# ANTIGUA CHARTER on Sound Management of Public Health Pesticides

## Background

In 2010, the World Health Organization (WHO), in Resolution WHA63.26 from the Sixty-third World Health Assembly, urged *Member States "to establish or strengthen capacity for the regulation of the sound management of pesticides and other chemicals throughout their life-cycle;"* and requested the Director-General *"to support the ongoing joint efforts of FAO and WHO in capacity building of Member States in the sound management of pesticides."* [1]

Similarly, in the report on the *Sixth Session of the Intergovernmental Forum on Chemical Safety (IFCS)*, held in Dakar, Senegal in 2008, the Thought Starter *"Ecologically based Integrated Pest Management"* states in point 44: *"There is strong and broad evidence that IPM* [integrated pest management] *and IVM* [integrated vector management] *offer valid alternatives that help reduce pesticide use in pest management and vector control. Pesticide use reduction is considered the first step in pesticide risk reduction."* [2]

The International Code of Conduct[3] on the Distribution and Use of Pesticides provides a frame of reference for both agriculture and public health. In March 2007, the United Nations Food and Agriculture Organization (FAO) and WHO signed a Memorandum of Understanding for cooperation on a program for the sound management of pesticides.

The WHO Pesticide Evaluation Scheme (WHOPES) has been promoting sound use through the publication of policy frameworks and guidelines for legislation governing pesticides and their registration, quality control, distribution, sale, use and application; training and awareness raising; and the safe disposal of obsolete pesticides and pesticide waste. Through the project on the reduction of human health risks through sound management of pesticides, WHOPES, in collaboration with PAHO, has spearheaded situation analysis and integrated vector management (IVM) in the Region of the Americas.

Vector-borne diseases account for one-sixth of the global burden of communicable diseases.[4] In Latin America and the Caribbean, the most prevalent diseases are dengue, malaria, Chagas' disease, filariasis, and leishmaniasis. One of the key measures proposed for combating these diseases in the Region is integrated vector management.

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[1] WHO (2010). Resolution WHA63.26. Improvement of health through sound management of obsolete pesticides and other obsolete chemicals. World Health Assembly 2010. http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_R26-en.pdf

[2] IFCS (2008). Thought Starter from Forum VI. Dakar, Senegal. http://www.who.int/ifcs/documents/forums/forum6/f6_04ts.en.doc

[3] FAO (2005). International code of conduct on the distribution and use of pesticides. FAO, Rome. Available at: http://www.fao.org/docrep/005/y4544e/y4544e00.htm

[4] WHO (2010). Working to Overcome the Global Impact of Neglected Tropical Diseases: First WHO Report on Neglected Tropical Diseases http://whqlibdoc.who.int/publications/2010/9789241564090_eng.pdf

In 2004, WHO issued a directive on IVM,[5] indicating that its purpose is to improve the efficacy, cost-effectiveness, ecological soundness, and sustainability of disease vector control. The World Health Organization position statement (WHO 2008)[6] defines IVM as "a rational decision-making process for the optimal use of resources for vector control." The World Health Assembly requested, through Resolution WHA60.18,[7] international organizations and financing bodies provide support for the development of capacities of Member States to expand use of IVM.

PAHO Directing Council Resolution CD48/13[9] promotes implementation of the use of IVM in vector control programs. Chemical control using specific public health pesticides still continues to be a useful tool in vector control and IVM involves their sound use, promoting a reduction in their use and thereby minimizing human health and environmental risks.

## ANTIGUA CHARTER

Gathered in Antigua, Guatemala on 23-25 August 2011 for the Regional Advisory Meeting on Sound Management of Public Health Pesticides, technical personnel and government representatives from the health sector of Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, the Dominican Republic, Ecuador, Grenada, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Trinidad and Tobago, Uruguay, and Venezuela, recognized that vector-borne diseases continue to afflict the population of the Region and that the sustainability of activities for their prevention, control, and eventual elimination will greatly depend on action to address their social and environmental determinants, including the social control of public action.

In public health, vector control (physical, chemical, or biological) is one of the cornerstones in the prevention of outbreaks of disease, and recent reports indicate an increase in pesticide use in the Region[8] In one of them, CD48/13 (2008), the annexed resolution resolves "*To urge Member States to: Strengthen and support national vector-borne disease control programs by establishing evidence-based national policies and operational plans to implement integrated vector management initiatives*"*;* and *"Strengthen multi-disease control approaches in the prevention and control of vector-borne diseases, such as epidemiological and entomological surveillance, rational use of pesticides, social mobilization, and treatment of affected persons in order to increase synergies among different vector control programs."*[9]

During the advisory meeting, it was confirmed that in the Region pesticides are used in public health to a great extent to control the dengue vector, but also for vector control of other diseases such as malaria and Chagas' disease.

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[5] WHO (2004). Global Strategic Framework for Integrated Vector Management http://whqlibdoc.who.int/hq/2004/WHO_CDS_CPE_PVC_2004_10.pdf

[6] WHO (2008) Position on Vector Management http://whqlibdoc.who.int/hq/2008/WHO_HTM_NTD_VEM_2008.2_eng.pdf

[7] WHO (2007). Resolution WHA60.18. Malaria, including proposal for establishment of World Malaria Day. In: Sixtieth World Health Assembly, Geneva, 14–23 May 2007: resolutions and decisions; annexes. Geneva, World Health Organization, 2007:76–78. http://apps.who.int/gb/ebwha/pdf_files/WHA60/A60_R18-en.pdf

[8] WHO (2011) "Global Pesticide Use for Vector Borne Disease Control 2000-2009." http://whqlibdoc.who.int/publications/2011/9789241502153_eng.pdf

[9] PAHO (2008). CD48/13. Integrated Vector Management: A Comprehensive Response to Vector-borne Diseases. 48th PAHO Directing Council, September, 2008. [TN: See note in relevant paragraph.]

Varying levels of resistance to some of the pesticides used in vector control have been detected in some countries in the Region.[10] However, it has been documented that in addition to resistance testing, evaluations of pesticide efficacy through laboratory tests and bioassays are not routinely conducted, a situation that should be regulated and improved in the countries.

At the global level, no new molecules for vector control in health have been developed in the past 20 years, except for mosquito larva control. This, the lack of development of specific drugs, and the lack of immediate vaccine availability for these diseases, are aggravating factors that should be taken into account. The development and potential persistence of pesticide resistance should be a very important yardstick to consider when regulating their sound use, with a view to preserving their efficacy in critical times, particularly during outbreaks or health emergencies.

There is an information and research gap in the areas of vector sensitivity and resistance to pesticides, as well as the effectiveness of single or combined environmental interventions that do or do not include pesticides for vector control, for the purpose of reducing the burden of disease. This is reflected in the lag in and lack of research and publications on successful country experiences and outcomes.

**Whereas:**

There are PAHO/WHO resolutions on integrated vector management and FAO/WHO resolutions on the sound management of pesticides;

Despite the achievements in the Region of the Americas, vector-borne diseases remain important events for the public health of the countries;

Anthropogenic changes in some locations have given rise to ecosystem and climate changes, in which vectors have adapted to conditions that were once extreme for them and limited their presence, currently affecting areas that were once free of the diseases that they transmit, causing outbreaks and heretofore unforeseen persistence, and population shifts to previously uninhabited areas are also an emerging risk;

In some countries, immediate efforts to address outbreaks and control vectors often focus systematically on the use of pesticides, without accompanying these actions with structural measures that would permanently eliminate the causes of the presence of the disease vector;

The almost exclusive dependence on pesticides for the control of vectors of public health concern makes the costs of this control contingent on the market prices of these chemicals, giving rise to a new equity gap. This, even though PAHO has mechanisms such as the Strategic Fund to facilitate the management and procurement of these products, a mechanism that is not always used by the countries.

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[10] Examples:
Lardeux, F., Depickere, S., Duchon, S. Chavez, T. (2010). Pesticide Resistance of Triatoma infestans (Hemiptera, Reduviidae) Vector of Chagas disease in Bolivia. Tropical Medicine and International Health, 15, 1037-1048.
Ranson Hilary, Burhani Joseph, Lumjuan Nongkran, Black IV William C. Pesticide resistance in dengue vectors. TropIKA.net [serial on the Internet]. 2010.
Toloza, A.C., Germano, A., Cueto, G.M., Vassena, C., Zerba, E., Picollo, M.I. (2008). Differential Patterns of Pesticide Resistance in Eggs and First Instars of Triatoma infestans (Hemiptera: Reduviidae) from Argentina and Bolivia. Journal of Medical Entomology, 45, 421-424.

The use of pesticides requires technical and professional training to minimize occupational exposure, limit or prevent the effects of environmental pollution, and protect the health and safety of the population.

Countries are not systematically conducting validated efficacy or pesticide resistance and/or vector susceptibility testing;

The necessary interaction among governmental sectors related to workers' health, environmental health, pesticide registration, and entomological surveillance and control must be promoted to lay the technical and administrative groundwork for implementing, attaining, and sustaining the sound use of chemicals proposed by IVM;

Whenever a technical gap is detected, the collaboration of academic and research organizations can provide a very useful service to round out the interdisciplinary teams that all IVM requires;

In light of the different situations observed in the Americas and the need to control vector-borne diseases and reduce the risks from exposure to chemical products, the country representatives gathered in the city of Antigua, Guatemala, issue the following

**Recommendations:**

**Strengthen** in the legal framework in the countries that promotes sound pesticide management in order to boost institutional capacity for oversight and control of this management.

**Implement** the FAO/WHO recommendations on the conditions of storage facilities, final disposal, periodic medical monitoring of workers with occupational exposure, the registry of adverse effects and poisonings, product traceability, environmentally sustainable means of final disposal of residues and containers, and the selection of specific alternatives for the chemical to be controlled.

**Establish** mechanisms for collaboration among the Member States for the purpose of: harmonizing and improving the legal framework for the management of pesticides throughout their life-cycle, sharing information, calling attention to special situations in border areas, communicating changes in product regulations, and creating unified lists of products classified as banned and/or restricted.

**Propose** a country-initiated policy for the sound management of pesticides and request PAHO/WHO's intervention as a facilitator for its inclusion on the regional political agenda, in pursuit of alternatives aimed at a gradual reduction in the use of chemicals for the control of vectors of public health concern, in an evidence-based process.

**Urge** countries to search for resources to monitor the efficacy of pesticides and resistance or susceptibility to them, as well as registration, selection, procurement, and quality control processes for the products used, and to inform the countries of the Region about variations that result in the success or failure of operations involving them.

**Provide regular training** for human resources involved with the different stages of the life-cycle of pesticides, certifying them in the safe use and application of these products at all decision-making and management levels, with a view to improving the production and circulation of technical information, updating decision-making

routines with the best available alternatives, and forming knowledgeable interdisciplinary teams at all stages of decision-action.

**Ensure** an adequate flow of information both to guarantee the protection of workers and the exposed population, and to record cases of poisoning through an ongoing surveillance system.

**Support** from PAHO/WHO for the Member States mobilizing resources for the implementation of sound pesticide management, based on IVM.

**Strengthen** vector-borne disease control programs in the countries, guaranteeing human resources, infrastructure, and supplies for their operation; proposing and producing policies on the sound use of chemicals; monitoring the impact of their use on vector populations; optimizing, developing, and improving adequate storage facilities, medical entomology laboratories, and pesticide quality control laboratories, as well as monitoring mechanisms to detect resistance. For monitoring mechanisms, the following will be considered good practices: providing access to knowledge and supplies; standardizing protocols at the regional level; and suggesting unified surveillance and monitoring networks.

**Maintain** an up-to-date geographical registry of the distribution of the most important vectors in the Region, documented manifestations of resistance, outbreaks, and vulnerable populations.

**Observe**, as the first criterion for selecting chemical products, the actual conditions of local use.

**Encourage and promote,** with support from relevant international and regional organizations, and following FAO/WHO recommendations, research and development of vector control alternatives that mitigate human and environmental health risks; these alternatives should include biological control techniques and pesticides that break down into harmless compounds after use.

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