International Code of Conduct on the Distribution and Use of Pesticides

(Revised Version)

(adopted by the Hundred and Twenty-third Session of the FAO Council in November 2002)



Food and Agriculture Organization of the United Nations Rome, 2002

Contents

Preface1
Text of the Code
Article 1. Objectives of the Code
Article 2. Terms and definitions5
Article 3. Pesticide management9
Article 4. Testing of pesticides
Article 5. Reducing health and environmental risks
Article 6. Regulatory and technical requirements
Article 7. Availability and use
Article 8. Distribution and trade
Article 9. Information exchange
Article 10. Labelling, packaging, storage and disposal
Article 11. Advertising24
Article 12. Monitoring and observance of the Code
Annexes
Annex 1 International policy instruments in the field of chemicals management, environmental and health protection, sustainable development and international trade, relevant to the Code
Annex 2
FAO Council Resolution 1/123
References

Preface

The International Code of Conduct on the Distribution and Use of Pesticides was one of the first voluntary Codes of Conduct in support of increased food security, while at the same time protecting human health and the environment. It was adopted in 1985 by the FAO Conference at its Twenty-third Session, and was subsequently amended to include provisions for the Prior Informed Consent (PIC) procedure at the Twenty-fifth Session of the FAO Conference in 1989. The Code established voluntary standards of conduct for all public and private entities engaged in, or associated with, the distribution and use of pesticides, and since its adoption has served as the globally accepted standard for pesticide management.

Experience over the last 15 years has shown that the Code, in conjunction with its supplementary technical guidelines, has been instrumental in assisting countries to put in place or strengthen pesticide management systems. Surveys show that the number of countries without legislation to regulate the distribution and use of pesticides has greatly decreased; awareness of the potential problems associated with pesticide use has grown significantly; involvement in various aspects of pesticide management by NGOs and the pesticide industry has been strengthened; and further successful Integrated Pest Management (IPM) programmes are being implemented in developing countries.

However, in spite of these positive signs, there are still major weaknesses in certain aspects of pesticide management, predominantly in developing countries. For instance, national pesticide legislation is not widely enforced due to lack of technical expertise and resources; highly hazardous or sub-standard pesticide formulations are still widely sold; and end-users are often insufficiently trained and protected to ensure that pesticides can be handled with minimum risk.

After the adoption of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade in September 1998, the provisions relating to the PIC procedure in the Code became redundant. Furthermore, the changing international policy framework and the persistence of certain pesticide management problems urged FAO to initiate the revision and update of the Code. This process started in 1999, with a number of recommendations made by the FAO "Panel of Experts on Pesticide Specifications, Registration Requirements, Application Standards and PIC." Government experts, NGOs, the pesticide industry and other United Nations organizations participated in the revision process. A government consultation subsequently established the basic text for the present revised version of the Code.

The structure and nature of the Code have been maintained in the revised version. The 12 Articles of the Code, plus supporting technical guidelines and a new Annex consisting of references to international policy instruments related to the Code, represent an up-to-date standard for pesticide management. This embodies a modern approach, leading to sound management of pesticides which focuses on risk reduction, protection of human and

1

environmental health, and support for sustainable agricultural development by using pesticides in an effective manner and applying IPM strategies.

In addition, the revised Code includes the life-cycle concept of pesticide management and an expanded definition of IPM. Article 9 is revised completely since the PIC provisions are now covered by the Rotterdam Convention. Finally, the revised text strengthens the monitoring of the Code and explicitly invites governments, the pesticide industry, NGOs and other interested parties to provide regular feedback on its implementation.

The Code demonstrates that pesticide management should be considered a part of chemical management, as well as of sustainable agricultural development. This means that collaboration, cooperation and information exchange between various government and non-government entities, in particular those involved in agriculture, public health, environment, commerce and trade, have become increasingly important. New stakeholders have also been identified, such as the application equipment and food industries, and enhanced cooperation with them is important.

The basic function of the Code remains to serve as a framework and point of reference for the judicious use of pesticides for all those involved in pesticide matters, particularly until such time as countries have established adequate and effective regulatory infrastructures for the sound management of pesticides. It is my expectation that this revised and updated Code will continue to be a valuable resource for its many users.

JACQUES DIOUF Director-General

Text of the Code

Article 1. Objectives of the Code

- **1.1** The objectives of this Code are to establish voluntary standards of conduct for all public and private entities engaged in or associated with the distribution and use of pesticides, particularly where there is inadequate or no national legislation to regulate pesticides.
- **1.2** The Code is designed for use within the context of national legislation as a basis whereby government authorities, pesticide manufacturers, those engaged in trade and any citizens concerned may judge whether their proposed actions and the actions of others constitute acceptable practices.
- 1.3 The Code describes the shared responsibility of many sectors of society to work together so that the benefits to be derived from the necessary and acceptable use of pesticides are achieved without significant adverse effects on human health or the environment. To this end, all references in this Code to a government or governments shall be deemed to apply equally to regional groupings of governments for matters falling within their areas of competence.
- **1.4** The Code addresses the need for a cooperative effort between governments of pesticide exporting and importing countries to promote practices that minimize potential health and environmental risks associated with pesticides, while ensuring their effective use.
- **1.5** The entities which are addressed by this Code include international organizations, governments of exporting and importing countries, pesticide industry, application equipment industry, traders, food industry, users, and public-sector organizations such as environmental groups, consumer groups and trade unions.
- **1.6** The Code recognizes that training at all appropriate levels is an essential requirement in implementing and observing its provisions. Therefore, governments, pesticide industry, users of pesticides, international organizations, non-governmental organizations (NGOs) and other parties concerned should give high priority to training activities related to each Article of the Code.
- **1.7** The standards of conduct set forth in this Code:
 - **1.7.1** encourage responsible and generally accepted trade practices;
 - **1.7.2** assist countries which have not yet established regulatory controls on the quality and suitability of pesticide products needed in that country to promote the judicious and efficient use of such products and address the potential risks associated with their use;
 - **1.7.3** promote practices which reduce risks in the handling of pesticides, including minimizing adverse effects on humans and the environment and preventing accidental poisoning resulting from improper handling;

- **1.7.4** ensure that pesticides are used effectively and efficiently for the improvement of agricultural production and of human, animal and plant health;
- **1.7.5** adopt the "life-cycle" concept to address all major aspects related to the development, regulation, production, management, packaging, labelling, distribution, handling, application, use and control, including post registration activities and disposal of all types of pesticides, including used pesticide containers;
- **1.7.6** are designed to promote Integrated Pest Management (IPM) (including integrated vector management for public health pests);
- **1.7.7** include reference to participation in information exchange and international agreements identified in Annex 1, in particular the *Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* (1)¹.

4

Numbers in brackets throughout the text refer to the references listed at the end of this document.

Article 2. Terms and definitions

For the purpose of this Code:

Active ingredient means the biologically active part of the pesticide.

Advertising means the promotion of the sale and use of pesticides by printed and electronic media, signs, displays, gift, demonstration or word of mouth.

Application equipment means any technical aid, equipment, implement or machinery which is used for the application of pesticides.

Application technology means the actual physical delivery and distribution process of a pesticide to the target organism or to the place where the target organism comes into contact with the pesticide.

Banned pesticide means a pesticide for which all uses have been prohibited by final regulatory action, in order to protect human health or the environment. The term includes a pesticide that has been refused approval for first-time use, or has been withdrawn by industry either from the domestic market or from further consideration in the domestic approval process, and where there is clear evidence that such action has been taken in order to protect human health or the environment.

Disposal means any operation to recycle, neutralize, destruct or isolate pesticide waste, used containers and contaminated materials.

Distribution means the process by which pesticides are supplied through trade channels to local or international markets.

Environment means surroundings, including water, air, soil and their interrelationship as well as all relationships between them and any living organisms.

Equivalence means the determination of the similarity of the impurity and toxicological profile, as well as of the physical and chemical properties, presented by supposedly similar technical material originating from different manufacturers, in order to assess whether they present similar levels of risk.

Extension service means those entities in the country responsible for the transfer of information, technology and advice regarding the improvement of agricultural practices, including production, handling, storage and marketing of agricultural commodities.

Formulation means the combination of various ingredients designed to render the product useful and effective for the purpose claimed; the form of the pesticide as purchased by users.

Good Agricultural Practice (GAP) in the use of pesticides includes the officially recommended or nationally authorized uses of pesticides under actual conditions necessary for effective and reliable pest control. It encompasses a range of levels of pesticide

applications up to the highest authorized use, applied in a manner which leaves a residue which is the smallest amount practicable.

Hazard means the inherent property of a substance, agent or situation having the potential to cause undesirable consequences (e.g. properties that can cause adverse effects or damage to health, the environment or property).

Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agroecosystems and encourages natural pest control mechanisms.

Label means the written, printed or graphic matter on, or attached to, the pesticide or the immediate container thereof and also to the outside container or wrapper of the retail package of the pesticide.

Manufacturer means a corporation or other entity in the public or private sector or any individual engaged in the business or function (whether directly or through an agent or entity controlled by or under contract with it) of manufacturing a pesticide active ingredient or preparing its formulation or product.

Marketing means the overall process of product promotion, including advertising, product public relations and information services as well as the distribution and sale on local or international markets.

Maximum Residue Limit (MRL) means the maximum concentration of a residue that is legally permitted or recognized as acceptable in or on a food or agricultural commodity or animal feedstuff.

Packaging means the container together with the protective wrapping used to carry pesticide products via wholesale or retail distribution to users.

Personal protective equipment means any clothes, materials or devices that provide protection from pesticide exposure during handling and application. In the context of this Code, it includes both specifically designed protective equipment and clothing reserved for pesticide application and handling.

Pesticide means any substance or mixture of substances intended for preventing, destroying or controlling any pest, including vectors of human or animal disease, unwanted species of plants or animals causing harm during or otherwise interfering with the production, processing, storage, transport or marketing of food, agricultural commodities, wood and wood products or animal feedstuffs, or substances which may be administered to animals for the control of insects, arachnids or other pests in or on their bodies. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit, and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport.

Pesticide industry means all those organizations and individuals engaged in manufacturing, formulating or marketing pesticides and pesticide products.

Pesticide legislation means any laws or regulations introduced to regulate the manufacture, marketing, distribution, labelling, packaging, use and disposal of pesticides in their qualitative, quantitative, health and environmental aspects.

Poison means a substance that can cause disturbance of structure or function, leading to injury or death when absorbed in relatively small amounts by human beings, plants or animals.

Poisoning means occurrence of damage or disturbance caused by a poison, and includes intoxication.

Product (or **pesticide product**) means the pesticide active ingredient(s) and other components, in the form in which it is packaged and sold.

Product stewardship means the responsible and ethical management of a pesticide product from its discovery through to its ultimate use and beyond.

Public sector groups means (but is not limited to) scientific associations, farmer groups, citizens' organizations, labour unions and environmental, consumer and health organizations.

Registration means the process whereby the responsible national government or regional authority approves the sale and use of a pesticide following the evaluation of comprehensive scientific data demonstrating that the product is effective for the intended purposes and does not pose an unacceptable risk to human or animal health or the environment.

Repackaging means the authorized transfer of a pesticide from any commercial package into any other, usually smaller, container for subsequent sale.

Residue means any specified substances in or on food, agricultural commodities or animal feed resulting from the use of a pesticide. The term includes any derivatives of a pesticide, such as conversion products, metabolites, reaction products and impurities considered to be of toxicological significance. The term "pesticide residue" includes residues from unknown or unavoidable sources (e.g. environmental) as well as known uses of the chemical.

Responsible authority means the government agency or agencies responsible for regulating the manufacture, distribution or use of pesticides and more generally for implementing pesticide legislation.

Risk is a function of the probability of an adverse health or environmental effect, and the severity of that effect, following exposure to a pesticide.

Severely restricted pesticide means a pesticide for which virtually all use has been prohibited by final regulatory action in order to protect human health or the environment, but for which certain specific uses remain allowed. It includes a pesticide that has, for virtually all use, been refused for approval or been withdrawn by industry either from the domestic

market or from further consideration in the domestic approval process, and where there is clear evidence that such action has been taken in order to protect human health or the environment.

Tender means request for bids in purchasing of pesticides.

Toxicity means a physiological or biological property which determines the capacity of a chemical to do harm or produce injury to a living organism by other than mechanical means.

Trader means anyone engaged in trade, including export, import and domestic distribution.

Use pattern means the combination of all factors involved in the use of a pesticide, including the concentration of active ingredient in the preparation being applied, rate of application, time of treatment, number of treatments, use of adjuvants and methods and sites of application which determine the quantity applied, timing of treatment and interval before harvest.

Article 3. Pesticide management

- **3.1** Governments have the overall responsibility to regulate the availability, distribution and use of pesticides in their countries and should ensure the allocation of adequate resources for this mandate (2).
- **3.2** Pesticide industry should adhere to the provisions of this Code as a standard for the manufacture, distribution and advertising of pesticides, particularly in countries lacking appropriate legislation and advisory services.
- **3.3** Governments of pesticide exporting countries should, to the extent possible:
 - **3.3.1** provide technical assistance to other countries, especially those lacking technical expertise in the assessment of the relevant data on pesticides;
 - **3.3.2** ensure that good trading practices are followed in the export of pesticides, especially to those countries with limited or no regulatory schemes.
- **3.4** Pesticide industry and traders should observe the following practices in pesticide management, especially in countries without legislation or means of implementing regulations:
 - **3.4.1** supply only pesticides of adequate quality, packaged and labelled as appropriate for each specific market (3);
 - **3.4.2** in close cooperation with procurers of pesticides, adhere closely to provisions of FAO guidelines on tender procedures (4);
 - **3.4.3** pay special attention to the choice of pesticide formulations and to presentation, packaging and labelling in order to reduce risks to users and minimize adverse effects on the environment;
 - **3.4.4** provide, with each package of pesticide, information and instructions in a form and language adequate to ensure effective use and reduce risks during handling;
 - **3.4.5** be capable of providing effective technical support, backed up by full product stewardship to field level, including advice on disposal of pesticides and used pesticide containers, if necessary;
 - **3.4.6** retain an active interest in following their products to the end-user, keeping track of major uses and the occurrence of any problems arising from the use of their products, as a basis for determining the need for changes in labelling, directions for use, packaging, formulation or product availability.
- **3.5** Pesticides whose handling and application require the use of personal protective equipment that is uncomfortable, expensive or not readily available should be avoided, especially in the case of small-scale users in tropical climates (5). Preference should be given to pesticides that require inexpensive personal protective and application equipment and to

procedures appropriate to the conditions under which the pesticides are to be handled and used.

- **3.6** National and international organizations, governments and pesticide industry should take coordinated action to disseminate educational materials of all types to pesticide users, farmers, farmer organizations, agricultural workers, unions and other interested parties. Similarly, users should seek and understand educational materials before applying pesticides and should follow proper procedures.
- **3.7** Concerted efforts should be made by governments to develop and promote the use of IPM. Furthermore, lending institutions, donor agencies and governments should support the development of national IPM policies and improved IPM concepts and practices. These should be based on scientific and other strategies that promote increased participation of farmers (including women's groups), extension agents and on-farm researchers.
- **3.8** All stakeholders, including farmers and farmer associations, IPM researchers, extension agents, crop consultants, food industry, manufacturers of biological and chemical pesticides and application equipment, environmentalists and representatives of consumer groups should play a proactive role in the development and promotion of IPM.
- **3.9** Governments, with the support of relevant international and regional organizations, should encourage and promote research on, and the development of, alternatives posing fewer risks: biological control agents and techniques, non-chemical pesticides and pesticides that are, as far as possible or desirable, target-specific, that degrade into innocuous constituent parts or metabolites after use and are of low risk to humans and the environment.
- **3.10** Governments and the application equipment industry should develop and promote the use of pesticide application methods (6, 7) and equipment (8, 9, 10, 11) that pose low risks to human health and the environment and that are more efficient and cost-effective, and should conduct ongoing practical training in such activities (12).
- **3.11** Governments, pesticide industry and national and international organizations should collaborate in developing and promoting resistance management strategies to prolong the useful life of valuable pesticides and reduce the adverse effects resulting from the development of resistance of pests to pesticides.

Article 4. Testing of pesticides

- **4.1** Pesticide industry should:
 - **4.1.1** ensure that each pesticide and pesticide product is adequately and effectively tested by recognized procedures and test methods so as to fully evaluate its efficacy (13), behaviour, fate, hazard and risk (14) with regard to the various anticipated conditions in regions or countries of use;
 - **4.1.2** ensure that such tests are conducted in accordance with sound scientific procedures and the principles of good laboratory practice (15);
 - **4.1.3** make available copies or summaries of the original reports of such tests for assessment by responsible government authorities in all countries where the pesticide is to be offered for sale. Evaluation of the data should be carried out by qualified experts. If translated documents are provided, their accuracy should be validated;
 - **4.1.4** ensure that the proposed use pattern, label claims and directions, packages, technical literature and advertising truly reflect the outcome of these scientific tests and assessments;
 - **4.1.5** provide, at the request of a country, methods for the analysis of any active ingredient or formulation that they manufacture, and provide the necessary analytical standards:
 - **4.1.6** provide advice and assistance in the training of technical staff involved in the relevant analytical work. Formulators should actively support this effort;
 - **4.1.7** conduct residue trials prior to marketing, at least in accordance with Codex Alimentarius and FAO guidelines on good analytical practice (16) and on crop residue data (17, 18, 19) in order to provide a basis for establishing appropriate maximum residue limits (20).
- **4.2** Each country should possess or have access to facilities to verify and exercise control over the quality of pesticides offered for sale or export, to establish the quantity of the active ingredient or ingredients and the suitability of their formulation, according to FAO or WHO specifications², when available (21, 22, 23).
- **4.3** International organizations and other interested bodies should, within available resources, consider assisting in the establishment of analytical laboratories, or strengthening existing laboratories, in pesticide importing countries, either on a national or a regional basis. These laboratories should adhere to sound scientific procedures and guidelines for good laboratory practice, should possess the necessary expertise and should have adequate analytical equipment and supplies of certified analytical standards, solvents, reagents and appropriate, up-to-date analytical methods.

-

² WHO: World Health Organization

- **4.4** Exporting governments and international organizations should play an active role in assisting developing countries in training personnel on trial design and conduct, the interpretation and evaluation of test data, and risk/benefit analysis. They should also promote maximum availability to, and use by developing countries of, appropriate international assessments and evaluations of pesticide hazards and risks.
- **4.5** Pesticide industry and governments should collaborate in post-registration surveillance or conducting monitoring studies to determine the fate of pesticides and their health and environmental effects under field conditions (14, 24).

Article 5. Reducing health and environmental risks

5.1 Governments should:

- **5.1.1** implement a pesticide registration and control system along the lines set out in Article 6;
- **5.1.2** periodically review the pesticides marketed in their country, their acceptable uses and their availability to each sector of the public, and conduct special reviews when indicated by scientific evidence;
- **5.1.3** carry out health surveillance programmes of those who are occupationally exposed to pesticides and investigate, as well as document, poisoning cases;
- **5.1.4** provide guidance and instructions to health workers, physicians and hospital staff on the treatment of suspected pesticide poisoning (25);
- **5.1.5** establish national or regional poisoning information and control centres at strategic locations to provide immediate guidance on first aid and medical treatment, accessible at all times (25);
- **5.1.6** utilize all possible means for collecting reliable data and maintaining statistics on health aspects of pesticides and pesticide poisoning incidents, with the objective of establishing the WHO harmonized system for identifying and recording such data (25). Suitably trained personnel and adequate resources should be made available to ensure the accuracy of information collected;
- **5.1.7** provide extension and advisory services and farmers' organizations with adequate information about practical IPM strategies and methods, as well as the range of pesticide products available for use;
- **5.1.8** ensure, with the cooperation of pesticide industry, that where pesticides are available through outlets which also deal in food, clothing, medicines or other products for consumption or topical application, they are physically segregated from other merchandise to prevent contamination and/or mistaken identity. Where appropriate, they should be clearly marked as hazardous materials. Every effort should be made to publicize the dangers of storing foodstuffs and pesticides together (26);
- **5.1.9** utilize all possible means for collecting reliable data, maintaining statistics on environmental contamination and reporting specific incidents related to pesticides;
- **5.1.10** implement a programme to monitor pesticide residues in food and the environment.
- **5.2** Even where a control scheme is in operation, pesticide industry should:
 - **5.2.1** cooperate in the periodic reassessment of the pesticides which are marketed;

- **5.2.2** provide poison-control centres and medical practitioners with information about pesticide hazards and on suitable treatment of pesticide poisoning;
- **5.2.3** make every reasonable effort to reduce risks posed by pesticides by:
 - **5.2.3.1** making less toxic formulations available;
 - **5.2.3.2** introducing products in ready-to-use packages;
 - **5.2.3.3** developing application methods and equipment that minimize exposure to pesticides;
 - **5.2.3.4** using returnable and refillable containers where effective container collection systems are in place;
 - **5.2.3.5** using containers that are not attractive for subsequent reuse and promoting programmes to discourage their reuse, where effective container collection systems are not in place;
 - **5.2.3.6** using containers that are not attractive to or easily opened by children, particularly for domestic use products;
 - **5.2.3.7** using clear and concise labelling.
- **5.2.4** halt sale and recall products when handling or use pose an unacceptable risk under any use directions or restrictions.
- **5.3** Government and industry should cooperate in further reducing risks by:
 - **5.3.1** promoting the use of proper and affordable personal protective equipment (5);
 - **5.3.2** making provisions for safe storage of pesticides at both warehouse and farm level (26, 27);
 - **5.3.3** establishing services to collect and safely dispose of used containers and small quantities of left-over pesticides (28);
 - **5.3.4** protecting biodiversity and minimizing adverse effects of pesticides on the environment (water, soil and air) and on non-target organisms.
- **5.4** To avoid unjustified confusion and alarm among the public, concerned parties should consider all available facts and should promote responsible information dissemination on pesticides and their uses.
- **5.5** In establishing production facilities of a suitable standard in developing countries, manufacturers and governments should cooperate to:

- **5.5.1** adopt engineering standards and operating practices appropriate to the nature of the manufacturing operations and the hazards involved, and ensure the availability of appropriate protective equipment;
- **5.5.2** take all necessary precautions to protect workers, bystanders, surrounding communities and the environment:
- **5.5.3** ensure the proper siting of manufacturing and formulating plants and adequately control wastes and effluents;
- **5.5.4** maintain quality-assurance procedures to ensure compliance with the relevant standards of purity, performance, stability and safety.

Article 6. Regulatory and technical requirements

6.1 Governments should:

- **6.1.1** introduce the necessary legislation for the regulation of pesticides and make provisions for its effective enforcement, including the establishment of appropriate educational, advisory, extension and health-care services, using FAO guidelines as far as possible (2, 29, 30). In so doing, they should take full account of local needs, social and economic conditions, levels of literacy, climatic conditions and availability of appropriate pesticide application and personal protective equipment;
- **6.1.2** strive to establish pesticide registration schemes and infrastructures under which products can be registered prior to domestic use and ensure that each pesticide product is registered before it can be made available for use (29, 30, 31);
- **6.1.3** conduct risk evaluations and make risk management decisions based on all available data or information, as part of the registration process;
- **6.1.4** use the principles described in the Manual on Development and Use of FAO and WHO Specifications for Pesticides for determining equivalence of pesticides (21);
- **6.1.5** promote the advantages of, and cooperate with other governments in, the establishment of harmonized (regionally or by groups of countries) pesticide registration requirements, procedures and evaluation criteria, taking into account appropriate, internationally agreed technical guidelines and standards, and where possible incorporate these standards into national or regional legislation (32, 33);
- **6.1.6** establish a re-registration procedure to ensure the periodic review of pesticides, thus ensuring that prompt and effective measures can be taken if new information or data on the performance or risks indicate that regulatory action is needed;
- **6.1.7** improve regulations in relation to collecting and recording data on import, export, manufacture, formulation, quality and quantity of pesticides;
- **6.1.8** collect and record data on the import, export, manufacture, formulation, quality, quantity and use of pesticides in order to assess the extent of any possible effects on human health or the environment, and to follow trends in pesticide use for economic and other purposes;
- **6.1.9** permit pesticide application and personal protective equipment to be marketed only if they comply with established standards (5, 8, 9);
- **6.1.10** detect and control illegal trade in pesticides;
- **6.1.11** when importing food and agricultural commodities, recognize good agricultural practices in countries with which they trade and, in accordance with recommendations of the Codex Alimentarius Commission, establish a legal basis for

the acceptance of pesticide residues resulting from such good agricultural practices (19, 20) in a manner that is consistent with the WTO³ requirements so as not to lead to technical barriers to trade.

6.2 Pesticide industry should:

- **6.2.1** provide an objective pesticide data assessment together with the necessary supporting data on each product, including sufficient data to support risk assessment and to allow a risk management decision to be made;
- **6.2.2** provide national regulatory authorities with any new or updated information that could change the regulatory status of the pesticide, as soon as it becomes available;
- **6.2.3** ensure that the active ingredient and other ingredients of pesticide products being marketed correspond in identity, quality, purity and composition to the substances tested, evaluated and cleared for toxicological and environmental acceptability;
- **6.2.4** ensure that active ingredients, and formulated products for pesticides for which international specifications have been developed, conform with the relevant FAO specifications for agricultural pesticides (22), and with WHO pesticide specifications for public health pesticides (23);
- **6.2.5** verify the quality and purity of pesticides offered for sale;
- **6.2.6** when problems occur, voluntarily take corrective action and, when requested by governments, help find solutions to difficulties;
- **6.2.7** provide their national governments with clear and concise data on export, import, manufacture, formulation, sales, quality and quantity of pesticides.
- **6.3** Technical assistance funding agencies, development banks and bilateral agencies should be encouraged to give high priority to requests for assistance from developing countries which do not yet have the facilities and expertise for pesticide management and control systems.

.

WTO: World Trade Organization

Article 7. Availability and use

- **7.1** Responsible authorities should give special attention to drafting rules and regulations on the availability of pesticides. These should be compatible with existing levels of user training and expertise. The parameters on which such decisions on availability are based vary widely and must be left to the discretion of each government.
- **7.2** In addition, governments should take note of and, where appropriate, use the WHO classification of pesticides by hazard (34) as the basis for their regulatory measures and associate the hazard class with well-recognized hazard symbols. When determining the risk and degree of restriction appropriate to the product, the type of formulation and method of application should be taken into account.
- **7.3** Two methods of restricting availability can be exercised by the responsible authority: not registering a product or, as a condition of registration, restricting the availability to certain groups of users in accordance with a national assessment of the hazards involved in the use of the product.
- **7.4** Governments and industry should ensure that all pesticides made available to the general public are packaged and labelled in a manner which is consistent with the FAO guidelines on packaging and labelling (3) and with appropriate national regulations.
- **7.5** Prohibition of the importation, sale and purchase of highly toxic and hazardous products, such as those included in WHO classes Ia and Ib (34), may be desirable if other control measures or good marketing practices are insufficient to ensure that the product can be handled with acceptable risk to the user.

Article 8. Distribution and trade

8.1 Governments should:

- **8.1.1** develop regulations and implement licensing procedures relating to the sale of pesticides, so as to ensure that those involved are capable of providing buyers with sound advice on risk reduction and efficient use (26);
- **8.1.2** take the necessary regulatory measures to prohibit the repackaging or decanting of any pesticide into food or beverage containers and rigidly enforce punitive measures that effectively deter such practices;
- **8.1.3** encourage, to the extent possible, a market-driven supply process, as opposed to centralized purchasing, to reduce the potential for accumulation of excessive stocks. However, when governments or other agencies purchase pesticides, the procurement should be based on established FAO tender procedures for pesticides (4);
- **8.1.4** ensure that any pesticide subsidies or donations do not lead to excessive or unjustified use which may divert interest from more sustainable alternative measures.

8.2 Pesticide industry should:

- **8.2.1** take all necessary steps to ensure that pesticides entering international trade conform at least to:
 - **8.2.1.1** relevant FAO (22), WHO (23) or equivalent specifications (where such specifications have been developed);
 - **8.2.1.2** principles embodied in relevant FAO guidelines on classification, packaging, marketing, labelling, procurement and documentation (3, 4, 26);
 - **8.2.1.3** rules and regulations laid down by the UN Recommendations on the Transport of Dangerous Goods (35), and by international organizations concerned with specific modes of transport (e.g. ICAO⁴, IMO⁵, RID⁶, ADR⁷ and IATA⁸).
- **8.2.2** endeavour to ensure that pesticides manufactured for export are subject to the same quality requirements and standards as those applied to comparable domestic products;
- **8.2.3** ensure that pesticides manufactured or formulated by a subsidiary company meet appropriate quality requirements and standards. These should be consistent with the requirements of the host country and of the parent company;

⁴ ICAO: International Civil Aviation Organization

⁵ IMO: International Maritime Organization

⁶ RID: International regulations concerning the carriage of dangerous goods by rail.

ADR: European agreement concerning the international transport of dangerous goods by road

⁸ IATA: International Air Transport Association

- **8.2.4** encourage importing agencies, national or regional formulators and their respective trade organizations to cooperate in order to achieve fair practices as well as marketing and distribution practices that reduce the risks posed by pesticides, and to collaborate with authorities in stamping out any malpractice within the industry;
- **8.2.5** recognize that a pesticide may need to be recalled by a manufacturer and distributor when its use, as recommended, represents an unacceptable risk to human and animal health or the environment, and act accordingly;
- **8.2.6** endeavour to ensure that pesticides are traded by and purchased from reputable traders, who should preferably be members of a recognized trade organization;
- **8.2.7** ensure that persons involved in the sale of pesticides are trained adequately, hold appropriate government licences (where such licences exist) and have access to sufficient information, such as material safety data sheets, so that they are capable of providing buyers with advice on risk reduction and efficient use;
- **8.2.8** provide, consistent with national requirements, a range of pack sizes and types that are appropriate for the needs of small-scale farmers and other local users, in order to reduce risks and to discourage sellers from repackaging products in unlabelled or inappropriate containers.
- **8.3** The procurer (government authority, growers' association, or individual farmer) should establish purchasing procedures to prevent the oversupply of pesticides and consider including requirements relating to extended pesticide storage, distribution and disposal services in a purchasing contract (4, 36).

Article 9. Information exchange

9.1 Governments should:

- **9.1.1** promote the establishment or strengthening of networks for information exchange on pesticides through national institutions, international, regional and subregional organizations and public sector groups;
- **9.1.2** facilitate the exchange of information between regulatory authorities to strengthen cooperative efforts. The information to be exchanged should include:
 - **9.1.2.1** actions to ban or severely restrict a pesticide in order to protect human health or the environment, and additional information upon request;
 - **9.1.2.2** scientific, technical, economic, regulatory and legal information concerning pesticides including toxicological, environmental and safety data;
 - **9.1.2.3** the availability of resources and expertise associated with pesticide regulatory activities.
- **9.2** In addition, governments are encouraged to develop:
 - **9.2.1** legislation and regulations that permit the provision of information to the public about pesticide risks and the regulatory process;
 - **9.2.2** administrative procedures to provide transparency and facilitate the participation of the public in the regulatory process.
- **9.3** International organizations should provide information on specific pesticides (including guidance on methods of analysis) through the provision of criteria documents, fact sheets, training and other appropriate means (37).

9.4 All parties should:

- **9.4.1** support the process of information exchange and facilitate access to information regarding pesticide residues in food and related regulatory actions;
- **9.4.2** encourage collaboration between public sector groups, international organizations, governments and other interested stakeholders to ensure that countries are provided with the information they need to meet the objectives of the Code.

Article 10. Labelling, packaging, storage and disposal

- **10.1** All pesticide containers should be clearly labelled in accordance with applicable guidelines, at least in line with the FAO guidelines on good labelling practice (3).
- **10.2** Industry should use labels that:
 - **10.2.1** comply with registration requirements and include recommendations consistent with those of the recognized research and advisory agencies in the country of sale;
 - **10.2.2** include appropriate symbols and pictograms whenever possible, in addition to written instructions, warnings and precautions in the appropriate language or languages (3);
 - 10.2.3 comply with national or international labelling requirements for dangerous goods in international trade and, if appropriate, clearly show the appropriate WHO hazard classification of the contents (3, 34, 35);
 - **10.2.4** include, in the appropriate language or languages, a warning against the reuse of containers and instructions for the safe disposal or decontamination of used containers;
 - **10.2.5** identify each lot or batch of the product in numbers or letters that can be understood without the need for additional code references;
 - **10.2.6** clearly show the release date (month and year) of the lot or batch and contain relevant information on the storage stability of the product (21).
- **10.3** Pesticide industry, in cooperation with government, should ensure that:
 - **10.3.1** packaging, storage and disposal of pesticides conform in principle to the relevant FAO, UNEP⁹, WHO guidelines or regulations (27, 28, 36, 38, 39) or to other international guidelines, where applicable;
 - **10.3.2** packaging or repackaging is carried out only on licensed premises where the responsible authority is satisfied that staff are adequately protected against toxic hazards, that the resulting product will be properly packaged and labelled, and that the content will conform to the relevant quality standards.
- **10.4** Governments should take the necessary regulatory measures to prohibit the repackaging or decanting of any pesticide into food or beverage containers and rigidly enforce punitive measures that effectively deter such practices.
- 10.5 Governments, with the help of pesticide industry and with multilateral cooperation, should inventory obsolete or unusable stocks of pesticides and used containers, establish and

-

UNEP: United Nations Environment Programme

implement an action plan for their disposal, or remediation in the case of contaminated sites (40), and record these activities.

- **10.6** Pesticide industry should be encouraged, with multilateral cooperation, to assist in disposing of any banned or obsolete pesticides and of used containers, in an environmentally sound manner, including reuse with minimal risk where approved and appropriate.
- **10.7** Governments, pesticide industry, international organizations and the agricultural community should implement policies and practices to prevent the accumulation of obsolete pesticides and used containers (36).

Article 11. Advertising

- 11.1 Governments should control, by means of legislation, the advertising of pesticides in all media to ensure that it is not in conflict with label directions and precautions, particularly those relating to proper maintenance and use of application equipment, appropriate personal protective equipment, special precautions for children and pregnant women or the dangers of reusing containers.
- **11.2** Pesticide industry should ensure that:
 - **11.2.1** all statements used in advertising are technically justified;
 - 11.2.2 advertisements do not contain any statement or visual presentation which, directly or by implication, omission, ambiguity or exaggerated claim, is likely to mislead the buyer, in particular with regard to the "safety" of the product, its nature, composition or suitability for use, official recognition or approval;
 - 11.2.3 pesticides which are legally restricted to use by trained or registered operators are not publicly advertised through journals other than those catering for such operators, unless the restricted availability is clearly and prominently shown;
 - **11.2.4** no company or individual in any one country simultaneously markets different pesticide active ingredients or combinations of ingredients under a single brand name;
 - **11.2.5** advertising does not encourage uses other than those specified on the approved label;
 - **11.2.6** promotional material does not include recommendations at variance with those of the recognized research and advisory agencies;
 - **11.2.7** advertisements do not misuse research results, quotations from technical and scientific literature or scientific jargon to make claims appear to have a scientific basis they do not possess;
 - **11.2.8** claims as to safety, including statements such as "safe", "non-poisonous", "harmless", "non-toxic" or "compatible with IPM," are not made, with or without a qualifying phrase such as "when used as directed". [However, reference to use within specified IPM programmes may be included if validated by the regulating authority, and the claim is qualified accordingly];
 - **11.2.9** statements comparing the risk, hazard or "safety" of different pesticides or other substances are not made;
 - 11.2.10 misleading statements are not made concerning the effectiveness of the product;

- **11.2.11** no guarantees or implied guarantees, such as "more profits with..." or "guarantees high yields," are given unless definite evidence to substantiate such claims is available:
- **11.2.12** advertisements do not contain any visual representation of potentially dangerous practices, such as mixing or application without sufficient protective clothing, use near food or use by or in the vicinity of children;
- **11.2.13** advertising or promotional material draws attention to the appropriate warning phrases and symbols as laid down in the FAO labelling guidelines (3);
- **11.2.14** technical literature provides adequate information on correct practices, including the observance of recommended application rates, frequency of applications and pre-harvest intervals;
- **11.2.15** false or misleading comparisons with other pesticides are not made;
- **11.2.16** all staff involved in sales promotion are adequately trained and possess sufficient technical knowledge to present complete, accurate and valid information on the products sold;
- **11.2.17** advertisements encourage purchasers and users to read the label carefully, or have the label read to them if they cannot read;
- **11.2.18** advertisements and promotional activities should not include inappropriate incentives or gifts to encourage the purchase of pesticides.
- **11.3** International organizations and public sector groups should call attention to departures from this Article.

Article 12. Monitoring and observance of the Code

- **12.1** The Code should be published and should be observed through collaborative action on the part of governments, individually or in regional groupings, appropriate organizations and bodies of the United Nations system, international, governmental and non-governmental organizations and the pesticide industry.
- 12.2 The Code should be brought to the attention of all concerned in the regulation, manufacture, distribution and use of pesticides, so that governments, individually or in regional groupings, pesticide industry, international institutions, pesticide user organizations, agricultural commodity industries and food industry groups (such as supermarkets) that are in a position to influence good agricultural practices, understand their shared responsibilities in working together to ensure that the objectives of the Code are achieved.
- **12.3** All parties should observe this Code and should promote the principles and ethics expressed by the Code, irrespective of other parties' ability to observe the Code. Pesticide industry should cooperate fully in the observance of the Code and promote the principles and ethics expressed by the Code, irrespective of a government's ability to observe the Code.
- **12.4** Independently of any measures taken with respect to the observance of this Code, all relevant legal rules, whether legislative, administrative, judicial or customary, dealing with liability, consumer protection, conservation, pollution control and other related subjects, should be strictly applied.
- **12.5** Governments and other parties concerned:
 - **12.5.1** are encouraged to observe the provisions laid down in any international instruments to which they are party, concerning chemical management, environmental and health protection, sustainable development and international trade, relevant to the Code (Annex 1);
 - **12.5.2** are encouraged, if they have not yet joined, ratified or acceded to such instruments, to evaluate the appropriateness of so doing as soon as possible.
- **12.6** FAO and other competent international organizations should give full support to the observance of the Code.
- **12.7** Governments, in collaboration with FAO, should monitor the observance of the Code and report on progress made to the Director-General of FAO.
- **12.8** Pesticide industry is invited to provide reports to the Director-General of FAO on its product stewardship activities related to observance of the Code.
- **12.9** NGOs and other interested parties are invited to monitor activities related to the implementation of the Code and report these to the Director-General of FAO.

12.10 Governing Bodies of FAO should periodically review the relevance and effectiveness of the Code. The Code should be considered a dynamic text which must be brought up to date as required, taking into account technical, economic and social progress.

Annex 1

International policy instruments in the field of chemical management, environmental and health protection, sustainable development and international trade, relevant to the Code

International policy instruments which address one or more aspects of the life-cycle of a pesticide include, but are not limited to, the ones listed below. Some have direct operational implications for pesticide distribution and use, while others provide a more general policy context. Dates of entry into force are given for those instruments that were legally binding at the time of adoption of the revision of this Code.

A. International policy instruments with direct operational implications for pesticide management

- The *Codex Alimentarius*, and more specifically the Codex Committee on Pesticide Residues, operational since 1966 (41);
- The Montreal Protocol on Substances that Deplete the Ozone Layer, adopted in 1987 and entered into force in 1989, and its subsequent amendments (42);
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, adopted in 1989 and entered into force in 1992 (39);
- The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, adopted in 1998 (1);
- The Stockholm Convention on Persistent Organic Pollutants, adopted in 2001 (43).

B. International policy instruments that provide a general policy context for pesticide management

- The Convention concerning Safety in the Use of Chemicals at Work, adopted in 1990 and entered into force in 1993 (44);
- The *Rio Declaration on Environment and Development*, proclaimed by the United Nations Conference on Environment and Development in 1992 (45);
- Agenda 21 Global Programme of Action on Sustainable Development, and more specifically chapters 14 (Promoting Sustainable Agriculture and Rural Development) and 19 (Environmentally Sound Management of Toxic Chemicals, Including Prevention of Illegal International Traffic in Toxic and Dangerous Products), adopted in 1992 (46);

- The *Convention on Biological Diversity*, adopted in 1992 and entered into force in 1993 (47);
- The Convention concerning the Prevention of Major Industrial Accidents, adopted in 1993 and entered into force in 1997 (48);
- The Rome Declaration on World Food Security and The World Food Summit Plan of Action, adopted in 1996 (49);
- The World Health Declaration and Health-for-all in the 21st Century, adopted in 1998 (50).

Annex 2

FAO Council Resolution 1/123:

Revised Version of the International Code of Conduct on the Distribution and Use of Pesticides

THE COUNCIL, based on the authority given by the Thirty-first Session of the FAO Conference,

<u>Hereby approves</u> the revised text of the "International Code of Conduct on the Distribution and Use of Pesticides, contained in the Appendix."

Adopted on 1 November 2002

References

- 1. Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. FAO/UNEP, Rome/Geneva. 1998. [further information and text at: http://www.pic.int]
- 2. *Guidelines for legislation on the control of pesticides*. FAO, Rome. 1989. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/LEGIS.pdf]
- 3. *Revised guidelines on good labelling practice for pesticides.* FAO, Rome. 1995. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/label.pdf]
- 4. *Provisional guidelines on tender procedures for the procurement of pesticides.* FAO, Rome. 1994. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/TENDER.pdf]
- 5. Guidelines on personal protection when using pesticides in tropical climates. FAO, Rome. 1990. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/PROTECT.pdf]
- 6. *Guidelines on good practice for ground application of pesticides.* FAO, Rome. 2001. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Ground01.pdf]
- 7. *Guidelines on good practice for aerial application of pesticides.* FAO, Rome. 2001. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Aereal01.pdf]
- 8. Guidelines on minimum requirements for agricultural pesticide application equipment. FAO, Rome. 2001. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Minimum1.01.pdf http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Minimum2.01.pdf http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Minimum3.01.pdf htt
- 9. Guidelines on standards for agricultural pesticide application equipment and related test procedures. FAO, Rome. 2001. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Standard1.01.pdf http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Standard1.02.pdf]
- 10. Guidelines on procedures for the registration, certification and testing of new pesticide application equipment. FAO, Rome. 2001. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/procedure01.pdf]
- 11. Guidelines on the organization of schemes for testing and certification of agricultural pesticide sprayers in use. FAO, Rome. 2001. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Testing01.pdf]

- 12. Guidelines on organization and operation of training schemes and certification procedures for operators of pesticide application equipment. FAO, Rome. 2001. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/Training01.pdf]
- 13. Guidelines on efficacy evaluation for the registration of plant protection products. FAO, Rome. 2006. [text at: http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/Efficacy.pdf]
- 14. Revised guidelines on environmental criteria for the registration of pesticides. FAO, Rome. 1989. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/ENVICRI.pdf]
- 15. *OECD principles on good laboratory practice (as revised in 1997)*. Organisation for Economic Co-operation and Development, Paris. 1998. [text at: http://www.oecd.org/officialdocuments/displaydocumentpdf/?cote=env/mc/chem(98)17&doclanguage=en]
- 16. Guidelines on good laboratory practice in pesticide residue analysis. Codex Alimentarius. Volume 2a, Part 1. FAO, Rome. 2003 [text at: http://www.codexalimentarius.net/web/more_info.jsp?id_sta=378].
- 17. Manual on the submission and evaluation of pesticide residues data for the estimation of maximum residue levels in food and feed. FAO, Rome. 2007. [text at: http://www.fao.org/fileadmin/templates/agphome/documents/Pests Pesticides/JMPR/FAO manual2nded Oct07.pdf
- 18. Recommended methods of sampling for Pesticide Residues for the determination of compliance with MRLs Codex Alimentarius. Vol. 2A FAO, Rome. 1999. [http://www.codexalimentarius.net/web/more_info.jsp?id_sta=361]
- 19. *Manual on Development and Use of FAO and WHO Specifications for Pesticides. First Edition.* FAO, Rome. 2010. [text at: http://www.fao.org/agriculture/crops/corethemes/theme/pests/pm/jmps/manual/en/]
- 20. *Specifications for plant protection products.* FAO, Rome. Various, from 1970 to present. [text at: http://www.fao.org/agriculture/crops/core-themes/theme/pests/pm/jmps/ps/en/]
- 21. *Specifications for pesticides used in public health.* 7th edition. WHO, Geneva. 1997. [text at: http://www.who.int/whopes/quality/en/]
- 22. Guidelines on post-registration surveillance and other activities in the field of pesticides. FAO, Rome. 1988. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/POSTREG.pdf]
- 23. Guidelines for retail distribution of pesticides with particular reference to storage and handling at the point of supply to users in developing countries. FAO, Rome.

- 1988. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/RETAIL.pdf]
- 24. *Pesticide storage and stock control manual. FAO Pesticide Disposal Series N 3.* FAO, Rome. 1996. [text at: http://www.fao.org/docrep/v8966e/v8966e00.htm]
- 25. Guidelines for the management of small quantities of unwanted and obsolete pesticides. FAO Pesticide Disposal Series N°7. UNEP/WHO/FAO, Rome. 1999. [text at: http://www.fao.org/fileadmin/user_upload/obsolete pesticides/docs/small qties.pdf]
- 26. Guidelines for the registration of pesticides. FAO/WHO, Rome. 2010. [text at: http://www.fao.org/fileadmin/templates/agphome/documents/Pests Pesticides/Code/R egistration 2010.pdf
- 27. *Guidelines on the registration of biological pest control agents.* FAO, Rome. 1988. [text at: http://www.fao.org/ag/AGP/AGPP/Pesticid/Code/Download/BIOPEST.pdf]
- 28. OECD guidance for country data review reports on plant protection products and their active substances (« monograph guidance »). Revision 1. OECD, Paris. 2001. [text at: http://www.oecd.org/dataoecd/45/60/1943906.pdf?channelId=34383&homeChannelId=33713&fileTitle=Monograph+Guidance+-+OECD+Guidance+for+Country+Data+Review+Reports+on+Plant+Protection+Products+and+their].
- 29. *OECD guidance for industry data submissions on plant protection products and their active substances* (*« dossier guidance »*). *Revision 1*. OECD, Paris. 2001. [text at : http://www.oecd.org/dataoecd/43/26/34870180.pdf].
- 30. The WHO recommended classification of pesticides by hazard and guidelines to classification 1998-1999. WHO, Geneva. 1998. [text at: http://www.who.int/ipcs/publications/pesticides_hazard/en/]
- 31. Recommendations on the Transport of Dangerous Goods Model Regulations. Sixteenth revised edition. United Nations, New York/Geneva. 1997. [further infomation at: http://www.unece.org/trans/publications/dg_recommend.html]
- 32. Provisional guidelines on prevention of accumulation of obsolete pesticide stocks. FAO Pesticide Disposal Series N°2. FAO, Rome. 1995. [text at: http://www.fao.org/docrep/v7460e/v7460e00.htm]
- 33. Inventory of IPCS and other pesticide evaluations and summary of toxicological evaluations performed by the Joint Meeting on Pesticide Residues (JMPR). Evaluations through 2009. WHO, Geneva. 2010. [text at: http://www.who.int/ipcs/publications/jmpr/jmpr_pesticide/en/]
- 34. Provisional technical guidelines on the disposal of bulk quantities of obsolete pesticides in developing countries. FAO Pesticide Disposal Series N°4.

- UNEP/WHO/FAO, Rome. 1996. [text at: http://www.fao.org/fileadmin/user_upload/obsolete_pesticides/docs/w1604e.pdf]
- 35. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. UNEP, Geneva. 1989. [further information and text at: http://www.basel.int]
- 36. Assessing soil contamination a reference manual. FAO Pesticide Disposal Series N°8. FAO, Rome. 2000. [text at: http://www.fao.org/DOCREP/003/X2570E/X2570E00.HTM]
- 37. *Codex Alimentarius*. Joint FAO/WHO Secretariat. Rome. [further information and database on Codex maximum residue limits (MRLs) at: http://www.fao.org/agriculture/crops/core-themes/theme/pests/pm/jmpr/en/]
- 38. Montreal Protocol on Substances that Deplete the Ozone Layer, as amended in London 1990, Copenhagen 1992, Vienna 1995, Montreal 1997 and Beijing 1999. UNEP, Nairobi. 2000. [further information and text at: http://www.unep.org/ozone/]
- 39. Stockholm Convention on Persistent Organic Pollutants. UNEP, Geneva. 2001. [further information and text at: http://chm.pops.int/]
- 40. *Convention concerning Safety in the Use of Chemicals at Work.* ILO, Geneva. 1990 [text at: http://www.ilo.org/ilolex/cgi-lex/convde.pl?C170 document C170]
- 41. Rio Declaration on Environment and Development. United Nations, New York. 1992. [further information and text at: http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163]
- 42. Agenda 21 Global Programme of Action on Sustainable Development. United Nations, New York. 1992. [further information and text at: http://www.unutki.org/default.php?doc_id=79]
- 43. *Convention on Biological Diversity*. UNEP, Montreal. 1992. [further information and text at: http://www.cbd.int/]
- 44. *Convention concerning the Prevention of Major Industrial Accidents*. ILO, Geneva. 1993. [text at: http://actrav.itcilo.org/actrav-english/telearn/osh/legis/c174.htm document C174]
- 45. Rome Declaration on World Food Security and World Food Summit Plan of Action. FAO, Rome. 1996. [further information and text at: http://www.fao.org/docrep/003/w3613e/w3613e00.HTM]
- 46. World Health Declaration and Health-for-all in the 21st Century. WHO, Geneva. 1998. [further information and text at: http://www.euro.who.int/ data/assets/pdf_file/0004/109759/EHFA5-E.pdf]