

2. Opening of the meeting

Mr Savioli welcomed the members of the FAO and WHO Panels, participants from partner Organizations in the UN system and OECD, representatives of the private sector and civil society, FAO staff and the staff of other WHO programmes to the 7th FAO/WHO JMPM.

The Panel was thanked for its advice to FAO and WHO on sound management of pesticides. Through the JMPM's work, FAO and WHO collaboration has contributed immensely to harmonizing and coordinating the actions for sustainable improvement of agriculture, public and animal health, and the environment. The development of the Code of Conduct, adopted by the 38th FAO Conference in June 2013, is a major achievement, and is included in the agenda of WHO's Executive Board (Geneva, January 2014) for its consideration and recommendation for publication as a joint FAO/WHO document. WHO senior management is strongly committed to promoting and implementing the Code of Conduct and to supporting the JMPM's work.

The theme of World Health Day (7 April 2014) is "vector-borne diseases", with a principal focus on vectors. Since vector control relies heavily on the use of pesticides, this commemoration provides an opportunity to globally advocate safe, efficient and judicious use of public-health chemicals through integrated vector management (IVM) and implementation of the Code of Conduct.

Mr Savioli thanked the participants for their contribution to the work of the two organizations and for making themselves available to attend the meeting.

3. Election of the chairperson and rapporteurs

Ms Andrea Rother was elected Chairperson and Mr David Kapindula Vice Chairman of the meeting. Ms Maristella Rubbiani and Ms Irma Makalinao were appointed Rapporteurs.

4. Adoption of the agenda

A number of minor amendments were made to the agenda for the purposes of timing and participants' availability. The final agenda is provided in Annex 2.

5. Declaration of interest

All invited experts completed a *Declaration of interests* for WHO experts. Those interests declared by the experts were assessed by the FAO and WHO Secretariat and were not found to be directly related to the topics under discussion at the meeting.

6. Terms of reference of the JMPM

The JMPM Secretariat informed JMPM of progress in developing the Terms of Reference (ToR) of the JMPM; the final ToR will be presented by June 2014.

7. Developments since the previous session of the JMPM

UNEP, FAO and WHO reported developments since the 6th Session of the JMPM in October 2012.

7.1 UNEP

Mr Kaj Madsen informed the meeting about UNEP's activities related to pesticide management since the last JMPM.

Internal developments

UNEP's situation has been affected by two important developments: (i) the Organization's restructuring, based on the conclusions of Rio+20, which has strengthened UNEP and the environmental dimension in the UN system, and increased its budget; and (ii) the designation of UNEP's chemicals branch as the temporary Secretariat of the new Minamata Convention on mercury, adopted during the second week of October 2013 in Japan. (When the convention is ratified, the first Conference of the Parties will decide where to permanently locate the Secretariat).

Follow up to ICCM3

UNEP has been involved in many SAICM implementation activities following ICCM3 (in September 2012). Endocrine disrupting chemicals (EDCs) are a major issue, which were adopted as a new emerging issue at ICCM3. The conference called upon the IOMC (Inter-Organization Programme for the Sound Management of Chemicals) organizations to build a plan for cooperative action on EDCs. In response, UNEP has been working with WHO and

OECD to develop a programme of work to increase knowledge and cooperative action in this area.

Global chemicals outlook

The full report of UNEP's Global Chemicals Outlook (GCO) was published earlier in 2013. As reported to the previous session of the JMPM, the project describes changes in the production, use and disposal of chemicals in developing countries, ways to track environmental impacts, sound management methods, costs of inaction, and other related issues. UNEP's Governing Council, which discussed the report in February 2013, has asked UNEP to continue its work on the GCO and, specifically, to examine areas where data and information are missing. UNEP will hold a first Expert Meeting in November 2013 to determine which issues have insufficient information and need further investigation. The plan is to decide which areas to focus on in the coming years.

Guidance on the marketing of chemicals

The GCO meeting will be held back to back with a meeting on UNEP's forthcoming guidance on the marketing, or "upstream", regulation of chemicals. This guidance will be somewhat similar to certain parts of the Code of Conduct but will focus on industrial chemicals, an area that has been neglected in the international setting for many years. The guidance should be finalized at the meeting; UNEP will try to promote it in different fora and use it for legal activities in assistance to developing countries.

Global alliance for alternatives to DDT

The global alliance for alternatives to DDT has been transferred from the Stockholm Convention Secretariat to UNEP's chemicals branch. UNEP is working with the secretariat of the Stockholm Convention to identify members for the steering committee.

Sustainable development indicators

As the follow up to the recommendations of the Rio+20 summit 2012, governments and the UN are working to develop sustainable development goals to replace the MDGs (Millennium Development Goals).

7.2 FAO

Mr Mark Davis informed the meeting about FAO's activities related to pesticide management since the last JMPM.

Regional focus in guidelines

As recommended at the last JMPM, FAO has tried to ensure that its guidelines and actions address regional collaboration in pesticide management, and notes that the JMPM itself ensures this in the guidelines. Beyond this, FAO has strongly supported regional collaboration by helping existing schemes to advance and encouraging the creation of new ones. FAO's regional work is discussed further in section 9 of this report.

Water monitoring to demonstrate positive effects of pesticide reduction

In response to the JMPM recommendation to look at water monitoring in order to demonstrate the positive effects of pesticide reduction, based on successful work in West Africa to monitor pesticides in international waters, FAO has examined the possibility of transferring the technology to other regions, such as in Kenya, to monitor well water. FAO is also investigating opportunities in projects under development. Opportunities to implement this recommendation have been limited, as considerable financial resources and running projects where the technology could be used are required; whereas taking water samples is relatively inexpensive, analysing them is quite costly, and resources must therefore be built into projects over time. Nevertheless, FAO is taking this recommendation into account and is transferring the technology where possible and appropriate.

Expanding on IPM and alternatives to pesticide use

The promotion of integrated pest management (IPM) and alternatives to chemical pesticides has become a major focus of the AGPMC. All new FAO pesticide and crop production projects have a component that addresses IPM and alternatives, and promotes sustainable pest management strategies. FAO has highlighted such strategies in its recent publication *Save and Grow*, which clearly links sustainable crop protection and pesticide management to sustainable crop production. As far as FAO is concerned, the two are completely integrated. The APMG, which has a high level of expertise in IPM, works closely with other FAO teams that are developing projects related to crop production to ensure that IPM principles and strategies are used.

Highly hazardous pesticides

FAO is developing guidance on HHPs (discussed in section 11). It continues to operate the project in Mozambique that was reported to the last session of the JMPM (also discussed in section 11), and is beginning a project in Paraguay. More generally, the FAO is emphasizing the issue with stakeholders and helping them to address HHPs in new projects. FAO's principal focus in this area is to empower regulators, which it sees as the way forward. The goal is to help regulators not only in managing pesticides in general but also to identify those chemicals that cause particular harm to humans or the environment under their conditions of use; these are not the same chemicals in every country or environment, and the objective is to help regulators find where problems are and to address them specifically.

Obsolete pesticides and container management

FAO has several projects on obsolete pesticides and container management either ongoing or under development for which it collaborates with other agencies, including WHO, UNEP, UNIDO (the United Nations Industrial Development Organization) and UNDP (the United Nations Development Programme). FAO has considerable expertise in this area, which it is happy to share with others. Every FAO project related to waste management contains a strong element of sustainability to ensure that countries have the capacity to deal with pesticide and container waste in the future, and to prevent the creation of new stockpiles of obsolete pesticides (FAO does not see its role as an agency that regularly collects stockpiles, so wants to prevent this problem at its source). FAO is helping to amend and update guidance that deals with pesticides under the Basel Convention, and is working to support south-south cooperation by building expertise in one country that can be made available to others.

Regional harmonization of pesticide registration

FAO has a number of projects that support regional groupings for pesticide registration (discussed in section 9 of this report). FAO strongly emphasizes the need for these groups to be sustainable over time, and builds this into initiatives from the start. In keeping with the recommendation of the previous session of the JMPM, FAO strongly promotes that pesticide registration covers both agricultural and public-health pesticides. In all of its projects, FAO tries to create collaboration between agriculture, environment and health ministries.

Registration toolkit

FAO has not made as much progress on the toolkit as expected but is implementing measures to make more significant progress on the toolkit in 2014 (see section 10 of this report).

Code of Conduct

The revised Code of Conduct was presented to FAO's Council and Conference for adoption in 2013. The translations have been checked and the final Code will be published simultaneously in all six official UN languages. FAO plans to format the document and to publish it online while awaiting WHO and, possibly, UNEP endorsement, after which the Code will be published in hard copy.

IOMC

FAO continues to participate in the work of the IOMC, notably in development of the toolbox for chemicals management, which will assist in developing the JMPM registration toolkit and ultimately be linked to the toolkit as one of its chemical management tools.

OECD

FAO also continues to work with the OECD Pesticide Programme, notably in its projects on biocides, pollinators, minor uses and IPM. At this time, the work on biocides and pollinators is of particular importance given its objective of promoting IPM in developing countries.

Conventions extraordinary-COP

FAO continues to be closely associated with the work of the Basel, Stockholm and Rotterdam Convention secretariats, particularly of the Rotterdam Convention which it co-hosts. During the spring 2013 "extraordinary" Convention of Parties (COP), which brought together the three conventions, FAO participated in side events on the IOMC toolbox and on highly hazardous pesticides, and led a side event on sustainable synergies through sustainable agriculture that was sufficiently interesting to the Director-General of FAO and the CEO of GEF that they opened it together. The event showed how the normative work of the conventions, the FAO Code of Conduct and policy- and standard-setting work translate to FAO's work in the field; it included presentations from various countries where projects are being implemented. The GEF's interest in this event derived from their interest in biodiversity, international waters and food security, which the FAO projects address.

FAO brought to the JMPM's attention an issue that arose during the ex-COP debates concerning the transfer of "old chemical" production technology to developing countries. During the debates, certain countries strongly defended certain chemicals, or resisted their

listing under the Rotterdam Convention, because of the chemicals' commercial value and the fact that the countries were producing and marketing these chemicals to other countries in their region or even globally. In other words, it transpired that developing countries are creating a chemical industry that is largely based on the formulation of older technology pesticides. The question raised was whether a new paradigm has developed whereby OECD countries, not wanting to be seen as exporting bad chemicals for use in developing countries, are instead transferring production. FAO explained that it was important for the JMPM to be aware that this was happening and to consider how it should be approached.

FAO reform

FAO is undergoing a major reform with a strong emphasis on decentralization, with more projects as well as procurement operated from field offices. FAO has five regional and some 10 subregional offices; their workload is overwhelming and the technical expertise is limited. The regional offices each have just one plant protection and one plant production person; the subregional offices have only one person who deals with both. The question is whether the quality of FAO's work can be maintained. At headquarters, meanwhile, the workforce has been significantly reduced. Of particular concern is the reduction of the IT department, which hosts the PSMS (Pesticide Stock Management System) database and is anticipated to host the registration toolkit as well. Nevertheless, the JMPM was assured that the AGPMC was highly regarded and therefore in a strong position under the reform.

7.3 WHO

Mr Rajpal Yadav and Mr Richard Brown, Technical Officer, Chemical Safety Team, WHO Department of Public Health and Environment, informed the meeting of the major activities carried out by WHO/HQ on public-health pesticide management since the previous JMPM meeting.

WHO Pesticide Evaluation Scheme (WHOPES) activities

WHOPES has been engaged in the following activities since the previous JMPM meeting:

Published guidelines

- *Guidelines for laboratory and field-testing of long-lasting insecticidal nets*¹
- *Specifications for pesticides: a training manual – Participant's guide*²
- *Specifications for pesticides: a training manual – Facilitator's guide*³
- *Guidelines on data requirements for the registration of pesticides*⁴
- *Guidelines for efficacy testing of spatial repellents*⁵

¹ http://apps.who.int/iris/bitstream/10665/80270/1/9789241505277_eng.pdf.

² http://apps.who.int/iris/bitstream/10665/85510/1/9789241505796_eng.pdf.

³ Available upon request to the WHO Pesticide Evaluation Scheme, CH-1211 Geneva, Switzerland.

⁴ http://www.who.int/whopes/recommendations/FAO_WHO_Guidelines_Data_Requirement_Registration.pdf.

⁵ http://apps.who.int/iris/bitstream/10665/78142/1/9789241505024_eng.pdf.

Country support activities

In collaboration with the WHO regional offices, technical support in developing national policy on sound management of pesticides was provided to Mali, Sierra Leone and Tunisia.

National workshops on development of pesticide specifications and on determination of equivalence were held in China (December 2012) and India (April 2013) in collaboration with the national pesticide regulatory authority. A similar national workshop for the staff of relevant sectors involved in quality control of pesticides is planned for the Islamic Republic of Iran (in November 2013). A needs assessment and workshop is planned for Sudan (in December 2013) to develop a strategic plan for integrated vector management (IVM).

A capacity assessment of the US Navy Entomology Center of Excellence in Jacksonville, Florida, USA, was carried out in July 2013 with a view to expanding the WHO Collaborating Centres for testing and quality control of pesticide application equipment for vector control. Similarly, the capacity of the Pesticide Quality Control Laboratory of the Bureau of Cosmetics and Hazardous Substances of the Department of Medical Sciences of Thailand was assessed in December 2012 as a prerequisite for designation of the laboratory as a WHO Collaborating Centre for quality control of pesticides. A collaborative action plan has been developed.

Several field activities or projects have also been carried out in collaboration with WHO regional and country offices since the previous JMPM meeting (presented under agenda item 14).

Evidence-base for policy and product development

WHO has established a Vector Control Advisory Group (VCAG) on new tools to serve as an advisory body to WHO on new forms of vector control for malaria and other vector-borne diseases. This advisory group was jointly established by the WHO Global Malaria Programme (GMP) and WHO/NTD to review and assess the public-health value, “proof of principle” (epidemiological impact) of new tools, approaches and technologies; and to make recommendations on their use for vector control within the context of IVM in multi-disease settings. VCAG has started functioning and held its first meeting in July 2013.

A report of WHOPES’ 6 years of work in five WHO regions, funded by the Bill & Melinda Gates Foundation, has been published in *Reducing health risks through sound management of pesticides*.⁶

WHOPES product assessment

The 12th FAO/WHO Joint Meeting on Pesticide Specifications (JMPS) was held in Kiev, Ukraine, on 5–13 June 2013. The meeting considered new, or to be revised, WHO specifications for 12 public health pesticides. WHOPES has also finalized recommendations on 8 new pesticide products for use in public health. The *Report of the Sixteenth WHOPES Working Group Meeting*, an Advisory Group to WHOPES, contains the outcome of WHO’s

⁶ http://apps.who.int/iris/bitstream/10665/90546/1/9789241506106_eng.pdf

assessment of and recommendations for these products.⁷ Currently, 12 pesticide products are under WHOPEs testing and evaluation (an updated list is available on the WHO homepage⁸).

Public Health and Environment (PHE) Chemicals Team activities

The Chemicals Team of the WHO Department of Public Health and Environment has been engaged in the following activities relating to pesticide management since the previous meeting:

International Chemical Safety Cards (ICSCs)

The development of ICSCs has continued through a collaborative effort by WHO and ILO. These cards summarize essential health and safety information on chemicals aimed at employees in the workplace. ICSCs are available in 16 languages via the Internet⁹. Highly hazardous pesticides have received priority in recent years when updating and creating ICSCs. All recent ICSCs carry GHS classification information. Of the 233 pesticides that are currently covered by ICSCs, approximately one quarter (60) have GHS information, including 38 from Classes Ia or Ib.

Generic risk assessment model for insecticides

Used for disease vector control in aircraft (known as aircraft disinsection), a generic risk assessment model for insecticides has been developed to complement the risk assessment models for public-health insecticides. A number of product types currently used or proposed for use in aircraft were also evaluated against the risk assessment model and those evaluations are published in the document to inform national authorities when making registration decisions regarding these products. This document has just been cleared for publication in the WHO Environmental Health Criteria series (EHC 243).

Scientific literature review of human health effects of DDT

At the end of 2012, a review of the scientific literature relating to the human health effects of DDT was undertaken to update the previous WHO evaluation dating from 2010. The findings were reported to the Conference of Parties to the Stockholm Convention in May 2013 when the continued use of DDT in indoor residual spraying for vector-borne disease control was considered. WHO will continue to monitor the DDT literature on an annual basis to identify major points of concern and if any changes to WHO recommendations may be required.

The team contributed to the following capacity-building activities relevant to pesticides:

IOMC Toolbox for decision-making in chemicals management

- Through the IOMC, WHO is contributing to the development of a web-based toolbox of guidance materials developed by IOMC organizations. The toolbox includes a

⁷ <http://www.who.int/whopes/recommendations/en/>

⁸ <http://www.who.int/whopes/en/>

⁹ www.ilo.org/icsc

module for developing a national management scheme for pesticides. A pilot version of the Toolbox is available online.¹⁰

e-Distance Learning Tool for chemical risk assessment

- WHO has contributed extensively to the development of an SAICM-funded online multi-media training tool for chemical risk assessment. This learning tool was developed in Thailand to provide globally-relevant training materials on risk assessment, risk management and toxicology for professionals in developing countries. It can be accessed online.¹¹ This tool could provide a platform for making chemical risk assessment training available to pesticide registrars.

7.4 Joint activities: JMPR

The JMPR has assessed pesticide residues in food since 1963. It is an international expert scientific group that is administered jointly by FAO and WHO.¹² The JMPR annual meeting reports back to the Codex Committee on Pesticide Residues (CCPR). The CCPR adopts the maximum residue limits (MRLs) proposed by JMPR and establishes priorities for future evaluations of new compounds and compounds under the programme for periodic re-evaluation.

The JMPR roster of experts consists of scientific experts who have submitted applications in response to the call for experts. These applications are reviewed by an outside referee and by the WHO Joint Secretary of JMPR. For each meeting, experts are selected by the Secretariat as a function of the expertise needed. Two independent experts are assigned for each compound: one prepares the monograph and the other reviews it before the meeting. Experts selected to participate in a JMPR should complete and sign the *Declaration of interests for WHO experts* regarding compounds to be evaluated. The Secretariat should identify and manage potential conflicts of interest.

During the meetings, the FAO Panel of Experts is responsible for reviewing residue and analytical aspects of the pesticides under consideration and estimating the MRLs that might occur as a result of the use of the pesticides according to good agricultural practices. The WHO Core Assessment Group is responsible for reviewing toxicological and related data and for estimating, where possible, acute and chronic health-based guidance values for humans of the pesticides under consideration.

The JMPR carried out the following activities since the JPM meeting in October 2012:

- Meeting of the Codex Committee on Pesticide Residues (CCPR), April 2013, in which 190 delegates from 65 countries participated and adopted >300 MRLs;
- Meeting of the 50th JMPR, September 2013, in which 35 FAO and WHO experts participated, who evaluated 37 compounds including 11 new compounds, 3 periodic re-evaluations and proposed 495 MRLs to the CCPR.

¹⁰ : iomctoolbox.oecd.org

¹¹ www.chemdlt.com

¹² <http://www.who.int/foodsafety/chem/jmpr/en/index.html>.

7.5 Discussion

The meeting discussed the presentations made by the three organizations and made several recommendations related to FAO and WHO activities.

FAO activities

The JMPM noted the importance of regional approaches to pesticide management and the fact that regional collaboration should not focus exclusively on harmonizing pesticide registration, which often confronts political obstacles, but should address pesticide management generally. The group noted that it was often easier to harmonize technical or other related issues such as data requirements, incident reporting, illegal imports and awareness raising than registration itself. At the same time, regional organizations could help to obtain political support for harmonization in registration. In conclusion, the JMPM recommended that FAO, WHO and UNEP help regional pesticide management groups to obtain official recognition by regional intergovernmental organizations. It further recommended that a list of regional pesticide management groups be compiled to facilitate future cooperation and synergies among all concerned parties.

The JMPM supported the promotion of regional collaboration in pesticide management and recommended:

- the use of regional platforms for collaboration, including the involvement of regional bodies;
- that regional collaboration on pesticide management be addressed in all relevant guidelines;
- that collaboration in individual targeted areas (e.g. technical subjects), where success has been proven or is easier to achieve, precede efforts to harmonize legislation and registration.

The JMPM commended FAO for its work on pesticide container management, noting the success of its system that enabled countries to clean, crush and recycle the bulk pesticide containers used during the 2003–2004 locust control campaign. It also noted that it was far more difficult to deal with the more common situation of lots of small containers, but that there were various examples of success worldwide in managing used pesticide containers.

WHO activities

The JMPM commended WHO for its work in promoting the sound management of public-health pesticides. It noted that its previous recommendation to finalize the guidelines on safe disposal of used long-lasting insecticidal nets had not been adequately addressed. The complexity of this issue and the lack of data on the amount of pesticide residues remaining in nets and bags made it difficult to give advice or make a decision. In conclusion, the JMPM welcomed the work being done to generate data on insecticide residues in treated nets and bags, and recommended that such data be used to generate models for environmental exposure. It also recommended that joint FAO/WHO guidance on labelling make reference to disposal of used nets and bags.

In relation to aircraft disinsection and travellers not being properly informed that their plane would be treated, the JMPM recommended that action be taken through the mechanism of the International Health Regulations to enable travellers to be informed before travel that they would be travelling on a route where disinsection would be required.

8. Emerging and priority issues in pesticide management

The JMPM reviewed and condensed a consolidated list of emerging and priority issues in pesticide management that had been identified in previous meetings in order to reduce redundancy, remove issues where work under way was deemed sufficient, remove items that seemed not to warrant a specific project but that could be incorporated into guidelines, and focus on issues that were not only judged important but also where success was considered achievable. Some of the issues were matters that could not be marked as having been “done” but were in fact processes that needed to be built into projects, which would over time become the norm for how things were done. The resulting condensed list of emerging and priority issues was organized into four categories: awareness raising, capacity building, statistics, and risk reduction. The JMPM agreed not to explore new issues for the time being but rather to promote the use of tools and materials that already existed or were under development.

The JMPM noted the recurrent problems related to the emerging and priority issues that they encountered in their work in the field, notably:

- insufficient awareness of the existence of JMPM guidelines among pesticide regulators;
- lack of capacity and training at local level to apply the guidelines;
- the prevalence of poor-quality pesticide products and inadequate inspection and enforcement;
- the difficulty of providing advice and assistance on alternatives to banned pesticides.
- To address these problems and the condensed list of emerging and priority issues, the JMPM recommended:
 - that FAO and WHO further increase awareness of their pesticide management guidance documents, including widely disseminating them during workshops and organizing exercises on their effective use;
 - that FAO and WHO, in collaboration with UNEP, OECD and other organizations, promote more effective inspection and enforcement of pesticide regulations in more of their activities;
 - that WHO and FAO facilitate establishment of a common policy by institutional buyers and international organizations for procurement of good-quality pesticide products;

- that advice be provided to countries on how to protect human health and the environment during the phase-out period of banned or withdrawn pesticides, which should include advice on pest control alternatives, discouraging the illegal use of banned or withdrawn pesticides, and the reasons for the ban or withdrawal. Reference to this advice should be made available in future guidance and could be useful to document successful approaches to implementing alternatives;
- that communication tools be developed to inform stakeholders of how the new Code of Conduct differs from the previous version;
- that a policy note be published to indicate the significance of the Code of Conduct to the public-health sector.

9. Pesticide registration: regional experiences

The JMPM was briefed on regional initiatives to strengthen registration supported by FAO in Asia, Latin America, the Caribbean, sub-Saharan Africa, East Africa, the Pacific and Southern Africa, which it considered in light of the previous JMPM recommendation on regional harmonization of public health and agricultural pesticide registration.

Asia (ASEAN)

The Asian regional collaboration on pesticide regulatory management has made steady progress in helping ASEAN countries to develop policies, review and revise laws and regulations, implement registration schemes and quality control, develop a harmonized scheme for registration of biopesticides, and address other aspects of pesticide management. A regional workshop held in 2012 to review progress and discuss an action plan of follow-up found that many countries could report significant achievements. A regional project on pesticide risk reduction has been extended to the second phase (another 5 years) to include implementation of IPM and assistance in developing pesticide policy and legislation. The revised Code of Conduct was introduced to a session of the APPPC (Asia and Pacific Plant Protection Commission); it was suggested that a document explaining how the new Code differs from the previous version could be useful in the future, notably for a workshop on the new Code and on PIC planned for 2014. A regional training workshop, also planned for 2014, will focus on practical aspects of pesticide registration, phasing out highly hazardous pesticides, and how to find and use available resource materials.

The Andean region (CAN)

In recent years, the Andean community has produced diagnostic systems for national registration and post-registration management of chemical and biological pesticides; validated a regional standard for control of biological control agents, natural extracts and agricultural use of semio-chemicals; validated a resolution concerning official use of a network of quality control laboratories for agricultural pesticides; developed a post-registration regional standard; developed a self-learning course on use of agricultural pesticides; provided training in registration and post-registration for agricultural pesticides; and developed national action plans for post-registration life-cycle management of pesticides.

The Caribbean (CARICOM)

FAO has been working with 16 countries in the Caribbean region and notably with the Coordinating Group of Pesticide Control Boards of the Caribbean (CGPC), which has tried unsuccessfully for years to achieve formal recognition from CARICOM as a technical working group in order to obtain needed political and financial support for their work. CGPC has nevertheless made progress regarding obsolete pesticides, information exchange, communication and awareness raising. FAO has been helping them to build capacity in registration, notably of biopesticides, and has carried out a review in the region towards harmonizing legislation and labelling. In the future, FAO will undertake obsolete pesticide disposal in the region, assist with further harmonization of its registration procedures, and support post-registration activities and interest in alternatives, and the sustainability of pest control practices.

West Africa (CILSS)

CILSS, one of the best known and longest running programmes, originally consisted of 9 countries but has recently expanded to 13; there is discussion about expanding a regional pesticide regulatory and registration scheme to include ECOWAS and UEMOA, which would bring the group to 17 countries, making up essentially the whole of sub-Saharan West Africa. The goal is to have a coordinated pesticide registration system for all of these countries.

East Africa (EAC)

The more recent initiative in East Africa is based on a Netherlands-FAO initiative and builds on work in Ethiopia. Based on this experience, FAO has decided to explore opportunities to bring the East African countries together to discuss their needs and expectations for pesticide management. As a first step, a workshop was held in Rwanda in September 2013 with five countries who are members of the East African Community (EAC), under which legislation and a policy on pesticide management have been drafted but frozen due to lack of resources. Participants from the agriculture, environment and health ministries as well as the private and farming sectors were invited to attend the workshop in Rwanda. The workshop developed a 21-point action plan that will be taken to donors to seek funding.

The Pacific region

The Pacific region also has been working for some time to harmonize pesticide legislation, registration, and management. Most of their work is coordinated through the South Pacific Community (SPC) and the South Pacific Regional Environment Programme (SPREP), which is working on waste management, including of obsolete pesticides. Some work has been carried out with the assistance of Australia and New Zealand, but progress in this region is very slow. Registrars from the countries have identified as priority needs: training of trainers on post-registration management of pesticides; basic capacity building; installation of a tracking system for pesticides; harmonized legislation and registration; languages on labels (an important problem in the region, where the small islands have many different languages); access to laboratory services; support for IPM or ICM; public education and awareness raising; a regulators' forum; an analysis of the use of highly hazardous pesticides; support for waste management, notably of pesticide containers; and action to prevent build-up of obsolete pesticide stocks.

Southern Africa (SAPReF)

The Southern Africa Pesticide Regulators Forum (SAPReF), begun in 2011, includes 13 countries and will soon include 15. To date, the group has held two face-to-face meetings as well as a steering group meeting, in September 2013, to review the group's workplan. SAPReF has been working to achieve formal recognition from the regional body (SADC) and so far has had positive results, including an invitation to participate on one of the subcommittees of the region's phytosanitary group. Another link between the two groups will be that the members of SAPReF apply the guidelines on the harmonization of pesticide registration prepared by the phytosanitary group, which has not known how to apply them. SAPReF brought to the JMPM's attention its recent discovery that a meeting to validate draft common regulations for pesticide management in Africa had been held in Tunis in October 2013, organized by the African Union's Inter-African Phytosanitary Council (AU-IAPSC). No pesticide regulators from the southern African region had been invited to the meeting, only representatives of the phytosanitary services. SAPReF expressed concern about this and noted that it was essential for regulators to be involved in such regional meetings.

Discussion

The JMPM commended the FAO for its extensive work in the regions and the promising results, reiterated its commitment to supporting regional pesticide management efforts and, to this end, recommended:

- that FAO, WHO and UNEP help regional pesticide management groups, which aim at strengthening regional collaboration and harmonization of pesticide management, to obtain official recognition by regional intergovernmental organizations;
- that FAO create a list of regional pesticide management groups with a contact point for each, to help interested parties work more closely with them and to increase synergies among all concerned parties;
- that a review of the use and risk of highly hazardous pesticides be considered in regions where they have been identified as a regional problem and priority; and
- that all initiatives related to harmonization of pesticide management include pesticide regulators, and that FAO, WHO and other organizations communicate this to their regional offices.

It was noted that the previous year's JMPM recommendation to address management of public health and agricultural pesticides together was not always taken into account, and FAO agreed to follow up on this. FAO also noted that many of the regional initiatives were still too recent to show results. Nevertheless, based on the positive experience overall, the JMPM recommended that in a few years' time, a summary of successful activities and approaches be compiled, to be shared among the regional groups.

10. Registration toolkit

The JMPM reviewed progress of the further development of the registration toolkit and was given a demonstration of what it looks like and how it will work. The group was reminded that this is a decision support system for pesticide registrars in developing countries and a web-based handbook for day-to-day use, not an automated system for evaluating pesticides. More specifically, the toolkit will provide information and advice on the different steps of the registration process and will allow users to: access data requirements and test guidelines for evaluating specific types of pesticides for specific uses; access evaluation methods for the various aspects of the registration dossier; obtain advice on decision-making principles and procedures; and summarize evaluations and build a registration record for each application. The toolkit will include: links to registration databases, which will allow users to check existing registrations and reviews; links to restrictions and bans; links to hazard classifications and labels defined by other registration authorities; and links to pesticide properties databases. It will provide assessment methods at different levels of complexity, starting with relatively simple methods requiring fewer resources.

The toolkit structure has now been set up but its content remains to be built. The JMPM recommended that the building of the toolkit continue and that developing countries be included in the process. The JMPM also recommended that the toolkit incorporate the OECD tool on considering alternatives such as biocides in pesticide registration, as well as safety datasheets on pesticides and exposure models that have been developed in developing countries.

11. Progress on guidelines under development

The JMPM noted that the FAO guidelines on pesticide resistance management had been completed and published, and it reviewed further four draft guidelines that are under development.

11.1 Guidelines on highly hazardous pesticides

Background

The JMPM reviewed the background to its work on guidelines for HHPs, namely that the FAO Council in 2006 instructed the FAO Secretariat to pay particular attention to highly toxic pesticides and help countries to reduce their risks, including their possible phase-out. The JMPM subsequently decided not to make a list of HHPs but instead to develop guidelines based on practical experience. In addition, the FAO Committee on Agriculture, in its review of the revised Code of Conduct, removed a proposed annex listing criteria for HHPs and instructed the JMPM to develop guidelines instead.

Pilot study in Mozambique

The JMPM reviewed progress in the project on HHPs in Mozambique reported to last year's JMPM. The project began by reviewing the pesticides registered in Mozambique to identify HHPs, reviewing the registration status of the identified HHPs in the EU and the USA, and assessing imports of the identified HHPs in Mozambique during the past 3 years as a proxy for use. An analysis of these reviews produced a "shortlist" of 64 pesticide products

containing 15 active ingredients that were classified as highly hazardous or “near” highly hazardous: this represented approximately 10% of registered pesticide products in Mozambique and 8% of registered active ingredients.

The shortlist was then used as the basis for field surveys, with 280 farmer interviews focusing on key cropping systems where HHPs might be used, and a stakeholder workshop. Surprisingly, preliminary results suggest that very few of the HHPs identified from the import data were actually used in the key cropping systems, and health problems reported by farmers were linked to other pesticides.

Plans now are to finalize the analysis, conduct an occupational risk assessment of a few pesticides using available models, establish a final list of HHPs and their use conditions, and elaborate a plan of action for reducing the likely risks of a limited number of pesticide-crop situations in Mozambique.

An important issue that arose during the project is that the international classification of hazards may have been harmonized through the GHS but the outcome of health evaluations may still not be similar; the result is that reputable sources disagree about whether a pesticide is a carcinogen, mutagen, etc. It might be helpful if the HHP guidelines developed by the JMPM could guide developing countries in making decisions in this confusing situation.

A second issue is the different “lines of evidence” to establish the shortlist of HHPs requiring action. In the absence of any established procedure, the project did this on an ad hoc basis as it went along. It was recommended that the guidelines identify the lines of evidence needed to decide which pesticides require attention, taking into account that many countries will not have the level of resources that were available for the SAICM-funded project in Mozambique.

Progress on the guidelines

The JMPM noted the progress made in developing the HHP guidelines and recommended that the structure be finalized before they are elaborated further. The principal purpose of the guidelines is to identify the “low-hanging fruit” – i.e., the most hazardous pesticides – so as to help regulators in developing countries target their assessment of pesticide use and potential problems. The group agreed that the eight criteria for HHPs previously established by the JMPM should remain, but that other parts of the guidelines would need reworking. The JMPM members agreed to send their specific comments on the document individually to the JMPM Secretariat, copied to expert working group on HHPs.

11.2 Guidelines on microbial pesticides

The JMPM reiterated its commitment to completing the guidelines on microbial pesticides, which address data requirements and assessment of such pesticides. A first draft of the guidelines was reviewed at the last JMPM meeting. The use of microbial pesticides has developed rapidly in developing countries and it was important to complete the guidelines as quickly as possible. In the absence of guidelines, companies have often been faced with “self-regulation” in countries, and farmers in some countries have been reluctant to use products that are potentially less stable than chemical pesticides. Harmonized guidelines would enable pilot global joint reviews of microbial pesticides. The JMPM therefore recommended that FAO facilitate completion of the guidelines as quickly as possible by an independent

consultant with expertise in biopesticide registration, and that the guidelines be aligned with the work being conducted by the OECD.

11.3 Guidelines on good labelling practice for pesticides

The JMPM reviewed the amendments made to the latest (5th) revision of the guidelines on good labelling practice for pesticides, which incorporated comments and suggestions provided at the last JMPM. The meeting suggested a number of corrections and additions, including:

- adding a clarification to the scope of the guidelines that labelling of pharmaceutical pesticides will not be covered in the document;
- stressing the need for intersectoral information exchange on labelling, in particular in countries where pesticides are being regulated by different ministries;
- inserting clear advice on appropriate personal protective equipment;
- clarifying the difference between mandatory and advisory statements on the label;
- adding a number of definitions;
- further specifying various units for active ingredient content, in particular for biological control agents and particular devices used for household pesticides;
- providing advisory text in case of accidental spills;
- requiring contact details for the national poisons centre on the label;
- updating information required on chemically treated seeds; and
- updating information required for insecticide treated mosquito nets.

The JMPM discussed the need for chronic hazard information to appear on the label, as it was argued that pesticides posing a chronic risk would normally not be registered. However, the JMPM identified cases where pesticides classified as posing a chronic hazard according to the GHS might indeed be registered, and therefore recommended maintaining chronic hazard information on the label.

The JMPM reiterated the urgent need to publish these guidelines and recommended that they be completed as soon as possible, incorporating the changes and additions agreed at the meeting, and circulated for endorsement by the JMPM.

11.4 Guidelines on pesticide legislation

The JMPM was informed of progress with the guidelines on pesticide legislation, which were drafted and discussed by the JMPM in 2012. The guidelines are being revised to incorporate comments received from JMPM members and are being reviewed by the FAO legal department, but the work has been slow due to the FAO staff being diverted to work on the

Organization's new strategic plan. The JMPM recommended that a new draft of the guidelines incorporating comments received to date be completed as quickly as possible and circulated to the JMPM for endorsement in 2014.

12. New guidelines to be developed

The JMPM considered which new guidelines would be useful to develop, taking into account its earlier discussion of emerging and priority issues, and existing lists of FAO, WHO and UNEP guidelines. Based on this, the JMPM recommended and prepared an action plan for developing:

- a single annotated list of FAO, WHO and UNEP guidelines related to pesticide management as a basis for assessing gaps and future needs (an enhancement to AGPMC's published *Annotated list of Technical Guidelines for the implementation of the International Code of Conduct on Pesticide Management* [2013]);
- an outline for guidelines on various aspects of the management of household pesticides;
- an outline for guidelines on licensing and inspection of pesticide retailers;
- an outline for guidelines on certification of pest control operators;
- an outline for new pesticide storage guidelines;
- a review of the existing guidelines on personal protective equipment (PPE) with a view to recommending a process for their further development;
- guidelines on the process of determining criteria to identify alternatives (including non-chemical solutions) to highly hazardous pesticides and pesticides whose use is prevented for any reason.

To maximize use of the guidelines, the JMPM also considered converting them into an interactive online training module that could be incorporated into training programmes and/or accessed at a distance, using experience from the Rotterdam Convention regional centre training programmes. However, due to the attendant cost and resource-intensity, the JMPM agreed not to recommend this for the time being.

13. Inspection and enforcement

The JMPM discussed at length the issue of inspection and enforcement, and the difficulty of regulating this in developing countries where there can be a considerable amount of "informal" retailing of pesticides, for example by bicycle vendors, that falls outside the scope of the Code of Conduct. Based on their discussion, the JMPM recommended that a working group, composed of JMPM members and established at the meeting, compile a list of

problems and constraints encountered by national inspection and enforcement services, as a way to assess what guidance could be provided or activities initiated.

14. Field activities

The JMPM was informed about various projects and activities being undertaken by different organizations, and discussed opportunities for synergies and common approaches to technical issues.

14.1 WHO programmes

*WHO regional offices*¹³

In the WHO African Region, the following activities were undertaken or are being continued:

- training of vector control staff on sound management of vector control insecticides;
- periodic Malaria Control Programme Review (MCPR), which includes capacity for indoor residual spraying and management of insecticides applied (issues such as storage, application, personal protection);
- monitoring susceptibility of malaria vectors to insecticides by the African Network on Vector Resistance (ANVR), which has been functional since 2001;
- a GEF-supported project on developing alternatives to DDT in Ethiopia and Madagascar was initiated in 2012;
- data collection and reporting procedures for evaluating the continued need of DDT, which will be completed in 10 countries in the region in 2014.

The WHO Region of the Americas is updating an online course on pesticide poisoning. The following activities are planned:

- organizing the 2nd international meeting for the control of *Aedes aegypti* (Panama, 18–22 November 2013) in collaborating with CDC and others partners (<http://www.meetingaedes2013.com/>) and presenting the results of the global survey on pesticide management in the Region of the Americas;
- preparing insecticide resistance surveillance map for the region;
- organizing training on the sound management of pesticides;
- supporting an SAICM project in the Bahamas to build a database of priority chemicals in the country, and identifying obsolete pesticides stockpiles.
- supporting management of public health pesticides in El Salvador, which has approved a law to regulate their use.

¹³ The report was provided to participants for information but not discussed due to time constraints.

The WHO Eastern Mediterranean Region is executing the UNEP-funded project on demonstrating sustainable alternatives to DDT and strengthening national vector control capabilities in the Middle East and North Africa. The project is being implemented in Djibouti, Egypt, the Islamic Republic of Iran, Jordan, Morocco, Sudan, the Syrian Arab Republic and Yemen. The objectives of the project are to reduce (i) the negative effects of DDT in public health and the global environment through the introduction of sustainable, cost-effective and environmentally friendly alternative interventions; and (ii) the reliance on DDT during outbreaks of vector-borne diseases and to minimize the potential to revert to DDT use.

The region has organized the following activities since the previous JMPM meeting:

- a training course for 22 hygiene officers on vector surveillance and IVM in Djibouti (September 2012);
- four workshops relating to IVM activities in Egypt and vector surveillance in 44 districts in 2012;
- a workshop on pesticide management and IVM in Jordan (September 2012) followed by a national workshop to adopt the national plan for pesticide legislation (October 2012);
- a consultation meeting on insecticide resistance management in Casablanca, Morocco (September 2012);
- a training course on insecticide resistance monitoring for 13 countries in collaboration with NAMRU-3 in Cairo (May 2013) and established an insecticide resistance database from the 1940s onwards;
- contracted an agency to repack and remove obsolete DDT from Jordan and Morocco for its safe disposal in France.
- the mission of a WHO consultant to Beirut, Lebanon (4–7 March 2013), with the main objective to identify priority activities for strengthening public health pesticide management in Lebanon. Key recommendations made to the Ministry of Public Health included the need for closer involvement in elaborating new pesticides' law, capacity-strengthening, strengthening collaboration with the Ministry of Agriculture, supporting the establishment of a national poison control and information centre, and strengthening information provision to and training of pesticide users.

The region has planned the following activities:

- situation analysis of public health pesticide management practices in Pakistan (November 2013);
- launching a regional IVM training course in Blue Nile River Institute, Gezira, Sudan (September 2014).

The WHO European Region is undertaking a project on sustainable alternatives to DDT for the control of vector-borne diseases in Southern Caucasian and Central Asian countries in collaboration with UNEP and GEF. The project also involves management of obsolete DDT stockpiles.

In the WHO South-East Asia Region, the Ministry of Health of Timor-Leste organized a multi-stakeholder meeting (25–26 July 2013) including the Ministry of Agriculture & Fisheries (MAF) to discuss ways of harmonizing policy and strategy for use of public health pesticides and to revise the national legislation. With the support of the Global Fund to Fight AIDS, Tuberculosis and Malaria, the National Malaria Control Programme in collaboration with MAF will initiate an integrated vector and pest management project beginning November 2013.

The WHO Western Pacific Region is undertaking a project on insecticide resistance determination in the Greater Mekong Sub-region (2012–2013) in collaboration with ACTMalaria. The region organized the 2nd IVM training programme in Kuala Lumpur, Malaysia (28 October – 3 November 2012) in which 40 participants from 9 Asia-Pacific countries participated.

Poison information, prevention and management

Ms Joanna Tempowski of the WHO Evidence and Policy on Emerging Environmental Health Issues briefed the meeting of the Department's activities on poisons information, prevention and management. WHO has a longstanding programme directed at the establishment and strengthening of poisons centres.¹⁴ It has developed information management tools to promote the collection of harmonized data on poisoning cases, guidance on establishing poisons centres, guidance on poisons prevention activities, and training materials for poisons centre staff.^{15,16} WHO also assists by facilitating training placements in existing, well-established poisons centres. A global directory of poisons centres is available from the WHO website.¹⁷

WHO is the implementing agency in two SAICM-funded projects: in the Pacific Islands and in Eastern Africa. The first project involves setting up poisoning “hot-desks” in 5 countries: the Cook Islands, Kiribati, Samoa, the Solomon Islands and Tonga, supported by the New Zealand National Poisons Centre. The second project explores the feasibility of a subregional poisons centre in Eastern Africa. The report of this project will present a number of options for improving poisons centre services in the subregion, including the possibility of establishing a “hub” centre to support other centres with training, information resources and advocacy. The report will include a costing model for setting up a poisons centre.

Suicide prevention programme

Ms Alexandra Fleischmann of the WHO Department of Mental Health and Substance Abuse briefed the meeting on the WHO suicide prevention programme that has been in existence for

¹⁴ <http://www.who.int/ipcs/poisons/en/>.

¹⁵ http://www.who.int/ipcs/poisons/training_manual/en/index.html.

¹⁶ <http://www.who.int/ipcs/poisons/pesticides/en/index.html>.

¹⁷ http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/index.html.

about 15 years. In its early years, the programme published figures and facts and resource booklets about the prevention of suicide, addressed to different professional and social groups (e.g. primary health care workers, general physicians, media professionals, teachers, police and first line interveners). Specific research projects in this area of work were also carried out.¹⁸

More recently, the work on suicide prevention has received more attention due to suicide being included as a priority subject in the Department's flagship programme "mhGAP"¹⁹, which provides WHO's Guidelines Review Committee with approved recommendations for the assessment and management of priority conditions, such as depression, schizophrenia and epilepsy. In May 2013, the WHO World Health Assembly adopted the *Comprehensive Mental Health Action Plan 2013–2020*,²⁰ which focuses international attention on a long-neglected problem that is firmly rooted in the principles of human rights. The Plan has brought additional visibility to the subject of mental health and suicide, and signals the priority given by WHO Member States to address mental health issues and the prevention of suicide. The publication of the first World Suicide Report is planned to be launched on 10 September 2014 on the occasion of World Suicide Prevention Day.

There are almost one million annual deaths from suicide globally. Not all suicides are associated with mental disorders. Suicide can also happen on the spur of the moment as an impulsive act. This is particularly relevant to suicide by self-ingestion of pesticides, which is estimated to account for one third of all suicides committed annually. In agricultural communities of low- and middle-income countries, pesticides are readily available and used as a means of suicide. A WHO key recommendation in mhGAP is the restriction of access to means of suicide. At the community level, a novel approach to restricting access to pesticides was demonstrated in a feasibility demonstration project in India,²¹ where a community opted for a central communal storage facility (instead of individual locked boxes, which is another option for safer storage of pesticides in communities). The central storage facility of pesticides is a practical and feasible approach for restricting access to pesticides in developing countries. The storage facility is simple, culturally acceptable and locally participative, thus, contributing to its sustainability. It can bring about better awareness and understanding of the medical implications of pesticide poisoning. Also, it can equip people with the capacity to deal with stressors in a proactive manner. The recommendation of restricting access to means will also be addressed in the planned World Suicide Report 2014.

The JMPM discussed the presentations, compared the members' own experiences with the huge number of pesticide poisoning cases in developing countries and the problem of under-reporting, agreed on the importance of poisons centres, supported the WHO position on "reducing access to means" of suicide as relevant for pesticides, and recommended:

- the creation or strengthening of existing centres and regional hubs;
- the systematic collection and evaluation of data from poisons centres on pesticide poisoning trends and self-poisoning with pesticides in developing countries, to be made available to pesticide regulators;

¹⁸ http://www.who.int/mental_health/prevention/suicide/suicideprevent.

¹⁹ http://www.who.int/mental_health/mhgap.

²⁰ http://www.who.int/mental_health.

²¹ Vijayakumar L et al. (2013). A central storage facility to reduce pesticide suicides – A feasibility study in India. *BMC Public Health*, 13: 850.

- that further work be carried out on reducing access to pesticides as a means of suicide; and
- that the issue of suicide be addressed in relevant FAO/WHO pesticide guidelines.

The JMPM agreed to revisit the issue of pesticide poisoning at its next meeting, and noted the need for further evaluation of the role of repeated and cumulative exposure to pesticides such as the highly toxic organophosphates in causing depression, Parkinson disease and other serious health problems.

14.2 OECD pesticide and biocide programmes

The JMPM was informed about the OECD's ongoing activities on pesticides and biocides, which include:

- organizing a workshop with the EU and KemI in June 2013 on testing and risk management of microbial pesticides. The workshop report, expected by the end of the year, should contribute to the development of European guidelines on microbial pesticides;
- developing new public web sites that are expected to be available in early 2014 on IPM, compliance and enforcement, and risk mitigation measures to protect pollinators;
- establishing an alliance to fight illegal international trade in pesticides, focusing initially on agricultural pesticides and OECD countries and partners, but intended to be enlarged in future to address other chemicals and to include non-OECD countries; and
- developing guidelines on how to solve minor use issues, which the OECD hopes will be useful to developing countries that export minor crops, and which if possible will provide recommendations for filling minor use gaps and using non-chemical pest control solutions.

14.3 FAO field activities

The JMPM was unable to hear presentations on FAO field activities due to time constraints, but presentation notes were provided for FAO activities and for activities in Asia, the Near East, and Eastern Europe and Central Asia (Annex 3).

14.4 Increasing synergies and collaboration

The JMPM agreed that although its Member organizations work together in a number of areas – for example in the JMPR (since 1963), JMPS (since 2001) and the JMPM (since 2007), on the Code of Conduct, and in projects on obsolete chemicals and DDT – it would be helpful to increase their collaboration, especially in the field. To this end, the JMPM recommended:

- building synergies among FAO, WHO and UNEP in designing projects and mobilizing resources on pesticide management at country and regional levels;
- that the pesticide manufacturing industry submit a proposal on how they could strengthen their collaboration with FAO, WHO and UNEP on pesticide resistance prevention and management;
- that FAO, WHO and UNEP draft a discussion paper, for consideration at the next JMPM, on how to increase synergies among the organizations on laboratory capacity, pesticide waste management, quality control, registration, and inspection and enforcement; and
- that JMPM members exchange new ideas or information by sending a message to the FAO or WHO Secretariat, for circulation to the Panel and/or observers.

15. Venues and procedures for JMPM meetings

The JMPM recommended that future meetings be held in developing countries, possibly in conjunction with another event, to allow participants to observe local situations, increase the visibility of the JMPM's work, and raise awareness of pesticide management issues among regulators and other stakeholders. FAO and WHO agreed to assess these possibilities and to choose a venue for 2014.

Following the procedure adopted during this meeting, the JMPM agreed that future meetings should conclude with a summary of the day's highlights and recommendations, and a draft action plan at the end of each day.

Finally, the JMPM agreed to hold an inter-sessional meeting by teleconference during April 2014 to review progress being made on the various projects, and obtain advice and feedback for the continuing work. WHO and FAO should take this occasion to inform the group of the location selected for the next JMPM meeting.

16. Recommendations

The recommendations of the JMPM referred to in the text above are summarized as follows:

Terms of reference of the JMPM

The JMPM recommended that FAO and WHO finalize the terms of reference of the JMPM, its panel members and observers by June 2014, and circulate them for information.

Summary of developments and actions taken after the 6th Joint Meeting on Pesticide Management in October 2012

Regional collaboration on pesticide management

The JMPM supported promotion of regional collaboration in pesticide management and recommended:

- the use of regional platforms for collaboration, including the involvement of regional bodies;
- that regional collaboration on pesticide management be addressed in all relevant guidelines;
- that collaboration in individual targeted areas (e.g. technical subjects), where success has been proven or is easier to achieve, precede efforts to harmonize legislation and registration.
- The JMPM noted that this recommendation should be implemented on an on-going basis, with progress reported at sessions of the JMPM.

Insecticide-treated nets and their bags

The JMPM welcomed the work being done to generate data on insecticide residues in treated nets and bags, and recommended that such data be used to generate models for environmental exposure. The meeting recommended that progress in implementing this recommendation be reported back to the next session of the JMPM.

The JMPM recommended that joint FAO/WHO guidance on labelling make reference to disposal of used nets and bags.

Aircraft disinsection

The JMPM recommended that action should be taken through the mechanism of the International Health Regulations to enable travelers to be informed before travel that they will be travelling on a route where disinsection will be required. The JMPM recommended that progress on this action be reported back to the next session of the JMPM.

Use of FAO and WHO guidance

The JMPM recommended that FAO and WHO further increase awareness of their pesticide management guidelines, including widely disseminating the documents during workshops and organizing exercises on how to use them effectively. The JMPM requested that progress in implementing this recommendation and examples of materials distributed be reported back to the next session of the JMPM.

Quality control

The JMPM recommended that FAO and WHO, in collaboration with UNEP, OECD and other organizations, promote more effective inspection and enforcement of pesticide regulations in

more of their activities. The JMPM requested the progress in implementing this recommendation be reported to the next session of the JMPM.

The JMPM recommended that WHO and FAO facilitate establishment of a common policy by institutional buyers and international organizations for procurement of good-quality pesticide products. The JMPM requested that an interim report on implementation of this recommendation be presented at the inter-sessional JMPM meeting in April 2014.

Banned and withdrawn pesticides

The JMPM recommended that advice should be provided to countries on how to protect human health and the environment during phase-out of banned or withdrawn pesticides including:

- providing advice on alternatives;
- discouraging illegal use of the banned or withdrawn pesticide; and
- communicating reasons for the ban or withdrawal.
- The JMPM further recommended that reference to this issue be made in future guidance, and that progress in implementing the recommendation be reported to the April 2014 inter-sessional meeting of the JMPM.

International Code of Conduct on Pesticide Management

The JMPM recommended the development of communication tools to inform stakeholders of how the new Code of Conduct differs from the previous version, to be ready by the time of WHO's anticipated endorsement of the Code in early 2014.

The JMPM recommended the publication of a policy note by the end of December 2013, to indicate what the Code of Conduct can bring to the health sector.

Pesticide registration

Regional pesticide management groups

The JMPM recommended that FAO, WHO and UNEP help regional pesticide management groups, which aim at strengthening regional collaboration and harmonization of pesticide management, to obtain official recognition by regional intergovernmental organizations.

The JMPM recommended that FAO create a list of regional pesticide management groups with a contact point identified for each, by the end of January 2014, to help interested parties to work more closely with them and to increase synergies among all concerned parties.

The JMPM recommended that in future, after more experience is gained, a summary of experiences on activities/approaches that work be compiled, to be shared among the regional groups.

Regional HHP analysis

The JMPM recommended that a review of the use and the risk of HHPs be considered in regions where HHPs have been identified as a regional problem and priority, and that a report on implementation of this recommendation be provided at the next session of the JMPM.

Regional harmonization of pesticide management activities

The JMPM recommended that all initiatives related to harmonization of pesticide management should include pesticide regulators, and that FAO, WHO and other organizations should communicate this to their regional offices. The JMPM requested a report on progress in implementing this recommendation at the JMPM inter-sessional meeting in April 2014.

Pesticide registration toolkit

The JMPM recommended further development of the Pesticide Registration Toolkit and encouraged inclusion of developing countries in the process.

The JMPM recommended that the Toolkit incorporate the OECD tool on considering alternatives in pesticide registration as well as exposure models that have been developed in developing countries and a link to safety datasheets on pesticides.

Progress on guidelines under development

Guidelines on highly hazardous pesticides

The JMPM noted the progress made in developing the HHP guidelines and recommended that the structure of the document be finalized prior to further elaboration. The JMPM requested a working draft for the next session of the JMPM.

Guidelines on microbial pesticides

The JMPM recommended that FAO facilitate completion of the guidelines, and that the guidelines be aligned with the work being conducted by the OECD. The JMPM requested that a final draft be prepared and reviewed by both the JMPM and the OECD biopesticide group, and possibly endorsed by the JMPM at the end of April 2014.

Guidelines on good labelling practice for pesticides

The JMPM recommended that the guidelines be completed as soon as possible to incorporate the changes and additions agreed at the meeting and circulated for endorsement by the JMPM. The JMPM requested that the guidelines be completed and endorsed as quickly as possible, with the aim of publishing at the end of April 2014.

Guidelines on pesticide legislation

The JMPM recommended that FAO complete a draft incorporating comments received to date, to be circulated to the JMPM for endorsement in March 2014.

New guidelines and tools to be developed

The JMPM recommended:

- the preparation of a single annotated list of FAO, WHO and UNEP guidelines related to pesticide management as a basis for the assessment of gaps and future needs, by the end of January 2014;
- the development of an outline for guidelines on various aspects of the management of household pesticides, for review at the next session of the JMPM;
- the development of an outline for guidelines on licensing and inspection of pesticide retailers, with a draft outline to be written and circulated for review by the end of March 2014, followed by preparation of a final draft for review at the next session of the JMPM;
- the development of an outline for guidelines on certification of pest control operators, with a draft outline to be written and circulated for review by the end of March;
- the development of an outline for new pesticide storage guidelines, to be circulated for review in mid-2014;
- a review of existing guidance on PPE with a view to making recommendations for a process for their further development to be circulated for review in mid-2014;
- the development of guidance on the process of identifying alternatives (including non-chemical solutions) to HHPs and pesticides whose use is prevented for any reason, with an outline to be circulated for review in mid-2014.

Inspection and enforcement

The JMPM recommended the compilation of problems and constraints encountered by national inspection and enforcement services, as a way to assess what guidance could be provided or activities initiated. The JMPM requested a report back on this at the next session of the JMPM.

Field activities

Pesticide poisoning

The JMPM emphasized the importance of poisons centres and recommended the creation or strengthening of existing centres and regional hubs.

The JMPM recommended the systematic collection and evaluation of data from poisons centres on pesticide poisoning trends and self-poisoning with pesticides in developing countries to be made available to pesticide regulators.

The JMPM supported the WHO position on “reducing access to means” of suicide as relevant for pesticides, and recommended that further work be carried out on reducing access to pesticides as a means of suicide.

The JMPM recommended that the issue of suicide be addressed in relevant FAO/WHO pesticide guidance documents.

The JMPM noted that these recommendations should be implemented on an on-going basis, and requested a report back to the next Session of the JMPM.

Synergies

The JMPM recommended building synergies among FAO, WHO and UNEP in designing projects and mobilizing resources on pesticide management at country and regional levels. The JMPM noted that this recommendation should be implemented on an on-going basis, and requested a report back to the next session of the JMPM.

Resistance management

The JMPM recommended that industry submit a proposal on how they could strengthen their collaboration with FAO, WHO and UNEP on pesticide resistance prevention and management.

Common approaches to technical issues

The JMPM recommended that FAO, WHO and UNEP draft a discussion paper to be considered at the next session of the JMPM on how to increase synergies among the organizations on each of the identified issues:

- laboratory capacity
- pesticide waste management
- quality control
- registration
- inspection and enforcement.

Venues for JMPM meetings

The JMPM recommended that its future meetings be held in developing countries, possibly in conjunction with another event, to allow participants to observe local situations, increase the visibility of its work, and raise awareness of pesticide management issues among regulators and other stakeholders. The JMPM requested that a venue be proposed at the JMPM inter-sessional meeting in April 2014.

17. Closure of the meeting

Mr Rajpal Yadav, on behalf of WHO, thanked the Chair, Vice-Chair, rapporteurs, Panel members and observers, FAO and WHO colleagues, advisers and resource persons for their excellent collaboration in the JMPM and for a dynamic and productive meeting. Mr Jan Breithaupt, on behalf of Mr Mark Davis and FAO, also thanked the group and expressed his pleasure at being able to work with the JMPM in the coming year.

Annex 1 – List of participants

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Annex 2 – Agenda

Closed Session

1. Declaration of interest
2. Panel working procedures and programme of work
3. Any other matters

Open Session

4. Opening of the meeting and welcome address
5. Appointment of Chairperson and Rapporteurs
6. Adoption of the agenda
7. Introduction of meeting procedure, working arrangements and housekeeping matters
8. Terms of reference of the JMPM, panel members and observers
9. Summary of developments and actions taken after the 6th joint meeting in October 2012
10. Presentations by FAO
11. Presentation by WHO
12. Presentation by UNEP
13. Emerging and priority issues in pesticide management – alerts and advice to FAO and WHO
14. Pesticide registration
 - a. Mapping regional efforts/experiences of various national bodies to harmonize registration of pesticides
 - b. Registration toolkit
15. Progress on guidelines under development – for review
 - a. Guidelines on highly hazardous pesticides
 - b. Guidelines on microbial pesticides
 - c. Guidelines on good labelling practice for pesticides
 - d. Guidelines on pesticide legislation
16. Discussion on new guidelines to be developed
17. Field activities:
 - a. Reports on important projects in implementation or under development
 - i. WHO programme for the prevention and management of poisoning
 - ii. OECD pesticide and biocide programmes
 - iii. FAO, WHO and UNEP field activities

- b. Discussion on possibilities for greater synergy between agency projects
- c. Common approaches to technical issues
 - i. Laboratory capacity
 - ii. Pesticide waste management
 - iii. Quality control
 - iv. Registration
 - v. Inspection and enforcement
 - vi. Pesticide resistance management
 - vii. Other issues

18. Venues and procedures for JMPM meetings

Closed Session followed by Open Session

19. Recommendations

Annex 3 – FAO field activities

14.3 FAO field activities

Near East: Pest and Pesticide Management (FAORNE, 2013)

- Preparing technical manuals (final drafts) in Arabic on:
 - Management of tomato borer *Tuta absoluta*
 - Management of fruit flies
- Translation to Arabic of 3 pesticide management guidelines:
 - Guidelines for the Registration of Pesticides,
 - Guidelines on Prevention and Management of Pesticide Resistance,
 - Guidelines for Quality Control of Pesticides.
- A Sub-Regional workshop was convened to review the NAPs and foster cooperation among Designated National Authorities (DNAs) in the implementation of the "Rotterdam Convention" for SNG countries (Subregional Office for the Gulf Cooperation Council States and Yemen).
- A field mission was carried out by an international expert to guide the Governments in safeguarding and developing an action plan for disposal of accumulated 226 tons of Lindane.
- Two training events on Pest Risk Analysis were carried out in the region.
- Assessment of the infestation, guidance and training on management of fire blight (*Erwinia amylovora*) on Rosaceae in Maghreb Countries was conducted.
- Assessment of the infestation and guidance on management of invasive water lettuce (*Pistia stratiotes*) in Morocco was carried out.

FAO projects (FAORNE)

- Regional TCP/RAB/3402 on management of tomato borer: *Tuta absoluta* in Near East Region (on-going implementation)
- GTFS/REM/070/ITA Regional IPM Programme (On-going, ends by December 2013).
- TCP/YEM/3404 (E) Emergency assistance to control the red palm weevil outbreak in Yemen (on-going implementation)
- (UTF/SAU/038) Capacity Building in Integrated Plant Health Management in The Kingdom of Saudi Arabia (on-going implementation)

- Regional TCP/RAB/3307: Management of Red Palm Weevil in North Africa (ongoing implementation)
- UTF/OMA/007/OMA: Disposal of Obsolete Pesticides in the Sultanate of Oman (standby for the shipping and disposal activity by the company)
- Promotion of Good Agricultural Practices for Dubas Bug *Ommatissus lybicus* Management for Improving Livelihoods of Date Palm Growers in the Sultanate of Oman UTF/OMA/013/OMA (pending to the signature by Omani counterpart).
- UTF/LIB/027/LIB Strengthening national capacities in phytosanitary standards and measures (formulation stage)
- UTF/LIB/047/LIB Managing Pesticides and Pests in Libya (*formulation stage*)

Asia: Pest and Pesticide Management (FAORAP, 2013)

- Inclusion in the work plan of the APPPC
- Regional workshop on enhancement of pesticide regulatory management in Asia
- Reviewed current status of pesticide registration systems (data requirements, evaluation of application dossier, registration and licensing, post registration, etc.)
- Introduced revised Code of Conduct to the 28th Session of APPPC, September 2013
- Harmonization of bio-pesticides registration - ASEAN
- Pesticide risk reduction through IPM and regulatory management for GMS (Greater Mekong Subregion) countries

FAO projects (FAORAP)

- FAO Pesticide Risk Reduction for GMS countries (2nd phase til 2018, funded by KemI, SIDA)
- GIZ Project on harmonization of bio-pesticides registration for ASEAN countries (1st and 2nd phase)
- TCP-Sri Lanka on capacity improvement of registrars
- Regional workshop on revised Code of Conduct and PIC
- Regional training workshop on practical aspects of pesticide registration and phasing out of HHPs (use of registration information resources etc.)

Other FAO regional initiatives include:

Project framework

Legislation Regulation Registration Enforcement	Institutional capacity Post-registration capacity/tools Specific technical issues	Alternatives IPM Crop/pest typology Access to inputs	Obsolete pesticides Contamination Containers
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New projects

- CILSS/ECOWAS/UEMOA
- Morocco
- Cameroon
- Benin
- Malawi
- Caribbean region
- Pacific region (waste management only with UNDP)
- East African countries – pesticide management programme
- ACP-MEAs Phase II