



## REPORT

**5<sup>TH</sup> FAO/WHO JOINT MEETING ON PESTICIDE MANAGEMENT**

**and**

**7<sup>TH</sup> SESSION OF THE FAO PANEL OF EXPERTS ON PESTICIDE  
MANAGEMENT**

**11 – 14 October 2011  
Rome**



**World Health  
Organization**



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## Abbreviations

ADI	Acceptable Daily Intake
ASEAN	Association of Southeast Asian Nations
ASP	Africa Stockpiles programme
CEMAC	Communauté Economique et Monétaire de l’Afrique Centrale
China CDC	Chinese National Institute of Communicable Disease Control and Prevention
CILSS	Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel
CiP	Chemicals in Products
CIPAC	Collaborative International Pesticide Analytical Council
COAG	Committee on Agriculture (of FAO)
COP	Conference of Parties
CPAC	Comité Inter-Etats des Pesticides d’Afrique Centrale
CRC	Chemical Review Committee (of the Rotterdam Convention)
CSP	Comité Sahélien des Pesticides
DGD	Decision Guidance Document
DNA	Designated National Authority (of the Rotterdam Convention)
EDC	Endocrine Disrupting Chemical
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HHP	Highly Hazardous Pesticide
HQ	Headquarters
ICAC	International Cotton Advisory Committee
ICCM	International Conference on Chemicals Management
ICSC	International Chemical Safety Card
IGO	Inter-governmental Organization
ILO	International Labour Organization
IOMC	Inter-organization Programme for the Sound Management of Chemicals
IPCS	International Programme on Chemical Safety
IPM	Integrated Pest Management
IRRI	International Rice Research Institute
IRS	Indoor Residual Spraying
ITN	Insecticide Treated mosquito Net

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
LN	Long-lasting Insecticidal Mosquito Net
MRL	Maximum Residue Limit
NGO	Non-governmental Organization
NIMR	National Institute of Malaria Research (of India)
OECD	Organization for Economic Co-Operation and Development
OEWG	Open-ended Working Group (of SAICM)
POP	Persistent Organic Pollutant
PSMS	Pesticide Stock Management System
SADC	Southern African Development Community
SAICM	Strategic Approach to International Chemicals Management
SAPReF	Southern African Pesticide Registrars Forum
SCPI	Sustainable Crop Production Intensification
SDS	Safety Data Sheet
SECE	Scientific Expert Group on Chemicals and the Environment (of UNEP)
SEEP	ICAC Expert Panel on Social, Environmental and Economic Performance of Cotton Production
SHPF	Severely Hazardous Pesticide Formulation
STMR	Supervised Trials Median Residues
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
US	United States of America
WHO	World Health Organization
WHOPES	World Health Organization Pesticide Evaluation Scheme

## 1. Introduction

The 5<sup>th</sup> FAO/WHO Joint Meeting on Pesticide Management (JMPPM) and the 7<sup>th</sup> Session of the FAO Panel of Experts on Pesticide Management, were held at FAO Headquarters in Rome, from 11 to 14 October 2011.

The FAO Panel of Experts on Pesticide Management is the official statutory body that advises FAO on matters pertaining to pesticide regulation and management, and alerts it to new developments, problems or issues that otherwise merit attention. The Panel in particular counsels FAO on the implementation of the revised version of the *International Code of Conduct on the Distribution and Use of Pesticides* (hereinafter the “Code of Conduct”). Members of the WHO Panel of Experts are drawn from the WHO Panel of Experts on Vector Biology and Control, or are academic or government experts invited to advise WHO on policies, guidelines and key actions to support Member States on sound management of pesticides.

Panel members invited to this meeting have been selected for their personal expertise and experience in specific aspects of pesticide management, both in agriculture and in public health, and do not represent the position of governments or institutions they may belong to. They are appointed in their personal capacity by either FAO or WHO. Both FAO and WHO 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 inter-governmental organizations (IGOs) pesticide industry associations and non-governmental organizations (NGOs) attended the meeting as observers.

Mr Mark Davis, Senior Officer, Pesticide Management Group of FAO, welcomed all participants to the 5<sup>th</sup> Session of the JMPPM on behalf of FAO. He informed the meeting that one FAO Panel member, Dr Amadou Diarra, had to cancel his participation in this Session. Mr Davis expressed his appreciation to members and observers for coming to Rome again and to devote their time and expertise to advise FAO and WHO. He indicated he was looking forward to the active participation of the JMPPM in the processes that FAO is involved in with regard to the management of pesticides in its member countries.

Dr Morteza Zaim, Coordinator Vector Ecology and Management, on behalf of WHO, welcomed all Panel members and observers to the 5<sup>th</sup> Session of the JMPPM. He noted that two WHO Panel members, Dr Christina Alonzo and Dr Irma Makalinao, would not be able to attend the present Session, but that a new member, Dr Andrea Rother, from the University of Cape Town, had joined the WHO Panel. Dr Zaim thanked FAO for hosting the meeting this year. He noted that WHO has significantly invested in providing support to its member states, in particular in capacity building for sound management of public health pesticides, and that he would brief the JMPPM about this in more detail. Dr Zaim underlined that many challenges still remain, due to the continued increase in use of public health pesticides in many developing countries, and that he therefore was looking forward to the contributions of the participants during the meeting.

All participants in the meeting are listed in Annex 1.

## **2. Opening of the meeting**

Dr Shivaji Pandey, Director of the FAO Plant Production and Protection Division, in his opening address, welcomed the members of the FAO and WHO Expert Panels, participants from partner Organizations in the UN system and OECD, representatives of the private sector and civil society, and staff from the FAO regions and headquarters to the 5<sup>th</sup> JMPM.

The Director underlined that the expertise and experience of the FAO and WHO Expert Panels is invaluable to the work of this Joint Meeting and to the pesticides management teams in the respective organizations. He in particular acknowledged the valuable time that each member contributes to participate in these annual meetings, the inter-sessional work conducted to develop guidelines and provide comments and advice, and in some cases the participation in workshops and trainings. The Director stressed that this work is not taken for granted and is very much appreciated.

Dr Pandey pointed out that within the UN system one is often asked how closer collaboration among agencies, and more efficient use of scarce resources for the benefit of developing countries, can be demonstrated. He noted that this meeting is an exemplary example of just such a collaboration. WHO among its many tasks, aims to help reduce the transmission of human diseases by vectors. This requires pest control strategies that may depend on pesticide use, but may equally depend on environmental, physical and biological control measures. FAO aims to help farmers protect their crops in the field and post-harvest, broadly recommending Integrated Pest Management (IPM) strategies within the context of ecologically based crop production practices. Nevertheless, pesticides are widely used and need much better management than is currently practiced in most of the developing world. These parallels alone signal the need for FAO and WHO to collaborate on pest and pesticide management so that the best practices for health and crop protection are disseminated and so that pesticide management in the health and agricultural sectors is strengthened.

The Director underlined that the collaboration demonstrated in the JMPM goes a great deal further. The work of UNEP on identifying and reducing the adverse impacts of chemicals on the environment is growing in importance every year. The evolution of the Basel, Rotterdam and Stockholm Conventions and of the Strategic Approach to International Chemicals Management (SAICM) is testament to international concerns. WHO's International Programme on Chemical Safety (IPCS) is a key source of information and guidance on reducing risks from pesticides as well as other chemicals. And OECD's extensive programme on pesticides management leads the way on demonstrating effective registration, risk reduction, monitoring and collaboration between countries.

The consistent work of NGOs on raising awareness on and promoting alternatives to hazardous pesticides that remain in widespread use, and the work of the private sector in stewarding their products and bringing newer, less hazardous pest control tools to market, also contribute to this goal. Dr Pandey particularly welcomed the recent announcement by Bayer to phase out the production and sale of all WHO Class I pesticides. FAO and WHO have been asking industry to achieve this for some time, and he expresses his hopes that Bayer's move is a signal that the rest of the industry will follow.

Dr Pandey underlined that at this year's Session the JMPM will be addressing a number of issues that are of high importance to FAO and WHO member countries. Strengthening pesticide registration is a high priority for many countries, and the work of JMPM has already

produced valuable guidance. Reducing risks from highly hazardous pesticides is also a priority. FAO does not allow the provision of WHO Class I pesticides through any of its activities, and the Secretariat of the Rotterdam Convention, half of which is hosted by FAO, is working with countries to identify Severely Hazardous Pesticide Formulations and alert the world to them. Nevertheless, more needs to be done, and faster, in order to prevent tragedies such as the poisoning of 94 people and the death of three children who consumed pesticide-contaminated food in Peru three weeks ago.

The Director noted that a revision to the Code of Conduct will also be discussed in this meeting. The Code of Conduct is at the core of the work done by FAO and WHO on pesticide risk reduction and both Organizations want to formally adopt the Code of Conduct as part of their strategies on pesticides management. This revision is necessary in order to better adapt the Code of Conduct to the needs of the health and environmental sectors, and time-critical in order to fit with the cycle of governing body meetings that need to approve it in FAO, WHO and UNEP. Dr Pandey therefore urged participants to support its smooth progress through this meeting and beyond, and to avoid getting mired in issues that may be of interest to particular groups but will not ultimately help developing countries to reduce risks and manage pesticides effectively.

Finally, the Director wished everyone a fruitful and enjoyable meeting, and declared the 5<sup>th</sup> JMPM open.

### **3. Election of the chairperson and rapporteurs**

Dr Gary Whitfield was elected Chairperson and Mr Tan Soo Hian Vice Chairperson of the meeting. Dr Andrea Rother and Dr Maristella Rubbiani were appointed Rapporteurs.

### **4. Adoption of the agenda**

Agenda item 11c of the provisional agenda (“Experience in Sri Lanka on risk reduction of highly hazardous pesticides”) was cancelled.

Three closed sessions were held as part of the JMPM, in which only Panel members, but not observers, participated; one at the start of the meeting to discuss working procedures (agenda items 1 – 3), a second session to identify emerging issues (agenda item 16), and a third one at the end of the meeting to define the recommendations (agenda item 18).

The definitive agenda was adopted as shown in Annex 2.

## **5. Declaration of interest**

FAO and WHO received Declarations of Interest from all the Panel members participating in the 5<sup>th</sup> Session of the JMPM. The Secretariat of the JMPM reviewed the Declarations of Interest and concluded that no circumstances were disclosed that could give rise to a potential or reasonably perceived conflict of interest related to the subjects discussed in the JMPM.

## **6. Terms of reference**

At its previous Session, JMPM members discussed terms of reference for observers to the JMPM and requested FAO and WHO to finalize them so that they apply for its the next Session.

JMPM members were informed that the legal departments of FAO and WHO had advised not to establish explicit terms of reference for observers, since the position of observers in all FAO and WHO expert panels and consultations is governed by well-defined rules.

These rules stipulate that observers are invited to meetings at the discretion of both Organizations but that there is no obligation to invite observers to meetings. In principle, observers are invited under the expectation that their participation will contribute to the overall objectives of the meeting. However, a confidentiality undertaking may be established, for both the observers and appointed members. Both Organizations should inform observers about the expectations they have from their participation, and the Organizations as well as the Chairperson of the meeting should monitor whether observers meet those expectations.

## **7. Developments since the previous Session of the JMPM**

A summary was presented of some important developments with respect to pesticide management that had taken place since the 4<sup>th</sup> Session of the JMPM in October 2010.

### **7.1 UNEP**

Dr Agneta Sundén-Bylehn informed the meeting about the major activities carried out by UNEP on aspects relevant to pesticide management since the previous Session of the JMPM.

#### **Scientific Expert Group on Chemicals and the Environment**

The meeting was reminded of the establishment, in mid-2009, of the UNEP Scientific Expert Group on Chemicals and the Environment (SECE), which supports UNEP's work on environmental chemical issues. SECE is composed of a resource group of experts in different areas, a core group that mainly advises UNEP on its work plan and ways of meeting



identified stakeholder needs, and stakeholder consultations that help identify needs relevant to the UNEP mandate.

SECE is presently developing guidance on four priority issues:

- identification of sensitive ecosystems in terms of stresses from pesticides and other chemicals;
- protection of ecosystem services from contamination, with a focus on drinking water resources;
- development of simple models for exposure and fate assessment of chemicals applicable to tropical climates in particular;
- socio-economic considerations in environmental risk management decision making for pesticides and other chemicals.

The focus of these guidance documents is to translate classical chemical risk assessment and management procedures to the local situation in, primarily, developing countries.

### **Training tools**

UNEP, jointly with WHO, has elaborated and is further refining its resource tool for trainers: *Sound management of pesticides and diagnosis and treatment of pesticide poisoning*<sup>1</sup>. Furthermore, a tool aimed at raising awareness of children (target group 9-15 year old) about risks from pesticides and other chemicals found in the household is being developed and tested<sup>2</sup>.

### **Endocrine disrupting chemicals**

UNEP, jointly with WHO, is preparing a major update to the 2002 IPCS *Global assessment of the state of the science of endocrine disruptors*<sup>3</sup>. The updated review document is expected to be released by early 2012.

Endocrine disrupting chemicals (EDCs) are being proposed as an emerging policy issue for consideration by the SAICM Open-ended Working Group (OEWG), in November 2011, and the subsequent 3<sup>rd</sup> International Conference on Chemicals Management (ICCM), expected to be held by mid-2012.

### **Chemicals in products**

The 2<sup>nd</sup> ICCM, in 2009, identified chemicals in products (CiP) as an emerging policy issue for cooperative action, because of the growing awareness of potential adverse effects of chemicals found in common products leading to increasing need for information on chemicals in products. ICCM-2 therefore mandated the establishment of a CiP project<sup>4</sup> to ensure that information on chemicals throughout their life cycle, including chemicals in products, is available, accessible and appropriate to the needs of all stakeholders. UNEP presently coordinates the project with the aim to:

- investigate existing CiP information systems;

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<sup>1</sup> <http://www.chem.unep.ch/Pesticides/PesticideResourceTool/default.htm>

<sup>2</sup> <http://www.chem.unep.ch/Pesticides/ToxicologyInTheClassroom/default.htm>

<sup>3</sup> [http://www.who.int/ipcs/publications/new\\_issues/endocrine\\_disruptors/en/](http://www.who.int/ipcs/publications/new_issues/endocrine_disruptors/en/)

<sup>4</sup> <http://www.unep.org/hazardoussubstances/UNEPsWork/ChemicalsInProductsproject/tabid/56141/Default.aspx>

- assess these systems, information needs of stakeholders, and identify gaps; and
- recommend to OEWG and to ICCM-3 (2012) further actions to address the issue.

CiP information systems may comprise product labels, databases, either publicly available or of limited access (i.e. when information is confidential or proprietary), safety data sheets (SDS), and regulatory systems requiring information disclosure.

A conclusion of the CiP project so far is that there are common drivers for chemicals information exchange, including industry concerns for product liability and brand and corporate image, and corporate policies and actors regarding safety, health and environmental performance (some pushing for supportive legislation). These drivers are present in all countries, though at a much higher level in developed countries.

A recent CiP workshop recommended to OEWG and ICCM-3 that a non-legally binding framework be developed to facilitate the exchange of information on chemicals in products. The framework should a) identify the roles and responsibilities of the major stakeholder groups; b) define the principles on what information could be transferred to different stakeholders and how that transfer could take place; and c) build on existing experiences of best practices.

## 7.2 WHO

Dr Morteza Zaim informed the meeting of the major activities carried out by WHO on pesticide management since the previous JMPM meeting.

### Chemical Safety

WHO Chemical Safety has been engaged in the following activities relating to pesticide management since the previous meeting:

The development of International Chemical Safety Cards (ICSCs) has continued, which summarize essential product identity data and health and safety information on pure chemicals for use by workers, employers and the general public. ICSCs are made available in a number of languages via the Internet<sup>5</sup>. There are approximately 200 pesticides which are covered by ICSCs. WHO is working with the UN Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) to make GHS classifications (for all hazard categories) available on a global basis. As part of this work, WHO is working with a European toxicology institute to make proposals for GHS classifications (including chronic endpoints) for all the Highly Hazardous Pesticides (HHPs) in Classes Ia and Ib (approximately 40 pesticides remain to be completed by the end of 2011). These GHS classifications would be made available initially through updating and publishing the ICSC for those pesticide substances. This information could also be incorporated in a future update of the *WHO Recommended classification of pesticides by hazard*.

As part of its contribution to SAICM, WHO has been finalizing a survey of SAICM stakeholders to provide the ICCM-3 with baseline information and preliminary information on progress in implementing the Strategic Approach. The report of the survey, which will be

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<sup>5</sup> <http://www.who.int/ipcs/publications/icsc/en/index.html>

available in October 2011 from the SAICM secretariat, gives a global picture of implementation and use of a number of key chemicals management tools including the *WHO Recommended classification of pesticides by hazard*, the *International code of conduct on the distribution and use of pesticides* and the GHS. The report also includes an analysis of the data by UN regional group and developmental status. From preliminary information, the results show a positive use of the aforementioned tools.

A Toolbox for decision-making in chemicals management is in the early stages of development by the Inter-organization Programme for the Sound Management of Chemicals (IOMC). The final Toolbox will provide a problem identification and problem-solving tool that enables countries to identify the most appropriate and efficient national actions to address specific national problems related to chemicals management. The project consists of an overarching web-based framework including the general framework of the Toolbox and three detailed examples of national chemicals management issues. The development of a national pesticide management scheme will be one of the detailed examples to be included in this project. The Toolbox will take into account as far as possible all material developed (or under development) by IOMC participating organizations relating to the management of pesticides, special focus being on identifying simple cost-effective solutions.

The use of DDT in indoor residual spraying (IRS) for malaria prevention and control has been re-evaluated by WHO. The process consisted of the development of hazard and exposure assessments, each of which underwent public and peer review and expert consultation, followed by a further expert consultation to prepare the risk characterization (based on the hazard and exposure assessments and recently published information). These assessments have now been published by WHO as Environmental Health Criteria No. 241<sup>6</sup>, and the conclusions were reported to the Conference of the Parties of the Stockholm Convention as part of the consideration of the continued use of DDT in disease vector control.

The use of insecticides in aircraft disinsection is being re-evaluated. A generic risk assessment model has been developed (using the same principles as similar risk assessment models for insecticides used in space spraying and IRS). Stakeholders have been invited to submit information on products currently used or proposed for use for aircraft disinsection for disease vector control, the risk to humans of which will be assessed by WHO using the risk assessment model. The outcomes of this project will be considered by an expert meeting early in 2012 and the results will be made publicly available to assist countries in making informed decisions regarding methods for aircraft disinsection.

### **WHO Pesticide Evaluation Scheme (WHOPES)**

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

Various guidance documents have been published:

- two WHO guiding documents<sup>7,8</sup>, providing national policy makers in the WHO African and South-East Asia Regions with critical elements to develop and/or strengthen national policy for the management of public health pesticides. Issues and driving forces that may instigate national policy development are discussed and guidance is provided on the process of policy formulation, implementation, and monitoring and evaluation;

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<sup>6</sup> <http://www.who.int/ipcs/publications/ehc/ehc241.pdf>

<sup>7</sup> [http://www.who.int/whopes/resources/SEA\\_CD\\_214.pdf](http://www.who.int/whopes/resources/SEA_CD_214.pdf).

<sup>8</sup> [http://whqlibdoc.who.int/publications/2011/9789241501231\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241501231_eng.pdf) .

- the second revision of the *Manual on development and use of FAO and WHO specifications for pesticide*;<sup>9</sup>
- *FAO/WHO Guidelines for quality control of pesticides*. These guidelines cover the legislative, administrative, organizational and infrastructure (facilities and trained human resources) requirements to implement a scheme of regulatory quality control of pesticides in Member States;<sup>10</sup>
- *Guidelines for monitoring the durability of long-lasting insecticidal mosquito nets under operational conditions*.<sup>11</sup> The data that will be generated using the guidelines will be crucial to further development of quality standards for physical integrity of long-lasting insecticidal mosquito nets (LNs);
- first revision of WHO *Generic risk assessment models*<sup>12</sup> for: i.) indoor and outdoor space spraying of insecticides, ii.) insecticides used for larviciding, and iii.) indoor residual spraying of insecticides, based on experience from use gathered since 2009 and also making use of emerging new information;
- fifth edition of the *Global insecticide use for vector-borne disease control – A 10-year assessment (2000-2009)*.<sup>13</sup> The report is intended for use by national programmes in order to inform decisions about the use of insecticides to control vector-borne diseases, for information exchange and regional collaboration, and as a basis for managing chemicals;
- *Guidelines for efficacy testing of insecticide products for disinsection of aircraft*. The purpose of these guidelines is to provide specific and standardized procedures and criteria for efficacy testing of products designed specifically for aircraft disinsection. Their aim is to harmonize the testing procedures for use by various laboratories and institutions in order to generate comparable efficacy data for registering and labelling such products by national regulatory authorities.

WHOPES has provided country support in the following manner:

- supported three countries (Cambodia, Ecuador and Guatemala) in situation analysis and needs assessment and development of national action plans for sound management of public health pesticides;
- supported Cambodia, Gambia, Guatemala and Mozambique in assessment of their national quality control laboratory(ies) and in development of an action plan for strengthening their capacities;
- Conducted workshop, for the pesticide regulatory authority in Cambodia, Ecuador, Guatemala and The Gambia on development of pesticide specifications, including the principles of determination of equivalence;
- assessed the capacity of the Chinese National Institute of Communicable Disease Control and Prevention (China CDC), Beijing, China and the National Institute of Malaria Research (NIMR), Delhi, India, and initiated the process for designation of China CDC as a WHO Collaborating Centre for vector surveillance and management and NIMR for laboratory testing and evaluation of public health pesticides;

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<sup>9</sup> [http://whqlibdoc.who.int/publications/2006/9251048576\\_eng\\_update3.pdf](http://whqlibdoc.who.int/publications/2006/9251048576_eng_update3.pdf).

<sup>10</sup> [http://whqlibdoc.who.int/hq/2011/WHO\\_HTM\\_NTD\\_WHOPES\\_2011.4\\_eng.pdf](http://whqlibdoc.who.int/hq/2011/WHO_HTM_NTD_WHOPES_2011.4_eng.pdf).

<sup>11</sup> [http://whqlibdoc.who.int/publications/2011/9789241501705\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241501705_eng.pdf)

<sup>12</sup> <http://www.who.int/whopes/guidelines/en/>

<sup>13</sup> [http://whqlibdoc.who.int/publications/2011/9789241502153\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241502153_eng.pdf)

- conducted a workshop on capacity strengthening for sound management of pesticides in Rabat (Morocco)<sup>14</sup>, November 2010, which was represented by five countries (Cameroon, Gambia, Madagascar, Morocco and Oman). Strategies and key actions for sound management of public health pesticides during their life-cycle were discussed;
- organized WHO regional consultations in Antigua, Guatemala, 23-26 August 2011 and in Kuala Lumpur, Malaysia, September 2011, on management of public health pesticides, which were represented by 26 and 20 member countries, respectively. Regional frameworks for action for sound management of public health pesticides were developed by the two consultations;
- participated in external review of malaria control programme of Indonesia and assessed public health pesticide management in the practice of vector control to inform malaria control policy and strategy for the country.

With the aim to provide an evidence-base for policy and product development, WHOPES co-convened the 10<sup>th</sup> FAO/WHO Joint Meeting on Pesticide Specifications (JMPS), in Beijing, China, from 8 to 3 June 2011. The data package in support of specifications for 29 pesticide compounds (19 new and 10 that were reviewed in previous JMPS meetings and pending completion), including public health products, were reviewed under the "new" procedure, using unified FAO/WHO procedures and data package requirements. The JMPS also recommended, among others, that manufacturers should provide internal analytical methods for any impurities listed in the published specification to FAO/WHO for provision to national programs.

The 7<sup>th</sup> Collaborative International Pesticide Analytical Council (CIPAC)/FAO/WHO Open Meeting was held in conjunction with the JMPS mentioned above. The meeting reported that the average of pesticide products which showed non-compliance with FAO/WHO Specifications was six percent, which indicated a constant trend between 2004 and 2010.

For the Joint FAO/WHO Meeting on Pesticide Residues (JMPR), see section 7.3.

Furthermore, WHOPES finalized efficacy testing and evaluation of five pesticide products for use in public health: a new long-lasting insecticidal mosquito net, three LNs for extension of specifications and one mosquito larvicide. Currently, 13 pesticide products are under WHOPES testing and evaluation. The updated list is available on the WHO homepage.<sup>15</sup>

### **7.3 FAO**

Mr Mark Davis informed the meeting about the major activities carried out by FAO on pesticide management since previous JMPM meeting.

#### **Guidelines**

Following a recommendation by the previous Session of the JMPM, FAO published translations of five recent guidelines in support of the Code of Conduct, which are now available in English, Spanish and French (*Pest and pesticide management policy development; Registration of pesticides; Pesticide advertising; Management options for empty*

<sup>14</sup> [http://whqlibdoc.who.int/hq/2011/WHO\\_HTM\\_NTD\\_WHOPES\\_2011.1\\_eng.pdf](http://whqlibdoc.who.int/hq/2011/WHO_HTM_NTD_WHOPES_2011.1_eng.pdf)

<sup>15</sup> <http://www.who.int/whopes/en/>

containers; *Developing a reporting system for health and environmental incidents*).<sup>16</sup> More translations are planned in 2012.

## **Field programmes and projects**

FAO has been conducting a large number of activities at national and regional levels to strengthen pesticide management. They include:

### ***Near East***

Under the Rotterdam Convention, a sub-regional consultation was conducted to review implementation and updating of National Action Plans for Jordan, Lebanon, Oman, Qatar, Saudi Arabia, Syria and Yemen. In addition, a specific sub-regional workshop was organized on severely hazardous pesticide formulations in (SHPFs) for Jordan, Lebanon and Syria. A national workshop for implementation of the Rotterdam Convention was held in Libya. Finally, Morocco ratified the Convention in 2011.

Under the general pesticide risk reduction objective, FAO carried out a regional IPM programme in the Near East, which comprises various training and workshops in project countries. Studies on pesticide residues and occupational health of workers are also being carried out. A specific IPM and pesticide management project is being conducted in Saudi Arabia. Furthermore, the degree of implementation of the Code of Conduct in the Oriental Near East sub-region is presently being evaluated.

New projects have been formulated for: Libya (i. improvement of IPM and minimization of the use of pesticides; and ii. disposal of obsolete pesticides, updating of legislation and strengthening of pesticide registration); Lebanon & Pakistan (pesticide risk reduction); and Regional (i. red palm weevil management; and ii. *Tuta absoluta* management).

### ***Eastern Europe, Caucasus, Central Asia***

An on-going Global Environment Facility (GEF)-funded project with NGO partnership for capacity building on pesticide (POPs) management in nine countries in the region will be concluded by the end of 2011, and a follow-up EU-funded project for 14 countries in the region is presently being formulated. In Armenia and Kyrgyzstan development of pesticide laboratory capacity is also being pursued. A new project, with Turkish funding is being prepared for Central Asian countries focussing on preparation of disposal of obsolete pesticides and regional approaches to pesticide registration.

### ***Asia***

A series of capacity building workshops has been supported by FAO under the Association of Southeast Asian Nations (ASEAN) regional umbrella, since the previous JMPM, on topics such as: harmonization of pesticide labelling requirements (November 2010 in Malaysia); biopesticide registration requirements (November 2010 in Thailand); bio-efficacy test protocols (January 2011 in Myanmar); pesticide formulation (June 2011 in Thailand); residue analysis (June 2011 in Thailand); and pesticide risk assessment (October 2011 in Malaysia). In addition, a project is carried in Vietnam together with UNEP on obsolete pesticide disposal. Different programmes are on-going in South-East Asia on implementation and promotion IPM in various crops.

### ***Pacific***

FAO is conducting a number regional activities, as part of a broader European Union (EU)-funded project, focusing on pesticide registration, empty container management,

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<sup>16</sup> <http://www.fao.org/agriculture/crops/core-themes/theme/pests/pm/code/list-guide/en/>

communication & awareness raising on pesticide risks, development of IPM strategies for key crops, and contaminated site assessments.

### ***Latin America and the Caribbean***

The FAO Regional Office has developed an e-learning course on the Code of Conduct, which will be on-line by November 2011. In addition, a web-based Toolbox is being developed for Latin America (in Spanish) to facilitate access to existing FAO and UN tools and guidelines on all aspects of pesticide management.

FAO is collaborating with the Comunidad Andina to update the Andean Regulation (“Norma”) for the registration and control of agricultural pesticides, including biopesticides. In Paraguay, 200 tonnes of obsolete pesticides were disposed of and 6 000 tonnes of contaminated seed were treated. In Bolivia, an inventory and safeguarding exercise of obsolete pesticides is being planned.

FAO implements an EU-funded programme in 16 Caribbean countries focussing on disposal of obsolete pesticides, pesticide registration, communication and capacity development on pesticide management. Furthermore, FAO and UNEP are jointly elaborating a proposal for a GEF-funded project for Central America and the Caribbean on pesticide management and risk reduction.

### ***Africa – southern***

FAO supported the Southern African Development Community (SADC) in developing *Regional guidelines on the regulation of crop protection products*, which were subsequently endorsed by the SADC Council of Ministers. FAO also provided support for the initial meeting of the Southern African Pesticide Registrars Forum (SAPReF).

Technical support was provided for pesticide risk reduction in substantial Conservation Agriculture projects in the region, and to IPM farmer field schools in Mozambique. FAO also worked with the International Labour Organization (ILO) to implement its *Code of practice on safety and health in agriculture* in countries in the Southern African region, and supported Botswana and Malawi in the clean-up of pesticide contamination.

### ***Africa – eastern***

In Eritrea, FAO supports obsolete pesticides removal and development of Citrus IPM. In Ethiopia work is carried out to improve the capacity for pesticide residue monitoring and a project is being implemented to strengthen post-registration activities, as part of the Pesticide Risk Reduction Programme – Ethiopia, in which FAO collaborates with the Netherlands. Finally, in Kenya an obsolete pesticide management project is being conducted.

### ***Africa – central***

Information and sensitization on the Rotterdam Convention is being pursued in various Central African countries. In Gabon, FAO a project on pesticide and chemical use in peri-urban areas of Libreville and Owendo has been formulated. In Cameroon, an inventory of pesticides is being established as a preparation of a disposal operation.

### ***Africa – west***

FAO conducts, and is expanding, a substantial regional IPM programme which is linked to monitoring of pesticide presence in river systems. The regional pesticide registration and management system of the Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS) is being supported, through various projects, focusing on capacity building. And there is continuing attention for the management of locust control pesticide stocks in the region, focusing on quality control and adequate storage.

## **Pesticide specifications**

For the JMPS see section 7.2.

## **Pesticide residues**

The JMPR was held in September 2011, at WHO Headquarters(HQ) in Geneva<sup>17</sup>. A total of 27 pesticides were evaluated, including eight new compounds. Eight new Acceptable Daily Intakes (ADIs) and more than 300 Maximum Residue Limits (MRLs) and Supervised Trials Median Residues (STMRs) were recommended by the meeting. JMPR has now started using the OECD Calculator for the estimation of MRLs.

Some key general considerations following from the meeting were: the updating of the automated spreadsheets for the calculation of dietary intake taking into account new large portion data; the use of geographical zones for the estimation of MRLs; and need to increase capacity and resources for the work of JMPR at both Organizations.

## **Pesticides at international fora**

FAO promoted discussion of sound pesticide management and pesticide risk reduction at various international fora, including:

- the 5<sup>th</sup> Conference of Parties of the Stockholm Convention, which included a GEF side event on pesticides and a side event on the Eastern European, Caucasus and Central Asia capacity development project;
- the 19<sup>th</sup> Session of the UN Commission on Sustainable Development included a joint FAO/WHO side-event entitled *More Food, Safe Food, Save Food*;
- the 5<sup>th</sup> Conference of Parties of the Rotterdam Convention included a side event on SHPFs;
- FAO assisted in the planning, and then participated in, the 1<sup>st</sup> International Conference for Heads of Pesticide Regulatory Authorities, held in September 2011 in Canada, promoting ways and means in which OECD countries might help developing countries in strengthening pesticide registration.

## **7.4 Discussion**

The meeting discussed the presentations made by the three organizations and requested a number of clarifications.

The JMPM noted the establishment by UNEP of the SECE and the relevance of the guidance materials being developed for pesticide risk assessment and management. JMPM requested to be kept informed about work being done by the SECE.

The meeting welcomed the on-going work on EDCs by UNEP and WHO. Participants noted that guidance is urgently needed for regulators in developing countries on EDC definitions and the data criteria required for evaluating potential endocrine disrupting properties of pesticides.

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<sup>17</sup> <http://www.fao.org/agriculture/crops/core-themes/theme/pests/pm/jmpr/en/>



The JMPM also underlined the usefulness of the tool on *Sound management of pesticides and diagnosis and treatment of pesticide poisoning*, and indicated that it is being successfully used and/or adapted in several countries. Similarly, the development of the teaching building module on chemical risks aimed at children was well received. The JMPM welcomed the offer by CropLife International to share information with UNEP about similar programmes they are conducting.

The JMPM stressed the need for resources to be mobilized for work on environmental aspects of pesticides.

The meeting briefly discussed the life-cycle management of insecticide treated mosquito nets (ITNs). It is expected that by the end of 2011, 200– 300 million ITNs will have been distributed in Africa alone, which will become obsolete after 3 – 5 years and may still contain 40-60% of the initial concentration of insecticide. The JMPM stressed the importance of finding appropriate solutions to the logistical and environmental problems related to ITN management and disposal. UNEP confirmed that pilot projects were still being conducted by FAO, UNEP and WHO with the aim to propose suitable solutions.

The JMPM was pleased to note that ICSCs had been updated by WHO for a number of highly hazardous pesticides, and recommended that funds be allocated to this activity for its completion.

The JMPM noted with great interest the re-evaluation by WHO of human health risks of using DDT in indoor residual spraying for malaria prevention and control. It was informed that the results of this study should help national informed decision making on future use of DDT in member countries.

The JMPM welcomed the on-going development of quality standards for LNs by WHO. However, it noted with concern that the increased use of pyrethroids in vector control and in agriculture is resulting in greater resistance in disease vectors and recommended that WHO provides further guidance on resistance prevention and management, and supports development of alternatives and optimal use of existing insecticides.

The meeting welcomed the publication by WHO of policy guidelines for the management of public health pesticides and noted that these would complement similar guidance documents published earlier by FAO.

The JMPM underlined that sufficient resources would be needed to enable WHO to implement country support activities for the management of public health pesticides.

The JMPM noted with satisfaction the extent of the field programme being implemented by FAO on pesticide risk reduction.

Regarding management and disposal obsolete pesticides, FAO clarified that it does normally not focus on specific groups of pesticides, such as POPs, but assists countries to dispose of all obsolete pesticide stocks. The JMPM acknowledged the difficulties encountered in establishing a new phase of the Africa Stockpiles Programme (ASP), and expressed its satisfaction that FAO had still been able to start implementing projects in most of the selected countries.

The JMPM noted that the rate of non-compliance of pesticide products with FAO/WHO Specifications, as found in the last CIPAC/WHO/FAO joint meeting, was quite low given

earlier FAO and WHO reports on the matter. The JMPM was informed that this figure was based on quality monitoring schemes in 25 countries, most of which were industrialised. However, sample sizes are sometimes fairly small and non-compliance with quality criteria in developing countries may not be properly reflected.

The JMPM welcomed the timely translation of several guidelines which would make these documents more readily accessible in French- and Spanish-speaking countries. The JMPM underlined that capacity building at the national and regional levels is essential to achieve sound pesticide management.

The JMPM noted FAO's continued support and involvement in the University of Cape Town's Post Graduate Programme in Pesticide Risk Management, which is structured around the Code of Conduct and supports its implementation.

## **8. Survey of use of guidelines**

The JMPM was presented with the results of the FAO *Survey of the use of technical guidelines*, which was conducted from January to June 2011. The purpose of the survey was to investigate:

- to what extent the current guidelines are known and used;
- to what extent the guidelines meet the needs of developing countries;
- how awareness about these guidelines, and their use, can be further enhanced; and
- whether there is a need for additional tools to supplement the guidelines.

The survey used a multi-pronged approach that involved analysis of web-use data, citation analysis and a questionnaire for the target audience. In addition, industry and NGO target groups were requested to provide written contributions that describe how they use the guidelines. Some selected findings included the following.

The web-use analysis showed that the most downloaded guidelines were the FAO/WHO specifications for pesticides; guidelines related to application equipment; and guidelines advising on the management of obsolete pesticides. Of the guidelines prepared through the JMPM mechanisms, most consulted were the guidelines on pesticide labelling; environmental criteria; pest and pesticide management policy; and pesticide registration.

The questionnaire for pesticide regulators and registrars was completed by 66 respondents, most of them from Africa and Latin America. The results showed that awareness and use of guidelines by these target groups is low. In 27% of cases, respondents were not aware of the existence of specific guidelines relevant to their responsibilities. Among respondents who had indicated that a specific guideline was considered relevant to their responsibilities, on average only 27% stated they had actually read it. Guidelines considered most useful (out of 66 respondents) were: pesticide labelling; legislation; registration; specifications; the manual on specifications; and efficacy testing.

Various reasons were given for the limited use of the guidelines, such as lack of awareness that they existed, non-availability in the local language, lack of or slow internet access, lack of human resources and limited time to read guidelines.

The main recommendations of the survey were that:

- more effort is needed to enhance awareness about guidelines (the report provides several concrete suggestions);
- there is an urgent need to translate the guidelines into other languages;
- there is a need for additional tools to supplement guidelines (case studies, reference lists, tool kits, etc.)
- better use should be made of ongoing field projects to raise awareness about guidelines and to make them available.

The JMPM noted with great interest the results and conclusions of the survey and commended FAO for carrying out the extensive assessment. The participants expressed their concern about the relatively low degree of use of the guidance by regulators and registrars in developing countries. They recognized however that the survey might have underestimated actual use of the guidelines somewhat, mainly because certain non-FAO web sites where guidelines are available were not monitored.

The JMPM stressed the importance of raising awareness and improving dissemination of guidelines and suggested that specific attention should be given to the “marketing” of this information (e.g., distributing at regional meetings). It was pointed out, however, that the lack of awareness about these materials may not only be due to inadequate dissemination but also to a general lack of priority for the sound management of pesticides in many countries.

The JMPM endorsed the recommendations made by FAO as a result of the survey and supported the urgent follow up on these. Participants indicated it would be important to assess the current structure of guidelines and to what extent this meets the needs of the users. In this respect, it was pointed out that more modern, easy-to-use, tools would likely be needed, in particular for regulators with limited human resources. Continued feedback from users through a feedback form/mechanism linked to each guideline was also considered important. In addition, making guidelines available through other channels than the Internet, which is still unreliable in some developing countries, was underlined (e.g. through CD-ROM and printed hard copies). The JMPM suggested evaluating the actual structure, layout and format of the guidelines to make them more accessible and easy-to-use.

The JMPM recommended that this type of survey be carried out on a regular basis to ensure that guidance materials developed by international organizations respond to the needs of target groups in developing countries and are being effectively used. Suggestions were made of using case studies to highlight how guidelines are used in individual countries. The JMPM requested that FAO reports back on actions taken to implement the recommendations made in the survey report as well as those by the JMPM at its next Session.

## 9. Pesticide registration

### Introduction

The JMPM was informed about on-going activities to strengthen pesticide registration in its member countries. It was pointed out that registration is a priority activity for FAO, because effective registration system lies at the foundation of sound pesticide management. The existence of an operational pesticide registration system reflects that appropriate institutional, legislative and technical structure for pesticide management is likely in place, which facilitates implementation of other elements of the pesticide life-cycle (e.g. control of imports, distribution, use and disposal).

The FAO/WHO *Guidelines for the registration of pesticides*, published in 2010, have been printed by WHO and subsequently widely distributed among registrars and regulators in relevant ministries, and used in various workshops and meetings in 2011. They have also been translated in Spanish and French by FAO. The guidelines were very well received, and a reprint is being considered.

The Guidelines encourage regional collaboration for pesticide registration as a means to optimize the use of limited resources and strengthen decision making. Various regional groupings have continued their collaboration or explored options for regional cooperation during 2011. FAO is supporting a series of activities conducted by the CILSS Comité Sahélien des Pesticides (CSP) in West Africa, including training of national inspection and control services. An independent evaluation of the regional registration system is also planned, with the aim to identify strengths and weaknesses of the CSP and make its operations more sustainable. FAO has also met with the Comité Inter-Etats des Pesticides d'Afrique Centrale (CPAC), of the Communauté Economique et Monétaire de l'Afrique Centrale (CEMAC), to discuss operationalizing their regional registration system. Recently, registrars from Southern African countries met to discuss regional collaboration, in a meeting organized by the University of Cape Town and supported by FAO. They established the SAPReF which will likely operate under the umbrella of SADC. FAO is also collaborating with ASEAN, focussing on regional networking rather than full harmonization. Finally, in the Pacific, discussions have been initiated towards a regional system for pesticide registration and management, which is supported by FAO with assistance from Australia and New Zealand.

Many of the meetings and workshop conducted in 2011 indicated that there is a great need for capacity building on pesticide registration in many countries and regions. Some training is being conducted through individual country projects, but this issue merits further attention. Publication of registration guidelines is not enough in itself and should be accompanied by the development and provision of appropriate practical tools for registration authorities. In this respect, the *Guidelines on data requirements for the registration of pesticides*, which are presently being developed under the JMPM, will be a key tool. Other relevant initiatives are the addition of a pesticide registrations database in the FAO Pesticide Stock Management System (PSMS) and the development of a Pesticide Registration Toolkit (see below).

It was noted that many developing countries have limited human and financial resources for pesticide registration, which will limit the time and options they have for evaluation of the pesticides. However, it was underlined that dossier evaluation standards should not be set low because of the limited national or regional capacity. It is essential that appropriate but

scientifically sound approaches to dossier evaluation and registration are developed, and that regulators are supported in building sufficient capacity to ensure good levels of control.

The JMPM took note of on-going activities to strengthen pesticide registration in developing countries and particularly welcomed the wide use of the *Guidelines for the registration of pesticides* published recently by FAO and WHO. It underlined the importance of a cross-sectoral approach to pesticide registration, covering all types of pesticides, and involving all relevant ministries and institutions.

### **Pesticide Stock Management System**

The JMPM was informed about the development by FAO of a new module of the PSMS<sup>18</sup> to allow information exchange among countries on registered pesticides.

The PSMS was initially developed to allow countries to record inventories of obsolete pesticides and to assess comparative risks of pesticide stores for developing a safeguarding strategy. Later on, the PSMS evolved into a management information system which helps countries to monitor the import, movement, use and disposal of all pesticides and pesticide containers, and manage flows and quantities of pesticides in the country. JMPM requested FAO to report about the extent to which the system is currently being used by countries.

At the request of regulators, a new module in PSMS is now being developed to maintain registers of authorized pesticides in participating countries and to make these easily accessible as a basis for information sharing. The module will provide basic information on each registered product, e. g. registrant name and contact details, product composition, uses, pests, MRLs, pre-harvest intervals, etc. It can be accessed by active ingredient, formulated product, crop or pest, among others. Countries will upload information using a standard spreadsheet template. It was underlined that this new module is presently limited to a repository of registrations and is not a system to manage the registration process.

The public module will not contain confidential business information. However, a feature may be included where regulators can attach decision making documents to the registration entries, which are password protected and are only accessible by selected registrars. The aim would be to allow information exchange among regulators on decision making.

The JMPM made a number of suggestions for consideration by FAO when further developing the PSMS registrations module, which included: ensuring that data categories are harmonized with the *Guidelines on data requirements for registration of pesticides*; including information on formulants; including information on poisoning cases; ensuring that the system meets the specific situation of countries with more than one registration authority. Participants furthermore pointed out that there is a need for dedicated software to manage work flows within the pesticide registration system, but recognized that these tend to be very country-specific.

The JMPM underlined the usefulness of such information exchange for pesticide regulators in developing countries and recommended that FAO carry out pilot testing of the module to ensure that it responds to the needs of its target audience. The JMPM supported the offer of WHO to extend the module to also cover public health pesticides, as well as linking FAO's and WHO's forms currently used for data collection.

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<sup>18</sup> <http://psms.fao.org/psms/about.htm>

## **Pesticide Registration Toolkit**

The *FAO/WHO Guidelines for Registration of Pesticides* were published in 2010 as an umbrella guideline which describes structure, organization and process of pesticide registration. Under the umbrella guideline, a registrar will need specific technical guidance on various topics related to pesticide registration, such as dossier composition, data requirements, testing methods, data evaluation methods, acceptability criteria, etc.

As a result of a JMPM 2010 recommendation, the Pesticide Registration Toolkit is being developed as a decision support system for pesticide registrars in developing countries. It will assist registrars in the evaluation and authorization of pesticides.

The Toolkit can best be considered as a web-based registration handbook intended for day-to-day use by pesticide registrars. The Toolkit is not an automated system for the evaluation of pesticides. It supports and facilitates informed decision-making by registrars, but does not take decisions for registrars.

Registrars can use the Toolkit to support various aspects of their regular tasks, including:

- assessing what data may be required for the evaluation of a specific type of pesticide for a particular use. Data requirements can be selected through a dynamic selection procedure and tailor to the specific situation a registrar needs to assess. Registrars will also be able to access internationally defined testing guidelines that are available for the generation of those data;
- obtaining guidance on how to evaluate the various technical aspects of the pesticide registration dossier submitted by the applicant, to ensure that only pesticides are approved for use which are effective but do not pose unacceptable risks to human health and the environment;
- determine whether other countries have registered a pesticide, and for what uses. Where available, registrars will also be able to access evaluations carried out by other registration authorities;
- monitor the dossier evaluation process and check its progress. The Toolkit will provide flow charts and check-lists to help determine the most appropriate processes to be followed. In addition, standardised evaluation summary forms can be downloaded to structure and document pesticide evaluations.

Since registration authorities in many developing countries have limited staff and relatively little experience in pesticide evaluation, the Pesticide Registration Toolkit provides, as much as possible, assessment methods at different levels of complexity. These range from generic methods requiring less resources, to more locally specific risk and efficacy assessment methods. As a registration authority builds up staff resources and gains (access to) scientific capacity for pesticide evaluation, the Toolkit will allow increasingly complex but more precise methods to be chosen.

A partial working model of the Toolkit is presently under development, in which different options for its structure, functionalities and contents can be tested and evaluated. The development of the full Pesticide Registration Toolkit is expected to take about 2-3 years. It will involve close collaboration among registrars in developing countries and subject experts from more resource-rich pesticide registration systems. Optimal use will be made of existing guidance documents and materials, both internationally and at the national level. FAO will

coordinate the elaboration of the contents of the Toolkit, as well as ensure the design, development and maintenance of the Toolkit web site.

The Pesticide Registration Toolkit will be made available through the FAO web site. An extensive training programme for registration authorities in developing countries would part of the project.

The JMPM welcomed the initiative by FAO to develop a web-based Pesticide Registration Toolkit. It was pointed out that the Toolkit would be a user-friendly complement to the paper versions of published guidelines. The JMPM recommended that methods and approaches for re-registration evaluations be included in the tool. It was underlined that maintenance and regular updating of the Toolkit would be very important, as well as continued review of evaluation methods being proposed. Dating individual text items should facilitate evaluation of the appropriateness and timeliness of the information.

The JMPM suggested that the development team of the Toolkit be sufficiently broad and that the scientific working groups that provide contents for evaluation methods and data requirements be inter-disciplinary and include registrars from the countries targeted by the Toolkit. The JMPM also suggested that the Toolkit and PSMS be linked to other existing activities, and that members could provide support in this regard. A further suggestion was for the tool to include advice on public risk and risk prevention awareness raising linked to the registration process.

Participants stressed the great importance of capacity building to accompany implementation of toolkit. In this respect, the course convenor of the University of Cape Town's post-graduate diploma on pesticide management offered to use/test the tool and provide feedback.

It was noted that this type of technical tools are important to strengthen pesticide registration, but that there may be other constraints that hamper decision making for pesticide registration and use of the tool (e.g. political will). There would need to be advice to countries on how to deal with such constraints and social/economic context issues in addition to technical tools.

The JMPM stressed the importance of the toolkit as a means to improve access to guidance on pesticide registration, data requirements and other relevant topics that is available from FAO and WHO, and to provide practical support to pesticide registrars in developing countries. The JMPM recommended that the toolkit covers all types of pesticides (including public health pesticides) and takes into account relevant guidance developed by other relevant organizations, such as IOMC, OECD and UNEP.

## **10. Highly hazardous pesticides**

The JMPM was informed about the scope of on-going work in the area of HHPs.

### **Survey of actions taken to regulate HHPs**

The previous Session of the JMPM recommended that experiences from countries that have taken regulatory decisions to phase-out the use of HHPs be used for developing practical guidance to assist other countries in the process of reducing risks by and/or phasing-out

HHPs. FAO therefore is preparing a survey of countries that have phased out HHPs with the aim to publish a number of case studies. A short list of questions for countries has so far been developed to guide the elaboration of the case study. These include the reasons for phasing out the pesticide(s), the information used and processes followed to take such a decision, the availability of alternatives, and specific constraints encountered when preparing the decision or after the decision.

Case studies will be collected from countries that are known to have phased out HHPs or have taken explicit other measures to reduce their risks. Case studies will be edited and published by FAO, and commonalities and lessons learned will subsequently be analysed with the aim to develop practical guidance for countries on how to implement HHP risk reduction.

The JMPM welcomed the proposed survey by FAO. Participants made a number of suggestions for additional questions to be included in the survey, including: how decisions are publicised and disseminated to pesticides users; how decisions are enforced; whether any indicators are measured to assess risk reduction as result of the decision; how obsolete stocks are being managed; and whether the socio-economic impact of the decision has been evaluated.

### **Rotterdam Convention**

The JMPM was informed about recent development in the *Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade*, in particular those related to regulation SHPFs. The main objective of the Rotterdam Convention is to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm and to contribute to their environmentally sound use.

The Chemical Review Committee (CRC) of the Convention, in its 7<sup>th</sup> Session held in March 2011, decided that draft Decision Guidance Documents (DGDs) should be prepared for the SHPF Paraquat dichloride (EC of 276 g a.i./L or above, corresponding to paraquat-ion at or above 200 g/L). This DGD will be discussed and finalized at CRC 8 in 2013. In addition, the CRC agreed on the draft DGD for azinphos-methyl, that will be forwarded to the 6<sup>th</sup> Conference of Parties (COP) in 2013, and recommended for listing. The elaboration of the DGD on endosulfan is presently on hold, since the pesticide has already been listed on Annex III.

The 5<sup>th</sup> COP, held in June 2011, decided to add three new pesticides to Annex III: endosulfan, alachlor and aldicarb. As a result, Annex II of the Convention now lists 32 pesticides/SHPFs and 11 industrial chemicals. Two side events regarding pesticides were organized at the COP. One on was on vulnerable groups and pesticide exposure (in collaboration with FAO, WHO and ILO). Special attention was given to children working in agriculture, considering that seventy percent of child labour occurs in agriculture, and that therefore children are at high risk of exposure to pesticides. Discussed was, among others, whether the same safety limits should be applied to vulnerable groups as to the normal working population, and the importance of awareness raising and education.

A second side event discussed how farmers share responsibility at the global level to protect human health and the environment. The objectives of that session were, among others, to present country-experiences in collecting field data on exposure to pesticides, to share



experiences with NGOs on community monitoring methodologies, and to seek ways to identify SHPFs and increase capacity to prepare proposals to be submitted to the CRC.

A specific programme to provide support to countries in reporting SHPFs started in 2007 and has initiated so far pilot activities in 11 countries. The JMPM was reminded of the definition of an SHPF under the Rotterdam Convention, which is a chemical formulated for pesticidal use that produces severe health or environmental effects observable within a short period of time after single or multiple exposure, under conditions of use.

Specific challenges in reporting SHPFs to the Convention include the fact that pesticide incidents often not well documented, in particular with respect to information on the pesticide identity or the description of the circumstances of the incident; that Designated National Authorities (DNA) are often not in touch with the sources of information on incidents (e.g. poison centres, doctors, hospitals, farmers); that countries may not be aware of the procedure for submitting a proposal for an SHPF to the Convention; and lack of political will to submit such a proposal. As a result, only two proposals have been submitted to the Convention since 1998: in 2004 Senegal submitted an SHPF proposal for dustable powder formulations containing a combination of benomyl, carbofuran and thiram, which led to its inclusion in Annex III; and in 2010 Burkina Faso submitted a proposal to list an EC formulation of paraquat dichloride.

COP-5 identified that strengthening national capacities related to severely hazardous pesticide formulations, including by facilitating pilot projects is a priority activity for technical assistance in 2012-13 and requested that SHPF programmes be conducted in four countries every year. Publication of a SHPF toolkit, providing information to countries to set up a monitoring and reporting system, is another priority activity being pursued by the Convention Secretariat. The JMPM was also informed about the outcome of a recent workshop in Sri Lanka on strengthening national capacity and collaborative efforts in monitoring and reporting on pesticide poisoning.

The JMPM welcomed the support provided to countries on the identification and reporting of SHPFs and recommended that it be extended, recognizing the accountability of the Secretariat to the COP and the text of the Convention. Members further welcomed the current work by the Secretariat on bringing the Convention in line with the GHS.

The JMPM discussed differences in the criteria for SHPFs and for HHPs as defined by the JMPM and noted that the relatively narrow definition of an SHPF was bound by the text of the Convention. The relevance of “normal condition of use” in the SHPF definition was in particular debated. Participants also pointed out the importance of the types and levels impurities and formulation characteristics for the hazard of a specific formulation, and recommended that the Convention Secretariat consult with the JMPS on how to deal with such issues when identifying SHPFs.

The JMPM invited the Secretariat of the Convention to report back on the incident reports received from countries at its next Session in order for the JMPM to be aware of which pesticides are particularly problematic for countries.

The JMPM explored possible measures that could be taken to reduce risks in the, sometimes considerable, period between the submission of a proposal for a SHPF (and implicitly alerting Parties that incidents have occurred with such a formulation) and the final inclusion of the pesticide in Annex III. It was noted that risk management and risk reduction guidance may

need to be provided to Parties that have submitted a SHPF and are waiting for a resolution by the COP.

Participants underlined the importance of awareness building and political advocacy on the objectives of the Convention and the pesticides covered by it. If political will to take effective risk reduction measures is lacking, all technical support to countries would be of little use. It was suggested that there may be a need for training of regulators and/or NGOs to write policy briefs for national politicians.

### **Rice and pesticide risk reduction**

The JMPM was presented with the case of the important outbreaks of brown planthopper (*Nilaparvata lugens*) which have occurred in various South-East Asian countries in the period 2005 – 2010. The causes of brown planthopper outbreaks are well-researched and include the inappropriate use (e.g. timing, location) as well as overuse of insecticides, the use of insecticide mixtures, the overuse of nitrogen fertilizers, and growing sensitive rice varieties, among others. This leads to resurgence of the pest, mainly through adverse effects on natural enemies, the development of pesticide resistance, and physiological effects increasing population growth of brown planthopper.

One of the possible reasons for the recent outbreaks is the great increase in production of pesticides in various countries in the region over the last decade. This has led, among others, to inappropriate insecticides and mixtures being marketed for brown planthopper control. In addition, because of the (potentially) large crop losses that are caused by brown planthopper, the response in some countries has been to apply large amounts of insecticides as a “quick-fix” for the problem, without looking at longer-term sustainability. Such measures have only augmented pest pressure.

Various FAO supported initiatives, some in collaboration with the International Rice Research Institute (IRRI), attempt to rationalize brown planthopper control and reduce risk of insecticide use on rice. Many of the measures being promoted build on successful experiences from the 1980s and 1990s. They include the prohibition of the use of certain insecticides in rice, including ecological (agronomic) assessments into the pesticide registration process, establishing post-registration monitoring to assess pest resurgence, better enforcement of regulations, farmer training and awareness building, and promotion of integrated pest management (e.g. through the well-established farmer field school approach for rice). In this way, FAO attempts to assist countries to avoid generating a full-blown pesticide treadmill in rice, as has occurred in the past.

In the discussion that ensued, it was pointed out that another adverse effect of high pesticide use in agriculture, in particular in cotton and rice, is the increase resistance pressure on mosquito vectors of malaria and other vector-borne diseases. Participants underlined the importance of developing mechanisms for the agriculture and health sectors to collaborate on managing resistance in vectors of diseases, and the need for explicit guidance on this issue.

### **Other activities**

The previous Session of the JMPM had been informed of a case study carried out by the International Cotton Advisory Committee (ICAC) in collaboration with FAO to identify the risks associated with the use of pesticides on cotton. This study was originally conducted in five countries, but will now be extended to Spain and Togo. Furthermore, ICAC has requested its Expert Panel on Social, Environmental and Economic Performance of Cotton Production (SEEP)

to develop a global matrix for sustainable cotton production, which will also cover pest management and pesticide use.

The Mozambique project on HHPs, which was reported at the last Session of the JMPM and is funded by the SAICM Quick Start Programme, is expected to become operational shortly. In addition, FAO has supported Paraguay and Botswana, to formulate and submit similar projects aimed at reducing risks of HHPs.

It was noted that many activities are targeted to countries that are part of FAO projects. However, countries which are not part of FAO projects on pesticide management may still wish to identify HHPs and initiate risk reduction activities. The JMPM therefore recommended that guidance be developed for all countries on how to identify HHPs and take measures to reduce their risk, and raise awareness on the issue.

Finally, the JMPM called for acceleration of activities aimed at risk reduction from HHPs, and acknowledged the importance of inter-sector collaboration in all relevant FAO and WHO projects.

## **11. Updating the Code of Conduct**

The meeting was informed about the status of the update of the Code of Conduct.

At its previous Session, the JMPM had provided comments and suggestions for amendments to a revised version of the Code of Conduct, which were complemented by subsequent written comments by some members. All comments received were compiled by FAO and reviewed again in close collaboration with WHO and UNEP, with the aim of finding a common interpretation of the many proposed revisions. This resulted in a consolidated update of the Code of Conduct which was circulated to all JMPM members and observers prior to the present Session, with the request to identify any issues that were not adequately resolved in the proposed revision.

The JMPM and observers discussed the draft amendments proposed for updating the Code of Conduct, identified potentially contentious issues, provided additional comments and made a substantial number of suggestions for revised text.

The JMPM was informed that the agreed updated Code of Conduct should be submitted to the FAO Committee on Agriculture (COAG) in May 2012.

The JMPM requested that the suggested comments be considered while finalizing the update of the Code of Conduct. It was informed that both the FAO and WHO legal departments would review the text prior to submission to COAG. The JMPM requested that the subsequent final update of the Code of Conduct be circulated to members for endorsement, and to observers for information purposes.

## 12. New guidelines published

One guideline reviewed by the JMPM was finalized and published since its previous Session: the FAO/WHO *Guidelines for quality control of pesticides*<sup>19</sup> (March 2011).

## 13. Draft guidelines under development – review

The Panel reviewed three draft guidelines that are presently being developed.

### 13.1 Guidelines on data requirements for registration of pesticides

The 4<sup>th</sup> JMPM, in October 2010, discussed a draft annotated outline for new *Guidelines on data requirements for the registration of pesticides*. An updated outline for the guidelines was prepared and circulated in March 2011 and the first draft full version of the guidelines was finalized in July 2011. This version was discussed during an informal consultation with some members and observers of JMPM, at WHO HQ in late August 2011. The version presented to the JMPM incorporated most of the comments and suggestions made during that consultation.

The JMPM discussed both format and contents of the guidelines, focussing on a number of issues identified by the drafter as requiring further advice.

While the JMPM endorsed the overall structure of the draft guidelines, several participants stressed the importance of ensuring that the document is user-friendly. It was suggested that this guideline should be considered as a core reference document on data requirements for pesticide registration, but that it should be properly aligned with the Pesticide Registration Toolkit which would allow more user-friendly access to the information. It was also suggested to make the implicit tiered structure of the data requirements in the guidance document and its annexes more explicit, to improve clarity.

It was pointed out that the list of data requirements is very comprehensive, to a large extent based on EU and US practice, and that this may be too extensive for countries with limited resources to evaluate properly. The JMPM therefore discussed whether it would be possible to identify a minimum data set that should always be required, and a supplementary data set that may need to be required. However, it was not considered feasible to identify such a minimum data set since all the presently listed data requirements have been included for a specific reason. The JMPM concluded that the guidelines should not lower the standards of data required for the appropriate evaluation of pesticide registration applications. However, it was suggested to present conditional data requirements more clearly to facilitate use of the data tables in the guidelines.

The draft guidelines refer to the possibility that countries require specific data requirements in response to local situations. While this principle was not questioned by the JMPM, it was pointed out that an appropriate balance should be sought between requesting specific local

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<sup>19</sup> <http://www.fao.org/agriculture/crops/core-themes/theme/pests/pm/code/list-guide/en/>

data requirements, on the one hand, and the need to harmonize data requirements as much as possible over larger geographical regions, on the other.

The JMPM indicated that a limited number of issues were either missing from, or would require additional attention in, the guidelines. These include packaging criteria, immunotoxicity, formulants, mixtures, criteria for data waivers, limiting unnecessary duplication of testing, and specific data requirements for re-registration.

The JMPM furthermore indicated that data requirements for registration by equivalence (generic products) should be explicitly identified, as this would likely be a more limited data set than the one presented in the annexes of the guideline.

Participants felt that general reference to new “toxicology tests for the 21<sup>st</sup> century” should be provided in the guideline, but that specific guidance on the use of alternative toxicity tests methods is not yet mature enough to be included.

The JMPM suggested that no details on risk and efficacy assessment methods should be included in the guidelines, but only to provide general references to such methods. However, participants indicated that guidance from international organizations was needed on pesticide risk assessment procedures and methods.

It was felt that flow charts to help select specific use patterns, or templates for dossier submission, would probably not need to be added to these guidelines.

The JMPM recommended that these guidelines cover data required for the registration of chemical, biochemical and botanical pesticides. The JMPM further recommended that separate guidelines be prepared on data requirements and assessment of microbial pest control agents, given the specific nature of this latter group of pesticides.

The JMPM agreed that further written comments be submitted by JMPM members and observers until 1 December 2011. The JMPM recommended that a revised draft subsequently be prepared by March 2012, for circulation to members for endorsement, and to observers for information purposes, prior to its next Session. Piloting the final draft guidelines among registrars from developing countries should also be considered, before proceeding with publication.

The JMPM requested that a draft of guidelines on data requirements and assessment of microbial pest control agents be elaborated and circulated for comments to members and observers by March 2012, so that a new version of the document can be brought for review at the next Session of the JMPM.

## **13.2 Guidelines on good labelling practice for pesticides**

The 3<sup>rd</sup> draft of the revision of the FAO/WHO *Guidelines on good labelling practice for pesticides* was discussed at the JMPM Session in October 2010. At the time, the JMPM noted the difficulty of providing clear advice on classification of health hazards as a basis for labelling, because WHO’s *Classification of pesticides by hazard* and the GHS are not fully aligned. The JMPM therefore recommended describing both systems in the guidelines, and providing guidance on applying either classification system as well as on the process of

transition from WHO's classification to the GHS. Chapter 5 of the draft guidelines was therefore revised, and discussed by the JMPM at its present Session.

For this agenda item, the WHO IPCS joined the JMPM through a conference call. It was clarified by WHO that its classification was never designed for pesticide labelling, but is intended for decision making. Examples of label elements were overlaid onto the WHO classification at a later stage in the *FAO Guidelines for good labelling practice*. WHO/IPCS suggested to apply label elements according to the GHS, and not to attempt any hybrid between the WHO classification and GHS. It was also suggested that the WHO classification could be printed on the pesticide label in addition to the GHS label required elements (e.g. with the already recommended colour bands).

The JMPM acknowledged the clarification that was provided by WHO and that the WHO *classification of pesticides by hazard* provides an overall assessment of hazard of pesticides and is mainly intended to support decision-making for risk management.

Participants noted that the GHS environment pictogram is not sufficient to change behaviour to protect the wide variety of environmental effects that might be caused by pesticides, but acknowledged that risk and precautionary phrases are normally added to provide further guidance to users.

The JMPM also discussed whether to consider retail pesticides as "consumer products" and therefore recommended risk-based classification for chronic endpoints, a specific option described in the GHS. In this respect it was noted that EU chronic toxicity classification is entirely hazard based, while risk assessment is used in the authorization process of the product. The general view of JMPM members was that classification of chronic toxicity on the pesticide label should be derived from hazard-based criteria, in line with the strict application of GHS. CropLife International underlined that it favoured risk-based classification of chronic effects.

It was pointed out that the building block approach of GHS, which allows countries to choose specific subsets of hazards specific to their national situation, may provide opportunities to develop more appropriate pesticide labels.

Both field testing of label elements and obtaining feedback on GHS label comprehension from UNITAR, responsible for GHS training programmes, were suggested as useful contributions to developing better pesticide labels. In this respect, it was also pointed out that the South African pesticide industry had designed a GHS-compliant pesticide label format, taking into account hazard colour bands, which would merit reviewing for possible wider applicability.

The JMPM concluded that the GHS be given preference as the basis for hazard communication on the pesticide label, and that consideration be given to the WHO classification for indication of overall hazard. The JMPM recommended that a working group be established to assist in preparing the next draft, based on comments made during its previous and present Sessions. It was also suggested to bring the revised draft of the guidelines to the attention of the UNECE Sub-Committee of Experts on the GHS. The JMPM requested that this new draft be circulated for comments to JMPM members and observers by March 2012, for discussion and endorsement at its next Session.

### 13.3 Guidelines on pesticides legislation

At the JMPM held in October 2010, an outline for FAO/WHO *Guidelines on pesticides legislation* was discussed. The JMPM recommended that FAO and WHO proceed with elaborating the full draft of the guidelines.

The first complete draft of these guidelines were presented to the JMPM, in absence of the drafter, by the FAO Legal Office. Issues identified by the Legal Office for further discussion, as well as comments that had been provided by JMPM members and observers, were considered.

A number of topics were identified by the JMPM which require further attention in the drafting of the guidelines, among them:

- differences between a pesticide registration board (authorizing products) and pesticide advisory committees (advising the government on pesticide management issues in general);
- who and what could trigger various steps in the pesticide registration process, such as re-registration, revision, minor changes, etc.;
- legal aspects of regional approaches to pesticide registration or management;
- post-registration surveillance, both for safety and quality;
- legal differences between not registering a product and banning a pesticide;
- requirements for pesticide manufacturing for export only, but not for local use;
- requirements for transit of pesticides through a country where it will/cannot not be used;
- types of fees related to pesticide import, registration and use, and its legal basis.

The JMPM discussed the level of detail that these guidelines should provide, given that more detailed technical guidance is already available from FAO and WHO for various topics (e.g. registration, efficacy testing, compliance monitoring and enforcement, quality control, labelling). It was suggested that the *Guidelines on pesticide legislation* should clarify, as a minimum, what aspects of pesticide management should be covered by legislation, and at what level (e.g. main or subsidiary legislation). It was stressed that these guidelines should not contradict existing published FAO/WHO guidance. The JMPM further recommended that duplication with existing guidance should be avoided as much as possible, in particular with respect to more technical aspects, but recognized that some overlap may be unavoidable to produce comprehensive guidelines.

The JMPM recommended creating a small working group which would look into greater detail at the draft guidelines and provide feedback to the drafter. The JMPM requested that FAO and WHO, with assistance from JMPM members, elaborate a revised draft by March 2012, for discussion and endorsement at its next Session.

## **14. Draft guidelines under development – status report**

A status report on one draft guidelines or outlines under development was presented to the JMPM.

### **14.1 Guidelines on prevention and management of pesticide resistance**

The draft *Guidelines on prevention and management of pesticide resistance* are in the process of final editing by FAO. As indicated during the previous Session of the JMPM, the final draft of these guidelines will be circulated to JMPM members for endorsement and observers for information, and subsequently be published by FAO.

## **15. Save and grow**

The JMPM was informed about the new FAO publication *Save and Grow – A policymaker's guide to the sustainable intensification of smallholder crop production*<sup>20</sup>. *Save and Grow* represents a new paradigm which frames FAO's approach to assisting countries in sustainably intensifying crop production.

While the Green Revolution led to a great increase food production and bolstered world food security, in many countries intensive crop production has depleted agriculture's natural resource base, jeopardizing future productivity. In order to meet projected demand over the next few decades, farmers in the developing world must double food production, a challenge made even more daunting by the combined effects of climate change and growing competition for land, water and energy. The *Save and Grow* paradigm promotes sustainable crop production intensification (SCPI), which produces more from the same area of land while conserving resources, reducing negative impacts on the environment and enhancing natural capital and the flow of ecosystem services.

The central approach to plant protection is IPM, in which the first and most fundamental line of defence against pests and diseases in agriculture is a healthy agro-ecosystem. The policy guide recommends that countries should give preference to less hazardous pesticides in registration processes. They should also ensure that they apply ecologically informed decision-making to determine which pesticides may be sold and used, by whom and in what situations. Eventually, pesticide-use fees or pesticide taxes may be used to finance the development of alternative pest management practices and subsidize their adoption.

In the discussion that ensued, it was pointed out that pesticide regulators now only regulate pesticides, often in isolation, but under the *Save and Grow* approach should work much more closely together with pest control and crop specialists to provide sustainable solutions to pest management, also covering urban agriculture.

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<sup>20</sup> <http://www.fao.org/ag/save-and-grow/>



It was also noted that there have been large cuts in the research capacity for pest management as well as in extension services in many countries. However, many of the intended sustainable solutions are knowledge-intensive, in particular at the level of smallholder farmers. Sufficient funding for research and extension would therefore be required to implement the *Save and Grow* approach successfully. Public–private partnerships may be further encouraged, where an appropriate balance should be sought between private sector interests, farmer interests and consumer interests.

The JMPM welcomed and endorsed this initiative by FAO and recognized the contribution made by the elements related to plant protection to the objectives of the Code of Conduct. The JMPM noted the potential role of the private sector in the effective implementation of the initiative. The JMPM requested that information about indicators for measuring progress be reported back at its next Session.

## **16. Emerging and priority issues**

As part of its terms of reference, the JMPM may be requested to review and advise on activities implemented by FAO and WHO to strengthen pesticide management in agriculture, public health and other fields of use, in particular in developing countries; and to alert FAO and WHO on new developments or issues related to pesticide use or management which may require attention from one or both Organizations.

In this respect, JMPM members discussed emerging issues and topics in pesticide management, that may be of importance to developing countries, which would merit future attention from FAO or WHO. They also reflected on existing aspects of pesticide management which require more attention from FAO or WHO, or different approaches than presently being pursued by the Organizations.

The JMPM identified a number of emerging and priority issues, in four specific areas: awareness building, capacity building, statistics, and risk reduction. These are listed in more details in Annex 3. It was suggested that JMPM members would prepare, inter-session, concept notes for one or more of the identified issues, for further discussion at its next Session.

The JMPM welcomed the willingness of FAO and WHO to consider integrating the proposals into their work programmes. The JMPM recommended that progress be reported at its next Session.

## **17. Other matters**

Two additional topics were briefly discussed by the JMPM.

The first was the need to clarify the how pesticides added to certain pesticide products in very small quantities, and not as active ingredients, should be evaluated and regulated. This is presently a grey area and countries need advice on how to deal with such substances.

The second issue concerned the increased practice by pesticide companies to contract out the manufacturing of active ingredients to other companies or locations than the ones identified in the registration application. It was pointed out that many countries use 5-batch analysis and verification of impurity profiles to assess whether the active ingredients are equivalent. However, it was felt that further guidance for regulators would help to set minimum standards for this assessment and promote that similar procedures would be used by registration authorities.

The JMPM recommended that these two issues be referred to the next JMPS for further advice.

## **18. Recommendations**

Based on the working documents reviewed, the presentations made and the discussions held during the meeting, the 5<sup>th</sup> JMPM made the following observations and recommendations.

### **Developments since the previous Session of the JMPM**

The JMPM was informed of developments that had taken place since the previous Session and specific actions taken by FAO, UNEP and WHO.

The JMPM noted the establishment by UNEP of the SECE, and the relevance of the guidance materials being developed for pesticide risk assessment. JMPM requested to be kept informed about work being done by the SECE. The JMPM was informed about the update being prepared by UNEP and WHO of the Global Assessment of the State of the Science of Endocrine Disruptors and welcomed its expected release in early 2012. The JMPM stressed the importance of raising attention in developing countries about endocrine disrupting pesticides and the need for clear criteria to identify such compounds and appropriate methods for risk assessment. The JMPM noted the work being done to raise awareness among children about the risks of chemicals including pesticides and welcomed the offer by CropLife International to share information with UNEP about similar programmes they are conducting. The JMPM underlined the need for resources to be mobilized for work on environmental aspects of pesticides.

The JMPM was informed about the publication by WHO of policy guidelines for the management of public health pesticides and noted that these would complement similar guidance documents published earlier by FAO. The JMPM underlined that sufficient resources would be needed to enable WHO to implement country support activities for the management of public health pesticides. The JMPM welcomed the on-going development of

quality standards for long-lasting insecticidal mosquito nets by WHO. The JMPM noted with concern that the increased use of pyrethroids in vector control and in agriculture is resulting in greater resistance in disease vectors and recommended that WHO provides further guidance on resistance prevention and management, and supports development of alternatives and optimal use of existing insecticides. The JMPM was pleased to note that ICSC have been updated by WHO for a number of highly hazardous pesticides, and recommended that funds be allocated to this activity for its completion.

The JMPM was informed about the work done by FAO on pesticide risk reduction and noted with particular satisfaction the extent of the field programme being implemented. The JMPM underlined that capacity building at the national and regional levels is essential to achieve sound pesticide management. The JMPM welcomed the timely translation of several guidelines which would make these document more readily accessible in French- and Spanish-speaking countries. The JMPM acknowledged the difficulties encountered in establishing a new phase of the ASP, and expressed its satisfaction that FAO had still been able to start implementing projects in most of the selected countries.

The JMPM commended FAO, WHO and UNEP for their promotion of multi-stakeholder approaches to sound management of pesticides, and reiterated the importance of inter-sector collaboration both at the national and international levels.

### **Survey on use of guidelines**

The JMPM was informed about the FAO *Survey of the use of technical guidelines*. It noted with great interest the results and conclusions of the survey and commended FAO for carrying out the extensive assessment. The JMPM expressed its concern about the relatively low degree of use of the guidance developed in support of the Code of Conduct by regulators and registrars in developing countries and stressed the importance of raising awareness and improving dissemination of these materials.

The JMPM endorsed the recommendations made by FAO as a result of the survey and indicated a number of priorities as detailed in this report, in particular to assess the current structure of guidelines and the need to make them more user-friendly. The JMPM recommended that this type of survey be carried out regularly to ensure that guidance materials developed by international organizations respond to the needs of target groups in developing countries and are being effectively used. The JMPM requested that FAO reports back on actions taken to implement the recommendations made in the survey report as well as those by the JMPM.

### **Pesticide registration**

The JMPM took note of on-going activities to strengthen pesticide registration in developing countries and particularly welcomed the wide use of the *Guidelines for the registration of pesticides* published recently by FAO and WHO.

The JMPM was informed about the development by FAO of a new module of the PSMS to allow information exchange among countries on registered pesticides. The JMPM underlined the usefulness of such information exchange for pesticide regulators in developing countries and recommended that FAO carry out pilot testing of the module to ensure that it responds to the needs of its target audience. The JMPM supported the offer of WHO to extend the module to also cover public health pesticides.

The JMPM welcomed the recent initiative by FAO to develop a web-based pesticide registration toolkit. The JMPM stressed the importance of the toolkit as a means to improve access to guidance on pesticide registration, data requirements and other relevant topics that is available from FAO and WHO, and to provide practical support to pesticide registrars in developing countries. The JMPM recommended that the toolkit covers all types of pesticides and takes into account relevant guidance developed by other organizations such as UNEP.

The JMPM endorsed FAO's approach to prioritize pesticide registration in its programme of work as it forms the basis for sound pesticide management.

### **Highly hazardous pesticides**

The JMPM was informed about the scope of on-going work in the area of HHPs. The JMPM welcomed the proposed survey by FAO on actions taken by countries to regulate HHPs, that could serve to guide other countries in taking similar actions.

In relation to the report from the Rotterdam Convention Secretariat, the JMPM welcomed the support provided to countries on the identification and reporting of SHPFs, and recommended that it be extended, recognizing the accountability of the Secretariat to the COP and the text of the Convention. The JMPM noted that guidance may need to be provided to Parties that have submitted a SHPF and are waiting for a resolution by the COP. The JMPM requested the Secretariat of the Convention to report back on the incident reports received at its next Session.

The JMPM recommended that guidance be developed for all countries on how to identify HHPs and take measures to reduce their risk, and raise awareness on the issue.

The JMPM called for acceleration of activities aimed at risk reduction from HHPs, and acknowledged the importance of inter-sector collaboration in all relevant FAO and WHO projects.

### **Updating the International Code of Conduct**

The JMPM and observers discussed the draft amendments proposed for updating the Code of Conduct and provided additional suggestions, including a possible change of title to reflect the broad objectives of the Code of Conduct.

The JMPM requested that the suggested comments be considered and that the updated revised version of the Code of Conduct be circulated to members for endorsement, and to observers for information purposes, in order to ensure that the agreed revised Code of Conduct is submitted to the FAO Committee on Agriculture in May 2012.

### **Save and Grow**

The JMPM was informed about the Save and Grow paradigm which frames FAO's approach to assisting countries in sustainably intensifying crop production. The JMPM welcomed and endorsed this initiative by FAO and recognized the contribution made by the elements related to plant protection to the objectives of the Code of Conduct. The JMPM noted the potential role of the private sector in the effective implementation of the initiative. The JMPM requested that information about indicators for measuring progress be reported back.

## **Guidelines in support of the Code of Conduct**

The JMPM reviewed a number of draft guidelines that have been developed in support of the Code of Conduct and made the following recommendations.

### ***Guidelines on data requirements***

The JMPM discussed the first full draft of the *Guidelines on data requirements* and commended the drafters for their efforts in providing comprehensive advice on this topic. The JMPM endorsed the overall structure of the draft guidelines. The JMPM stressed the importance of providing clear guidance, in particular for registration authorities with limited resources, but underlined that the guidelines should not lower the standards of data required for the appropriate evaluation of pesticide registration applications. The JMPM recommended that these guidelines cover data required for the registration of chemical, biochemical and botanical pesticides. The JMPM provided various suggestions to further improve the structure and contents of the guidelines, as detailed in the report.

The JMPM agreed that further written comments be submitted by JMPM members and observers until 1 December 2011. The JMPM recommended that a revised draft subsequently be prepared by March 2012, for circulation to members for endorsement, and to observers for information purposes, prior to its next Session.

The JMPM further recommended that separate guidelines be prepared on data requirements and assessment of microbial pest control agents, given the specific nature of this latter group of pesticides. The Panel requested that a draft of these guidelines be elaborated and circulated for comments to members and observers by March 2012, so that a new version of the document can be brought for review at the next Session of the JMPM.

### ***Guidelines on good labelling practice for pesticides***

The JMPM discussed the chapter of the draft *Guidelines on good labelling practice for pesticides* which covers hazard classification. The JMPM acknowledged the clarification that was provided by WHO and that the *WHO classification of pesticides by hazard* provides an overall assessment of hazard of pesticides and is mainly intended to support decision-making for risk management.

The JMPM therefore recommended that the *Globally harmonized system of classification and labelling of chemicals* be given preference as the basis for hazard communication on the pesticide label, and that consideration be given to the WHO Classification for indication of overall hazard. The JMPM recommended that a working group be established to assist in preparing the next draft, based on comments made during its previous and present Sessions. The JMPM requested that this new draft be circulated for comments to JMPM members and observers by March 2012, for discussion and endorsement at its next Session.

### ***Guidelines on pesticide legislation***

The JMPM discussed the draft *Guidelines on pesticide legislation* and made a number of suggestions for amendments and additions as detailed in this report.

The JMPM requested that FAO and WHO, with assistance from JMPM members, elaborate a revised draft by March 2012, for discussion and endorsement at its next Session.

## **Emerging and priority issues**

The JMPM discussed emerging issues and priority topics in pesticide management that are of importance to developing countries and would merit future attention from FAO or WHO, and proposed a number of priority actions. The JMPM was asked to also consider emerging opportunities and bring these to the attention of FAO and WHO.

The JMPM welcomed the willingness of FAO and WHO to consider integrating the proposals into their work programmes, and supported inter-sessional activities on how to further develop and implement these ideas. The JMPM recommended that progress be reported at its next Session.

## **Other matters**

The JMPM was informed about the need to clarify the regulation of pesticides added to certain pesticide products in very small quantities and not as active ingredients, as well as the need for guidance on assessing and regulating the production of pesticide active ingredients in other manufacturing locations than the original one linked to the product registration. The JMPM recommended that these two issues be referred to the FAO/WHO Joint Meeting on Pesticide Specifications for further advice.

## **19. Closure of the meeting**

The 5<sup>th</sup> JMPM was closed by its Vice Chairperson, Mr Tan Soo Hian. He expressed his appreciation and thanks to all who had prepared and/or presented discussions papers and draft guidelines. He also gratefully acknowledged the participation of the FAO regional staff who provided regional experiences and insights, and the WHO/PCS staff who joined into the discussion through a telephone conference. Mr Tan thanked OECD and UNEP for participating in the meeting, as well as industry and NGO representatives. He gratefully acknowledged the FAO and WHO secretariats for their invaluable assistance in preparing and organizing the meeting and providing support to JMPM members. Finally, Mr Tan wished everyone a good journey back home.

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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 procedures, working arrangements and housekeeping matters.
8. Summary of developments and actions taken after the 4<sup>th</sup> joint meeting in October 2010.
  - a. Presentations by WHO, FAO and UNEP.
  - b. Discussion.
9. Survey on use of guidelines published in support of the International Code of Conduct on the Distribution and Use of Pesticides.
  - a. Report on conduct and findings of the survey.
  - b. Discussion.
10. Pesticide registration.
  - a. Follow up on publication of the *Guidelines for the registration of pesticides*.
  - b. Implementation of the Pesticide Stock Management System (PSMS) – Registration Module.
  - c. Development of the Pesticide Registration Toolkit.
  - d. On-going work on registration capacity development in different regions.
11. Highly hazardous pesticides (HHPs).
  - a. Follow-up to recommendations made by the previous Session of the JMPM.
  - b. Severely hazardous pesticide formulations (SHPFs) and outcomes of the Conference of Parties of the Rotterdam Convention.
  - c. Rice as an example of risk reduction.
12. Updating the International Code of Conduct on the Distribution and Use of Pesticides.

13. Draft Guidelines under development – for review.
  - a. Guidelines on data requirements for the registration of pesticides.
  - b. Guidelines on good labelling practice for pesticides.
  - c. Guidelines on pesticide legislation.
14. Draft Guidelines reviewed in previous meetings and pending finalization – status report.
  - a. Guidelines on resistance prevention and management.
15. FAO publication of *Save and grow – A policymaker’s guide to the sustainable intensification of smallholder crop production*. Implications for pesticide management.
16. Emerging and priority issues in pesticide management – alerts and advice to FAO and WHO.
17. Any other matters.

**Open Session followed by Closed Session**

18. Recommendations.

## Annex 3 – Emerging and priority issues

The following is a list of emerging and priority issues that were identified by the JMPM for further attention by FAO and WHO, in partnership with member countries.

Issue	Objectives	Actions
<p><b><i>Awareness raising</i></b> The need to promote public and user understanding of pesticide risk and management tools</p>	<ul style="list-style-type: none"> <li>• Promote understanding of symbols, pictograms, and other information on pesticide labels.</li> <li>• Promote understanding of banned products, risks of pesticides, alternative materials, and relative safety of products among farmers.</li> <li>• Increase public confidence in pesticide authorities.</li> </ul>	<ul style="list-style-type: none"> <li>○ Conduct field testing of symbols, pictograms.</li> <li>○ Develop prototype risk communication materials that countries can adapt culturally and to local languages.</li> <li>○ Develop and distribute standardized training schemes for different target audiences (certification of pest control operators and farmers; farmworkers; consumers).</li> </ul>
<p><b><i>Capacity building</i></b> The need to provide capacity for pesticide regulation (resources) to local authorities</p>	<ul style="list-style-type: none"> <li>• Promote understanding of pesticide management issues, banned products, risks of pesticides, alternative materials.</li> <li>• Promote integration and collaboration among authorities regionally, in-country, and between authorities and advisors (extension).</li> <li>• Create awareness among policy makers of the possibility of political pressures, the implication of such pressures, and means of coping.</li> </ul>	<ul style="list-style-type: none"> <li>○ Prepare “train the trainer” materials.</li> <li>○ Develop a strategy for promotion of JMPM Guidelines.</li> <li>○ Pilot projects on enforcement and inspection to address sub-standard, counterfeit and illegal pesticides.</li> <li>○ Regional pilot registration projects (e.g. CILSS).</li> <li>○ Options for establishment and operation of regional quality control laboratories.</li> <li>○ Regional pilot project for handling existing stocks of newly-banned pesticides.</li> <li>○ Regional survey and project on improving linkages and communication between regulators and extension services.</li> <li>○ Audit/evaluation of pesticide management agencies within a country to develop harmonization recommendations.</li> <li>○ Create poison control centres in areas of need.</li> <li>○ Develop new Guidelines: <ul style="list-style-type: none"> <li>• enforcement/inspection;</li> <li>• poison control centres &amp; medical staff;</li> <li>• risk assessment and management;</li> <li>• political issues.</li> </ul> </li> </ul>

<b>Issue</b>	<b>Objectives</b>	<b>Actions</b>
<i>Statistics</i>	<ul style="list-style-type: none"> <li>• Consolidate information aiming at supporting registration processes.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop database of quantities of pesticides being used/imported.</li> <li>• Collect, harmonize, and analyze pesticide poisoning data.</li> </ul>
<i>Risk reduction</i>	<ul style="list-style-type: none"> <li>• Reduce risk and protect human health and the environment (incl. poisoning, suicide, phytotoxicity, poor quality of products, effects on ecosystems).</li> <li>• Provide information on alternatives to chemical pest &amp; vector control.</li> </ul>	<ul style="list-style-type: none"> <li>• Promote a system of registration decisions based on a hierarchy of control (tiered risk mitigation measures).</li> <li>• Reduce exposure through the hierarchy of control.</li> <li>• Promote risk reduction of HHPs through national projects and initiatives.</li> <li>• Consolidate and disseminate information on alternatives to pesticides (IPM/IVM approaches), including examples of successful programmes.</li> </ul>