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[1]This report is extracted from the Summary report on the Technical consultation on the implementation of the regional framework for sound management of public health pesticides, 2016–2020, Amman, Jordan 12–14 April 2016 (http://apps.who.int/iris/bitstream/10665/246246/1/IC_Meet_Rep_2016_EN_18924.pdf)

Adverse effects from the production and exposure to pesticides in the Eastern Mediterranean Region (EMR) is projected to increase, while a recent assessment (1) showed that the majority of EMR countries are still unprepared to deal with chemical or poisoning incidents. In addition, climate change will alter the distribution of vector species, as well as the use of pesticides to control them. In order to address these issues WHO/EMRO, in collaboration with the Government of Jordan, convened a technical consultation on implementation of the regional framework for sound management of public health pesticides (PHPs) in Amman, Jordan from 11 to 12 April 2016. The objectives of the consultation were to review the progress made so far on the sound management of PHPs; identify challenges in the Region; and develop with stakeholders a joint action plan for the management of PHPs.

Participants of the meeting included staff from ministries of health, agriculture and environment from seven countries in the Region: Egypt, Islamic Republic of Iran, Jordan, Morocco, Pakistan, Saudi Arabia and Sudan. Representatives from the Food and Agriculture Organization of the United Nations (FAO), United Nations Environment Programme (UNEP), vector control experts and WHO staff from the Centre for Environmental Health Action (CEHA) and EMRO also attended the meeting.

The consultation was opened by Dr Hoda Atta, then Acting Director, Communicable Disease Prevention and Control, WHO/EMRO, who emphasized the critical need for a regional action plan on pesticide management in order to make constructive improvements at the country level in the years ahead. She noted that investments need to be made to enhance capacity on management of pesticides throughout their life-cycle.

Dr Basil Al-Yousfi, Director, WHO CEHA, reiterated the critical importance of pesticide

management in view of the Sustainable Development Goals (SDGs), namely target 3.9 to achieve a reduction in deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. WHO estimates that an estimated 19% of all cancers are attributable to the environment, and pesticide residues in food need urgent monitoring (2). Obsolete pesticides are often dumped in national border zones which, in this Region, are often the areas where conflict is ongoing – with potential hazardous consequences. Despite ratification of international conventions, a country such as Somalia has uncontrolled import and export of pesticides, resulting in hazardous waste being dumped in the country.

Summary of discussions

Since the onset of the first regional framework on PHPs (2012–2016) (1), WHO has facilitated a number of activities to improve pesticide management in the Region. These activities include situation analysis, training on pesticide management practices, development of insecticide resistance management strategies, training and implementation of integrated vector management, and disposal of obsolete pesticides. Most of these actions have been implemented under the Global Environment Facility project on the demonstration of sustainable alternatives to dichloro-diphenyl-trichloroethane (DDT).

Despite these achievements, the challenges and obstacles to sound pesticide management in the Region remain diverse. Major constraints exist in legislation, registration, procurement procedures and post-registration monitoring of PHPs. National pesticide legislations sometimes conflict with the requirements of international pesticide conventions ratified by EMR countries, which have inadequate legislation and control of PHPs, long registration procedures, inadequate procurement procedures, weak coordination on pesticides between implicated sectors, lack of standards and monitoring for pesticide transport and storage, unsound pesticide disposal and lack of mechanisms for collection of empty pesticide containers.

Morocco reported that comprehensive legislation is in place for agricultural pesticides, but that this is not the case for PHPs (2). Its Ministry of Health has tackled this constraint by drafting laws and decrees governing PHPs and is exploring the establishment of one central body covering all pesticides. A number of recent advances have been made, particularly in policy-making, training and implementation on integrated vector management, insecticide resistance monitoring and establishing a national database on insecticide resistance, training on pesticide management, and disposal of obsolete DDT. Sudan reported recent developments in integrated vector management, insecticide resistance monitoring and obsolete pesticide inventories, but noted that national policy, legislation and registration on PHP management needs updating. Jordan highlighted the problem of high pesticide use for house fly control, which is a major issue in poor rural areas that practice animal husbandry.

To cope with the challenges in vector control, it is widely recognized that new vector control products are needed. Global reforms have been initiated in the value chain of vector control products, from innovation to evaluation, registration and use. WHO's role in product evaluation and normative support of pesticide management will be upgraded in order to achieve a more direct impact on disease. These reforms will also have implications at the country level, due to the need to harmonize procedures and standards for registration, procurement and quality control.

There are several available strategies for strengthening pesticide management including: setting of global standards, regional policy development, establishing regional pesticide schemes and collaboration, thematic support across countries and in-depth support at the country level. These strategies could provide a toolbox of options for countries and the Region, and should be harnessed in proposals for resource mobilization. The working groups reviewed the regional framework on sound management of PHPs 2012–2016 (1), particularly the recommended actions, to make revisions and additions for inclusion in the new framework document. The outcomes of the working group sessions are summarized below.

Policy and legislation

Policy and legislation is a prerequisite for initiating constructive improvements in pesticide management at the country level. However, lack of comprehensive policies (i.e. a government "vision") and legislations on PHPs, including rules and responsibilities, is a major issue. Specifically, the inadequate participation of stakeholders in the critical review of PHP regulatory frameworks and lack of evidence on the negative consequences of poor PHP management limit the effectiveness of advocacy. As an important step towards effective advocacy, it was proposed that studies be conducted to generate reliable data on poor pesticide management and its negative consequences. A multi-stakeholder effort to assess policy requirements on pesticides was further proposed.

Registration

Suboptimal registration schemes in countries may limit timely availability of quality products for pest and vector control. Bottleneck issues include the fact that manufacturers and other stakeholders are rarely consulted during the pesticide registration process; capacity and guidelines for pesticide assessment are often inadequate, while human and financial resources are limited. To improve pesticide registration, a mechanism for increased consultation with manufacturers and other stakeholders was proposed to enable improved information exchange on pesticide products and local conditions of use and application. A critical review of current capacity and establishment of an expert committee to support the registration authority in evidence-based decision-making was also proposed.

Public awareness

There is limited public awareness about pesticide risks and benefits, and limited public pressure on governments to address pesticide-related issues; these need to be addressed.

Enforcement

Problems with compliance to pesticide regulations are widely recognized. Activities to review capacity, training and penalty systems, and to establish coordination between regulatory and enforcement agencies, were therefore proposed.

Pesticide quality control

Substandard, counterfeit and adulterated pesticides are commonly encountered. There is insufficient laboratory capacity to process and analyse PHP samples, or capacity is available for agricultural pesticides only. In addition, pesticides donated for use in emergencies are often imported without quality control. To strengthen pesticide quality control, it was proposed to increase intersectoral collaboration on sharing of laboratory facilities, advocacy for resource mobilization and, specifically, establishing procedures to ensure that donated pesticides are routinely submitted to quality control (1). The importance of analytic capacity for relevant impurities in pesticide products was highlighted.

Exposure monitoring

There is concern that pesticide use causes occupational and non-occupational exposure and affects the environment. Pesticide exposure in spray workers and pesticide levels in the environment are often unknown, however, and poisoning data are not collected or managed. Capacity-building for pesticide monitoring, which includes procedures for occupational pesticide exposure monitoring, data collection and data sharing on poisoning cases (in addition to capacity-building for health facilities to treat poisoning cases), and establishment of a scheme for environmental monitoring of pesticide levels, were proposed.

Procurement

Procurement of PHPs often lacks efficiency, which may limit timely availability of economical and quality products. This stems from poor coordination in procurement planning, outdated procedures and poor liaison between technical and administrative authorities. In addition, it is difficult for countries to estimate the contingency stocks of pesticides needed for emergencies.

Transport and storage

In-country transportation of PHPs is often unsafe and unsound pesticide storage is common, which poses risks and allows accumulation of obsolete pesticides. These issues were traced back to weak procedures for pesticide transport and staff not having received appropriate training. Also, storage facilities are often poor and stock management practices inadequate. Priority activities to address these issues include a situational review, updating of standards and procedures, and training of staff on pesticide transport and storage.

Application

Poor pesticide application practices affect the efficacy of interventions, pose risks to human health and the environment, and can accelerate insecticide resistance development. The main issues related to application include the misuse of pesticides, poor use of personal protective equipment and use of poor quality PHP application equipment (3). In addition, insecticide resistance levels are not, or not routinely, measured. To tackle these issues at country level, a series of activities were proposed including the improvement of training curricula on vector control, review of national regulatory standards, maintenance of spray equipment, training courses for spray workers and establishing routine monitoring of field operations. The group proposed steps to develop schemes for insecticide resistance monitoring, but noted that there are no specific guidelines for susceptibility testing in vector species (other than anopheline mosquitoes).

Disposal

It is evident that existing stocks of obsolete pesticides and misuse of empty pesticide containers pose risks to human health and the environment. The root problem is that many countries lack a proper system for sound disposal and management of empty containers. Actions were proposed to address this problem including mobilization of resources, development of an inventory system for obsolete pesticides, development of a system for managing empty containers, and establishing procedures for centralizing, safeguarding and disposal.

Despite the prioritization of key issues, the list of proposed activities remains long. Therefore, a distinction was made between activities requiring short-term attention (within the next 2 years) and those requiring medium-term attention (within the next 4 years).

References

1. Framework for action on the sound management of public health pesticides in the Eastern Mediterranean Region 2012–2016. Cairo: World Health Organization. Regional Office for the Eastern Mediterranean; 2016. Available from (http://applications.emro.who.int/dsaf/EMRPUB_2012_EN_850.pdf?ua=1)

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