Global Plan of Action

Executive summary

**Introduction**

1. The Global Plan of Action of the Strategic Approach to International Chemicals Management has been structured into work areas and associated activities that may be undertaken voluntarily by stakeholders in order to pursue the commitments and objectives expressed in the Dubai Declaration on International Chemicals Management and the Overarching Policy Strategy. These reaffirm the commitment expressed at the World Summit on Sustainable Development in the Johannesburg Plan of Implementation that by 2020 chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.[[1]](#footnote-1) The plan should be regarded as a guidance document to be reviewed, as appropriate, and the activities should be considered and implemented, as appropriate, by stakeholders during the implementation of the Strategic Approach, according to their applicability.
2. The present executive summary aims to give policy-makers a brief overview of the structure of the Global Plan of Action and the list of actions that can be undertaken to achieve the objectives of the Strategic Approach. Within the Global Plan of Action, possible work areas and their associated activities, actors, targets and timeframes, indicators of progress and implementation aspects are grouped according to five categories of objectives contained in the Overarching Policy Strategy of the Strategic Approach, namely, risk reduction, knowledge and information, governance, capacity-building and technical assistance and illegal international traffic. These objectives are discussed in sections A to E of the present executive summary. Cross-cutting measures that appear under more than one objective are discussed in section F, entitled “Improved general practices”.
3. Three tables follow this executive summary. Table A provides a summary list of the work areas and the numbers of the possible activities associated with them. Table B lists the work areas together with the possible activities associated with them and suggested actors, targets and timeframes, indicators of progress and implementation aspects, set out in five separate sections corresponding to the five categories of objectives listed in paragraph 2 above. Although each work area is listed under a single principal category in the summary table A, it may appear under several objectives in the detailed table B. The columns dealing with suggested actors, targets and timeframes, indicators of progress and implementation aspects were not fully discussed and sufficient time was not available to achieve agreement during the process to develop the Strategic Approach. However, stakeholders might find them useful in their implementation of the relevant activities. A table listing acronyms and abbreviations used in table B is appended as well.
4. Participants in the process to develop the Strategic Approach were unable to conclude their discussions on a number of activities, as reflected in table C of document SAICM/ICCM.1/4, which can be found at the website http:www.chem.unep.ch/saicm. Bearing in mind that the Global Plan of Action is an evolving tool to assist in achieving the objectives of the Strategic Approach, stakeholders may wish to discuss these items. In the period between the first and second sessions of the International Conference on Chemicals Management, activities such as regional meetings could be pursued.
5. The various categories of objectives, together with their corresponding work areas, are closely interconnected. Thus, numerous risk reduction actions are needed to protect human health and the environment from the unsound management of chemicals. A large number of these risk reduction actions will need to be supported by extensive improvements in our knowledge and information on chemicals, governance arrangements (including institutional coordination, regulatory frameworks and public policy) in all sectors involved with chemicals, and general practices associated with the sound management of chemicals throughout their life‑cycles. Furthermore, meaningful and timely capacity‑building and technical assistance in support of the actions of developing countries and countries with economies in transition are essential to making substantive improvements in reducing the risks to human health and the environment caused by the unsound management of chemicals.
6. The Global Plan of Action also serves as guidance to all stakeholders at the global, regional, national and local levels, including when assessing the current status of their actions in support of the sound management of chemicals and identifying priorities to address gaps in such management. It is emphasized that priorities and timeframes will differ among countries, reflecting, for instance, the current state of chemicals management and the capacity to carry out a given measure in a given country. It is anticipated that Governments and other stakeholders will adopt flexible programmes to build and sustain adequate and comprehensive capabilities for the sound management of chemicals consistent with national circumstances and the Strategic Approach objectives.
7. In general, priority should be given to activities which:
8. Focus on narrowing the gap between developed countries on the one hand and developing countries and countries with economies in transition on the other hand in their capacities for the sound management of chemicals;
9. Facilitate the implementation of existing agreements and work areas;
10. Target issues not currently addressed in existing agreements and work areas;
11. Ensure that, by 2020:
12. Chemicals or chemical uses that pose an unreasonable and otherwise unmanageable risk to human health and the environment[[2]](#footnote-2) based on a science‑based risk assessment and taking into account the costs and benefits as well as the availability of safer substitutes and their efficacy are no longer produced or used for such uses;
13. The risks from unintended releases of chemicals that pose an unreasonable and otherwise unmanageable risk to human health and the environment2 based on a science‑based risk assessment and taking into account the costs and benefits are minimized;
14. Target chemicals that pose unreasonable and unmanageable risks;
15. Promote the generation of adequate science‑based knowledge on health and environmental risks of chemicals and make it available to all stakeholders.
16. For many of the work areas, it is important to work in a concerted manner in order to be most effective. It is therefore critical for all stakeholders to take appropriate cooperative action on global priorities. These include, among others:
17. Integrating chemicals issues into the broader development agenda, including the development of plans for prioritization of action in consultation with stakeholders, including vulnerable groups;
18. Promoting ratification and implementation of relevant existing international conventions on health, safety, occupational health and safety and environment;
19. Encouraging implementation of existing internationally recognized standards, tools and approaches for environment and health and protection from chemicals, such as the Globally Harmonized System of Classification and Labelling of Chemicals and pollutant release and transfer registers;
20. Promoting reduction of risks from mercury and other chemicals of global concern so that they are minimized;
21. Encouraging the reduction of the quantity and toxicity of hazardous wastes;
22. Promoting efforts to prevent illegal traffic in chemicals and hazardous waste;
23. Promoting greater coordination among regional and national centres and other stakeholders in order to address the whole spectrum of issues regarding chemicals and hazardous waste;
24. Promoting alternatives in order to reduce and phase out highly toxic pesticides;
25. Promoting capacity‑building, education and training and information exchange on sound management of chemicals for all stakeholders;
26. Promoting voluntary industry initiatives and product stewardship in all relevant industries;
27. Promoting the phase‑out of lead in gasoline;
28. Promoting the remediation of contaminated areas.

**A. Measures to support risk reduction**

1. Under the risk reduction objective, work areas aimed at protecting human health and the environment would include the development of action plans to address priority concerns in relation to groups with specific vulnerabilities. Examples of measures to safeguard the health of women and children are the minimization of chemical exposures before conception and through gestation, infancy, childhood and adolescence. Occupational health and safety for workers would be promoted through measures such as the establishment of national inspection systems and implementation of adequate occupational health and safety standards to minimize workplace hazards from chemicals. Groups of chemicals that might be prioritized for assessment and related studies, such as for the development and use of safe and effective alternatives, include: persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous systems; persistent organic pollutants (POPs); mercury and other chemicals of global concern; chemicals produced or used in high volumes; chemicals subject to wide dispersive uses; and other chemicals of concern at the national level. Minimization of hazardous wastes would be enhanced by national planning and policies, awareness‑raising and protection of handlers, while contaminated sites would be subject to identification and remediation. Pollution prevention measures would include the phasing out of lead in gasoline. Capacities to deal with poisonings and other chemical incidents would be strengthened.

**B. Strengthening knowledge and information**

1. Measures to strengthen knowledge and information would include improved education, training and awareness‑raising activities aimed at those who may be exposed to toxic substances at any stage in the life cycle of chemicals and the generation and dissemination of data on the hazards of all chemicals in commerce, taking account of legitimate commercial confidentiality needs. Among other measures in this area would be stepped-up monitoring of the impacts of chemicals on health and the environment, harmonized risk assessments, efforts to implement the Globally Harmonized System of the Classification and Labelling of Chemicals, and the development and publication of national pollutant release and transfer registers.

**C. Governance: strengthening of institutions, law and policy**

1. Central to the Strategic Approach’s governance objectives would be measures to review national legislation in order to ratify and implement existing international agreements dealing with chemicals and hazardous wastes, such as the Basel Convention on the Control of the Transboundary Movement of Hazardous Wastes and their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Stockholm Convention on Persistent Organic Pollutants, the International Labour Organization conventions on the protection of workers and measures to improve coordination and synergies with respect to chemical safety policy and activities at the national and international levels. Another core area would be measures to ensure the participation of all stakeholders, including women in particular, in the management of the life cycle of chemicals. Measures to integrate chemicals management into strategies for development assistance, sustainable development and poverty reduction papers would be important to underpin the more effective direction of resources to chemical safety activities. Other measures under the governance category would include the development of systems for emergency preparedness and response in the case of chemical accidents, the consideration of chemical use in protected areas, training in liability and compensation schemes in relation to damage to human health and the environment caused by the production and use of chemicals and action to prevent and detect illegal trafficking of chemicals and hazardous wastes.

**D. Enhancing capacity-building**

1. Capacity-building measures include training of personnel in order to provide the necessary skills to support the systematic implementation of the Strategic Approach at the local, national and regional levels in a coordinated way and across the full range of chemical safety needs, including strategic planning, risk assessment and management, testing and research and control of illegal traffic. Use would be made of information‑exchange mechanisms on capacity-building in order to ensure coordination.

**E. Addressing illegal international traffic**

1. Actions at the national, regional and global levels are needed to prevent and detect illegal trafficking of chemicals and hazardous wastes, including efforts towards the more effective application of international conventions relating to transboundary movements of chemicals and hazardous waste.

**F. Improved general practices**

1. The list of work areas contains a number of activities to improve general chemicals management practices, such as the development and implementation of cleaner production methods in accordance with best available techniques and best environmental practices. Similarly, better agricultural methods, including the use of non-chemical alternatives, would be promoted. Measures associated with improved corporate social and environmental responsibility for the safe production and use of products would include the further development and implementation of voluntary initiatives such as industry’s Responsible Care programme and the International Code of Conduct on the Distribution and Use of Pesticides of the Food and Agriculture Organization of the United Nations.

**Table A. Possible work areas and their associated activities**

|  |  |
| --- | --- |
| **Work Area** | **Activity** |
| Assessment of national chemicals management to identify gaps and prioritize actions | 1, 165, 207 |
| Human health protection | 2–6 |
| Children and chemical safety | 7–10, 150–153, 245−246 |
| Occupational health and safety | 11–21, 138–149, 255 |
| Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) | 22, 99–101, 168, 248−250 |
| Highly toxic pesticides – risk management and reduction | 23–30, 114–117 |
| Pesticide programmes | 31 |
| Reduced health and environmental risks of pesticides | 32–42 |
| Cleaner production | 43–46, 118, 238–242 |
| Remediation of contaminated sites | 47– 48, 243 |
| Lead in gasoline | 49, 156, 244 |
| Sound agricultural practices | 50–53, 158–160 |
| Persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous systems; persistent organic pollutants (POPs) | 54–56 |
| Mercury and other chemicals of global concern; chemicals produced or used in high volumes; chemicals subject to wide dispersive uses; and other chemicals of concern at the national level | 57–60, 157 |
| Risk assessment, management and communication | 61–67, 127–137, 247 |
| Waste management (and minimization) | 68–73, 161–162, 258−262, 272–273 |
| Formulation of prevention and response measures to mitigate environmental and health impacts of emergencies involving chemicals | 74–79, 237 |
| Research, monitoring and data | 80–87 |
| Hazard data generation and availability | 88–97 |
| Promotion of industry participation and responsibility | 98, 189–192 |
| Information management and dissemination | 102–113, 256 |
| Life cycle | 119–123 |
| Pollutant release and transfer register (PRTRs) – creation of national and international registers | 124–126, 177–180 |
| Education and training (public awareness) | 154–155 |
| Stakeholder participation | 163–164 |
| Implementation of integrated national programmes for the sound management of chemicals at the national level in a flexible manner | 166–167 |
| International agreements | 169–176 |
| Social and economic considerations | 181–188, 257 |
| Legal, policy and institutional aspects | 193–198 |
| Liability and compensation | 199 |
| Stock-taking on progress | 200–201 |
| Protected areas | 202–203, 253–254 |
| Prevention of illegal traffic in toxic and dangerous goods | 204, 263–271 |
| Trade and environment | 205, 251–252 |
| Civil society and public interest non-governmental organization (NGO) participation | 206 |
| Capacity-building to support national actions | 208–236 |

**Table B. List of possible work areas and their associate activities, actors, targets/timeframes, indicators of progress and implementation aspects**[[3]](#footnote-3)

| Work areas addressing risk reduction (objective 1) | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Work area** | **Activities** | **Actors [[4]](#footnote-4)** | **Targets/Timeframe** | **Indicators of progress** | **Implementation aspects** |
| Assessment of national chemicals management to identify gaps and prioritize actions | 1. Develop national profiles and implement action plans for sound management of chemicals. | National Governments  Research centres  IOMC (UNEP, FAO, WHO, UNIDO, UNITAR, UNDP)  Trade unions  NGOs | 2006–2010 | National profiles including action plans are developed. | Interagency and multi-stakeholder committees created to assist the development of national profiles |
| Human health protection | 2. Fill gaps in abilities to access, interpret and apply knowledge. | Industry  National Governments  Research centres  IOMC (WHO, OECD)  Trade unions | 2006–2020 (deliverables to be set for each SAICM review period) | Gaps in abilities have diminished. | Improved availability of information on the hazards, risks and safe use of chemicals (including those in manufactured products), in forms relevant to end users, and improved use of existing risk assessments |
| 3. Develop and use new and harmonized methods for risk assessment. | IOMC (WHO, OECD)  National Governments | 2006–2020 (deliverables to be set for each SAICM review period) | New and harmonized methods for risk assessment are developed. | Methods for assessment of dose‑response relationships and risks to vulnerable groups, in particular children, pregnant women and fertile people, the elderly and the poor; new tools for risk assessment |
| 4. Develop better methods and criteria for determining the impact of chemicals on human health (and thereby on the economy and sustainable development), for setting priorities for action, for the detection of chemicals and for monitoring the progress of SAICM. | IOMC (WHO, OECD)  Research centres | 2006–2020 (deliverables to be set for each SAICM review period) | Better methods and criteria to determine impacts of chemicals are developed.  Chemicals and human health are included in the development assistance agenda. | Usable at the country level  Means of determining human health impacts of policy decisions |
|  | 5. Build capacities of countries to deal with poisonings and chemical incidents. | National Governments  Regional organizations  IOMC (UNEP, WHO) | 2006–2020 (deliverables to be set for each SAICM review period) | The number of countries with capacity to deal with poisoning and chemicals incidents has increased. | An integrated approach to establishment and strengthening of poisons centres and surveillance, alert and response mechanisms for chemical incidents  Technical cooperation on a regional basis |
| 6. Include a range of preventive strategies. | National Governments  IOMC (WHO) | 2006–2020 (deliverables to be set for each SAICM review period) | A range of preventive strategies is included internationally, regionally and nationally. | Education and awareness-raising  Capacity building in risk communication |
| Children and chemical safety | 7. Develop guidance materials to assist in the preparation of initial national assessments of children’s environmental health and the identification of priority concerns; develop and implement action plans to address those priority concerns. | IOMC (UNEP, ILO, WHO, UNIDO, OECD)  UNICEF  National Governments  Stakeholders  Regional organizations  NGOs | 2006–2010 | Initial national assessments of children’s environmental health and chemical safety are undertaken in all countries.  Action plans are prepared and are in use. | Guidance for assessments |
| 8. Establish needed infrastructure for research that will reduce uncertainty in risk assessment. | National Governments  IOMC (UNEP, ILO, WHO, UNIDO, OECD, UNDP) | 2006–2010 | Infrastructure is established. | Collection of additional toxicological data on endpoints of particular relevance to children, i.e., in utero or post-natal development and growth, and data that would help identify or quantify the extent to which children are exposed to chemicals of concern  Trained researchers |
| 9. Develop mechanisms to share and disseminate information that can be used to reduce uncertainty in risk assessment. | IOMC (UNEP, ILO, WHO, UNIDO, OECD, UNDP)  **NGOs**  **IFCS** | 2006–2010 | Mechanisms are developed. |  |
| 10. Eliminate as a priority any child labour that involves hazardous substances. | **IOMC (ILO)**  National Governments  Trade unions,  NGOs | 2006–2010 | The number of countries with legislation prohibiting child labour involving hazardous substances has increased.  The capacity to implement and enforce such legislation has improved in all countries.  The number of countries that have ratified the ILO convention on child labour has increased. | Model legislation |
| Occupational health and safety | 11. Develop harmonized data elements on occupational health and safety for recording relevant workplace data in company-specific databases. | **IOMC (ILO, WHO)**  National Governments  Trade unions  Industry | 2006–2010 | Harmonized data elements for recording relevant workplace data are developed. | ILO Global Strategy on Occupational Safety and Health  Standards and guidance |
| 12. Consider legislation to protect the health of workers and the public, covering the entire spectrum of work situations in which chemicals are handled, including such sectors as agriculture and health. | National Governments  IOMC (ILO)  Trade unions  Industry | 2006–2010 | Legislation is fully implemented in all relevant sectors. | Guidance developed on implementation |
| 13. Develop a system of health and environmental impact assessment in chemicals handling and incorporate it in occupational safety and health programmes. | **IOMC (ILO, WHO)**  National Governments  Trade unions  Industry  NGOs | 2006–2010 | Health and environmental impact assessments are made part of OHS programmes in all countries. | ILO Global Strategy on Occupational Safety and Health |
| 14. Develop, enhance, update and implement ILO safe work standards, ILO guidelines on occupational safety and health management system (ILO‑OSH 2001) and other non-binding guidelines and codes of practice, including those particular to indigenous and tribal populations. | **IOMC (ILO)**  National Governments  Trade unions  Industry | 2006–2010 | ILO safe work standards and guidelines are implemented in all countries.  Other non-binding guidelines and codes of practice to promote sound chemicals management are identified, documented and implemented.  Indigenous and tribal practices are identified, documented and implemented. | ILO Global Strategy on Occupational Safety and Health  Availability of implementable methodologies  Updating of legislation |
|  | 15. Develop national occupational safety and health policies containing specific text on chemicals management, with a clear emphasis on preventive measures, requiring that workplace risk assessments and hazard prevention measures be carried out based on the recognized hierarchy of prevention and control measures. | **National Governments**  **Trade unions**  **Industry**  IOMC (ILO, WHO)  NGOs | 2006–2010 | Occupational health and safety policies refer specifically to chemicals in all countries.  National occupational health and safety policies which emphasize preventive measures are developed and implemented in all countries. | ILO Global Strategy on Occupational Safety and Health  Incorporation of the needs of workers in small and medium‑sized enterprises, the informal sector, migrant workers, undocumented workers and undocumented migrant workers, the self-employed, wage workers and vulnerable groups, including children, young persons, women and the elderly in addressing risk reduction programmes for chemical safety in the workplace  Guidance material |
| 16. Establish integrated programmes for all public health and safety practitioners and professionals, with an emphasis on identification, assessment and control of occupational chemical risk factors in all workplaces (such as industrial, rural, business and services). | IOMC (ILO, FAO, WHO, UNIDO, UNITAR)  National Governments  Trade unions  Industry  NGOs | 2006–2010 | Integrated programmes for all public health and safety practitioners and professionals, with an emphasis on identification, assessment and control of occupational chemical risk factors, are established and implemented in all countries. | ILO Global Strategy on Occupational Safety and Health  Training institutions and material |
| 17. Promote exchange of information on successful experiences and projects related to chemical occupational safety and health. | IOMC (ILO, FAO, WHO, UNIDO, UNITAR)  National Governments  Trade unions  Industry  NGOs | 2006–2010 | Systems for information exchange are established in every country. | ILO Global Strategy on Occupational Safety and Health  Infrastructure |
| 18. Develop and disseminate chemical safety data sheets to assist enterprises in protecting their workers. | **National Governments**  **IOMC (WHO)**  **Industry**  **Trade unions** | 2006–2010 | Safety data sheets are developed and disseminated. | Training of professionals  Infrastructure for dissemination of safety data sheets |
|  | 19. Avoid worker exposure through technical measures where possible; provide appropriate protective equipment; improve the acceptance of wearing protective equipment and stimulate further research on protective equipment to be used under hot and humid conditions. | **National Governments**  **IOMC (FAO)**  **Industry**  **Trade unions** | 2005–2010 | The number of cases of occupational diseases and accidents shows a constant declining trend.  Research on protective equipment gives practicable results. | Awareness-raising for employers and employees  Building of technical capacity |
| 20. Protect workers from chemicals causing asbestosis, other asbestos‑related diseases and occupational cancers, those chemicals included in the Rotterdam Convention because of their occupational risks and other hazardous chemicals based on their occupational health risks. | **National Governments**  **Trade unions**  Industry | 2005–2010 | The number of cases of asbestosis and other asbestos‑related diseases and occupational cancers shows a constant declining trend. | Awareness-raising for employers and employees.  Legislation |
| 21. Develop guidance on a harmonized approach to the setting of occupational exposure limits. | IOMC (ILO, FAO, WHO, UNIDO, UNITAR)  Trade unions | 2006–2010 | Guidance is developed. | Establishment of working groups internationally and nationally |
| Implementation of GHS | 22. Establish roles and responsibilities of employers, employees, chemical suppliers and Governments in the implementation of GHS. | IOMC (ILO, FAO, WHO, UNITAR, OECD)  **National Governments**  **Industry**  **Trade unions** | 2007 | Roles and responsibilities of employers, employees, chemical suppliers and Governments in the implementation of GHS are established and disseminated in all countries. | International initiative:  UNITAR/ILO GHS Capacity‑building programme  Model legislation |
| Highly toxic pesticides – risk management and reduction | 23. Encourage full implementation of the FAO International Code of Conduct on the Distribution and Use of Pesticides. | **National Governments**  IOMC (FAO)  Industry (CropLife International)  NGOs | 2006–2010 | The number of countries that have adopted the FAO International Code of Conduct on the Distribution and Use of Pesticides has increased.  Implementation strategies for the FAO International Code of Conduct are developed and implemented in all countries. | FAO awareness-raising on the Code of Conduct  Life-cycle approach to pesticide management at the national level |
| 24. Give appropriate priority to pest and pesticide management in national sustainable development strategies and poverty reduction papers to enable access to relevant technical and financial assistance, including appropriate technology. | **National Governments**  **Agriculture industry** (CropLife International)  **IOMC (FAO)**  Trade unions, NGOs | 2006–2010 | National sustainable development strategies and poverty reduction papers have incorporated pest and pesticide management as a priority component, thus enabling access to relevant technical and financial assistance in all countries. | National financial resources  Model framework |
| 25. Base national decisions on highly toxic pesticides on an evaluation of their intrinsic hazards and anticipated local exposure to them. | **National Governments**  IOMC (FAO) | 2006–2010 | Hazard evaluations of all highly toxic pesticides are undertaken in all countries.  Exposure assessments are undertaken under local conditions in all countries. | National financial resources  Methodology  Need to take into account common conditions of use and the need to reduce risks |
| 26. Prioritize the procurement of least hazardous pest control measures and use best practices to avoid excessive or inappropriate supplies of chemicals. | **National Governments**  **Agriculture industry** (CropLife International)  Trade unions  **IOMC (FAO)** | 2006–2010 | National and industrial procurement policies include the purchase of the least hazardous pest control measures in all countries.  Use of best available techniques is given high priority in all countries. | Procurement policies  Best available techniques |
| 27. Promote development and use of reduced-risk pesticides and substitution for highly toxic pesticides as well as effective and non-chemical alternative means of pest control. | **Agriculture industry**  (CropLife International)  IOMC (FAO)  National Governments  Trade unions  Farmer organizations  NGOs | 2011–2015 | Use of highly toxic pesticides is reduced in all countries.  Use of non-chemical control measures is promoted in all countries.  Use of reduced-risk pesticides is promoted in all countries. | Alternatives available.  Local experience in use of pesticides  Sensitization of users of pesticides  Non-chemical control methods |
| 28. Distinguish programmes that have achieved cost effective, significant and sustainable risk reductions from those which have not and incorporate evaluation mechanisms and measures of progress in future programmes. | IOMC (UNEP, FAO, WHO, OECD, UNDP, World Bank) | 2006–2010 | Programmes that have achieved significant and sustainable risk reductions are documented and disseminated. | OECD risk reduction programmes in the use of pesticides |
| 29. Promote integrated pest and integrated vector management. | IOMC (UNEP, FAO, WHO, OECD, UNDP, World Bank)  National Governments  Trade unions  NGOs | 2006–2010 | Integrated pest and integrated vector management are practised in all countries and are included in national agricultural and health strategies. | Model legislation  Agricultural extension services  Training institutions and material |
|  | 30. Encourage industry to extend product stewardship and to withdraw voluntarily highly toxic pesticides which are hazardous and cannot be used safely under prevalent conditions. | **National Governments**  IOMC (UNEP, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  Trade unions  Industry (CropLife International) | 2006–2010 | Voluntary product stewardship initiatives are introduced in all countries.  Voluntary withdrawals of highly toxic chemicals are undertaken.  Presence of highly toxic chemicals on the market is reduced. | Industry initiatives |
| Pesticide programmes | 31. Establish pesticide management programmes to regulate the availability, distribution and use of pesticides and, where appropriate, consider the FAO Code of Conduct on the Distribution and Use of Pesticides. | **National Governments**  IOMC (FAO) | 2006–2010 | Regulation of availability, distribution and use of pesticides is put in place in all countries. | National legislation  Technical capacity |
| Reduced health and environmental risks of pesticides | 32. Implement a pesticide registration and control system which controls risks from the initial point of production/formulation to the disposal of obsolete products or containers. | **National Governments**  **IOMC (FAO, UNEP, UNDP, World Bank)** | 2010–2015 | Pesticide registration and control systems are implemented in all countries. | National legislation  Technical capacity |
| 33. Review pesticides available on the market to ensure their use in accordance with approved licenses. | **National Governments**  IOMC (FAO) | 2011–2015 | All countries ensure that pesticides on the market are used in accordance with approved licenses. | National legislation  Technical capacity |
| 34. Establish health surveillance programmes. | National Governments  **IOMC (ILO, FAO, WHO)**  Trade unions | 2006–2010 | Health surveillance programmes are put in place. | Training of workers to recognize symptoms of pesticide poisonings |
| 35. Establish poisoning information and control centres and systems for data collection and analysis. | **National Governments**  **Medical institutions**  **IOMC (WHO)** | 2006–2010 | Poisoning information and control centres are established. | Infrastructure  Technical capacity |
| 36. Provide extension and advisory services and farmer organizations with information on integrated pest management strategies and methods. | **IOMC (FAO)**  **Trade unions**  **Farmer organizations** | 2006–2010 | Information on integrated pest management is distributed to farmer organizations and extension services. | Infrastructure for information exchange  Awareness-raising |
|  | 37. Ensure proper storage conditions for pesticides at the point of sale, in warehouses and on farms. | **National Governments**  **Industry**  **Trade unions**  **Farmer organizations**  IOMC (FAO) | 2007–2015 | Pesticides are stored properly in all countries. | Awareness-raising |
| 38. Establish a programme to monitor pesticide residues in food and the environment. | **National Governments**  **IOMC (UNEP, FAO, WHO)** | 2006–2010 | Programmes for monitoring pesticide residues are put in place in all countries. | Laboratory capacity  Technical capacity |
| 39. Make less toxic pesticides available for sale and use. | **Industry**  IOMC (FAO) | 2006–2010 | Less toxic pesticides are available in all countries. | Awareness-raising |
| 40. License and sell pesticide products in containers that are ready to use, unattractive for re-use, inaccessible to children and labelled with clear, unambiguous directions that are understandable for local users. | **National Governments**  **Industry**  IOMC (FAO) | 2006–2010 | Only ready-to-use containers are licensed or sold.  Pesticide products are labelled with clear instructions for use. | Legislation  Awareness-raising |
| 41. Ensure that agricultural workers are appropriately trained in safe application methods and that personal protections are sufficient to allow the safe use of products. | **IOMC (FAO)**  **Trade unions**  **Farmer organizations**  **Agricultural extension services** | 2006–2010 | Agricultural workers are trained in safe application of pesticides. | Training programmes  Infrastructure for training |
| 42. Promote the availability and use of personal protective equipment. | **Industry**  **Trade unions**  IOMC (FAO)  **Farmer organizations** | 2006–2010 | Availability and use of personal protective equipment is promoted. | Awareness-raising |
| Cleaner production | 43. Encourage sustainable production and use and promote the transfer, implementation and adoption of pollution prevention policies and cleaner production technologies, in particular best available techniques and best environmental practices (BAT/BEP). | IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  National Governments  Industry  National cleaner production centres  Trade unions  NGOs  academia | 2011–2015 | Mechanisms to encourage sustainable production and use and the transfer of appropriate clean technologies are established in all countries.  Implementation of BAT/BEP is promoted. | Establishment of national cleaner production centres  BAT/BEP |
|  | 44. Promote the development and use of products and processes that pose lesser risks. | **Industry**  Trade unions  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  Basel Convention Secretariat | 2011–2015 | Systems for evaluating risks and criteria for substitution are established.  A list of alternatives and their properties is published and disseminated to assist in decision‑making.  List of substituted hazard chemicals is published and disseminated. | Development of methodology  UNIDO project: Regional Network on Safe Pesticide Production and Information for Asia and the Pacific (RENPAP)  Alternative chemicals |
| 45. Incorporate the concept of pollution prevention in policies, programmes and activities on chemicals management. | **National Governments**  Trade unions  NGOs  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank) | 2011–2015 | Pollution prevention is incorporated in all chemical management initiatives.  Pollution prevention initiatives are implemented. | Training institutions and material |
| 46. Support the further development and adoption of FAO and WHO specifications on pesticides. | **National Governments**  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  NGOs | 2006–2010 | FAO/WHO specifications on pesticides are developed and adopted in all countries. | Model legislation |
| Remediation of contaminated sites | 47. Identify contaminated sites and hotspots and develop and implement contaminated site remediation plans to reduce risks to the public and to the environment. | IOMC (FAO, ILO, UNIDO, UNDP, World Bank)  Basel Convention Secretariat  **National Governments**  **Private sector**  **NGOs** | 2010–2020 | Contaminated site remediation plans are developed for all contaminated sites in all countries. | African Stockpiles Programme  Model legislation |
| 48. Ensure the remediation of contaminated sites, including those caused by accidents. | **National Governments**  **Industry** | 2016–2020 | Mandatory remediation of contaminated sites is included in national legislation in all countries.  Contingency plans for handling accidents involving chemicals are put in place. | Model legislation |
| Lead in gasoline | 49. Eliminate lead in gasoline. | **National Governments**  IOMC (UNEP, WHO, UNIDO, UNDP, World Bank)  GEF  Industry | 2006–2010 | Lead in gasoline is eliminated. | Model legislation  Import decisions under Rotterdam Convention on tetraethyl and tetramethyl lead |
| Sound agricultural practices | 50. Develop schemes for integrated pest management. | IOMC (UNEP, ILO, FAO, WHO, UNDP, World Bank) | 2006–2010 | Schemes are developed. | Technical expertise  Infrastructure for dissemination of information  Awareness-raising |
| 51. Provide training in alternative and ecological agricultural practices, including non‑chemical alternatives. | IOMC (UNEP, ILO, FAO, WHO, UNDP, World Bank)  National Governments  Research and accredited training institutions  Industry  Trade unions  NGOs | 2006 –2010 | Training programmes in alternative and ecological agricultural practices including non-chemical alternatives are developed for all countries. | Methodologies and techniques |
| 52. Promote access to lower-risk or safer pesticides. | National Governments  IOMC (UNEP, ILO, FAO, WHO, UNDP, World Bank)  Trade unions | 2006–2010 | Access is promoted. | Awareness-raising  Infrastructure for dissemination of information |
| 53. Undertake development of pest‑ and disease‑resistant crop varieties. | National Governments  Agriculture industry  Research institutions  **IOMC (FAO)**  **CGIAR** | Ongoing activity | Pest and disease resistant crops have increased. | Research capacity |
| Persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous system; persistent organic pollutants (POPs) | 54. Promote the use of safe and effective alternatives, including non‑chemical alternatives to organic chemicals that are highly toxic, persistent and bioaccumulative. | **National Governments**  **Research centres**  Trade unions  NGOs  Industry  IOMC (UNEP, FAO, WHO, UNIDO, UNITAR, OECD, UNDP, World Bank) | 2016–2020 | Alternatives are identified and are in use. | Risk assessment methodology  Access to information on alternatives to persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous systems; persistent organic pollutants (POPs)  Clear identification of priorities for management of toxic chemicals |
| 55. Prioritize for assessment and related studies groups of chemicals posing an unreasonable and otherwise unmanageable risk for human health and the environment, which might include: persistent bioaccumulative and toxic substances, (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous system; and persistent organic pollutants (POPs). | **Industry**  National Governments  Trade unions  IOMC (UNEP, FAO, WHO, UNIDO, UNITAR, OECD, UNDP, World Bank) | 2016–2020 | Groups of chemicals posing an unreasonable and otherwise unmanageable risk for human health and the environment, which might include persistent bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens, mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous systems; and persistent organic pollutants (POPs), are prioritized for assessment and related studies. | Risk assessment methodology  Training |
|  | 56. Articulate an integrated approach to chemicals management taking into account multilateral environmental agreements and strategies that target a broad spectrum of chemicals. | **National Governments**  Trade unions  NGOs  Industry  IOMC (UNEP, FAO, WHO, UNIDO, UNITAR, OECD, UNDP, World Bank)  Basel Convention Secretariat | 2016–2020 | An integrated approach to chemicals management is developed and implemented in all countries. | Model legislation  Training  Industry initiatives  Development and promotion of reformulations and substitutions |
| Mercury and other chemicals of global concern; chemicals produced or used in high volumes; those subject to wide dispersive uses; and other chemicals of concern at the national level | 57. Promote reduction of the risks posed to human health and the environment, especially by lead, mercury and cadmium, by sound environmental management, including a thorough review of relevant studies such as the UNEP global assessment of mercury and its compounds. | **National Governments**  NGOs  Industry  IOMC (UNEP, WHO, UNIDO, UNITAR, OECD, UNDP, World Bank) | 2006–2015 | Risks posed by chemicals that are harmful to human health and the environment, especially lead, mercury and cadmium, are reduced in all countries.  Relevant studies are identified and documented.  A review of relevant studies is carried out and the results published and disseminated.  Environmentally sound technologies for reduction of risks associated with lead, especially for small recycling enterprises, are put in place and are in use. | Risk assessment methodology  Training available |
| 58. Consider the need for further action on mercury, considering a full range of options, including the possibility of a legally binding instrument, partnerships and other actions (based on UNEP Governing Council decision 23/9). | IOMC (UNEP, UNIDO)  (Cleaner production centres) | 2005–2008 | Further action on mercury is taken. | Analysis of options  Technical capacity |
| 59. Take immediate action to reduce the risk to human health and the environment posed on a global scale by mercury in products and production processes (based on UNEP Governing Council decision 23/9). | IOMC (UNEP, UNIDO)  (Cleaner production centres) | 2005–2010 | Further action is taken. | Legislation |
| 60. Consider the review of scientific information, focusing especially on long-range environmental transport, to inform future discussions on the need for global action in relation to lead and cadmium, to be presented to the Governing Council at its twenty-fourth session in 2007 (based on UNEP Governing Council decision 23/9). | IOMC (UNEP)  **National Governments** | 2007 | Necessary actions are initiated. | Assessment of the need for global action |
| Risk assessment, management and communication | 61. When assessing risk to the general population, consider whether certain segments of the population (i.e., children, pregnant women) have differential susceptibility or exposure. | IOMC (UNEP, ILO, WHO, UNIDO, UNITAR, OECD, UNDP, World Bank)  National Governments | 2006–2010 | An assessment of whether children and pregnant women have differential susceptibility is carried out. | Evaluation of whether additional risk management actions are needed on a chemical-by-chemical basis |
| 62. Implement warning systems with regard to the risks posed by the production, use or disposal of chemicals. | **IOMC (WHO)** | 2011–2015 | Warning systems with regard to the risks posed by the production, use or disposal of chemicals are established in all regions. | Design  Location  Management |
| 63. Apply science-based approaches, including those from among existing tools from IOMC organizations on, inter alia, test guidelines, good laboratory practices, mutual acceptance of data, new chemicals, existing chemicals, tools and strategies for testing and assessment. | **National Governments**  **NGOs**  **IOMC (UNEP, OECD)** | 2006–2010 | Science-based approaches are used in decision‑making in all countries. | Sufficient number of scientists  Training and education in science  Awareness-raising |
| 64. Encourage the development of simplified and standardized tools for integrating science into policy and decision-making relating to chemicals, particularly guidance on risk assessment and risk management methodologies. | **National Governments**  **NGOs**  IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP, World Bank) | 2006–2010 | Simplified and standardized tools for integrating science into policy are developed and implemented in all countries.  A framework for integrating standardized tools into policy is developed and is in use. | Sufficient number of scientists  Training and education in science  Awareness-raising  Appropriate policies |
| 65. Establish knowledge on risk assessment procedures, building on existing products such as those generated by OECD, including, inter alia, guidance on the OECD High Production Volume Chemicals hazard assessments, (Quantitative Structure Activity Relationship ((Q)SAR) Analysis, review of pesticide hazards and fate studies, emission exposure scenario documents, information exchange and coordination mechanisms. | IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP, World Bank) | 2006–2010 | Knowledge on risk assessment procedures is increased. | Awareness-raising  Infrastructure for dissemination of information |
| 66. Establish programmes for monitoring chemicals and pesticides to assess exposure. | **National Governments** | 2006–2015 | Monitoring programmes are established. | Technical capacity  Regional cooperation |
| 67. Apply life-cycle management approaches to ensure that chemicals management decisions are consistent with the goals of sustainable development. | **National Governments**  **Industry** | 2006–2010 | Life-cycle management approaches are applied. | Appropriate policies  Awareness-raising |
| Waste management (and minimization) | 68. Facilitate the identification and disposal of obsolete stocks of pesticides and other chemicals (especially PCBs), particularly in developing countries and countries with economies in transition. | **Basel Convention Secretariat, BCRCs**, Stockholm Convention Secretariat, IOMC (ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  Montreal Protocol  National Governments  Industry  Trade unions  NGOs | 2006–2020 | All obsolete stocks of pesticides and other chemicals are identified and disposed of. | Africa Stockpiles Programme  Methodology  Identification of stockpiles of other chemicals  Demonstration and promotion of appropriate destruction technologies |
| 69. Establish and implement national action plans with respect to waste minimization and waste disposal, taking into consideration relevant international agreements and by using the cradle-to-cradle and cradle-to-grave approaches. | **National Governments**  **BCRCs**  **Trade unions**  **NGOs** | 2011–2015 | National action plans with respect to waste minimization and waste disposal are developed and implemented in all countries. | Model action plans  Training |
| 70. Prevent and minimize hazardous waste generation through the application of best practices, including the use of alternatives that pose less risk. | **Industry**  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  Basel Convention Secretariat  **National cleaner production centres**  **Trade unions**  **NGOs** | 2016–2020 | Alternatives are identified and introduced. | Assessment methodology  Training  Development and promotion of safer alternatives |
| 71. Implement the Basel Convention and waste reduction measures at source and identify other waste issues that require full cradle‑to‑cradle and cradle‑to-grave consideration of the fate of chemicals in production and at the end of the useful life of products in which they are present. | **Industry**  **BCRCs**  National cleaner production centres  IOMC (ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  Montreal Protocol  Trade unions  NGOs | 2006–2010 | Waste reduction measures at source are implemented in all chemical plants.  The Basel Convention is implemented in all countries. | Training  Awareness-raising  Development and promotion of best available techniques |
| 72. Carry out measures that will inform, educate and protect waste handlers and small-scale recyclers from the hazards of handling and recycling chemical waste. | **National Governments**  **Trade unions**  **NGOs**  **IOMC (ILO)**  Basel Convention Secretariat  **United Nations Disaster Assessment and Coordination Team Unit** | 2006–2010 | Measures to inform, educate and protect waste handlers and small‑scale recyclers are carried out. | Particular attention to waste pickers and other actors in the informal recycling sector  Infrastructure for dissemination of information  Awareness-raising |
|  | 73. Promote waste prevention and minimization by encouraging production of reusable/recyclable consumer goods and biodegradable products and developing the infrastructure required. | **National Governments**  National cleaner production centres  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  Basel Convention Secretariat  Industry  Trade unions  NGOs | 2006–2015 | Mechanisms to encourage production of reusable/recyclable consumer goods and biodegradable products are in place in all countries. | National cleaner production centres  Information on successful initiatives  Eco-design |
| Formulation of prevention and response measures to mitigate environmental and health impacts of emergencies involving chemicals | 74. Develop integrated national and international systems to prevent major industrial accidents and for emergency preparedness and response to all accidents and natural disasters involving chemicals. | **National Governments**  IOMC (UNEP, ILO, WHO, UNIDO, OECD, UNDP)  Basel Convention Secretariat  United Nations Disaster Assessment and Coordination Team  Industry  Trade unions  NGOs | 2006–2012 | Integrated systems and centres to prevent major industrial accidents and for emergency preparedness and response are established and implemented in all countries. | ILO Convention 174, Prevention of Major Industrial Accidents  OECD project on safety performance indicators  UNEP APELL programme  CEFIC Safety and Quality Assessment System for road and rail transport  Application of process safety management to chemical operations and the strengthening of integrated approaches  Poison centres |
| 75. Encourage the development of an international mechanism for responding to requests from countries affected by chemical accidents. | **IOMC (WHO)** | 2010–2020 | An international mechanism to respond to requests from countries affected by chemical accidents is established and implemented. | Design of mechanism |
| 76. Minimize the occurrence of poisonings and diseases caused by chemicals. | **Industry**  National Governments  IOMC (UNEP, ILO, WHO, UNIDO, OECD, UNDP)  Trade unions  NGOs | 2006–2010 | Occurrence of poisonings and diseases caused by chemicals is reduced and medical surveillance systems are put in place in all countries.  Biological indicators are available. | Information systems to collect and manage data  National risk reduction strategy  Training  Availability of information  Awareness-raising |
| 77. Provide for national collection of harmonized data, including categorization by, for example, type of poison, chemical identity, structure, use or function. | **National Governments**  IOMC (UNEP, ILO, WHO, UNIDO, OECD, UNDP)  Industry  NGOs | 2006–2010 | Systems for collection of harmonized data are established and are used in all countries. | OECD chemicals programme |
| 78. Address gaps in the application of safety procedures relevant to the operation of chemical‑intensive facilities, including the environmentally sound management of hazardous substances and products. | **Industry**  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD)  Trade unions  NGOs | 2006–2010 | Gaps in the application of safety procedures relevant to the operation of chemical‑intensive facilities, including the environmentally sound management of hazardous substances and products, are identified.  Gaps are filled. | ILO Global Strategy on Occupational Safety and Health |
| 79. Design, site and equip chemical facilities to protect against potential sabotage. | **Industry**  National Governments | 2006–2010 | Chemical facilities are protected against potential sabotage. | Technical capacity |

| Work areas addressing knowledge and information (objective 2) | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Work areas** | **Activities** | **Actors2** | **Targets/Timeframe** | **Indicators of progress** | **Implementation aspects** |
| Research, monitoring and data | 80. Develop and establish targeted risk assessment approaches to evaluating exposure and impacts, including socio‑economic impacts and chronic and synergistic effects of chemicals on human health and the environment. | **National Governments**  Industry  NGOs  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP) | 2006–2010 | Systems to monitor exposure and socio economic impacts are put in place in all countries.  Assessment and monitoring of exposures are completed and remedial measures are identified and implemented in all countries. | National laboratory accreditation systems  Capacity to maintain laboratory equipment  Availability of trained professionals |
| 81. Evaluate whether different segments of the population (e.g., children, women) have different susceptibility and/or exposure on a chemical‑by‑chemical basis in order of priority. | **National Governments**  Industry  NGOs  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP) | 2006–2010 | Exposure monitoring systems are established in all countries.  Assessment and monitoring of vulnerable groups have been completed. | National laboratory accreditation systems  Capacity to maintain laboratory equipment  Availability of trained professionals |
| 82. Develop, validate and share reliable, affordable and practical analytical techniques for monitoring substances for which there is significant concern in environmental media and biological samples. Develop a targeted process to assess and monitor levels of a discrete number of priority contaminants in the environment. | **National Governments**  **IOMC (UNEP)**  Industry  Research centres  NGOs | 2006–2010 | Analytical techniques are developed and are available in all countries. | National laboratory accreditation systems  Capacity to maintain laboratory equipment  Availability of trained professionals |
| 83. Develop scientific knowledge to strengthen and accelerate innovation, research, development, training and education that promote sustainability. | **National Governments**  **Industry**  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD) | 2006–2015 | Innovation is supported in all countries. | Training institutions  Research centres  Information |
| 84. Promote research into technologies and alternatives that are less resource intensive and less polluting. | **National Governments**  **Industry**  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD) | 2006–2015 | Research is advanced and technologies and alternatives are in use. | Research centres  Alternatives developed  Information |
| 85. Collect data on the use patterns of chemicals for which there is a reasonable basis of concern where necessary to support risk assessment characterization and communication. | National Governments  NGOs  Industry  **IOMC (UNEP, WHO, OECD)** | 2006–2010 | Systems for data collection are established in all countries.  Databases are established and are accessible in all countries. |  |
|  | 86. Design mechanisms to enable investigators from less developed countries to participate in the development of information on risk reduction. | National Governments  Research institutions | 2006–2010 | Mechanisms are designed. | Model information on risk reduction |
| 87. Fill gaps in scientific knowledge (e.g., gaps in understanding of endocrine disruptors). | Research centres  Industry  IOMC (WHO) | 2011–2015 | Gaps in scientific knowledge are filled. | Industry long-range research initiative |
| Hazard data generation and availability | 88. Encourage partnerships to promote activities aimed at the collection, compilation and use of additional scientific data. | National Governments  Industry  Trade unions  NGOs  IOMC (UNEP, ILO, FAO, WHO, UNITAR, OECD, UNDP)  Professional organizations such as farmer organizations | 2006–2010 | Partnerships to promote activities aimed at the collection and use of additional scientific data are established and are sustained. | OECD High Production Volume Chemicals Programme |
| 89. Generate and share information detailing the inherent hazards of all chemicals in commerce, giving priority to hazard information for those chemicals that have the greatest potential for substantial or significant exposures. | National Governments  Industry  Trade unions  IOMC (UNEP, ILO, FAO, WHO, UNITAR, OECD)  NGOs  Professional organizations such as farmer organizations | 2008 | Hazard data is generated and made available on all chemicals in use in a country. | GHS  OECD High Production Volume Chemicals Programme  Existing hazard information should be systematically identified, collected, validated and shared to avoid duplicative testing.  For the generation of new information, advancements in hazard identification and other relevant approaches that reduce the use of animals for toxicity testing should be applied.  Use appropriate measures, where necessary according to each country’s own situation, to promote the timely generation of hazard information.  When implementing the activity, priority should be given to hazard information for those chemicals that have greatest potential for substantial or significant exposures. |
| 90. Establish national priorities for information generation for chemicals that are not produced in high volumes. | National Governments  Trade unions  NGOs  Professional organizations, e.g., farmer organizations  IOMC (WHO) | 2006–2010 and later | National priorities for information generation for chemicals that are not produced in high volumes are established in each country. | National experts  National budgets  Use of production/import volume inventories of chemicals in commerce and collection or generation of other relevant information such as information on significant exposure |
| 91. Encourage the use of IPCS health and safety cards (international chemical safety cards, or ICSCs) | National Governments  IOMC (UNEP, ILO, FAO, WHO, UNITAR, OECD)  Trade unions  NGOs  Professional organizations such as farmer organizations | 2006–2010 | IPCS health and safety cards are used. | Availability in appropriate languages |
| 92. Agree to time frames for industry, in cooperation and coordination with other stakeholders, to generate hazard information for high‑production volume chemicals not addressed under existing commitments. | **Industry**  IOMC (UNEP, ILO, UNITAR, OECD) | 2006–2010 | Time frames are agreed for industry to generate hazard information for high-production volume chemicals not addressed under existing commitments. | OECD High Production Volume Chemicals programme |
|  | 93. Promote the establishment of generally applicable guidelines on the respective roles, responsibilities and accountabilities of Governments, producing and importing enterprises and suppliers of chemicals concerning the generation and assessment of hazard information. | **National Governments**  Industry  Trade unions  IOMC (UNEP, ILO, FAO, UNITAR, OECD) | 2006–2010 | GHS is implemented. |  |
| 94. Further harmonize data formats for hazard information. | **National Governments**  Industry  IOMC (UNEP, ILO, WHO, UNITAR, OECD, UNDP)  Basel Convention Secretariat | 2006–2010 | GHS is implemented.  Harmonized data formats are developed and are in use. | Training |
| 95. Establish recommendations on tiered approaches to addressing screening information requirements for chemicals that are not produced in high volumes. | IOMC (UNEP, ILO, UNITAR, OECD)  **Industry** | 2006–2010 | Tiered approaches to addressing screening information requirements for chemicals that are not produced in high volumes are established. | Training |
| 96. Identify possible approaches for prioritization for such chemicals that are not necessarily based on production volume but, e.g., build on significant exposures. | IOMC (UNEP, ILO, FAO, WHO, UNITAR, OECD)  **Industry**  **Trade unions** | 2006–2010 | Approaches to prioritization of chemicals for hazard generation are developed. | Technical capacity |
|  | 97. Ensure that each pesticide is tested by recognized procedures and test methods to enable a full evaluation of its efficacy, behaviour, fate, hazard and risk, with respect to anticipated conditions in regions or countries where it is used. | Industry |  | Recognized procedures and test methods are established. | Testing facilities to verify quality and contents of pesticides offered for sale |
| Promotion of industry participation and responsibility | 98. Encourage industry to generate new science-based knowledge, building on existing initiatives. | **National Governments**  IOMC (FAO, UNIDO, UNITAR, OECD, UNDP)  Industry | 2006–2010 | Mechanisms are established in all countries for using new information generated by industry.  New science-based knowledge is developed and is being used. | OECD chemical programme  Global industry forums  UNIDO programme for all industries |
| GHS | 99. Establish information management systems for hazard information. | National Governments  Industry | 2006–2008 | Information systems are established. | International initiative  OECD initiative on increasing generation of hazard data |
| 100. Prepare safety data sheets and labels. | **Industry** | 2006–2008 | GHS is implemented. | Responsible Care  Information in appropriate languages |
| 101. Complete GHS awareness‑raising and capacity‑building guidance and training materials (including GHS action plan development guidance, national situation analysis guidance and other training tools) and make them available to countries. | Industry  Trade unions  NGOs  IOMC (ILO, WHO, UNITAR) | 2007 | All countries have prepared implementation strategies for GHS. | Awareness-raising activities  Sharing of the results of pilot projects  Development of a roster of GHS experts who can provide support on training and capacity-building activities on the application of GHS classification, labelling, and safety data sheets |
| Information management and dissemination | 102. Establish arrangements for the timely exchange of information on chemicals, including what is necessary to overcome barriers to information exchange (e.g., providing information in local languages). | National Governments  Industry | 2006–2015 | Stakeholders have access to information in local languages in all countries. | GHS  Use of article 14 of the Rotterdam Convention to facilitate information exchange on toxicology, ecotoxicology and safety |
|  | 103. Consider establishing a clearing‑house for information on chemical safety to optimize the use of resources. | IOMC (UNEP, ILO, FAO, WHO, UNITAR, OECD, UNDP)  Industry | 2006–2010 | A clearing-house for information on chemical safety is established. | Determination of feasibility |
| 104. Ensure that all Government officials from developing countries and countries with economies in transition responsible for chemicals management have access to the Internet and training in its use. | National Governments  **IOMC (UNEP)** | 2006–2010 | All Government officials from developing countries and countries with economies in transition responsible for chemicals management have access to the Internet and are trained in its use. | Infrastructure  Training |
| 105. Eliminate barriers to information exchange for the sound management of chemicals in order to enhance communication among national, subregional, regional and international stakeholders. | National Governments  IOMC (UNEP, ILO, FAO, WHO, UNITAR, OECD, UNDP) | 2006–2010 | All stakeholders have access to information on the sound management of chemicals. | INFOCAP  Elimination of barriers to information exchange |
| 106. Strengthen the exchange of technical information among the academic, industrial, governmental and intergovernmental sectors. | **Academia**  National Governments | 2011–2015 | Exchange of technical information among the academic, industrial, governmental and intergovernmental sectors occurs freely. | Infrastructure |
| 107. Establish procedures to ensure that any hazardous material put into circulation is accompanied, at a minimum, by appropriate and reliable safety data sheets which provide information that is easy to access, read and understand, taking into account GHS. | National Governments  Industry  Trade unions | 2008 | GHS is implemented. | OECD High Production Volume Chemicals Programme  Responsible Care  Information in appropriate languages |
| 108. Articles and products containing hazardous substances should all be accompanied by relevant information for users, work-places and at disposal sites. | National Governments  Industry | 2006–2015 | All stakeholders have access to information. | Guidance to be developed  Information available in appropriate languages |
|  | 109. Improve the information base, including via electronic media such as the Internet and CD ROMs, in particular in developing countries, ensuring that information reaches appropriate target groups to enable their empowerment and ensure their right to know. | National Governments  **IOMC (UNEP, OECD)**  Trade unions | 2011–2015 | All stakeholders have access to information. | Infrastructure |
| 110. Include a range of preventive strategies, education and awareness‑raising and capacity‑building in risk communication. | **National Governments**  Industry  Trade unions | 2011–2015 | Risk reduction and communication systems are established in all countries. | Model legislation  Training in risk reduction |
| 111. For all chemicals in commerce, appropriate information detailing their inherent hazards should be made available to the public at no charge and generated where needed with essential health, safety and environmental information made available. Other information should be available according to a balance between the public’s right to know and the need to protect valid confidential business information and legitimate proprietary interests. | **National Governments**  Industry  IOMC (UNEP, ILO, WHO, UNITAR, OECD) | 2008 | GHS is implemented. | Model legislation  Establishment of an international repository on hazard data (essential health, safety and environmental information) that will be accessible free of charge  Accessibility of other information, balancing the public’s right to know and the need to protect valid confidential business information and legitimate proprietary interests |
| 112. Undertake awareness-raising for consumers, in particular by educating them on best practices for chemical use, about the risks that the chemicals they use pose to themselves and their environment and the pathways by which exposures occur. | National Governments  Industry  NGO | 2006–2015 | Consumer awareness-raising programmes are put in place in all countries. |  |
| 113. Establish information-exchange mechanisms on contamination in border areas. | National Governments | 2006–2010 | Mechanisms for exchange of information are established. | Infrastructure |
| Highly toxic pesticides risk management and reduction | 114. Improve access to and use of information on pesticides, particularly highly toxic pesticides, and promote alternative safer pest control measures through networks such as academia. | Rotterdam Convention Secretariat  IOMC (UNEP, ILO, FAO, WHO, OECD, UNDP, World Bank)  Montreal Protocol  NGOs  Trade unions/labour  Industry  Stockholm Convention Secretariat  Academia | 2006–2010 | Information on pesticides, particularly highly toxic pesticides, and alternative safer pest control measures is available to all stakeholders. | Rotterdam Convention  Stockholm Convention  Databases |
| 115. Encourage and facilitate exchange of information, technology and expertise within and among countries by both the public and private sectors for risk reduction and mitigation. | National Governments  **IOMC (UNEP, FAO, OECD)** | 2006–2015 | Systems for exchange of information, technology and expertise within and among countries by both the public and private sectors for risk reduction and mitigation are established in all countries. | Infrastructure |
| 116. Facilitate access to research results related to alternative pest control (both chemical and non‑chemical) and crop protection measures by pesticide users, those exposed to pesticides and extension services. | National Governments  IOMC (UNEP, FAO)  Industry  Trade unions  NGOs | 2006–2015 | Research results related to alternative pest control (both chemical and non‑chemical) and crop protection measures by pesticide users, those exposed to pesticides and extension services are accessible to stakeholders. | System to exchange information |
| 117. Evaluate the efficacy of pesticide risk reduction programmes and alternative pest control methods currently implemented and planned by international organizations, Governments, the pesticide, agriculture and trade sectors and other stakeholders. | National Governments  Industry  IOMC (UNEP, ILO, FAO, WHO, OECD, UNDP, World Bank)  NGOs | 2006–2015 | Mechanisms to evaluate the efficacy of pesticide risk reduction programmes and alternative pest control methods are put in place. | OECD risk reduction programmes  Availability of methodologies |
| Cleaner production | 118. Undertake research into innovative means of cleaner production, including those involving waste minimization in all economic sectors. | **Industry**  Research centres  IOMC (UNEP, UNIDO)  Basel Convention Secretariat | 2011–2015 | Technologies that are environmentally friendly are developed and are used in all economic sectors. | Support for a culture of innovation |
| Life cycle | 119. Encourage management practices that take into account the full life-cycle approach to sustainable chemicals management, emphasizing front-end pollution prevention approaches. | IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP)  Basel Convention Secretariat  National Governments  National cleaner production centres  Industry  NGOs | 2011–2015 | Strategies and priorities, taking into account the full life-cycle approach to sustainable chemicals management, especially regarding front-end pollution prevention approaches, are established in all countries. | Life-cycle strategies |
| 120. Address matters of policy integration in consideration of life‑cycle issues. | National Governments  National cleaner production centres  Industry  IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP)  Basel Convention Secretariat | 2011–2015 | Integrated policies that incorporate chemicals management issues into policies for food safety, water and marine ecosystem management, health, occupational health and safety, development cooperation, sustainable production and consumption are adopted in all countries. | Model policies  Integration of chemicals management issues into policies for food safety, water and marine ecosystem management, health, occupational health and safety, development cooperation, sustainable production and consumption |
| 121. Utilize the life-cycle management concept to identify priority gaps in chemicals management regimes and practices and to design actions to address gaps in order to identify opportunities to manage hazardous products, unintentional toxic emissions and hazardous wastes at the most advantageous point in the chemical life cycle. | National Governments  Industry  Trade unions  IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP)  Basel Convention Secretariat  National cleaner production centres  NGOs | 2011–2015 | The life-cycle management concept is used for the sound management of chemicals in all countries. | Training  Awareness-raising |
| 122. Promote products that are either degradable and are returned to nature after use or at end use are recycled as industrial feedstocks to produce new products. | **Industry**  **IOMC (UNEP, FAO)** | 2011–2015 | Degradable or recycled products are promoted. | Awareness-raising  Research  Innovation |
| 123. Incorporate life-cycle issues in school curricula. | National Governments  National cleaner production centres  IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP)  Trade unions  NGOs | 2006–2010 | Life cycle issues are incorporated in school curricula. | Expertise in curriculum development |
| PRTRs – creation of national and international registers | 124. Develop a national PRTR/emission inventory design process involving affected and interested parties. | International IGOs IOMC (UNEP, UNIDO, UNITAR, OECD, UNDP), Stockholm Convention Secretariat  Regional organizations  National Governments | 2011–2015 | PRTRs are established in all countries. | Infrastructure  Consideration of national circumstances and needs |
| 125. Use PRTRs tailored to variable national conditions as a source of valuable environmental information for industry, Governments and the public and as mechanisms to stimulate reductions in emissions. | National Governments  NGOs  IOMC (UNEP, UNIDO, UNITAR, OECD, UNDP) | 2011–2015 | All stakeholders have access to PRTR information.  Emissions are reduced in all countries. | Infrastructure |
| 126. Develop manuals and implementation guides to explain in a simple form the benefits provided by a registry and the steps necessary to develop one. | IOMC (UNEP, UNIDO, UNITAR, OECD, UNDP) | 2011–2015 | Manuals and implementation guides are developed. | Availability of technical capacity |
| Risk assessment, management and communication | 127. Manufacturers, importers and formulators should assess data and provide adequate and reliable information to users. | National Governments  Industry | 2008 | Manufacturers, importers and formulators fulfil responsibilities to assess their products and inform users. |  |
| 128. Responsible public authorities should establish general frameworks for risk assessment procedures and controls. | National Governments | 2011–2015 | Risk assessment procedures and control systems are established in all countries. | Training |
| 129. Carry out hazard evaluations in accordance with the requirements of harmonized health and environmental risk assessments, including internationally recommended methodologies. | National Governments  IOMC (WHO) | 2008 | GHS is implemented. | Availability of technical capacity |
| 130. Harmonize principles and methods for risk assessment, e.g., methods for vulnerable groups, for specific toxicological endpoints such as carcinogenicity, immunotoxicity, endocrine disruption and ecotoxicology, for new tools. | IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP) | 2016–2020 | Risk assessment methodologies are harmonized for specific target groups. | Harmonization of terminology used in hazard and risk assessment  Use of molecular epidemiology, clinical and exposure data and scientific advances in toxicogenomics and methods relevant to real-life exposures, e.g., aggregate/cumulative exposures, use of simple analytical methods for in-field exposure assessment |
|  | 131. Address gaps in the development of new tools for risk assessment, harmonization of risk assessment methods, better methods to estimate the impacts of chemicals on health in real-life situations and the ability to access, interpret and apply knowledge on risks. | IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP) | 2016–2020 | Appropriate risk assessment tools are developed and used. | Technical capacity |
| 132. Address gaps in the study of chemical exposure pathways and opportunities for pathway intervention (e.g., in food production). | IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP)  Industry | 2016–2020 | Information on chemical exposure pathways and opportunities for pathway intervention are available. | Research capacity |
| 133. Further develop methodologies using transparent science‑based risk assessment procedures and science‑based risk management procedures, taking into account the precautionary approach. | National Governments  IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP)  NGOs | 2016–2020 | Methodologies for risk management are available in all countries. | Availability of trained professionals |
| 134. Compare assessments of alternative products and practices to ensure that they do not pose larger risks. | National Governments  IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP) | 2016–2020 | A system of comparative evaluation of chemical products is established in all countries. | Availability of trained professionals |
| 135. Fill gaps in abilities to access, interpret and apply knowledge (e.g., improve availability of information on the hazards, risks and safe use of chemicals, in forms relevant to end users, and improve use of existing risk assessments). | National Governments  Industry  NGOs  IOMC (UNEP, WHO) | 2006–2010 | All stakeholders have access to information on chemicals. | GHS |
| 136. Develop common principles for harmonized approaches for performing and reporting health and environmental risk assessments. | Research centres  IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP) | 2011–2015 | Harmonized methodology for risk assessments is available. | Infrastructure |
|  | 137. Improve understanding of the impact of natural disasters on releases of harmful chemicals and resulting human and wildlife exposures, as well as possible measures to mitigate them. | **National Governments**  NGOs  IOMC (WHO) | 2011–2015 | Studies are undertaken to improve understanding of the impact of natural disasters on releases of harmful chemicals and resulting human and wildlife exposures.  Results are disseminated to relevant decision makers.  Mitigation measures are developed and implemented. |  |
| Occupational safety and health | 138. Establish a means of developing and updating internationally evaluated sources of information on chemicals in the workplace by intergovernmental organizations, in forms and languages suitable for use by workplace participants. | IOMC (ILO, WHO, UNIDO, OECD, UNDP)  National Governments  Trade unions/labour  Industry  NGOs | 2006–2010 | Means of developing and updating internationally evaluated sources of information on chemicals in the workplace by intergovernmental organizations, in forms and languages suitable for use by workplace participants, are established in all countries. | GHS |
| 139. Promote research on the development of appropriate protective equipment. | **National Governments**  Industry  Trade unions | 2006–2010 | Research and development of appropriate protective gear is carried out in all countries.  Appropriate protective equipment is available in all countries. | ILO Global Strategy on Occupational Safety and Health  Research institutions |
| 140. Make information on workplace chemicals from intergovernmental organizations readily and conveniently available at no charge to employers, employees and Governments. | National Governments  Industry  Trade unions  NGOs | 2006–2008 | Mechanisms to make IGO information on chemicals readily available are established in all countries. | Infrastructure  GHS |
| 141. Strengthen global information networks in the sharing, exchange and delivery of chemical safety information (e.g. ILO, WHO, INFOCAP). | IOMC (ILO, FAO, WHO, UNIDO, OECD, UNDP)  Basel Convention Secretariat  Trade unions | 2006–2010 | Existing global networks are identified and links are strengthened. | Necessary infrastructure |
| 142. Promote the establishment of ILO SafeWork programmes at the national level and the ratification and implementation of ILO conventions 170, 174 and 184. | IOMC (ILO)  National Governments  Industry  Trade unions | 2006–2010 | ILO Conventions 170, 174 and 184 are ratified and implemented by all countries and ILO SafeWork programmes are established in all countries. | ILO conventions  Capacity‑building |
| 143. Implement an integrated approach to the safe use of chemicals in the workplace by establishing new mechanisms for expanding and updating ILO conventions related to hazardous substances and linking them to various other actions such as those associated with codes, information dissemination, enforcement, technical cooperation, etc. | IOMC (ILO)  National Governments  Industry  Trade unions | 2006–2010 | ILO conventions related to hazardous substances are updated and linked to other related initiatives. | ILO conventions  Capacity-building |
| 144. Establish approaches and methods for communicating the results of international risk assessments to appropriate workplace participants and stipulate related roles and responsibilities of employers, employees and Governments. | IOMC (ILO, WHO, UNIDO, OECD, UNDP)  National Governments  Industry  Trade unions | 2006–2010 | Mechanisms for disseminating the results of international risk assessments to appropriate workplace participants are established in all countries. | IPCS  OECD chemical programme |
| 145. Promote the establishment of national inspection systems for the protection of employees from the adverse effects of chemicals and encourage dialogue between employers and employees to maximize chemical safety and minimize workplace hazards. | IOMC (ILO)  National Governments  Industry  Trade unions  NGOs | 2006–2010 | National inspection systems on safe use of chemicals are established in all countries. | ILO conventions  Capacity‑building |
| 146. Strengthen chemical‑safety‑related information dissemination among social partners and through public media at the national and international levels. | IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP)  Basel Convention Secretariat  National Governments  Industry  Trade unions  NGOs | 2006–2010 | Chemical‑safety‑related information dissemination systems are put in place in all countries. | GHS |
| 147. Stress the importance of workers’ right to know in all sectors (formal and informal), i.e., that the information provided to workers should be sufficient for them to protect their safety and health as well as the environment. | IOMC (ILO, FAO, WHO, UNIDO, OECD, UNDP)  National Governments  Industry  Trade unions  NGOs | 2006–2010 | Workers’ right to know in all sectors is established in all countries. | GHS  ILO Global Strategy on Occupational Safety and Health |
| 148. Eliminate workplace hazards posed by chemicals through simple, practical methods, in particular chemical control banding. | IOMC (ILO, FAO, WHO, UNIDO, OECD, UNDP)  National Governments  Industry  Trade unions | 2006–2020 | Workplace hazards due to chemicals are eliminated. | ILO conventions and strategies |
| 149. Establish the right of employees to refuse to work in hazardous environments if they are not provided with adequate and correct information about hazardous chemicals to which they are exposed in their work environment and about appropriate ways in which to protect themselves. | IOMC (ILO)  National Governments  Industry  Trade unions  NGOs | 2006–2010 | The right of employees to refuse to work in hazardous environments is established in all countries. | Model legislation  Information in appropriate languages |
| Children and chemical safety | 150. Promote education and training on children’s chemical safety. | IOMC (ILO, WHO, OECD,)  UNICEF,  Regional organizations  National Governments  Stakeholders  Trade unions  NGOs  Academia | 2006–2010 | Government officials and key stakeholders are trained on children’s chemical safety. | Availability of training programmes on children’s chemical safety  Sharing of experience |
| 151. Promote the use of comparable indicators of children’s environmental health as part of a national assessment and prioritization process for managing unacceptable risks to children’s health. | National Governments  Industry  IOMC (ILO, WHO, OECD, UNDP)  NGOs | 2006–2010 | A harmonized approach to data collection, research, legislation and regulations and the use of indicators of children’s environmental health is established. | Model legislation |
| 152. Consider potential enhanced exposures and vulnerabilities of children when setting nationally acceptable levels or criteria related to chemicals. | National Governments  IOMC (ILO, WHO, OECD, UNDP)  Trade unions  NGOs | 2011–2015 | Potential enhanced exposures and vulnerabilities of children are considered when setting nationally acceptable levels or criteria related to chemicals. | Model legislation |
| 153. Develop broad strategies specifically directed to the health of children and young families. | National Governments  IOMC (WHO)  Trade unions | 2011–2015 | National strategies specifically directed to the health of children and young families are put in place in all countries. | Technical capacity available |
| Education and training (public awareness) | 154. Incorporate chemical safety and especially understanding of the labelling system of GHS into school and university curricula. | IOMC (UNEP, ILO, WHO, UNIDO, UNITAR, UNDP)  Basel Convention Secretariat  National Governments  Training institutions  Media institutes  Trade unions  NGOs | 2011–2015 | Chemical safety is included in school and university curricula in all countries. | Availability of training material |
| 155. Provide appropriate training and sensitization on chemical safety for those exposed to chemicals at each stage from manufacture to disposal (crop growers, industries, enforcement agents, etc.). | National Governments  Trade unions  NGOs  **IOMC (UNEP)**  Basel Convention Secretariat  National agricultural extension services | 2011–2015 | All relevant officials are trained in chemical safety. | Training institutions  Training of trainers |
| Lead in gasoline | 156. Undertake research into alternative additives. | Industry  Research centres | 2006–2010 | Lead in gasoline is phased out in all countries. | Research centres  Possibilities for information on alternatives provided by the Rotterdam Convention website |
| Mercury and other chemicals of global concern; chemicals produced or used in high volumes; chemicals subject to wide dispersive uses; and other chemicals of concern at the national level | 157. Undertake research into alternatives for other lead‑based products. | **Industry**  **Academia** | 2006–2010 | Alternatives to lead are used in products.  Improved technologies for small‑scale recycling industries are in place and used. | Technical and scientific capacity |
| Sound agricultural practices | 158. Undertake research on and implement better agricultural practices, including methods that do not require the application of polluting or harmful chemicals. | **Agriculture industry**  **National Governments**  IOMC (UNEP, ILO, FAO, WHO, UNDP, World Bank)  Trade unions/labour  NGOs  Research centres  International agricultural research centres (CGIAR centres and others) and national agricultural research systems | 2011–2015 | Better agricultural practices, including methods that do not require the application of chemicals, are identified and implemented in all countries. | Model legislation  Agricultural extension services  Training institutions and material |
| 159. Establish ecologically sound and integrated strategies for the management of pests and, where appropriate, vectors for communicable diseases. | **Agriculture**  **Industry**  **National Governments**  IOMC (UNEP, ILO, FAO, WHO, UNDP, World Bank)  Trade unions/labour  NGOs | 2011–2015 | Integrated strategies for the management of pests are established and implemented in all countries. | Model legislation  Agricultural extension services  Training institutions and material |
|  | 160. Promote information exchange on alternative and ecological agricultural practices, including on non‑chemical alternatives. | IOMC (UNEP, ILO, FAO, WHO, OECD, UNDP, World Bank)  National Governments  Research and accredited training institutions  Industry  Trade unions  NGOs | 2006–2010 | Information exchange mechanisms on alternative and ecological agricultural practices are developed in all countries. | Training |
| Waste management (and minimization) | 161. Implement information, education and communication packages on the sound management of chemicals, targeting key stakeholders including waste handlers and recyclers. | National Governments  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  Montreal Protocol  Basel Convention Secretariat  Trade unions  NGOs | 2006–2010 | Effective and sustained information, education and communication activities on sound management of chemical waste are carried out. | Training |
| 162. Support research on best practices in waste management resulting in increased waste diversion and recovery and reduced chemical hazards for health and the environment. | National Governments  NGOs  IOMC (UNEP, ILO, FAO, WHO, UNIDO, OECD, UNDP, World Bank)  Basel Convention Secretariat | 2006–2010 | Best practices in waste management to increase waste diversion and recovery and to reduce chemical hazards are identified, documented and disseminated. | Research  Dissemination |
| Stakeholder participation | 163. Undertake awareness-raising and preventive measures campaigns in order to promote safe use of chemicals. | IOMC (UNEP)  NGOs  Media institutes  Industry  Trade unions  NGOs | 2006–2020 | All stakeholders are informed of chemical safety issues. | Information in appropriate languages |
|  | 164. Work to ensure broad and meaningful participation of stakeholders, including women, at all levels in devising responses to chemicals management challenges and in regulatory and decision‑making processes that relate to chemical safety. | National Governments  Industry  Trade unions  NGOs  IOMC | 2006–2010 | All stakeholders including women at all levels are involved in devising responses to chemicals management challenges and in regulatory and decision-making processes that relate to chemical safety in all countries. | Model legislation |

| Work areas addressing governance (objective 3) | | | | | |
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| Work areas | Activities | Actors2 | Targets/Timeframe | Indicators of progress | Implementation aspects |
| Assessment of national chemicals management to identify gaps and prioritize actions | 165. Have in place multi-sectoral and multi-stakeholder mechanisms to develop national profiles and priority actions. | National Governments  Industry  Trade unions  NGOs  IOMC (UNITAR, UNDP) | 2006–2010 | All countries have mechanisms in place. | Interagency and multi-stakeholder committees |
| Implementation of integrated national programmes for the sound management of chemicals at the national level in a flexible manner | 166. With regard to the implementation of national programmes:  Develop comprehensive national profiles;  Formalize inter-ministerial and multi-stakeholder coordinating mechanisms on chemicals management issues, including coordination of national Government and multi-stakeholder positions in international meetings;  Develop national chemical safety policies outlining stra-tegic goals and milestones towards reaching the Johan-nesburg Summit 2020 goal;  Develop national chemicals safety information exchange systems;  Develop national strategies to mobilize national and external resources and to raise the importance placed on chemicals management within national sustainable development frameworks;  Develop policies of systematic stakeholder involvement, bringing synergies from related initiatives on chemicals management. | National Governments  All Stakeholders  IOMC (UNEP, UNITAR, UNDP)  Basel Convention Secretariat | 2006–2010 | All countries have developed integrated national programmes for the sound management of chemicals. | National poverty eradication and development plans  Regional cooperation, experience and best practices  Participation of relevant ministries and stakeholders in coordination mechanisms  Technical capacity |
| 167. Support efforts to implement an integrated approach to the safe use of chemicals at the workplace by establishing effective mechanisms for following up and updating information on international instruments related to hazardous substances. | IOMC (ILO)  National Governments  Industry and workers | 2010 | Effective follow-up mechanisms are put in place. | ILO guidance |
| GHS | 168. Review national legislation and align it with GHS requirements. | **National Governments**  IOMC (ILO, FAO, UNITAR) | 2006–2010 | GHS is implemented in all countries. | Model legislation |
| International agreements | 169. Promote ratification and implementation of all relevant international instruments on chemicals and hazardous waste, encouraging and improving partnerships and coordination (e.g., Stockholm Convention, Rotterdam Convention, Basel Convention, ILO conventions and IMO conventions related to chemicals such as the TBT Convention) and ensuring that necessary procedures are put into place. | **National Governments**  International convention secretariats | 2006–2010 | All conventions are ratified or comparable measures are put in place and implemented in all countries. | Model legislation  Funds for ratification and implementation and resources for designated national authorities and focal points |
| 170. Establish or strengthen coordination, cooperation and partnerships, including coordination among institutions and processes responsible for the implementation of multilateral environmental agreements at the international, national and local levels, in order to address gaps in policies and institutions, exploit potential synergies and improve coherence. | **Secretariats of multilateral environmental agreements**  **National Governments**  **IOMC**  Montreal Protocol | 2006–2010 | Institutional coordination is strengthened and reporting requirements are streamlined for all conventions.  Plans for exploiting potential synergies at all levels among international organizations involved in chemicals management are established. | Clustering of secretariats  Inter-ministerial plans for cooperation  Awareness-raising among Government representatives on governing bodies of intergovernmental organizations of the need for inter-agency coherence |
|  | 171. Consider approaches to facilitate and strengthen synergies and coordination between chemicals and waste conventions, including by developing common structures. | **Secretariats of multilateral environmental agreements**  **National Governments** | 2006–2010 |  |  |
| 172. Consider evaluating the possibilities and potential benefits of using the Basel and/or Stockholm Convention ways and means for waste management and disposal of wastes of reclaimed ozone‑depleting substances regulated under the Montreal Protocol. | **Secretariats of multilateral environmental agreements**  **National Governments** | 2006–2010 |  |  |
| 173. Develop pilot projects to pursue implementation of coordination between the national focal points of chemicals‑related multilateral environmental agreements (Rotterdam, Stockholm and Basel Conventions and Montreal Protocol) to achieve synergies in their implementation. | **National focal points**  **IOMC** | 2006–2010 | Pilot projects are carried out.  Results are published. | Terms of reference |
| 174. Address gaps at the domestic level in implementation of existing laws and policy instruments promulgated in the context of national environmental management regimes, including with respect to meeting obligations under international legally binding instruments. | **National Governments**  Secretariats of multilateral environmental agreements | 2006–2010 | Gaps are identified in all countries.  Strategies to fill gaps are put in place. | Guidance on criteria for the identification of gaps |
| 175. Ensure coherence with the proposed Bali Strategic Plan for Technology Support and Capacity‑building. | **National Governments IOMC (UNEP)** | 2006–2010 | Coherence with the Bali Strategic plan is achieved. |  |
| 176. Promote, when necessary, the further development of international agreements relating to chemicals. | **National Governments**  IOMC **(UNEP)** | 2006–2010 | Agreement is reached on development of further international agreements relating to chemicals. | Assessment of need for further international agreements |
| PRTRs – creation of national and international registers | 177. Establish the required framework for creating national PRTRs. | **National Governments**  Stockholm Convention Secretariat  IOMC (UNEP, UNIDO, UNITAR, OECD, UNDP)  UNECE  Industry | 2011–2015 | A framework for creating national PRTRs is established and PRTRs are implemented in all countries. | Model legislation |
| 178. Promote a political consensus in favour of public access to national environmental information. | IOMC (UNEP, UNIDO, UNITAR, OECD, UNDP) | 2006–2010 | Public access to national environmental information is improved. | Awareness-raising |
| 179. Manage information dissemination from PRTRs so that risks are communicated in a timely and accurate fashion without unduly alarming the public. | IOMC (UNEP, UNIDO, UNITAR, OECD, UNDP)  **National Governments**  **NGOs** | 2006–2010 | Mechanisms for the dissemination of timely and accurate information from PRTRs are developed. | Infrastructure |
| 180. Promote harmonization of environmental performance requirements in the context of international trade. | IOMC (UNEP, UNIDO, UNITAR, OECD) | 2006–2010 | Harmonized environmental performance requirements are developed. |  |
| Social and economic considerations | 181. Establish the capacity to collect and analyse social and economic data. | **National Governments**  IOMC  Trade unions/labour  NGOs | 2011–2015 | Social and economic data are collected in all countries. | Methodology |
| 182. Consider and apply approaches to the internalization of the costs to human health, society and the environment of the production and use of chemicals, consistent with Principle 16 of the Rio Declaration. | **National Governments**  IOMC | 2011–2015 | Studies of internalization of costs are carried out in all countries. | Training of scientists  UNEP |
|  | 183. Develop methodologies and approaches for integrating chemicals management into social and development strategies. | **IOMC** | 2011–2015 | Methodologies are developed. | Sufficient number of scientists  Training of scientists  Awareness-raising for stakeholders |
| 184. Include capacity-building for the sound management of chemicals as one of the priorities in national poverty reduction strategies and country assistance strategies. | **National Governments**  **IOMC** | 2011–2015 | Capacity-building for the sound management of chemicals is incorporated as one of the priorities in national poverty reduction strategies and country assistance strategies in all countries. | Guidance on capacity-building |
| 185. Enhance efforts to implement values of corporate social and environmental responsibility. | **Industry**  National Governments  Trade unions | 2006–2010 | Values of corporate social and environmental responsibility are implemented. | Information on social and environmental responsibility |
| 186. Develop frameworks for promoting private-public partnerships in the sound management of chemicals and wastes. | **National Governments**  Industry  Basel Convention Secretariat  NGOs  Trade unions | 2011–2015 | Frameworks are developed and implemented in all countries. | Guidance  Model legislation |
| 187. Develop a framework to promote the active involvement of all stakeholders, including non‑governmental organizations, managers, workers and trade unions in all enterprises – private, public and civil service (formal and informal sector) – in the sound management of chemicals and wastes. | **National Governments**  Industry  Trade unions  NGOs | 2006–2010 | A framework is developed and implemented. | IGO and Government support |
|  | 188. Build the capacities of NGOs, civil society and communities in developing countries so that their responsible and active participation is facilitated.  This may include provision of financial support and training in chemical safety agreements and concepts. | **National Governments**  **IOMC** | 2006–2010 | Capacities of NGOs in developing countries are strengthened. |  |
| Promote industry participation and responsibility | 189. Encourage use of voluntary initiatives (e.g., Responsible Care and FAO Code of Conduct).. | **Industry**  IOMC (FAO, UNITAR) | 2006–2010 | Responsible Care and the FAO Code of Conduct are implemented in all relevant countries. | Government support |
| 190. Promote corporate social responsibility for the safe production and use of all products, including through the development of approaches that reduce human and environmental risks for all and do not simply transfer risks to those least able to address them. | **Industry**  **IOMC (UNIDO)** | 2006–2010 | GHS is implemented in all countries and Responsible Care is adopted in all countries that manufacture chemicals.  Systems are in place that encourage and promote corporate social and environmental responsibility in all countries. | Responsible Care  United Nations Global Compact  GHS  National cleaner production centres  Industry participation in all aspects of chemicals management across the life cycle of chemicals |
| 191. Promote innovations and continuous improvement of chemicals management across the product chain. | **Industry**  National Governments | 2006–2010 | Systems are in place that encourage and promote innovation in all countries. | National cleaner production centres  Government support for innovation |
| 192. Promote within the industrial sector the adoption of PRTRs and cleaner production methods. | **National Governments** | 2006–2010 | Use of PRTRs and cleaner production methods is increased. | Awareness-raising |
| Legal, policy and institutional aspects | 193. Promote a culture of compliance and accountability and effective enforcement and monitoring programmes, including through the development and application of economic instruments. | **National Governments**  GEF, IOMC (UNEP, ILO, FAO, UNIDO, UNITAR, OECD, UNDP), Convention secretariats  Regional organizations  Accredited training institutions | 2006–2010 | Effective enforcement and monitoring programmes are in place in all countries. | Establishment of programmes  Model legislation |
|  | 194. Strengthen policy, law and regulatory frameworks and compliance promotion and enforcement. | **National Governments** | 2006–2010 | Policy, law and regulatory frameworks and compliance promotion and enforcement are strengthened in all countries. | Model legislation  Infrastructure |
| 195. Establish national multi‑stakeholder coordination bodies on chemicals to provide information and increase awareness of their risks. | **National Governments**  Industry  Trade unions  NGOs | 2006–2010 | Multi-stakeholder coordination bodies on chemicals are established in all countries. | Guidance  Terms of reference |
| 196. Explore innovative consultation processes, such as mediated discussions, with a view to finding common ground and agreement among affected sectors of society on critical issues that impede efforts to achieve the sound management of chemicals. | **National Governments**  Industry  NGOs | 2006–2010 | Consultation processes are in place in all countries. | Guidance  Terms of reference |
| 197. Incorporate capacity-building strategies and promote activities to enhance each country’s legal and institutional framework for implementing chemical safety across all relevant ministries and Government agencies. | **National Governments**  **IOMC** | 2006–2010 | Capacity-building strategies and promotion of activities to enhance each country’s legal and institutional frameworks for implementing chemical safety across all relevant ministries and Government agencies are established in all countries. | Capacity‑building strategies  Model legislation |
| 198. Encourage countries to harmonize their chemical safety norms. | **National Governments**  IOMC (UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD, UNDP) | 2010–2015 | Chemical safety norms are harmonized in all countries. | Safety norms  Model legislation |
| Liability and compensation | 199. Establish effective implementation and monitoring arrangements. | **National Governments** | 2006–2010 | Effective implementation and monitoring mechanisms are established. | Model legislation |
| Stocktaking on progress | 200. Complete periodic questionnaires to measure implementation of the Bahia Declaration. | **IFCS**  Regional organizations  IGOs | 2006–2020 | Implementation of the Bahia Declaration is reported in all countries. | Development of a questionnaire  Infrastructure for analysis |
| 201. Develop objective indicators for evaluating the influence of chemicals on human health and the environment. | IOMC (**UNEP, FAO,** WHO, OECD)  National Governments | 2011–2015 | Indicators for demonstrating reductions of the risks posed by chemicals to human health and the environment are established. | Funds |
| Protected areas | 202. Ensure that pesticides and chemicals issues are considered within environmental impact assessments covering protected areas. | National Governments  GEF  Regional organizations | 2006–2010 | Legislative mechanisms related to protected areas, including the use of chemicals in those areas, are established in all countries. | Model legislation including “no objection certificate” requirements for environmental impact assessment and seismic survey |
| 203. Evaluate the dispersion of pollutant releases (air, water and ground) in protected areas. | **National Governments** | 2006–2010 | Dispersion of pollutants to protected areas is evaluated in all countries. | Technical and research capacity |
| Prevention of illegal traffic in toxic and dangerous goods | 204. Develop national strategies for prevention, detection and control of illegal traffic, including the strengthening of laws, judicial mechanisms and the capacity of customs administrations and other national authorities to control and prevent illegal shipments of toxic and hazardous chemicals. | IOMC (IFCS)  **WCO**  **Interpol**  OPCW  Basel, Rotterdam and other convention secretariats  Montreal Protocol  National Governments  National customs authorities | 2006–2010 | National strategies for the prevention, detection and control of illegal traffic are developed and implemented in all countries.  The Rotterdam Convention is ratified and implemented by all countries. | Rotterdam Convention  WCO harmonized tariff codes  Training  In particular, in line with paragraph 1 of article 13 of the Rotterdam Convention, countries should give appropriate support to initiatives taken by WCO members aiming at the assignment of specific harmonized system codes to certain chemicals falling under the Rotterdam Convention and persistent organic pollutants and enabling their comparison to environmental compliance data. |
| Trade and environment | 205. Ensure mutual supportiveness between trade and environment policies. | IOMC (**UNEP**, UNITAR) |  | Trade and environment policies are mutually supportive. | Mechanisms for cooperation between trade and environment officials and policy-makers at national and international levels  Involvement of trade and environment stakeholders when developing chemicals policies  Cooperation and information exchange between chemicals and waste multilateral environmental agreements and WTO |
| Civil society and public interest NGO participation | 206. Include civil society representatives in Government committees formulating, carrying out and monitoring SAICM implementation plans. | Public interest NGOs/civil society  Trade unions  IPEN  IOMC  National Governments | 2006–2020 | Civil society is represented on national committees. | Participation in decision-making |
| Assessment of national chemicals management to identify gaps and prioritize actions | 207. Provide assistance and training for the development of national profiles. | National Governments  GEF  IOMC (UNITAR, UNDP) | 2006–2010 | Assistance and training for development of national profiles is provided. | Training |

| Work areas addressing capacity-building and technical cooperation (objective 4) | | | | | |
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| **Work areas** | **Activities** | **Actors2** | **Targets/Timeframe** | **Indicators of progress** | **Implementation aspects** |
| Capacity‑building to support national actions | 208. Establish a systematic approach in order to facilitate the provision of advice concern-ing capacity-building for the sound management of chemicals at the country level to countries that request it. For example:  Consider establishing a help desk which would provide basic advice to countries and/or refer requests to relevant sources (policy institutions, experts, data banks, information, etc) of expertise, policy guidance, funding and guidelines;  Ensure that the process above builds on existing information and tools for capacity building and acts in a complementary way to existing initiatives;  Consider establishing monitoring mechanisms as part of the SAICM stocktaking processes to evaluate the usefulness of the process;  Implement a pilot project to test and refine the concept prior to global implementation. | IOMC  Chemical convention secretariats  Trade unions | Establishment: 2006−2010  Ongoing operation: 2011–2020 | Number of countries requesting assistance  Number of requests received and responded to  Types of request received | Development and implementation of process as proposed in document SAICM/PrepCom3/Inf/9 |
| 209. Strengthen capacities pertaining to infrastructure in developing countries and coun-tries with economies in transi-tion through financial assistance and technology transfer to such countries with a view to addres-sing the widening gap between developed and developing countries and countries with economies in transition. | **IOMC**  GEF  Basel Convention Secretariat  International financial institutions | 2006–2010 | Financial, technical and human capacities are developed in all countries. | Training  Implementation of technology transfer and updating of programmes |
|  | 210. Promote the development of databases based on scientific assessment and the establishment of centres for the collection and exchange of information at the national, regional and international levels. | **IOMC** | 2006–2010 | Databases, chemical registers and data collection and information exchange centres are established in all countries. | Availability of methodologies  Training |
| 211. Promote programmes to develop chemicals-management instruments (national profiles, national implementation plans, national emergency preparedness and response plans). | **National Governments**  Research and accredited train-ing institutions  IOMC  BCRCs  Trade unions  NGOs | 2006–2010 | National profiles and implementation plans are developed and national emergency preparedness and response plans are in place. | Model legislation  Training  Coordination mechanism  Sharing of experiences on national profiles |
| 212. Coordinate assistance programmes at the bilateral and multilateral levels that support capacity‑building activities and strategies by developed countries. | National Governments  IGOs  NGOs  Trade unions  IOMC | 2006–2010 | Assistance programmes are coordinated. | Exchange of information on past and ongoing assistance provision activities  Development of assistance programmes |
| 213. Develop sustainable capacity‑building strategies in developing countries and countries with economies in transition, recognizing the cross‑cutting nature of capacity‑building for chemical safety. | **IOMC**  BCRCs  GEF | 2006–2010 | Cleaner production technologies are developed and adopted in all countries. | Training |
| 214. Promote contributions to and use of, e.g., INFOCAP for exchanging information and increasing coordination and cooperation on capacity‑building activities for chemical safety. | **IOMC**  Basel Convention Secretariat  National Governments  Industry  Trade unions  NGOs  INFOCAP | 2006–2010 | Coordination mechanisms for information exchange are in place and use of existing mechanisms, e.g., INFOCAP, increases. | Coordination mechanisms and options  Training |
|  | 215. Strengthen capacities in developing countries and countries with economies in transition pertaining to implementation of international conventions concerning chemicals. | **Secretariats for Rotterdam and Stockholm Conventions**  IOMC  Basel Convention Secretariat  National Governments | 2006–2010 | Revision of national legislation is in line with provisions of international conventions.  Responsible persons, e.g., focal points and designated national authorities, are appointed in each country.  Institutional frameworks required for the implementation of international conventions are established in all countries. | Model legislation  Training |
| 216. Involve all stakeholders in the elaboration and implementation of comprehensive plans for enhanced capacity-building. | **National Governments**  IOMC  Industry  Trade unions  NGOs | 2006–2010 | Lists of relevant stakeholders are established.  Relevant stakeholders are involved in all capacity-building programmes in all countries. | National policy  Training |
| 217. Develop competencies and capacities for the national planning of projects relevant to the management of chemicals. | **IOMC**  GEF | 2006–2010 | Sound chemicals management is incorporated into national programmes. | Training |
| 218. Establish programmes for scientific and technical training of personnel, including customs personnel. | **IOMC**  BCRCs  National Governments | 2006–2010 | A pool of skilled scientists and technical personnel is established in each country. | International and national training programmes and institutions |
| 219. Establish national or regional laboratory facilities, complete with modern instruments and equipment, including those necessary for testing emissions and operating according to national standards. | **IOMC** (UNEP, FAO, **UNIDO**, UNITAR, UNDP)  National Governments  Research institutions  Industry | 2006–2010 | National laboratory facilities, complete with modern instruments and equipment, are established in all countries. | Model legislation  Training |
| 220. Establish regional reference laboratories operated in accordance with international standards. | **IOMC** (UNEP, FAO, **UNIDO**, UNITAR)  National Governments  Research institutions  Industry | 2006–2010 | National reference laboratories are established in each country. | International standards  Training |
| 221. Establish or strengthen national infrastructure, including for information management, poison control centres and emergency response capabilities for chemical incidents. | **IOMC** (**UNEP**, ILO, FAO, WHO, UNIDO, UNITAR, UNDP)  National Governments | 2006–2010 | Infrastructure for the sound management of chemicals is established in all countries. | Methodologies and guidelines  Model legislation  Training  Guidelines |
| 222. Develop resources for national implementation plans and projects. | **IOMC** (**UNEP**, ILO, FAO, UNDP)  National Governments  Trade unions  Industry | 2006–2010 | Resources for national implementation plans and projects are available. | Funding mechanisms and options  Training |
|  | 223. Address capacity needs for regulatory and voluntary approaches to chemicals management. | **National Governments**  **Industry**  IOMC (UNEP, ILO, FAO, WHO, UNDP) | 2006–2010 | Capacity needs assessments for regulatory and voluntary approaches are accomplished in all countries. | Identification of regulatory and voluntary approaches  Availability of assessment methodologies  Training |
| 224. Improve coordination at the national level and strengthen policy integration across sectors, including the development of partnerships with the private sector. | **National Governments**  Industry  Trade unions  NGOs | 2006–2010 | Multi-stakeholder coordination mechanisms and institutional frameworks are established in all countries. | National policies  Training |
| 225. Integrate the sound management of chemicals capacity within ministries involved in supporting chemicals production, use and management. | **National Governments**  Industry  Trade unions  NGOs  IOMC (FAO, UNDP) | 2006–2010 | Sound management of chemicals is incorporated in ministerial plans and programmes in each country. | Model legislation  National policy  Cross-sectoral coordinating mechanisms |
| 226. Strengthen technical capacity and availability of technology (including technology transfer). | **IOMC (UNEP, FAO, UNIDO,** UNDP)  BCRCs  National Governments | 2006–2010 | Technical capacity is developed in all countries.  Steps to improve available technology are taken in all countries.  Only appropriate technology is transferred to developing countries and countries with economies in transition. | Needs assessment on technical capacity  Evaluation of existing technologies  Availability of safe technologies  Training |
| 227. Strengthen mechanisms for reporting and consolidating information necessary to produce baseline overviews that will help determine domestic management priorities and gaps (e.g., PRTRs and inventories), taking into account industry reporting initiatives. | **National Governments**  Research institutions  IOMC (UNEP, ILO, FAO, WHO)  BCRCs  Industry  Trade unions  NGOs | 2006–2010 | Multi-stakeholder mechanisms for reporting and consolidating information necessary to produce baseline overviews are established in all countries. | Methodologies and protocols  Training |
|  | 228. Develop infrastructure to redress the lack of accreditation bodies and accredited and reference laboratories with capacity to sample environmental and human matrices and foodstuffs. | **National Governments**  **IOMC (UNEP, FAO, UNIDO)**  Industry | 2006–2010 | Accredited and reference laboratories are established at the regional and national levels. | Standards  Training |
| 229. Establish the necessary training and infrastructure for undertaking the necessary testing of chemicals for their management across their life cycle. | **National Governments**  IOMC (UNEP, ILO, FAO, WHO, UNITAR)  Trade unions | 2006 –2010 | Training institutions and chemical testing laboratories are established in all countries. | Standards  Training |
| 230. Develop training programmes in risk assessment and management‑related health techniques and communication. | **National Governments**  IOMC (UNEP, ILO, FAO, WHO, UNITAR)  Trade unions | 2006–2010 | Training programmes in risk assessment and management are established in all countries. | Risk assessment and management methodologies  Training |
| 231. Address training needed to develop capacity in legislative approaches, policy formulation, analysis and management. | **National Governments**  IOMC (UNEP, ILO, FAO, WHO, UNITAR, UNDP)  Trade unions | 2006–2010 | Training needs assessments in legislative approaches, policy formulation, analysis and management are undertaken in all countries. | Model legislation  Training |
| 232. Provide training in the application of relevant liability and compensation mechanisms. | **National Governments**  IOMC (UNEP, ILO)  Trade unions  NGOs | 2006–2010 | Training in the application of liability and compensation mechanisms is provided in all countries. | Model legislation  Liability and compensation methodologies and models  Training  APPEL programme |
| 233. Provide training in emergency response. | **National Governments**  IOMC (UNEP, FAO, WHO)  Industry  Trade unions | 2006–2010 | Training in emergency response is provided in all countries. | Model legislation  Availability of emergency methodologies  Training |
| 234. Provide the necessary technical training and financial resources for national Governments to detect and prevent illegal traffic in toxic and dangerous goods and hazardous wastes. | **IOMC (UNEP, FAO, UNITAR)**  **Basel Convention Secretariat**  National Governments  Industry | 2006–2015 | Training and financial resources for national Governments to detect and prevent illegal traffic in toxic and dangerous goods and hazardous wastes are provided to all countries that require it.  The capacity of countries to detect and prevent illegal traffic in toxic and dangerous goods and hazardous waste is improved. | Training  Detection and prevention methodologies |
| 235. Outline specific capacity-building measures for each region. | **IOMC (UNEP, ILO, FAO, WHO)**  BCRCs  National Governments  Industry  Trade unions  NGOs | 2006–2010 | Specific capacity-building measures are identified in all regions. | Methodologies  Training |
|  | 236. Develop tools to assist industry to provide simplified chemicals information to Government and individual users. | **Industry**  **National Governments** | 2006–2010 | Tools for the provision of simplified information are developed. | Infrastructure |
| Formulation of preventive and response measures to mitigate environmental and health impacts of emergencies involving chemicals | 237. Establish and strengthen poison control centres to provide toxicological information and advice; develop relevant clinical and analytical toxicological facilities according to the needs identified and resources available in each country. | **National Governments**  **IOMC (WHO)** | 2006–2010 | Poison control centres are established and strengthened and clinical and analytical toxicological facilities are established in all countries, according to needs and available resources. | WHO poison centre initiative |
| Cleaner production | 238. Provide training in cleaner production techniques. | IOMC (UNEP, UNIDO)  **National Governments**  Research institutions  National cleaner production centres | 2006–2010 | Training in cleaner production techniques is provided in all countries | Availability of methodologies  Training |
| 239. Consider means to control the transboundary movement of dirty technologies. | IOMC (UNEP, UNIDO)  **National Governments**  Industry | 2006–2010 | Mechanisms for preventing transboundary movement of dirty technologies are developed in all countries. | Model legislation  Training |
|  | 240. Clearly define needs with respect to training of trainers. | **National Governments**  **Industry**  **IOMC (UNEP)** | 2006–2010 | Instructors’ training needs are clearly defined. | Availability of technical capacity |
| 241. Design clear and simple manuals and guides on practical measures to assess production methods and implement improvements. | IOMC (UNEP, UNIDO) | 2006–2010 | Clear and simple manuals and guides are designed. | Availability of technical capacity |
| 242. Promote the transfer of technology and knowledge for cleaner production and manufacture of alternatives. | National Governments  IOMC (UNEP, FAO, WHO, UNIDO, UNDP, World Bank)  GEF  NGOs  Trade unions  Industry |  |  |  |
| Remediation of contaminated sites | 243. Establish infrastructure for analyzing and remediating contaminated sites.  Provide training in rehabilitation approaches.  Develop capacity to rehabilitate contaminated sites.  Develop remediation techniques.  Increase international cooperation in the provision of technical and financial assistance to remedy environmental and human health effects of chemicals caused by chemical accidents, mismanagement, military practices and wars. | IOMC (UNEP, FAO, WHO, UNIDO, UNDP)  GEF  Regional bodies (Basel Convention regional training centres)  National Governments  Accredited training institutions  Industry  Trade unions | 2011–2015 | Infrastructure for analysing and remediating contaminated sites is established in all countries.  Training programmes in rehabilitation of contaminated sites are developed and implemented in all countries.  International technical and financial assistance is provided to developing countries and countries with economies in transition. | Model legislation  Inventory and assessment of contaminated sites  Remediation techniques and approaches  Training |
| Lead in gasoline | 244. Develop capacity to identify alternatives to lead in gasoline, establish the necessary infrastructure for analysing gasoline and upgrade the infrastructure needed to introduce unleaded gasoline. | IOMC (UNEP, UNIDO)  Regional bodies  National Governments  Industry | 2006–2010 | Infrastructure for analysing gasoline is established in all countries. | Model legislation  Methodologies available  Training |
| Children and chemical safety | 245. Develop mechanisms to facilitate collaborative national and international research and shared technology. | IOMC (ILO, WHO)  UNICEF  Regional organizations  National Governments  Research organizations | 2006–2010 | Mechanisms to facilitate collaborative national and international research and shared technologies are developed. | Availability of methodologies  Training |
| 246. Establish needed infrastructure for research into the impact of exposure to chemicals on children and women. | IOMC (ILO, WHO)  UNICEF  National Governments  Stakeholders  Trade unions  Regional organizations | 2006–2010 | Research on the impact of exposure to chemicals on children and women is undertaken. | Research centres |
| Risk assessment, management and communication | 247. Establish accredited testing facilities for chemicals. | **Industry**  ILAC  National Governments | 2016–2020 | Accredited testing facilities for chemicals are established in all regions. | Accreditation systems  Financial resources  Training  UNEP APELL  UNEP PRTR programmes |
| Implementation of GHS | 248. Establish accredited testing facilities to undertake testing of hazard characteristics of chemicals for classification and verification of label information. | **National Governments** | 2011–2015 | Accredited testing facilities for GHS purposes are established at least in all economic regions. | ILAC extension of accreditation systems to all regions |
|  | 249. Promote training in hazard classification. | **National Governments**  IOMC (WHO, FAO, OECD, UNITAR)  Industry  Trade unions  NGOs | 2006–2010 | Multi-stakeholder training programmes on hazard classification are developed and implemented in all countries. | Availability of criteria for hazard classification  Training |
| 250. Make available sufficient financial and technical resources to support national and regional GHS capacity-building projects in developing countries and countries with economies in transition. | IOMC (FAO, UNITAR, OECD)  GEF | 2006–2010 | Sufficient financial and technical resources to support national and regional GHS capacity‑building projects in developing countries and countries with economies in transition are available. | Availability of national GHS capacity‑building programmes  Sharing of results of UNITAR pilot projects |
| Trade and environment | 251. Provide training on links between trade and environment, including needed negotiating skills. | IOMC (UNEP, UNITAR)  WTO  National Governments  Accredited training institutions | 2006–2010 | Training programmes in links between trade and environment, including needed negotiating skills, are developed in all countries. | Availability of methodologies  Training |
| 252. Encourage cooperation between secretariats of multilateral trade and multilateral environmental agreements in development of programmes and materials to enhance mutual understanding of the rules and disciplines in the two areas among Governments, intergovernmental institutions and other stakeholders. | IOMC (UNEP, FAO, UNITAR) | 2006–2010 | Cooperation is increased. | Discussion at meetings of conferences of parties |
| ‑Protected areas | 253. Provide training in the concept of protected areas. | **National Governments**  IOMC (UNDP)  Regional organizations  Trade unions  NGOs | 2006–2010 | Training programmes in the concept of protected areas are developed in each country. | Methodologies  Training |
| 254. Undertake capacity-building in identifying and monitoring biological indicators. | **IOMC (UNDP)**  National Governments | 2011–2015 | The number of trained personnel has increased and laboratory facilities are in place. |  |
| Occupational health and safety | 255. Promote the necessary training and capacity-building for all people involved directly and indirectly with chemical use and disposal. | **IOMC (ILO, FAO, WHO)**  National Governments  Trade unions  Industry | 2006–2010 | Training capacity is in place. | ILO Global Strategy on Occupational Safety and Health |
| Information management and dissemination | 256. Develop and enhance the capacity to acquire, generate, store, disseminate and access information, including INFOCAP. | IOMC (ILO, UNEP, UNITAR)  **National Governments**  NGOs  Trade unions/labour | 2006–2010 | All countries have the capacity to generate data and make it available to stakeholders. | Necessary infrastructure in place  Ability to interpret and apply knowledge  Training  Awareness-raising |
| Social and economic considerations | 257. Establish the capacity to undertake social and economic impact assessment. | **National Governments**  IOMC (OECD) | 2011–2015 | Research institutions are established in all countries. | Training of scientists |
| Waste management | 258. Implement capacity-building programmes on waste minimization and increased resource efficiency, including zero waste resource management, waste prevention, substitution and toxic use reduction, to reduce the volume and toxicity of discarded materials. | **National Governments**  IOMC (FAO, WHO, UNIDO, UNITAR, UNDP)  NGOs  Basel Convention Secretariat  BCRCs  Trade unions | 2006–2010 | Programmes are executed to assist national/local authorities to develop zero waste resource management. | Provision of expertise, information  Transfer of knowledge required for reduction of volume and toxicity of discarded material |
| 259. Develop national and local capacities to monitor, assess and mitigate chemical impacts of dumps, landfills and other waste facilities on human health and the environment. | **IOMC (UNEP,** WHO, UNIDO, UNDP)  National Governments  Trade unions  NGOs | 2006–2010 | Essential technical and other skills are developed for monitoring, assessing and mitigating chemical problems for dumps, landfills and other waste facilities. | Provision of assistance including training and equipment through assistance programmes |
|  | 260. Undertake training programmes for preventing the exposure of waste handlers and recyclers, particularly waste scavengers, to hazardous chemicals and waste. | **National Governments**  Trade unions  NGOs  Basel Convention Secretariat  BCRCs  IOMC (ILO) | 2006–2010 | Training programmes addressing the chemical safety needs of waste handlers and recyclers are implemented. | Technical assistance  Training |
| 261. Train customs officials to detect illegal transboundary movements of waste. | National Governments  WCO  BCRCs | 2006–2010 | Customs officials are trained to detect illegal transboundary movements of waste. | Training |
| 262. Implement demonstration projects on waste minimization and efficient resource management in different countries with bilateral or multilateral support. | IOMC (UNEP, FAO, UNIDO, UNDP)  BCRCs  National Governments  Trade unions  NGOs | 2006–2010 | Zero waste demonstration projects are identified, supported and carried out. | Infrastructure  Trained professionals |

| Work areas addressing illegal traffic (objective 5) | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Work areas** | **Activities** | **Actors2** | **Targets/Timeframe** | **Indicators of progress** | **Implementation aspects** |
| Prevention of illegal traffic in toxic and dangerous goods | 263. Promote with WCO the dissemination and use of customs risk profiles and material safety sheets as official means of identifying probable cases of illegal traffic. | National Governments  WCO | 2006–2010 | Harmonized tariff codes developed by WCO for chemicals regulated in terms of international instruments are implemented in all countries. | WCO harmonized tariff codes  Training  Cooperation with WCO |
| 264. Address the matter of resources and operational mechanisms for technical and financial assistance for developing countries and countries with economies in transition, either directly or through a relevant regional organization. | SAICM financial mechanism | 2006–2010 | A reliable and sustainable financing mechanism is in place. | Availability of funds  Development of criteria for accessing funds |
| 265. Assess the extent and impact of illegal traffic at the international, regional, subregional, and national levels. | National Governments  Regional organizations, e.g., COMESA, AU, EAC, SADC, etc. | 2006–2010 | An assessment of the extent of illegal traffic is undertaken. | Clarification of the definition of illegal international traffic |
| 266. Expand the level of coordination and cooperation among all stakeholders. | National Governments  Trade unions  NGOs  International actors | 2006–2010 | Coordination among all stakeholders is enhanced in all countries. | Awareness-raising |
| 267. Address how international conventions related to the sound management of chemicals and national laws may be more effectively applied to the transboundary movement of toxic and hazardous chemicals. | National Governments  IFCS  Rotterdam and Basel convention secretariats  Trade unions  NGOs | 2006–2010 | Mechanisms to control transboundary movement of toxic and hazardous chemicals are in place. |  |
| 268. Promote efforts to prevent illegal international trafficking of toxic and hazardous chemicals and to prevent damage resulting from their transboun-dary movement and disposal. | National Governments  IFCS  WCO  IGOs | 2006–2010 | Enforcement mechanisms are in place.  Illegal trafficking of toxic and hazardous chemicals is reduced. | Provision of training and required equipment  Legislation in place |
| 269. Promote the adoption by intergovernmental organizations of decisions on the prevention of illegal international traffic in toxic and hazardous products. | IGOs | 2006–2010 | Intergovernmental organizations have adopted decisions on the prevention of illegal international traffic in toxic and hazardous products. | Chemical conventions  Availability of information on extent of illegal traffic  Capacity at the national level to implement control systems |
| 270. Train customs, agricultural and health officials to detect illegal toxic hazardous chemicals. | National Governments | 2006–2010 | Customs, agricultural and health officials are trained to detect illegal toxic and hazardous chemicals. |  |
| 271. Create a global information network, including early warning systems, across international borders, especially at the regional level. | Interpol  National Governments  WCO  WTO  Trade unions  NGOs | 2011–2015 | An information network, including early warning systems, is established for all regions. | Type of early warning system identified |
| Waste management | 272. Strengthen national strategies for prevention, detection and control of illegal transboundary movements of waste. | **National Governments**  BCRCs  Basel Convention Secretariat  Industry  Trade unions  NGOs | 2006–2010 | Strengthened strategies are in place. | Provision of training and required equipment |
| 273. Promote efforts to prevent illegal traffic of waste. | **National Governments**  Basel Convention Secretariat  Industry  Trade unions  NGOs | 2006–2010 | Illegal transboundary movements of waste are reduced. | Legislation  Availability of trained professionals |

1. *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August−4 September 2002* (United Nations publication, Sales No. E.03.II.A.I. and corrigendum) chap. I, resolution 2, annex. [↑](#footnote-ref-1)
2. Groups of chemicals that might be prioritized for assessment and related studies include: persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous systems; persistent organic pollutants (POPs); mercury and other chemicals of global concern; chemicals produced or used in high volumes; chemicals subject to wide dispersive uses; and other chemicals of concern at the national level. [↑](#footnote-ref-2)
3. A list of the acronyms and abbreviations used in this table is set out following the table. [↑](#footnote-ref-3)
4. Actors in bold are the principle actors. [↑](#footnote-ref-4)