

Strategic Approach to International Chemicals Management (SAICM)

Further Input on Health Aspects of Chemical Safety

An update to the World Health Organization (WHO) Forum IV Room Document, prepared for SAICM PrepCom1, Bangkok 9-13 November 2003

1. This Room Document responds to the mandate provided by 192 Member States participating in the World Health Assembly (WHA), which agreed in May 2003, through WHA Resolution 56.22, on the participation of global health partners in SAICM. In this Resolution, the Assembly urged Member States to take full account of the health aspects of chemical safety in the further development of SAICM, supported continuation of the roles of WHO and IFCS in overseeing the development of the strategic approach through membership of its Steering Committee, and requested the WHO Secretariat to contribute to SAICM and participate in preparatory meetings and the final conference. The Assembly called for a progress report on SAICM (before the estimated date of its completion) and for the completed SAICM to be submitted to the Health Assembly for consideration. In making this Resolution, the WHA was mindful of WHO's contribution to the international management of chemicals through the International Programme on Chemical Safety (IPCS), a cooperative activity of the International Labour Organization (ILO), WHO and UNEP.
2. Following the May 2003 World Health Assembly, an initial WHO *Contribution to Possible Draft Elements of a SAICM for Consideration by the First Preparatory Meeting* was made to UNEP in June 2003. This paper is at Annex 1, and contains the full text of WHA Resolution 56.22.
3. This Room Document builds on the initial WHO contribution, by providing country health views on SAICM, and further analysis of relevant policies and their goals. WHO invited country health views through means of a short structured questionnaire. At the time that the original Room Document (for Forum IV) was prepared, responses had been received from 33 countries. This update (for SAICM PrepCom1) takes account of additional country responses received and views expressed by countries at two health sector meetings convened in the margins of Forum IV, Bangkok, 1-7 November, 2003. Responses have now been received from 41 countries from the six WHO regions:
 - Regional Office for Africa (8 countries responding)
 - Regional Office for the Americas (1 country responding)
 - Regional Office for the Eastern Mediterranean (8 countries responding)
 - Regional Office for Europe (11 countries responding)
 - Regional Office for South-East Asia (1 country responding)
 - Regional Office for the Western Pacific (12 countries responding)
4. Six countries responding to the WHO questionnaire have also made a submission to UNEP. This document therefore provides additional information from 35 countries not already included in the papers developed for the Preparatory Committee for the Development of a Strategic Approach to International Chemicals Management (SAICM/PREPCOM.1/5). The additional responses are largely from countries located in Africa and the Pacific.

5. This Document is intended to be considered alongside the UNEP compilations of country views in the SAICM PrepCom1 meeting documents and the SAICM/PREPCOM.1/6 *Proposed structure of the SAICM report for consideration by the Preparatory Committee*¹.

Initial WHO contribution of possible elements for SAICM

6. The WHO *Contribution to Possible Draft Elements of a SAICM for Consideration by the First Preparatory Meeting* made in June 2003 was an initial proposal of ten elements. The initial contribution is reproduced in full in Annex 1, but in summary the elements related to:
- The need for linkages to WSSD and Millennium Development Goals.
 - A balanced, multi-sectoral approach.
 - Inclusivity, involving all countries, and directed to their needs.
 - A need for information on health impacts to inform decision making at global, regional and national levels.
 - The need for a sound scientific evidence-base for decision-making.
 - The need to provide a framework for decision-making, including priority-setting.
 - The need to take account of the commitment of existing intergovernmental organizations and regional networks.
 - Avoidance of duplication of effort and the need to address continuing gaps in chemical assessment work.
 - Provision of a timely response to emerging issues.
 - Measurement of progress in terms of health and environment outcomes.
7. The submission also requested that some of the key contributions of WHO to international chemicals management be taken into account in the development of SAICM. These include: chemical risk assessments; methodologies for chemical risk assessments; better use of human toxicology and exposure data; dissemination and promotion of use of chemical safety information; the establishment and strengthening of poisons centres; and surveillance, alert and response to chemical incidents of international public health importance.

WHO Member State views on issues in chemical safety

8. In order to build on the initial WHO contribution to UNEP and to follow-up WHA56.22, WHO sought additional country health sector views on SAICM. These were collected primarily in connection with WHO regional meetings. Health sector representatives were asked to provide views about issues in chemical safety and their country priorities, with particular reference to health aspects. Views were obtained through use of a questionnaire that followed the structure of the SAICM PrepCom1 thematic summary of possible draft elements for a SAICM (SAICM/PREPCOM1./5). The headings and numbering of the thematic summary have been retained in the summary below for ease of cross-referencing. Two basic questions were asked:
- i) What are the most urgent issues that need to be addressed in chemical safety?; and
 - ii) (To obtain an impression of overall priorities) Is there any particular aspect that is especially important?

The first question contained a number of subheadings, consistent with the UNEP thematic summary, as follows:

¹ www.chem.unep.ch/saicm

- A. Policy matters.
 - A1 Goals and objectives (e.g. health and environmental quality, cost efficiency)
 - A2 Scope (eg. types of chemicals, parts of life cycle)
 - A3 Principles (e.g. polluter pays, basis on sound science)
 - A4 Specific topics (e.g. specific chemicals, specific health effects)
- B. Coordination (e.g. between Conventions, between countries)
- C. Capacity building (e.g. resources, priorities among countries)
- D. Development of the SAICM and implementation (e.g. participation in SAICM process, follow-up process).

9. A range of views was expressed. The views are presented here in summary form. A tabular compilation of the responses is provided in Annex 2. Although some issues were raised by different countries under different headings, no attempt has been made to reorganize the responses, as in their current form they indicate the area of the proposed SAICM structure that respondents felt was relevant for their proposal.

A1 Goals and objectives

10. Many countries identified an overall goal/objective of “health and environmental quality”, or similar wording. A number of countries mentioned: the importance of children’s health and future generations; cost-benefit goals, such as impact analysis and full cost accounting relevant to developing countries. Some countries pointed to data generation and an improved information base (which one country stated would contribute to four goals relating to safety, efficiency, capacity, and identifying gaps). One country pointed to the need for an integrated national model for chemicals control for small states. One country called for the establishment of poisons centres as a primary goal. Another called for elaboration of the roles and responsibilities of various stakeholders and evaluation of existing chemical management structures, and a need to ensure consistency, harmonization and focus efforts on priority areas. One country suggested the goals and objectives should be formulated taking into consideration the capacity of each Member State. This country proposed marketing of less damaging alternatives and appropriate labelling.

A2 Scope

11. A broad scope in terms of types of chemicals was suggested, although many responses also mentioned chemicals with specific properties, such as persistent organic pollutants, carcinogenic, mutagenic and reprotoxic chemicals, endocrine-disruptors, pesticides including DDT, chemicals used in health-care facilities, solvents, heavy metals, and threats to health from interaction of mixtures of chemicals. The need to use a “cradle-to-cradle” approach, including environmental discharges, was mentioned repeatedly. Drinking-water safety and air pollution were mentioned. It was suggested that a “medicines policy model” should be used, to cover the whole chain from selection of chemicals through disposal and follow-up. Supporting the implementation of existing actions and assisting in capacity building were suggested as the most effective focus by one country. Under this heading also, health threats at all stages of human life were mentioned, as was the need to strengthen industry participation and to ensure strategies apply to small-sized companies and to assess the impacts of use and set priorities.

A3 Principles

12. The need for a sound scientific basis for decision-making and “polluter pays” was often mentioned. Right-to-know and accessibility of information were also mentioned by a number of countries, as was the precautionary principle. Other principles proposed by more than one country related to: the need for integrated approaches (for interventions as well as health/environment monitoring); and product stewardship. A number of countries proposed various principles relating to national legislation, for example, norms, and minimum requirements.

13. One country noted that application of risk-based assessment and management methodologies in developing countries and countries in transition might be inapplicable in other countries due to limitations in technical capacity and availability of resources. This country pointed to the need for globally harmonized technical guidance on risk assessment while another country specifically mentioned methods to assist classification under the Globally Harmonized System for Classification and Labelling (GHS). Quality assurance in chemicals handling and insurance approaches that could also help fund chemicals management were suggested. The subsidiarity principle was suggested, i.e. international management only where effectiveness and efficiency require it. A call was made to maintain the autonomy of existing bodies such as the Conferences of the Parties under the Conventions by one country, with another suggesting an integrated approach linking conventions. One country mentioned the need for enhanced coherence and efficiency among international activities. Liability and compensation for health and environmental damage was also mentioned by a number of countries.

A4 Specific topics

14. Inclusion in SAICM of activities aimed at addressing the health effects of chemicals was often mentioned. This included health effects arising from use of specific classes of chemicals, such as those that have carcinogenic, mutagenic and reprotoxic properties, and from chemicals that may have endocrine-disrupting properties. Children's environmental health was mentioned again under this heading. Issues such as poisoning, chronic effects and dealing with exposure to mixtures of chemicals were mentioned by a number of countries. The need for chemical incident and surveillance mechanisms were mentioned as was the need to put more emphasis on human data and the need for systems for reporting adverse health and environment effects.
15. Several countries mentioned DDT. Many other classes of chemicals were mentioned, including: persistent organic pollutants, PCBs, potentially sensitizing substances, lead, mercury, arsenic, agricultural chemicals, petroleum, leather industry chemicals, consumer chemicals, and chemicals used in health care facilities. Contamination of soil and water was mentioned as were natural sources of chemicals including potential health effects from low-dose chronic exposures.
16. Accessibility of hazard data and other information relating to chemicals use was also often mentioned. The need for information on hazards was mentioned repeatedly, for example, in the form of Safety Data Sheets and on chemicals in manufactured goods/articles. One country endorsed the existing Bahia Declaration including development of national systems to record adverse environmental and health reactions, capacity-building and support for existing international instruments and GHS.
17. Further harmonization of risk assessment methods (including the adoption by other international agencies of existing harmonized methods), methods to estimate exposures and methods to characterize dose-effect relationships were proposed. One country mentioned applying evidence-based methods for risk assessment and enhancement of research. One submission took up the need for simple field analysis equipment, for example, for lead in blood. Another brought up the special problems associated with storage of chemicals in tropical countries due to climatic factors, and still another pointed to stocks of obsolete pesticides and drugs. Cleaner technology and the need to develop substitutes were also mentioned.

B. Coordination

18. Approximately the same emphasis was given to coordination between countries, within regions, and between conventions. Improved coordination through existing international organizations and secretariats was suggested in preference to creation of a new entity. A number of countries mentioned intersectoral coordination, including the need for coordination between administrations within countries and the need for coordinated national action plans. Harmonization of legal requirements, globalized database formats, and ready availability of information were also noted. One country proposed country/regional pairings and the need for practical cooperation. Other proposals were for the establishment of a regional chemical database and regional chemical

management, and a protocol for dealing with chemical management issues that cross country borders.

C. Capacity building

19. Training needs in various forms was the most frequently mentioned capacity-building measure, followed by financial support. Priority setting and assistance to enhance awareness was also mentioned. A range of specific areas for capacity building was noted, including monitoring and controlling import, entry and use. A number of proposals relating to technical support were made. Empowerment of local professionals in developing countries rather than bringing in experts from developed countries was suggested. One country proposed that comparative information on the mechanisms for the control of chemicals would be useful. One country mentioned that the Bahia Declaration continues to provide an appropriate direction for efforts to improve the coordination and strengthening of capacity-building initiatives. The need for data to enable decision-making was again mentioned under this heading, as was emergency preparedness. Use of existing structures, institutions and stakeholders was mentioned (e.g. those involved in the WHO “Healthy Cities” programme and other such initiatives).

D. Development of SAICM and implementation

20. There was generally strong interest in participation in the SAICM process, and support for a multi-stakeholder process. The responsibility of industry was underlined. Follow-up was mentioned as was the use of a regional focus and national focal points. One country pointed to harmonization of environment and health strategies including chemicals management. Another proposed the design and evaluation of national chemical safety models in “candidate” countries.

Overall priorities

21. Capacity building was most commonly mentioned, and thereafter health effects (including those from different types of chemicals or different use scenarios). Beyond that a whole range of issues are proposed, including: lack of information/evidence base, soil and water remediation guidelines, food and drinking water safety, obsolete stocks of chemicals, coordination, chronic exposures, mixtures of chemicals, cost-efficiency, a national system for chemical safety according to a given model, and implementation of existing international agreements. A range of specific groups of chemicals was mentioned. Poor quality, availability and accessibility of case and public health services, and the need for poisons centre establishment were mentioned. It was proposed that risk assessments should be harmonized across threats to health with more emphasis on epidemiology and “reality-checks”. Ecotoxicology was also mentioned.

Regional work on chemical safety and health

WHO Regions

22. This section provides views on chemical safety and health priorities expressed at various recent WHO regional meetings. Information on existing regional strategies relevant to chemical safety and health is included as they provide an indication of the scale of regional capacities. This is relevant to the initial WHO proposal that SAICM include elements relevant to actions at the regional level, as well as at national and global levels, and that regional networks be used for implementation.
23. The role of the regional offices in chemical safety has been brought into strong focus within the Regional Offices for Europe (EURO), for the Americas (AMRO), the Eastern Mediterranean (EMRO) and South-East Asia (SEARO). Regional consultations on chemicals have been held in the African Region (AFRO), EMRO and SEARO.

WHO Regional Office for Africa (AFRO)

24. A Conference held in Cape Town in July 2001 discussed preparation of the health sector for the challenges of the 21st Century, in cooperation with partner organizations². Priority areas for the health sector were identified. These included: food and environmental contamination; substitution; poisoning and toxic exposure data collection; promotion of chemical safety at the political level (including at regional level); use of expertise in other countries for capacity building; information exchange; national action plans for the health sector; participation of the health sector in international negotiations; chemical risks at workplaces; education and awareness-raising; and networking arrangements at national, sub-regional and regional levels.

WHO Regional Office for the Americas (AMRO)

25. A Meeting of the Health and Environment Ministers of the Americas took place in 2002³. The objectives were to build bridges between the health and environment sectors, reach agreement on cooperative activities and contribute to WSSD. The meeting noted that diarrhoeal diseases and respiratory ailments continue to represent the principal burden of disease linked with the environment. It identified the priority environmental health issues in the Region: first, water pollution, water and sanitation, and hygiene; second, indoor and outdoor air pollution; and, third, the chronic and acute effects of exposure to chemical substances, and pesticides in particular. The meeting renewed emphasis on the link between health and the environment as the basis for sustainable development, stressing the importance of strategic partnerships between the two types of ministries, and between them and other actors within the public and private sectors as well as civil society.

WHO Regional Office for the Eastern Mediterranean (EMRO)

26. EMRO has been active in arranging a number of meetings relating to chemical safety. The region has a Regional Centre for Environmental Health Activities⁴ whose mandate is to promote environmental health through technical support for national capabilities and programmes in the Member States of the region. In 2000, the WHO Regional Committee for the Eastern Mediterranean passed a resolution on Safety Promotion in the Use of Hazardous Materials (EM/RC47/R.9) calling on Member States to: (i) Strengthen or establish their national chemical safety programmes, and develop and strengthen poison information and control centres to ensure appropriate prevention and treatment of poisoning; (ii) Ensure preparation of a national chemical safety profile as soon as possible; (iii) Establish a high-level national interministerial coordination committee on chemical safety, involving the Ministry of Health as well as all multisectoral and multidisciplinary stakeholders, this being essential for sustainable success; (iv) Establish legislation and regulations to prevent chemical hazards in air, water and food; and (v) Develop and strengthen chemical emergency preparedness and response programmes. Activities in chemical safety are part of the current EMRO programme. A Regional Workshop on Chemical Safety and Risk Analysis in the Eastern Mediterranean Region was held in Cairo, Egypt, in October 2003, where SAICM was one of the agenda items for discussion. The meeting, which was attended by representatives from 17 countries, made a number of new recommendations for action at country, regional and global level, as follows:

- **Country level.** Countries to establish, strengthen, update, develop and implement their national chemical safety programmes and establish, develop and strengthen poisons centres to ensure appropriate prevention and management of chemical hazards. Improve collaboration and communication between different ministries engaged in chemical safety in countries. Member States to analyse how chemical risk assessment information is used at national and local level for risk reduction. Raising community awareness.
- **Regional level.** EMRO should assist Member States in the above and in strengthening existing poisons centres. Programmes for information exchange. Training of medical and

² http://www.who.int/ifcs/Documents/Regions/Africa_docs/CapeTown_07_01/FinalDelRepEn.doc

³ <http://www.paho.org/english/gov/csp/csp26-27-e.pdf>

⁴ http://www.emro.who.int/ceha/about_ceha.asp

poisons centre staff. Training in information management, analysis, chemical risk assessment, management and communication. Assisting national research in pesticide poisoning and other chemical exposures.

- **Global level.** Ratify and implement conventions. In particular, prevention of illegal traffic. Ensure representation of chemical safety focal points from both Ministries of Health and Environment at international meetings. Assist Member States in the reduction of emissions through advice on appropriate technology. Encourage and support interregional research and training activities.

27. A regional consultation specifically focused on poisons centres was also held in Cairo in October 2003. At the meeting, representatives described the main problems of poisoning and toxic exposures in their countries and shared their experiences in establishing and operating poisons centres and in conducting poisons prevention activities.

WHO Regional Office for Europe (EURO)

28. The Third Ministerial Conference on Environment and Health in 1999⁵, addressed water and transport issues, local action, research, access to information, occupational health, health effects of climatic change and ozone depletion, economy, children's health, and national environmental health action plans. The Fourth Ministerial Conference on Environment and Health in Budapest, 2004, will have the theme "The future for our children".

WHO Regional Office for South-East Asia (SEARO)

29. SEARO has identified pesticide poisoning and establishing and strengthening poisons centres as priorities in chemical safety. A regional workshop on aspects of pesticides poisoning was held in New Delhi in 1999, followed by a training programme for poisons centres in the Region. The Informal Consultation on Health and Chemical Safety, at the end of October 2003, discussed the chemical management issues and health and safety priorities in the region. Specific areas of concern included: pesticides in agriculture and public health; prevention and management of poisoning; prevention of and response to chemical incidents; and disposal of hospital waste. The meeting discussed vulnerable groups, and agreed special attention was needed for children. Examples of concern being children exposed to chemicals and other hazards due to scavenging and recycling of hospital waste, and children exposed in the agricultural setting. A range of other areas needing attention were identified, including indoor air pollution. Countries discussed ways of working better together to address these problems, including through participation in the development and implementation of SAICM.

WHO Regional Office for the Western Pacific (WPRO)

30. Work has been undertaken to quantify chemical poisoning in the Western Pacific Region, and to identify sources of exposure. An international conference on the Environmental Threats to the Health of Children - Hazards and Vulnerability held in Bangkok in 2002, focused on environmental problems with the highest impact in WPRO as well as in SEARO countries.

Other regional groupings

31. **AMAP.** The Arctic Monitoring and Assessment Programme member countries are Canada, Denmark, Greenland, Finland, Iceland, Norway, Russia, Sweden and the United States⁶. The Arctic Environmental Protection Strategy aims to protect the Arctic ecosystems, including humans, and to identify, reduce and, as a final goal, eliminate pollution. The top priorities are persistent organic pollutants (POPs), heavy metals and radioactive substances. For these the programme measures levels of, and assesses the effects, in all compartments of the Arctic environment, including humans, and gives advice to Ministers on priority actions needed to

⁵ <http://www.euro.who.int/Document/E69046.pdf>

⁶ <http://www.amap.no/>

improve the Arctic condition. A main report on several aspects of work was published 2002, and the next main report on human health is due in 2006.

32. **The Americas.** Canada, the United States of America, and Mexico have formed the independent North American Commission for Environmental Cooperation⁷. The Commission has a programme on pollutants and health that includes projects on air quality, sound management of chemicals, North American Pollutant Release and Transfer Register, capacity building for pollution prevention, and children's health and the environment.
33. Among the Central and South American and Caribbean countries, there are various more limited subregional groupings, such as the Andean Community common legislation on pesticides, and the Caribbean Environmental Health Institute that provides laboratory, information and consultation services.
34. **Europe.** The European Union (EU) currently includes 15 countries with a further ten set to join in 2004. A European Environment and Health Strategy published in June 2003 has a focus on children⁸. Its implementation includes a European Integrated Environment and Health Monitoring and Response System. The EU also has a European Community Strategy on Health and Safety at work⁹, based on consolidating a culture of risk prevention, on combining a range of political instruments, and on building partnerships between all the players on the safety and health scene. It calls for extending the scope of the "carcinogenic agents" directive. It calls for linkage with the Community rules on the manufacture and marketing of work equipment and chemical products.
35. In July 2003, the European Commission put forward a proposal to create a European Centre for Disease Prevention and Control. The proposed core tasks of the new Centre will be epidemiological surveillance and laboratory networking, early warning and response, scientific opinions, technical assistance, preparedness against health emergencies, communication on health threats and providing a rapid and effective response to health threats.
36. **OECD.** The 30 countries of the Organization for Economic Cooperation and Development are drawn from Europe, North America, Asia and also include Australia. In 2001, an environment ministerial meeting adopted the OECD Environment Strategy for the First Decade of the 21st Century¹⁰. Priority topics mentioned include air and water quality, agricultural production methods, transport, social links such as equity and access to information, and coordination and coherence in governance. The OECD Environment Programme has a number of components, including cooperation on chemical safety¹¹. This includes the cooperative assessment of existing high production volume chemicals, and the development of harmonized test guidelines for the generation of hazard data through animal studies.
37. **UNECE.** The United Nations Economic Commissions for Europe has 55 member states in Europe, North America and Central and Western Asia. Priority areas for the environment are: transport, health and environment; environmental performance reviews for selected countries; environmental monitoring; consumption patterns; economic instruments; energy conservation; the phase-out of leaded petrol, and public participation¹². Conventions have been signed for air pollution, environmental impact assessment, industrial accidents, public participation and water.
38. The UNECE environment ministers made a declaration in May 2003¹³. After endorsing the WSSD commitments, they pointed to some future priorities: a larger concentration of efforts on

⁷ http://www.cec.org/who_we_are/index.cfm?varlan=english

⁸ http://www.centraweden.se/Bevakningsomr%C3%A5den/Milj%C3%B6/Bev_ME_D_MiljoHalsa_030630.pdf

⁹ http://europa.eu.int/comm/employment_social/news/2002/mar/new_strategy_en.pdf

¹⁰ <http://www1.oecd.org/env/min/2001/products/EnvStrategy.pdf>

¹¹ http://www.oecd.org/topic/0,2686,en_2649_37465_1_1_1_1_37465,00.html

¹² <http://www.unece.org/env/welcome.html>

¹³ <http://www.unece.org/env/documents/2003/ece/cep/ece.cep.94.rev.1.e.pdf>

the East European, Caucasian and Central Asian countries; coordination between ongoing processes; monitoring progress in implementation; and raising awareness.

Health and chemical safety elements in global agreements

39. This section does not attempt to describe all the work undertaken globally relevant to health and chemical safety that is conducted by a range of organizations, including WHO, ILO, UNEP, IPCS, and IFCS. It describes some key health and safety elements in recent significant global agreements that should be considered in the development of SAICM.

World Summit on Sustainable Development

40. WSSD (Johannesburg, 2002) sought to overcome obstacles to achieving sustainable development and resulted in a global commitment to full implementation of Agenda 21 and the Millennium Development Goals (see below). The WSSD Plan of Implementation sets out many health-related environment actions¹⁴. Aside from the call for SAICM to be based on the Bahia Declaration and Priorities Beyond 2000, WSSD health-related actions of particular relevance to chemicals include:

- A general commitment that by 2020 chemicals will be used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment, using transparent science-based risk assessment procedures and science-based risk management procedures taking into account the precautionary approach (Principle 15 of the Rio Declaration).
- Reducing waste.
- Ratify the conventions on Persistent Organic Pollutants and Prior Informed Consent.
- Implementation of the globally harmonized system for classification and labelling.
- Actions against illegal traffic in hazardous chemicals.
- Encourage development of coherent and integrated information on chemicals, such as through national pollutant release and transfer registers.
- Actions against heavy metals.
- Safe drinking water.
- Enhanced food safety.
- Reduction in health impacts resulting from air pollution, with particular attention to women and children.
- Phase out of lead in gasoline.
- Phase out lead in lead-based paints and in other sources of human exposure, work to prevent, in particular, children's exposure to lead and strengthen monitoring and surveillance efforts and the treatment of lead poisoning.
- Improve use of science and technology for environmental monitoring, assessment models, accurate databases and integrated information systems.

Links between the Millennium Development Goals and Chemical Safety

41. The Millennium Development Goals¹⁵ (MDGs) were adopted at the Millennium Summit of the United Nations in September 2000. Taken as a whole, the MDGs focus on human development and poverty reduction, and they are now commonly accepted as the framework for measuring development progress. The Millennium Plan asks for close cooperation between the public and private sector.

¹⁴ <http://www.johannesburgsummit.org/index.html>

¹⁵ http://www.developmentgoals.org/About_the_goals.htm

42. Three of the eight goals, eight of the 18 targets and 18 of the 48 indicators are health-related. While chemical safety is not explicitly mentioned in the MDGs, exposure to hazardous chemicals may have a bearing on the ability of some countries to achieve certain MDG targets, as indicated by the selection presented in Table 1. Of particular note is the absence of an indicator for non-communicable diseases for Target 8. This is significant when viewed from a chemicals perspective, as chemicals contribute to non-communicable disease.
43. As the table illustrates, chemicals may be a prerequisite for reducing health risks from other causes. Chemical safety policies thus need to strike a balance between health promotion through the use of chemicals, disease induction through that use, and other economic, social and environmental factors.

Table 1: Some links between the MDG targets and chemical safety

Target	Indicator	Example Links to Chemicals
2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalence of under-weight children under 5	Association between low birth weight and chemicals exposure (see also indicator 5).
	5. Proportion on population below minimum level of dietary energy consumption	Pesticides as prerequisite for food availability. Adverse health effects of pesticides.
5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	13. Under-five mortality rate	Child mortality associated with unintentional poisoning.
8. Have halted, by 2015, and begun to reverse, the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria 22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures. <u>Comment:</u> No indicators for non-communicable diseases.	DDT as major instrument to combat malaria, but also involving some health risks. Other chemicals also used. Chemicals as contributor to non-communicable diseases.
	10. Halve, by 2015, the proportion of people without access to safe drinking-water	30. Proportion of population with sustainable access to an improved water source, urban and rural.
17. ...provide access to affordable, essential drugs in developing countries.	46. Proportion of population with access to affordable, essential drugs on a sustainable basis.	Chemical intermediates as prerequisite for drug production.

44. DDT and malaria is an important example, with links to the MDGs. Malaria is estimated to kill between 1.1 and 2.7 million people world-wide each year of whom about one million are children under the age of five in sub-Saharan Africa. The strategies to control malaria include indoor residual spraying with pesticides including DDT. There is, however, a tendency to reduce reliance on spraying and there is a marked decrease in the use of conventional residual insecticides use as DDT, which have been replaced by more expensive new-generation insecticides such as pyrethroids. This situation potentially involves large risks from malaria, large risks from DDT and large costs of alternatives.
45. The text of the Stockholm Convention on Persistent Organic Pollutants recognizes the urgent and immediate needs of a number of Member States to maintain their reliance on DDT for some essential uses due to current lack of effective or affordable alternatives. It also recognizes the urgent and immediate needs of a number of Member States to maintain their reliance on DDT to control insect vectors, particularly for malaria, due to current lack of effective and/or affordable

alternatives. It also recognizes the need to accelerate research and development of safe and effective alternatives to DDT with a view to improving Member States vector control programmes in the medium term. It recognizes the need to work towards a longer-term goal of reducing reliance on vector control programmes on pesticides in general and DDT in particular (in line with World Health Assembly Resolution 50.13 to safeguard the ecosystem and human health from the effects of POPs pesticides).

46. An action plan for the Reduction of Reliance on DDT in disease vector control was established in 2001, to implement the careful balances that are reflected in the Convention.

Improving understanding of links between chemicals and other risk factors

47. Information about the hazards of specific chemicals, the potential for exposure and the assessment of chemical risk is an essential prerequisite for chemicals management. Much has been done to increase the number of hazard and risk assessments carried out on specific chemicals under voluntary and legislative instruments for chemical producers and several initiatives are being discussed at Forum IV to improve the availability of this information.

48. The need to integrate and understand these chemical specific assessments in the context of their use was emphasized by many Member States and regional groups in their responses to the call by WHO for input to SAICM. An integrative assessment is needed at the local level that takes into account both acute and chronic effects on human health and the environment, the various different routes through which exposure may occur, exposure from both diffuse and point sources as well as from man-made and natural sources, together with ways of assessing the impact of multiple exposures including to mixtures. Technical methodologies and guidance need developing in order to make such assessments.

49. A necessary part of this is improving the greater availability of robust epidemiological data between chemicals exposure and health consequences and also the need to reduce a number of uncertainties that still remain in assessment methods. For example, the IPCS Global Assessment of the State-of-the-Science on Endocrine Disruptors in 2002 highlighted the fact that fundamental concerns remain because traditional toxicological approaches do not provide the necessary answers.

Contribution of chemicals to the burden of injury, ill-health and disease

50. The burden of disease in some low-income regions acts as a barrier to economic growth. The links between social, economic and environment pillars are most evident among the poor who frequently live in unsafe and crowded settlements and are therefore more likely to be exposed to air pollutants and other health risks at home and at work and consume insufficient and poor quality food and be exposed to other health risks. There is some way to go before the link between chemical safety and sustainability and the MDGs is generally appreciated.

51. A greater appreciation of this gap in knowledge is needed to support more meaningful quantification of the environmental burden of disease. Quantification of the environmental burden of disease has many uses including:
 - Providing information about the combination of risk factors relevant to an understanding of the burden of disease and highlighting and helping to prioritize preventive measures.
 - Assisting in monitoring trends and emerging issues.
 - Pointing to vulnerable population sub-groups and comparing environmental health burdens to other health issues.
 - Providing a world-wide picture of ill-health and disease burden at a global level, highlighting countries in greatest need of support on selected issues.

52. Non-communicable diseases account for approximately 80% of the global disease burden, however the contribution of chemicals to this figure is not fully known.
53. In relation to estimating the chemicals-related burden of ill-health and disease a number of methodological issues need to be overcome and at present the few data that are available are not robust. Data sources that are available linking chemical exposure to injury and disease, relate primarily to acute or direct exposures such as those occurring occupationally and acute or local health conditions such as skin irritation. For chronic exposures and for diseases of long latency, the data are much more difficult to obtain and the methodologies for estimating their frequency of occurrence are far less developed.
54. Harmonized methodologies for assessing the environmental burden of disease would facilitate the comparison of estimates made by different countries. WHO is further developing its approach to the environmental burden of disease. Some case studies including specific risk factors are being developed including arsenic and fluoride in drinking-water.
55. Quantitative estimates of the Global Burden of Disease have been made in the World Health Report 2002 for 26 selected risk factors ranging from iron deficiency to unsafe sex. The report includes ten environmental and occupational risks, some of which have direct links to exposure to hazardous chemicals. Such calculations involving chemical hazards are in an early stage of development. Depending on the strength of the association with chemicals they can estimate the size of the global burden of disease measured as loss of healthy life (using Disability Adjusted Life Years, DALYs). For example, if the following risk factors are assumed to be attributed to chemical risks then a figure of 5% of the global burden of diseases can be summed as follows:

Indoor smoke from solid fuels	2.6%
Lead exposure	0.9%
Urban air pollution	0.5%
Occupational air particulates	0.2%
Occupational carcinogens	0.1%

56. For reference, some other selected risk factors were: *Unsafe water, sanitation and hygiene, Alcohol and Tobacco* (4% each), *Unsafe sex* (mainly HIV/AIDS, 6%).
57. In its working paper on a health and environment strategy, the World Bank in 2001 estimated that in established market economies pollution from agro-industrial chemicals and chemical pollution from diffuse sources caused between 0.6 and 2.5% of the total burden of diseases with a central estimate of 1.5%. Estimates were derived by considering 15 diseases.
58. In addition to diseases, chemicals can also be a significant cause of acute injury. Figures relating to unintentional poisoning (excluding pharmaceuticals) show some of the variations in mortality and in DALYs that can be found in the age and sex, geographical region and income data published by WHO. It is estimated that in 2000, EURO and SEARO countries together accounted for over one half of the total number of DALYs lost globally to poisoning (global total of 8,235,000) and that the highest mortality rates are found in the male populations of the low- and middle-income countries of EURO.

Monitoring trends and establishing priorities for chemicals assessment and management

59. Burden of disease and injury statistics can provide an important means of establishing priorities. However, their use is limited not only by a lack of harmonized methodology but also by a lack of comparable data. The need to strengthen surveillance and monitoring systems is therefore vital. While burden of disease and injury data can be compelling, other indicators may also need

developing. Examples where other indicators may be more appropriate could include where the health effects are serious; where there are susceptible groups or subpopulations; and/or where interventions are more easily operationalized.

Other links between non-communicable diseases and chemicals

60. Some common needs and links in relation to non-communicable diseases and chemicals have already been recognized by WHO in other areas. In May 2002, the 55th World Health Assembly agreed a resolution (WHA55.16) expressing concern about the global public health implications of a possible release or deliberate use of biological, chemical or radionuclear agents. The WHA urged Member States, with the support of WHO, to strengthen systems for surveillance, emergency preparedness and response. In a further development (May 2003), the 56th World Health Assembly agreed a resolution (WHA56.28) to revise the International Health Regulations (IHR) to cover not just cholera, plague and yellow fever, but also biological, chemical and radiological events of 'international concern'.
61. In response to these developments, IPCS is building upon previous activities for providing guidance for preparedness and response to chemical accidents and emergencies to include:
 - A Global Chemical Incident Surveillance, Alert and Response System.
 - A database of chemical incidents of international public health significance in order to improve the knowledge base.
62. From the work undertaken to date, the importance of strong networks of experts to respond to potential chemical incidents and emergencies has been shown to be vital. Relevant networks include the IPCS INTOX global network of poisons centres which can provide specialized medical and epidemiological support, analytical toxicology services, antidote supply and treatment facilities.

Protection of vulnerable groups including children

63. WSSD and the MDGs pay much attention to the protection of vulnerable groups and children in particular. WHO has taken several initiatives for children's environmental health, the latest being the Healthy Environments for Children Alliance (HECA)¹⁶. This is a world-wide alliance to intensify global action on environmental risks to children's health that arise from the settings where they live, learn, play and earn, by providing knowledge, increasing political will, mobilizing resources, and catalysing action. Acute respiratory infections that are the largest killer of young children are aggravated by environmental hazards such as indoor air pollution. Unintentional poisoning also accounts for many deaths among children. Children and chemicals is a theme at Forum IV, and the outcomes of those discussions will be relevant for SAICM.

Possible further elements for SAICM relevant to human health

64. A number of further possible elements for SAICM that are relevant to human health are proposed in this section. These build on the initial WHO contribution of possible elements, drawing on the WHO Member States' views presented earlier, regional views on chemical safety, health and safety elements in global policies (such as the MDGs), and papers for IFCS Forum IV, held in Bangkok 1-7 November, 2003. The IFCS Priorities for Action Beyond 2000 have been taken into account and are referred to below by the priority number as "PfA No". Consideration is given to whether the proposed element is included in the paper SAICM/PREPCOM.1/6 *Proposed*

¹⁶ <http://www.who.int/heca/en/>

structure of the SAICM report for consideration by the Preparatory Committee and proposals are grouped under any relevant headings from that paper.

65. The Forum IV *Thoughtstarter on Gaps in the Bahia Declaration and Priorities for Action Beyond 2000*¹⁷, is a valuable analysis which includes many health-related environment factors to consider in the development of SAICM. This paper does not attempt to duplicate or summarize that work, or foreshadow the outcomes of the Forum IV discussion which will be reported to SAICM PrepCom1. However there are a number of areas mentioned both in this paper and in the IFCS President's Progress Report to Forum IV which are of particular relevance to human health and the work of WHO/IPCS and these are highlighted.

Research, monitoring and data; Risk assessment and risk management (SAICM/PREPCOM.1/6, 10o and 10q)

66. A number of proposed areas of work are related to both the proposed Research, Monitoring and Data element and the Risk Assessment and Risk Management element. It is suggested that these elements be collocated in the proposed SAICM report and a logical flow of sub-elements developed. Countries strongly called for a sound scientific basis for chemical safety, and risk assessments provide such a basis. A need for better data for risk assessments relevant to the needs of developing countries (Thoughtstarter and President's report Section 1.3 A2), appears in the PfA2 and hence appears to be an implementation gap. Obstacles listed in the Forum IV thoughtstarter (Annex 2) are: national systems for collection of harmonized poisoning data, and other local data needed for chemical risk assessment, are lacking; and inter-agency cooperation is needed to enable transparent sharing of data and to assess their relevance and comparability.
67. The need for research and actions to be underpinned by science-based risk assessment procedures and the need to continue work on common principles and harmonized approaches for risk assessment (PfA A1) (Thoughtstarter Annex A and President's report Section 1.3 A1)) have been identified.
68. SAICM elements could encompass the following, which would be an expansion of PfA A1, A2 and A3:
- **Development of new tools for risk assessment** to make best use of scientific advances, e.g. in the field of toxicogenomics.
 - **Further efforts on the harmonization of risk assessment methods.** This should include methods for the assessment of health risks to children arising from exposure to chemicals.
 - **New work on methods relevant to real-life exposure situations**, such as assessment of aggregate/cumulative exposures from multiple chemicals (including chemical mixtures), multiple pathways and multiple exposure routes.
69. **Gaps in science and gaps in abilities to access, interpret and apply knowledge** (Thoughtstarter and President's report Section 1.3, A2 and A3) are also relevant to these SAICM proposed elements 10o and 10q. This issue is the subject of discussion at Forum IV under an item on hazard data generation and availability and the outcomes of this discussion should be considered by SAICM PrepCom1.

Response measures (SAICM/PREPCOM.1/6, 10p)

70. The varying capacities of countries to deal with poisonings and chemical incidents needs to be addressed. Although these are existing IFCS Priorities (PfA D7 and D5), a significant

¹⁷ http://www.who.int/ifcs/Forums/ForumIV/Meet_docs.htm

implementation gap has been brought into sharp focus in the IFCS President's Report to Forum IV.

71. Strengthening systems for emergency preparedness and response to chemical incidents and extending coverage to all types of incidents (Thoughtstarter Annex A and President's report Section 1.3 D4 and Section 2.1) has been identified by the IFCS President as an area where the existing targets have not been met. WHO has a mandate through the World Health Assembly to expand the International Health Regulations to include chemical incidents of potential international health concern and to strengthen the WHO global surveillance, alert and response system. Links to poisons centres will be made.
72. Strengthening and increasing the number of poisons centres (Thoughtstarter Annex A and President's report Section 1.3 D7) has been identified as a gap in implementation, as the goals already set by IFCS have not been met. The IFCS President, in his report to Forum IV, advises that significant effort is needed in this area, highlighting barriers to progress including the lack of: financial and human resources; contacts in the health sector; awareness raising and perception by key stakeholders. Poisons centres can play a vital role in strengthening capacity to deal with chemical incidents and drug safety monitoring, for example, in small countries the technical expertise to provide these services can be provided by the same centre. WHO is continuing to identify barriers and assist countries in their efforts to establish poisons centres. This will require a greater awareness of the potential role that poisons centres can play in chemical safety, and input of a number of stakeholders to remove obstacles to implementation.
73. Many aspects of poisoning and other incidents were mentioned in country replies to the WHO questionnaire, from being part of the life-cycle of chemicals to specific mention of the need for national data on poisoning or capacity building in the area. The ability to deal with chemical incidents depends on rapid access to information and local ability to respond, and hence poisons centres have a vital role to play.
74. It is proposed that this element in SAICM/PREPCOM.1/6 be **broadened and recast as an integrated approach for poisons centres and emergency preparedness (surveillance, alert and response mechanisms for chemical incidents)**.

Better estimates of the impact of chemicals on health to set priorities, and for monitoring

75. A further major theme is the need for **better methods to estimate of the impact of chemicals on health to set priorities for action**. This could be addressed under SAICM/PREPCOM.1/6 paragraph 10g or paragraph 14 (implementation). Estimates of disease burden and cost effectiveness have been used as tools for priority setting in other areas of health policy. Initial attempts at such assessments are being made for chemical risks. The need for good estimates is implicit in the strong call by countries to give priority to addressing health effects. With time, this type of information on health effects of chemicals could become useful in the national planning called for in PfA E2 and E3. Such better assessments could also facilitate balancing risks from chemicals and risks from their alternatives, for instance when chemicals are used to combat hunger and illness in plant protection or disinfection of water, or disease as in the case of DDT and malaria.

Implementation (14g) (SAICM/PREPCOM.1/6, 14g)

76. In its initial submission to UNEP, WHO stated its commitment to making continued efforts to improve chemical safety. Many country submissions called for a multi-stakeholder process for the implementation of SAICM, which is a more sophisticated approach than 'multi-sector'. In

order to have a shared understanding of the sectors *and* the stakeholders that can play a role in the implementation of SAICM, and to ensure all relevant players are involved through the process, it is suggested that the sectors and stakeholders be characterized in conjunction with the development of the elements, that this form part of the SAICM report, and hence the report would link actions with the implementers. As mentioned previously, WHO would encourage the use of existing regional offices, for example, those of Intergovernmental Organizations. While health-environment dialogue and strategies are in place for some regions, these appear to be lacking in others.

The occupational setting

77. In addition to the above, and also relevant to health and chemical safety, is exposure in the occupational setting. The Priorities for Action do not currently include a specific priority for occupational exposure, and this is a major gap for human health. This sector needs to be reflected in the SAICM. Occupational safety and health is a theme at Forum IV, and the outcomes of those discussions will be relevant for SAICM.

Further detailed country proposals

78. Many detailed/specific suggestions for actions under SAICM are made in the various papers for Forum IV and SAICM PrepCom1, including this WHO Room Document. These should not be lost from the process and should be carried forward into the detailed work on SAICM.

Conclusion

79. WHO requests that participants at SAICM PrepCom1 consider:

- The detailed suggestions of country health representatives and regional groups contained in this paper, in particular, as an addition to the collection presented in the SAICM PrepCom1 meeting papers.
- The ‘possible further elements for SAICM relevant to human health’ presented in this paper, for inclusion in SAICM.

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STRATEGIC APPROACH TO INTERNATIONAL CHEMICALS MANAGEMENT (SAICM)

WHO Contribution to Possible Draft Elements of a SAICM for Consideration by the First Preparatory Meeting

June 2003

Introduction

1. The process for development of SAICM includes preparatory meetings (PrepComs) followed by an International Conference on Chemicals Management (ICCM). The World Health Organization (WHO) understands that this will provide a number of opportunities for WHO, and individual WHO Member States, to contribute to SAICM as it takes shape. As a first step, therefore, this contributory document focuses on some of the experience gained by WHO in the field of chemical safety, at country, regional and intergovernmental levels. Particularly relevant are discussions over the past year regarding the re-focusing of the International Programme on Chemical Safety (IPCS) (WHO/ILO/UNEP), which is itself an intersectoral and intergovernmental mechanism. WHO is strongly committed to making more detailed inputs at subsequent stages of the SAICM process.

Health and Environment

2. The first Principle of the 1992 United Nations Conference on Environment and Development's Rio Declaration on Environment and Development points to the central importance of human health in the development of SAICM in stating that 'Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature'.
3. The importance of chemical safety for human health and of the link between health and environment have been recognized for some time and have been the subject of action by WHO Member States. For example, a 1978 World Health Assembly resolution on chemicals was followed by a WHO Executive Board Resolution in 1979 that agreed a plan of action to establish the International Programme on Chemical Safety (IPCS). The Executive Heads of the United Nations Environment Programme (UNEP), the International Labour Organization (ILO) and the World Health Organization (WHO) signed a Memorandum of Understanding in April 1980, whereby IPCS became a cooperative venture of the three organizations to address the effects of chemicals on human health and the environment.
4. The 42nd World Health Assembly in 1989 emphasized the paramount importance of health considerations for sustainable development and resolved to contribute to the international efforts towards sustainable development. This was followed by resolutions relating to the importance of the scientific basis of chemical safety in order to meet current and foreseen challenges, and the importance of comprehensive chemical safety programmes directed towards the needs of all countries. For effective implementation, the need for concerted action at global, regional and national levels was noted.

56th World Health Assembly Resolution on SAICM

5. In May 2003, the 192 Member States of the World Health Assembly (WHA) agreed on the participation of global health partners in SAICM through WHA Resolution WHA56.22 (full text at Attachment 1). The Assembly urged Member States to take full account of the health aspects of chemical safety in the further development of SAICM, supported continuation of the roles of WHO and IFCS in overseeing the development of the strategic approach through membership of its Steering Committee, and requested the WHO Secretariat to contribute to SAICM and participate in preparatory meetings and the final conference. The Assembly called for a progress report on SAICM (before the estimated date of its completion) and for the completed SAICM to be submitted to the Health Assembly for consideration.

Experience gained from WHO's Contribution to International Chemicals Management

6. WHO contributes to international chemicals management through a range of programmes, including activities with a primary focus on chemicals and those of an intersectoral nature. This reflects the framework provided in both Agenda 21 and the WSSD Plan of Implementation, which contain both approaches. In addition, WHO acts as the Administering Organization for IFCS and IOMC. These functions, along with the WHO JMPR/JECFA Secretariat (see paragraph 8) are collocated with IPCS at WHO.
7. The relevant intersectoral work of WHO includes contributions to activities under the Millennium Development Goals, the WEHAB (Water, Energy, Health, Agriculture and Biodiversity and ecosystem management) Initiative, and the Healthy Environments for Children (HECA) Alliance. WHO's International Health Regulations (IHR) are being expanded to cover public health events of international importance, including those of chemical origin. The revised IHR will provide the framework for future WHO Global Outbreak Alert and Response activities. The chemical aspects are being undertaken by IPCS.
8. Turning to chemical-focused activities, at the health and environment interface WHO has long-established programmes for assessing health risks posed by exposure to chemicals through air, water and food. These risk assessment activities have informed risk management bodies that, in turn, have provided advice and recommendations to limit human exposure to environmental and other chemicals, such as the WHO Guidelines for Drinking-Water Quality and the Joint FAO/WHO Codex Alimentarius Commission (to which scientific advice is provided by the Joint FAO/WHO Meetings on Pesticide Residues (JMPR) and Joint FAO/WHO Expert Committee on Food Additives (JECFA). Major WHO contributions to chemical safety are also made through IPCS, WHO's Food Safety Programme, the WHO Pesticide Evaluation Scheme (WHOPES), the International Agency for Research on Cancer (IARC), and WHO's occupational and environmental health programme. A fuller account of these contributions is summarized at Attachment 2. Many of these contributions and the experience gained are substantive and merit consideration in the final SAICM.
9. For the purpose of completeness, and without prejudice to the views of WHO's partners in IPCS, the IPCS current areas of work are listed in full in Attachment 2. WHO contributes to all work areas. Over the past year, and on the basis of multi-sectoral input from stakeholders, IPCS has been undergoing a re-design in response to current and expected future challenges in chemical safety. The re-design identified four focus points for future work, namely: risk assessment, including harmonized methodologies; poisons information, prevention and management; chemical incidents and emergencies; and support for capacity building.
10. The IPCS re-design aims to enable flexibility to meet emerging issues and concerns (as should SAICM), and a number of guiding principles have been promoted as a point of reference for

future detailed IPCS work planning. The development of guiding principles of a similar nature may also be useful for SAICM, both to aid the discussions and for inclusion in the final product.

Proposed Elements

11. SAICM should note the significant strategic work to date embedded in the IFCS Bahia Declaration on Chemical Safety and Priorities for Action Beyond 2000. SAICM should be similarly focussed on chemicals, but cognizant of the range of other international efforts that aim to effect chemical safety, for example, other action areas of the WSSD Plan of Implementation and the Millenium Develepment Goals.
12. SAICM needs to have a multi-sectoral and balanced approach, addressing *inter alia* human health and the environment in its content, and engaging health, environment and other sectors in its application.
13. SAICM must be inclusive, involving all countries, and be directed towards their needs. It must identify measures to build country capacities to address these identified needs, especially in developing countries and countries in transition.
14. SAICM should include elements that address the need for actions at global, regional and national levels. Decisions on what level of action is desirable and efficient are part of strategic decision-making, as are decisions on when action needs to be taken. Information on the health and economic impact of chemical exposures as well as the cost-effectiveness of possible remedial measures are needed to inform such decisions.
15. Hence, the scientific evidence-base needs to be continually improved and updated to inform decision-making and to monitor and evaluate the effectiveness of risk management measures. Rigorous, international expert peer-review processes are necessary for the global acceptance of such information. Information needed includes hazard characterization and exposure assessment of chemicals and risk information, such as estimates of the burden of disease (or illness and dysfunction), that take into account differing susceptibilities of sub-populations. WHO's Global Burden of Disease framework is currently being applied to chemical case studies, with the aim of refining the methodology to inform priority-setting for risk management actions on chemicals. Important input comes from national surveillance systems for chemical exposures and poisoning. The WSSD WEHAB Working Group Paper (A Framework for Action on Health and the Environment, August 2002, at http://www.johannesburgsummit.org/html/documents/summit_docs/wehab_papers/wehab_health.pdf) provides a useful summary of the issues and needs for strengthened information on health and environment linkages.
16. SAICM will need to provide a framework for decision-making, including priority-setting. Building on Rio Declaration Principle 15 on the precautionary approach, WHO is developing a *Precautionary Framework for Public Health Protection*. This framework, which will be contributed by WHO to the SAICM process, will provide guidance on application of precautionary strategies that will improve preventive public health decision making under conditions of complexity and uncertainty. It will assist WHO Member States in the development of their public health policies and application of precautionary measures to address environmental health risks (including, but not limited to, those resulting from chemicals).
17. SAICM needs to take account of the commitment of established intergovernmental organizations and international institutions active in the field of chemical safety. This would include, in the case of WHO, use of regional office and country-level networks which can facilitate chemical management, in particular by working with developing countries.

18. SAICM should avoid duplication of effort and address gaps in chemical assessment work (e.g. in hazard identification, in exposure assessment, and in the assessment of newly-recognized health and environment risks), so that scarce resources can be appropriately devoted to priority risk assessment and management issues. Duplication of effort in publishing such information should also be avoided, while recognizing the need for a range of useable information products in national languages.
19. SAICM should include a process for responding to emerging issues and the changing patterns of chemical production, use and consequent human exposures.
20. Measurements of progress will be needed, both by activity/target, and also in terms of health and environment outcomes.

Conclusion

21. WHO is the directing and coordinating authority on international health work and is committed to making continued efforts to improve chemical safety, both through its own programmes and in provision of expert technical advice to support the work of others. WHO will continue to engage in the SAICM process, and in working with its Members States, it will aim to implement WHA Resolution WHA56.22 on the participation of global health partners in SAICM.

Strategic approach to international chemicals management: participation of global health partners

The Fifty-sixth World Health Assembly,

Recalling the first principle of the Rio Declaration on Environment and Development, namely, that “Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature”;

Noting that the Bahia Declaration on Chemical Safety and the Priorities for Action Beyond 2000 of the Intergovernmental Forum on Chemical Safety emphasized the essential role of sound management of chemicals in sustainable development and the protection of human health and the environment;

Further noting that the World Summit on Sustainable Development Plan of Implementation, paragraph 23(b) calls for further development of a strategic approach to international chemicals management and urges international organizations dealing with chemical management to cooperate closely in this regard;

Fully supporting the UNEP Governing Council Decision 22/4 to further develop a strategic approach to international chemicals management following an open, transparent and inclusive process and providing all stakeholders opportunities to participate; and the invitation to a range of international organizations, including WHO, to collaborate actively in the further development of the strategic approach;

Noting the involvement of WHO in the Steering Committee of the strategic approach to international chemicals management established to act as a facilitative steering mechanism to deal with practical aspects of the strategic approach;

Noting also the role of WHO as the administering organization for the Intergovernmental Forum on Chemical Safety;

Mindful of WHO’s contribution to the international management of chemicals through the International Programme on Chemical Safety, a cooperative venture between ILO, WHO and UNEP;

Recalling resolution WHA45.32 on the International Programme, which emphasized the need to establish or strengthen governmental mechanisms to provide liaison and coordination between authorities and institutions involved in chemical safety activities, and resolution WHA42.26 on WHO’s contribution to the international efforts towards sustainable development, which considered that equitable health development is an essential prerequisite for socioeconomic development;

Recognizing the need for health interests at country level to be reflected in, and addressed by, the strategic approach to international chemicals management,

1. URGES Member States to take full account of the health aspects of chemical safety in further development of the strategic approach to international chemicals management;

2. REQUESTS the Director-General:

(1) to support the continuing roles of WHO and the Intergovernmental Forum on Chemical Safety in overseeing development of the strategic approach through membership of its Steering Committee;

(2) to contribute to the content of the strategic approach, in accordance with the invitation of the UNEP Governing Council, through initial submission of possible health-focused elements and participation of WHO in preparatory meetings and the final conference;

(3) to submit a progress report to the Health Assembly before the estimated date of completion of the strategic approach;

(4) when completed, to submit the strategic approach to international chemicals management to the Health Assembly for consideration.

Tenth plenary meeting, 28 May 2003
A56/VR/10

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Key Contributions of WHO to International Chemicals Management

1. The following summarizes key contributions of WHO to international chemicals management, including those made through:
 - International Programme on Chemical Safety (IPCS)
 - JMPR and JECFA
 - Food Safety Programme
 - WHO Pesticide Evaluation Scheme
 - WHO Air and Drinking-water Quality Guidelines
 - International Agency for Research on Cancer
 - Occupational and Environmental Health Programme.

Activities of IPCS

2. The current work of IPCS includes the following products and services:
 - ***Chemical risk assessments for national authorities*** (including Environmental Health Criteria monographs, Concise International Chemical Assessment Documents, International Chemical Safety Cards, WHO Classification of Pesticides by Hazard, and Joint IPCS/OECD in-depth assessments (as needed)).
 - ***Chemical risk assessments for WHO activities*** (including chemicals in drinking water and disinfectants, air pollutants - indoor and ambient, chemical exposures in the workplace, chemical risks due to climate change, Persistent Organic Pollutants, and assessment of pesticides for public health and chemical issues in healthy environments for children).
 - ***Methodologies for chemical risk assessments*** (including harmonization of approaches and methods, emerging chemical health risks, e.g. state-of-the-science review of endocrine disruptors, integrated risk assessment, and biological, physical and scientific principles of risk assessment). A large proportion of this work is undertaken bilaterally with OECD and WHO (including through its Inter-Regional Research Unit office, based at NIEHS).
 - ***Research studies on using human toxicology data*** (including development of methodology, validation of available data, and contribution to burden of disease estimates for death, illness and dysfunction attributable to chemical and pesticide exposures).
 - ***Dissemination of chemical safety information*** (including IPCS INCHEM database, development and maintenance of the IPCS web site, Global Information Network on Chemicals (GINC) and prevention and treatment interventions for pesticides).
 - ***Poisons Centre Network Management*** (including establishing and strengthening national poisons centres, and IPCS INTOX Programme implementation).
 - ***Emergency response mechanisms for chemical incidents*** (including a preparedness and response network for chemicals integrated with the network for communicable diseases under the WHO Global Outbreak and Alert Response Network, cooperation with drinking water and food safety programmes on deliberate contamination threats, support to national emergency preparedness initiatives, and international coordination mechanisms).

- **Policy coordination in chemicals management** (including chemicals issues in environmental health, IPCS programme planning, WHO linkages to Stockholm and Rotterdam Conventions, Intergovernmental Forum on Chemical Safety, and secretariat functions for IOMC/IOCC).

JMPR and JECFA

3. With FAO, WHO conducts chemical risk assessments for Codex Alimentarius and Member States (notably by the *Joint FAO/WHO Expert Committee on Food Additives* (JECFA) which evaluates the safety of food additives and contaminants, naturally-occurring toxicants and residues of veterinary drugs in food, and the *Joint FAO/WHO Meeting on Pesticide Residues* (JMPR), and revision of the *Methodology for Evaluation of Chemicals in Food*). Synergies with IPCS activities exist because of the close links with the preparation of risk assessment documents on specific pesticides and other chemicals (which may also be industrial chemicals) and in the development and refinement of risk assessment methodologies, which are included among IPCS activities. As a result of the recent FAO/WHO evaluation of Codex, the processes for provision of scientific advice to Codex are being reviewed. These arrangements for JMPR/JECFA provide an example of cross-sectoral ways of working.

Food Safety Programme

4. This programme is largely responsible for the exposure assessment of chemicals in food, including development of methodologies for predicting dietary intake of chemicals. Hence its work also contributes to Codex work (refer to paragraph above). Other contributions to international chemicals management include: provision of advice in food safety emergencies; it has initiated an activity to advise on terrorist threats to food (including those caused by chemicals); and it hosts the Global Environment Monitoring System/Food Contamination Monitoring Assessment Programme (GEMS/Food) which promotes the monitoring and collection of information on the levels of chemicals in food and includes the only international database on chemical exposures through food. GEMS/Food is also collaborating with UNEP in monitoring of the implementation of the Stockholm Convention by providing information on POPs in human breast milk.

WHO Pesticide Evaluation Scheme

5. The WHO Pesticide Evaluation Scheme (WHOPES) is the only international programme which promotes and coordinates the testing and evaluation of pesticides proposed for public health use. The main objectives of WHOPES are: to facilitate the search for alternative pesticides and application methodologies that are safe and cost-effective; and to develop and promote strategies and guidelines for the use of pesticides in public health, and to assist and monitor their implementation by Member States. WHOPES is an example of a programme which addresses risk assessment needs of countries with limited risk assessment capacity.

WHO Air and Drinking-water Quality Guidelines

6. WHO establishes guidelines for chemicals found in air and drinking-water sources in the form of its *Guidelines for Air Quality* and *Guidelines for Drinking-water Quality (GDWQ)*. The GDWQ are a significant contribution to chemicals management. Guidelines are maintained for over 100 chemicals/groups of chemicals found in drinking-water and they are recognized as the UN system's position on drinking-water quality. The guidelines, which are based on IPCS, JMPR and JECFA assessments where available, are used by many countries directly or indirectly in setting national standards and are referred to in the Codex food standards. Hence the programme works to reduce duplication of effort in risk assessment functions to support risk management actions. It also provides an international benchmark for evaluation.

International Agency for Research on Cancer

7. The International Agency for Research on Cancer, is a Specialized Agency of WHO devoted to a range of major activities on cancer, including assessment of the carcinogenic potential of chemical substances.

Occupational and Environmental Health Programme

8. This programme operates through its Global Strategy on Occupational Health for All, and includes a range of activities on chemicals, particularly facilitation of country-based actions through a network of WHO Collaborating Centres. Also a number of activities, for example work on silicosis and Control Banding, are conducted in cooperation with ILO. Control Banding enables workplaces to select appropriate control measures for chemicals based on Risk Phrases on product labels. Hence it will use the outcomes of the Globally Harmonized System for Classification and Labelling to improve chemical safety.

Compilation of country health representatives' responses to WHO questionnaire on SAICM

Table 1 provides a list of those countries for which responses to the WHO questionnaire was received. The WHO regions are:

AFRO: Regional Office for Africa

AMRO: Regional Office for the Americas

EMRO: Regional Office for the Eastern Mediterranean

EURO: Regional Office for Europe

SEARO: Regional Office for South-East Asia

WPRO: Regional Office for the Western Pacific

Note 1: Member States with names in *italics* have also submitted responses to UNEP in response to its call for submission of possible elements for SAICM in mid-2003.

Note 2. The original language of the response is given in the third column: English (E), French (F), or Russian (R).

Region (No. of responses)	Member State	Original language	Comment
AFRO (8)	Angola	F	3 responses received from: Ministry of Health, Ministry of Agriculture and the WHO environmental health adviser. These are combined in the below table under one entry.
	Central African Republic	F	
	Congo	F	3 responses received from: National Health Laboratory, one from the Department of Agriculture, and one unidentified organization (included as the submission was received through the WHO WR officer). These are combined in the below table under one entry.
	Equatorial Guinea	F	
	<i>Gambia</i>	E	
	Kenya	E	
	Rwanda	F	
	South Africa	E	
AMRO (1)	Suriname	E	

EMRO (8)	<i>Iran</i>	E		
	<i>Jordan</i>	E		
	Oman	E		
	Pakistan	E		
	Sudan	E		
	Syria	E		
	Tunisia	E		
	Yemen	E		
EURO (13)	Armenia	R, E		
	Cyprus	E		
	Estonia	E		
	Finland	E	Preliminary, pending other sector and EU coordination	
	Hungary	E		
	Israel	E		
	Netherlands	E	Supplementing NL input to EU	
	Poland	E	Official answer to come from Lodz, supplement from Environment	
	Slovak Republic	E		
	Spain	E		
				Sweden's response indicated: "In Sweden the health and environment policies are integrated so we refer to our input to SAICM/UNEP from 2001. The response has been placed under the most relevant sections in the table.
	Sweden	E		
	<i>Switzerland</i>	E		
Turkey	E			
SEARO (1)	<i>Indonesia</i>	E		
WPRO (10)	<i>Australia</i>	E		
	Cook Islands	E		
	Kiribati	E		
	Lao	E		

Marshall Islands	E
Papua New Guinea	E
Palau	E
Philippines	E
Solomon Islands	E
Vanuatu	E

The structure of the below table follows that of the SAICM/PREPCOM.1/5 *Thematic summary of the main points in submissions concerning possible draft elements for a Strategic Approach to International Chemicals Management*, with the below headings:

- A. Policy Aspects. A1. Goals and objectives; A2 Scope; A3 Principles; A4 Proposals on specific topics
 - B. Coordination
 - C. Capacity building
 - D. Development and implementation aspects.
- Overall priorities

Responses are then ordered by WHO Region, and then by country, in alphabetical order.

Note 3. Where a country did not answer a question, no country entry is listed.

A1. Goals and objectives

Region	Member State	Comment
AFRO	Angola	Health and environmental quality (3)
	Central African Republic	Food and environmental safety and quality
	Congo	Preservation of the ecosystem and improvement in human health. Use of pesticides that do not affect the health of populations, animals and the environment. Health and environmental quality
	Equatorial Guinea	Health and environmental quality
	Gambia	Health, environment issues, awareness creation.
	Kenya	Health and environmental quality
	South Africa	Health and environmental quality
AMRO	Suriname	Addressing the widening gap among countries in following (international) chemical safety policies Data generation on health and environmental quality related to developing countries Developing of full cost accounting framework related to developing countries
EMRO	Iran	Chemical safety laboratories and analytical methods, health and environmental quality
	Jordan	Sound management of chemicals with the objective to protect human health and the environment, focusing the efforts to assess and reduce the relevant risks posed by hazardous chemicals. Identify the impacts of chemicals management on producers, users and consumers. Disseminate scientific information and promote international scientific collaboration. Consider the impacts of toxic chemicals on children-the vulnerable group of population. Introduce possibilities (penalties?) for illegal trafficking of hazardous chemicals.
	Oman	Poisons control centre
	Pakistan	1. Health 2. Cost-Efficiency 3. Environment
	Sudan	Health and environmental quality
	Syria	Health and environmental quality, legal issues
	Tunisia	Environmental and health quality
	Yemen	Health and environmental quality
EURO	Armenia	Health aspects of chemicals and waste, industrial production, transportation, storage of pesticides
	Cyprus	Development of capabilities and expertise for risk assessment (ecotoxicological and health)
	Estonia	The goal of SAICM should be to minimize adverse effects of producing and using chemicals on environment and human health. Due to that the SAICM should support and help the process of establishing a science and practice based clear and realistic policy of managing chemicals and hazardous wastes.

	Finland	Health and environment quality taking into account comprehensive health based advantage/disadvantage analysis.
	Poland	Protection of human health with focus on children's health and future generations
	Slovak Republic	To enhance the health and environment quality. To support the global (international), national and local efforts to improve the quality of life (health, environment, safety). To develop user friendly strategy for sustainable healthy life with chemicals, i.e. friendly to people and to the environment, including future generations.
	Spain	Health and environmental quality
	Switzerland	Health and environmental quality, special focus on children.
	Turkey	Improvement of safe use and limitations on use of chemicals.
SEARO	Indonesia	To improve awareness, willingness and capability of communities in order to achieve optimum health status. To develop healthy environment and protect communities from risks of chemical hazardous substances.
WPRO	Australia	<p>Australia has indicated that development of a SAICM should only proceed if it has clearly defined objectives, against which proposals for international action can be tested. We suggested these should be:</p> <ul style="list-style-type: none"> • to advance chemical safety at national, regional and international levels, that is to contribute at all levels to improved, health, safety and environmental quality; • to contribute to greater efficiency in chemicals management; • to increase chemical safety capacity at all levels, especially in developing countries and countries with economies in transition; and • to focus on identifying and encouraging action to address gaps in existing and future international management of chemicals <p>There are many different ways in which these objectives might be addressed, for example an improved information base for chemical safety decision-making would contribute to all four objectives.</p>
	Cook Islands	Achieving quality health care for all; Health protection, prevention and promotion.
	Kiribati	<p>For the benefit of developing countries herewith are the following suggestions:</p> <ul style="list-style-type: none"> • Goals and objectives shall be identified and formulated taking into the consideration the capacity of each member state. Where necessary, more emphasis, assistance, etc may be directed to those handicapped. • Developing countries have limited capacity both in analytical facilities and manpower expertise for performing identification analysis of chemicals and the potential associated health risks of a chemical in question. If only SAICM considers the marketing of less damaging chemicals. • Probably there may be several developing countries that rely solely on the labeling of the container of the chemical; as well as the warnings given about such chemicals. If only chemical manufacturers and chemical expert committees, agencies, etc, perform risk assessment of the chemical prior to its marketing. Additionally, such marketed chemical shall be accompanied with instructions as per its proper handling and management. <p>Goals and objectives should be routinely evaluated and updates on such undertakings shall be provided to each member state; especially the developing countries and those in transition.</p>

	Lao	Health and environment quality
	Marshall Is	WHO to develop surveillance and necessary measures to ensure our environment is safe, clean and free of bio-terrorism threats. Through WHO's collaborative efforts more health and environmental protection initiatives and relevant education programs should be developed for implementation.
	Palau	Health: Chemical residues in food (consumers), Chemical runoff in water (consumers), Chemical poisoning (users). Environment: Environmental contamination and degradation. Public awareness and education.
	Philippines	The goals and objectives should be indicated in simple statements that would encompass the main thrusts that the organization would be involved in. There is a need to outline the roles and responsibilities of international organizations, existing legal instruments, conventions and conference of parties to evaluate existing provisions, identify gaps, ensure consistency and harmonization of approves among related activities and focus efforts on priority areas.
	Solomon Islands	Adopt "Quality usage of chemical entities" to ensure/promote cost-benefits (including safety); Developing and strengthening model chemicals management control, preferably a national integrated system for small States
	Vanuatu	Incorporate sustainable environmental principles and management systems into strategy to minimize the effects of chemical management.

A2. Scope

AFRO	Angola	Chemical substances (2) Life-cycle approach.
	Central African Republic	Types of chemical substances, ensuring environmental quality
	Congo	Pesticides, fertilizers, petroleum products, gases, pharmaceuticals. Pesticide formulations, residues, resistance and active ingredients. Life-cycle approach.
	Equatorial Guinea	Types of chemical substances
	Gambia	Agricultural, industrial chemicals, importation, storage, distribution.
	Kenya	Classes of chemicals
	Rwanda	Chemical substances and organic pollutants, industrialising countries; non-biodegradable chemicals (POPs)
AMRO	Suriname	Pesticides, heavy metals, Their use and disposal
EMRO	Iran	Chemicals and pesticides and waste management
	Jordan	We believe that SAICM should focus on industrial chemicals and pesticides.
	Oman	Export, import, storage, use
	Pakistan	All industrial chemicals and their effluents
	Sudan	Types of chemicals
	Syria	Waste disposal and waste management, pollution
	Tunisia	Pesticides, drugs, solvents
	Yemen	Parts of life cycle
EURO	Armenia	Development of environmental monitoring system, improvement of environmental control against pesticides, persistent organic pollutants, lead, mercury, waste.
	Cyprus	Industrial and household chemicals and pesticides
	Estonia	The SAICM should be a general umbrella – a document providing strategy (harmonized understanding) of management of dangerous chemicals in their complete life-cycle (from production to use and disposal) on an international level.
	Finland	All chemicals and their whole life cycle should be covered.
	Hungary	Whole of life cycle of dangerous chemicals
	Israel	Drinking water safety (standards, monitoring), air pollution, pesticides, heavy metals, children and pregnant women
	Poland	Mutagens, carcinogens and chemicals affecting reproduction

	Slovak Republic	The whole life cycle of chemicals. Chemical substances. To support the implementation of existing policy, conventions, and to be open to cover the majority of used chemicals. Priority setting is necessary to be able to reach consensus and cost benefit.
	Spain	Carcinogenic, mutagenic, reprotoxic, having endocrine disrupting properties
	Switzerland	All chemicals in general. Life cycle of chemicals with a special focus/priority on chemicals in use.
	Turkey	The chemical industry's global policy on chemicals management.
SEARO	Indonesia	Management of Pesticides and Hazardous Substances (production, distribution, transportation, storage, use and disposal)
WPRO	Australia	The scope can cover all international action to address chemicals and their impacts on environment and human health. It should also address the management of chemicals throughout their life cycle. Within this, it could most effectively focus on supporting implementation of existing actions and assisting in capacity building.
	Cook Islands	Environmentally friendly, short life-cycle.
	Kiribati	Chemicals are produced by the very few (population-wise) knowledgeable people, while the use of such chemicals covers a far greater proportion of the population. In other words, it is the ignorant or least knowledgeable people that will use and enhance further exposure of people to the point of application or storage of such purchased chemical. Increasing public awareness on all associated health risks to each individual chemical, its usage and management shall be kept abreast.
	Lao	Types of chemicals
	Marshall Is	To institute a system for the collection and safe disposal of hazardous waste generated that contains possible dangerous chemicals.
	Palau	Pesticides: Organophosphates and carbamates. Heavy Metals.
	Papua New Guinea	Persistent Organic Pollutants; DDT use for agriculture (farming an malaria control)
	Philippines	Health threats of chemical exposure during development, particularly during early gestation, but also throughout pregnancy, infancy, childhood and adolescence. Health threats from the interaction of mixed chemicals. Need to strengthen industry participation into the SAICM process to reinforce responsibility in hazardous waste management. Strategies applicable for small-scale industries to implement agreed procedures and regulations. Include consumer products with potential to contribute as waste materials (mercury containing fluorescent lamps batteries, computers, etc.). Clean alternative options. Chemicals used in health care facilities/management (thiomersal in vaccines, etc.)
	Solomon Islands	Use "medicines policy model" to select chemical entities, manage them (classify, determine potential access restrictions, quality assurance, procurement practice, storage/distribution, use and disposal, monitoring and feedback)
	Vanuatu	Assessment of impacts of chemicals management/use in Vanuatu.

A3. Principles

AFRO	Angola	Polluter pays (2) Scientific basis.
	Central African Republic	Polluter pays, scientific bases
	Congo	Polluter pays POPs Scientific basis
	Equatorial Guinea	Scientific basis
	Gambia	Polluter pays, stewardship, prior informed consent, precautionary principle.
	Kenya	Polluter pays
	Rwanda	Control; strategies, national legislation, norms
	South Africa	Product stewardship conducive to a “cradle to grave” approach to chemicals management (now generally lacking) Availability of information on chemical safety, the use of chemicals and their hazard needs to be explored
AMRO	Suriname	Polluter pays (realistic, implementation in developing country ?)
EMRO	Iran	Basis on sound science.
	Jordan	Polluter pays, preventive principle, precautionary principle. In this regard there is a need to support developing countries in elaborating their domestic legislation to correspond to such principles.
	Oman	Basis on sound science
	Sudan	Based on sound science
	Yemen	Basis on sound science
EURO	Cyprus	Preventive approach, polluter pays and sound scientific assessment.
	Estonia	A deeper international collaboration; Enhancing the coherence and efficiency of the chemicals conventions; Identification of lead institutions for different issues; Increased responsibility on industry for the chemical safety of products; co-action of policy and science; precautionary approach/principle; substitution of hazardous substances with safer alternatives.
	Finland	Basis on sound science and polluter pays principle
	Hungary	Polluter pays principle
	Israel	Responsibility of the polluter; increasing public awareness through media and education

	Netherlands	Hazard data should be based on sound scientific evidence, which is well documented. It is recommended that the evaluation of the evidence should be done in a way as has been elaborated by IARC for (potential) carcinogenic substances. A similar world wide approach is advocated for (potential) reproductive toxic substances in order to come to a classification according to the recently developed Global Harmonised System (GHS) system.
	Poland	Sound scientific evidence for management decisions and public information, health and economic impact methodologies, integrated environment and health monitoring, and integrated intervention approaches
	Slovak Republic	Precautionary principle. Scientifically based approach. Polluter pays principle for individual chemical substances. From the state level harmonized and comprehensive policy, monitoring, capacity buildine, risk management including risk perception and risk communication. To involve all players.
	Spain	Based on sound science
	Sweden	Sweden would welcome intensified work by UNEP, in cooperation with other relevant organizations, based on the precautionary principle, on risk reduction and enhanced coherence and efficiency among international activities related to chemicals work.
	Switzerland	Precautionary principle, hazard data based on sound science, responsibility of the polluter.
	Turkey	Human health and environmental effects.
SEARO	Indonesia	Integrated Disease Surveillance and Epidemiology, Health Promotion, Case and public health Management, Emergency Preparedness and Management, Partnership and inter-program and sector coordination.
WPRO	Australia	Issues should be managed at an international level only where effectiveness and efficiency require it (the subsidiarity principle), eg where there is an issue of global scope requiring global cooperation; issues that are better addressed at a national or regional level and through individual action should not be drawn into the remit of a SAICM; The autonomy of decision-making bodies under existing arrangements (eg Conferences of Parties under the Conventions) must be maintained; and Scientific decision-making should be maintained as the basis of chemical safety.
	Cook Islands	Local supplier and operator, polluter pays damage.
	Kiribati	SAICM should develop a mechanism for ensuring the proper usage and management of chemicals. Should there be any complications arising from a particular chemical, a descriptive investigation by an approved chemical expert shall be undertaken to identify the causes of such complication and to recommend whether or not liability and/or compensation is to be borne by the polluter.
	Lao	Polluter pays
	Marshall Is	It is recommended that certain legislation should be in place, necessarily to protect the environment from being contaminated through dumping of hazardous waste that may contain dangerous chemicals. A reasonable penalty should be paid by any polluters.
	Palau	Fines and recovery costs.

	Philippines	<p>SAICM should take into consideration application of risk-based assessment and management methodologies in developing countries and countries in transition which may be inapplicable due to limitations in technical capability and availability of resources. Furthermore, it should be borne in mind that considerable uncertainties are associated in terms of effects on human health. In the absence of science-based knowledge, the Rio Principles 15 on precautionary principle should be observed.</p> <p>Globally harmonized acceptable technical guidance on risk assessment should be provided to member states specially developing countries and countries in transition.</p> <p>Access to proprietary information.</p> <p>Liability and compensation in terms of damage to the environment and human health for host countries to foreign military bases and international companies abandoning their operations and responsibilities in developing countries.</p>
	Solomon Islands	<p>Evidence base, for safety and rational basis for determining national need/control</p> <p>Integrated approach linking major conventions</p> <p>Polluter pays</p> <p>Quality assurance in chemicals handling, all stages of life cycle</p> <p>Risk management approaches: Quality assurance + adequate insurance = minimised chemical risk with resources coming from insured accidents to cover eventualities</p>
	Vanuatu	<p>Need to put in place legal mechanisms which could reinforce principles of polluter pays system.</p>

A4. Proposals on specific topics

AFRO	Angola	Health effects (3)
	Central African Republic	Health effects, poisonings
	Congo	Greenhouse gases that affect human health. LD50, WHO Classification of pesticides, mode of action of pesticides. Health effects.
	Equatorial Guinea	Health effects of chemicals
	Gambia	Pesticides, persistent organic pollutants, formulations of high volume use.
	Kenya	Persistent Organic Pollutants; DDT and its effects
	Rwanda	Health effects, impact in developing countries, ecotoxicology
	South Africa	Lack of sufficient, accessible and user-friendly information on chemical production, import, export and use is perhaps one of the most significant obstacles to establishing the relative priorities in the industry. PCB guidelines on regulations. Chemical data availability and analysis Soil and groundwater remediation guidelines Risk management of DDT in the public health sector User-friendly Material Safety Data Sheets on chemicals for the public
AMRO	Suriname	Chronic exposure to chemical and mixtures of chemicals and the health risk assessments
EMRO	Iran	Specific chemicals
	Jordan	Identify the types of chemicals to be covered. There is a need for a systematic approach that could cover larger groups of chemicals with a very limited or unknown characteristics and impacts, since our markets are open for thousands of chemicals, and the current conventions covers a limited number of chemicals with known harmful properties.
	Oman	All health effects
	Pakistan	Agricultural chemicals, petroleum, leather
	Sudan	Specific chemicals
	Syria	More emphasis on human studies
	Tunisia	Pesticides, solvents
	Yemen	Specific chemicals
EURO	Armenia	Stocks of obsolete pesticides and drugs
	Cyprus	Mutagens, endocrine disorders, carcinogens, toxic to reproduction
	Estonia	Heavy metals, oil-shale chemicals, combined effects of chemicals on health and environment, dissemination of chemicals through goods.
	Finland	All health effects and all chemicals should be treated in principle in a similar way.

	Israel	PCBs (in light of several publications on prenatal exposure and developmental impairment); lead; smoking (although it is dealt with by other WHO agencies, it is still the No. 1 preventable chemical health hazard) Using portable inexpensive field equipment for monitoring of chemicals and enabling their use in remote sites and in developed countries with quick and practical management protocols. Examples: field monitors of lead exposure and lead levels in fingerstick blood samples (in smoking: exhaled CO as a marker for smoking)
	Netherlands	Urgent need that industry fills the data gaps in knowledge of the hazards of substances, especially when they are used in consumer products. Special attention: potential carcinogenic, mutagenic and reproductive toxic (CMR) substances, potential sensitising substances. Industry should provide and evaluate the data especially on substances in consumer products when put on the market in the form of single substances, substances in preparations or substances in articles. Special attention should be paid to establish mechanisms of transfer of (toxicological) information in the chain from the producer of a chemical to the end user. In order to evaluate the risks of substances in consumer products a further harmonisation in methods to estimate the exposure and to establish dose-effect relationships seems to be warranted. In case of e.g. proven CMR properties a further regulation of substances can be initiated by means of an authorisation procedure.
	Poland	Generally those indicated in the European Strategy on Environment and Health
	Slovak Republic	To facilitate international multicentre study, to enhance the level of evidence, to apply evidence-based methodology beside the informed international coordinated toxicological research. To continue and enhance research on genotoxicity, mutagenicity and immunotoxicology, endocrine disruptors. To be flexible and update the toxicological research on what is (will be) needed.
	Spain	Specific health effects as cancer and endocrine effects
	Sweden	The generation and dissemination of data on the properties of chemicals, development of substitutes and alternative technologies, and illicit trafficking should be taken into account in this context. The impact on human health and the environment from diffuse dissemination of chemicals through goods needs to be considered. International standards for placing chemicals on the market could facilitate the control of chemicals.
	Switzerland	Sensitization, multiple chemical sensitivity, endocrine disruptors, low dose toxicity, cohort studies.
	Turkey	Types of chemicals and non-chemical alternatives.
SEARO	Indonesia	Public Health Pesticides and chemical incidents acute intoxication) and long effect of Chemical exposure (Cancer)
WPRO	Australia	Implementation of those agreements and undertakings already entered into at international level; - continuation of the priorities identified in the IFCS Bahia Declaration including the coordination and strengthening of capacity building initiatives for those countries in need; - support for the two international instruments, the Stockholm and Rotterdam conventions, that are yet to enter into force, and also for the work of the Basel Convention, including action on regional instruments; - implementation of the globally harmonized system for the classification and labeling of chemicals (GHS); Support for the adoption by other international agencies of efforts already being undertaken to update and harmonize

		<p>activities related to risk assessments; Facilitation of the development of national systems to record adverse environmental and health reactions to chemical exposures and the exchange of this information between governments; Facilitation of the collection of data through improved global monitoring of the environment; and Encouragement for the uptake by national governments of Pollutant Release and Transfer Register (PRTR) programs.</p>
	Kiribati	<ul style="list-style-type: none"> • SAICM to encourage chemical manufacturers/producers to clearly define the specific health effect of such chemical, specifying the most vulnerable ones. • Facilitation of the development of national system to record any adverse environmental and health effects to chemical exposure and the exchange of such information between governments. • SAICM to encourage development of alternative chemicals (less damaging) to replace the hazardous ones, and also to ensure the total ban to replaceable hazardous chemicals.
	Cook Islands	Malathion, inhaling health effects.
	Lao	Specific chemicals, specific health effects
	Marshall Is	Cancer of the lungs, cardiac arrest, congestive heart failure.
	Palau	Pesticides: Pesticide poisonings, skin diseases, respiratory illnesses. Heavy Metals: cancer, developmental disabilities.
	Papua New Guinea	DDT as it affects quality of water sources and food (agricultural and marine life)
	Philippines	<p>Children's environmental health Cleaner technology options for disposal of obsolete drugs, chemicals including hazardous wastes (especially for the Philippines which already banned incineration under the Clean Air Act) to be made available to developing countries and countries in transition. Endocrine-disrupting chemicals Environmental toxicants such as lead, mercury, arsenic Natural sources of chemicals including potential health effects to low-dose chronic exposures. Mixtures of chemicals Consumer products (i.e. mercury containing fluorescent lamps) Agricultural pesticides Proprietary information Chemicals used in health care facilities/management (e.g. thiomersal, phthalates in plastic materials, etc)</p>
	Solomon Islands	<p>Climatic effects in chemicals stores in tropical countries Public education for safe use in population with limited literacy; safety and usage limiting for non/semi-literate users</p>
	Vanuatu	As currently a party to the Stockholm Convention, consideration should be given to small island developing states in implementing the convention with particular inference to the 12 chemicals.

B. Coordination

AFRO	Angola	Coordination between countries (3).
	Central African Republic	Between sectors and between countries
	Congo	Improvement of coordination mechanisms at national and regional level (central Africa). Harmonization of legal requirements for pesticides: registration, import permits. Between administrations in countries.
	Equatorial Guinea	Coordination between countries
	Gambia	Interdepartmental and NGO coordination, regional networking, interconvention coordination.
	Kenya	Networking between conventions
	Rwanda	Aid to developing countries for implementing conventions
	South Africa	Within countries of the Southern African Development Community (SADC) and the Region
AMRO	Suriname	Between conventions and regional countries
EMRO	Iran	Between conventions, between countries
	Jordan	To ensure full coordination between the work in Rotterdam, Stockholm and Basel Conventions and the development of SAICM.
	Oman	Between conventions
	Pakistan	Between countries and conventions
	Sudan	Between conventions
	Tunisia	Safe and neutral coordination
	Yemen	Between countries
EURO	Armenia	Between conventions
	Cyprus	Integration of national priorities with provision of coordination and international cooperation.
	Estonia	Global Harmonized System in producing, managing and using chemicals should be the main task. However, cooperation should be practical, possibly through country or regional pairings but the result of it should “flow” together.
	Finland	It depends on situation, coordination between Conventions <u>and</u> countries should be possible.
	Netherlands	The coordination of the activities and capacity building should take place at the regional level for e.g. in the EU to overarch the chemical safety policy.
	Poland	Harmonization of the European processes on environment and health including chemicals management
	Slovak Republic	Coordination between international bodies and countries.
	Spain	Between conventions and also between countries that have a not very developed chemicals strategy
	Sweden	There is also an increasing need to develop coordinated national action plans for chemicals management.

	Switzerland	Between countries, conventions and organizations dealing with this matter.
	Turkey	Improvement of coordination between countries.
SEARO	Indonesia	National Pesticides Commission, National Hazardous Substances Commission, Environmental Impact Analysis Commission, National Chemical Coordination Forum, National Poison Centre
WPRO	Australia	Coordination may best be delivered through greater activity on the part of existing organisations and secretariats. We do not see the case for a new entity.
	Cook Islands	National coordination between stakeholders.
	Kiribati	Strengthening information sharing between countries; A detailed protocol especially to developing countries when chemical management cross country borders is involved; Restriction of chemical transit in countries where those countries are not signatories to existing conventions.
	Lao	Between countries for example when chemical management issues cross country borders
	Marshall Is	WHO has already been established and should make an effort to develop dialogues with the Member State health sectors.
	Palau	Regional Chemical Database & Management (i.e. list-serve), Environmental and Public Health Monitoring System - Provide Linkages between chemicals and health effects.
	Papua New Guinea	Bilateral relationship with neighbouring countries and Commonwealth and WHO member countries
	Philippines	Strengthening information exchange among countries (regional/global) Globally harmonized formats for databases with timely, readily available information Restrictions applicable in the transit of chemicals in countries who are not signatories to existing conventions Harmonize conflicting provisions of existing legally binding instruments to ensure consistency and improve coordinated mechanisms between and among international organizations
	Solomon Islands	Interlinking coordination states/conventions to be built into national control model, identifying national communicator/coordinator
	Vanuatu	Consider Stockholm Convention and linkages/synergies with other national, regional and international conventions e.g., UNCBD, Montreal Protocol, Waigani Bases etc.

C. Capacity building

AFRO	Angola	Resources (3).
	Central African Republic	Strengthening human, material and (word cut in transmission) resources
	Congo	Improvement in analytical capacities and coordination mechanisms. Training (local and overseas), participation in international meetings. Resources.
	Equatorial Guinea Kenya	Training of human resources; mobilisation of resources Involvement in training, workshops, conferences
	Gambia	Training of regulating authorities, training of users, training in mobilization of resources.
	Rwanda	Enhancing capacity and education/training for developing countries
	South Africa	Cleaner products and technology – lack of resources and fields of expertise and lack of capacity in the country to allow for effective monitoring enforcement of permitted limits and dealing with relevant issues of concern <ul style="list-style-type: none"> • Technical and financial support with particular focus on research and risk communication. • Awareness and education amongst the general public regarding the hazards associated with chemicals.
AMRO	Suriname	Resources, executing capacity Capacity building as a region of small states in development to be more effective with restricted funding in chemical safety issues
EMRO	Iran	Training
	Jordan	Support the developing countries in building up and strengthening their capabilities in managing chemicals, especially in the field of monitoring and controlling the import, entry and use of chemicals in an effective way. Jordan is a small country and is not a producer and we are subject to marketing and sale of a wide range of hazardous chemicals in the absence of relevant up-to-date information. Jordan believes that comparative information on the control of chemicals is very essential to learn how other countries manage chemicals, especially those with a well-established system in this regard. Capacity building for DNAs through special training on how to fully implement PIC. Focus on country needs in the field of chemicals management, especially training on environment and health impacts, risk assessment and chemical life cycle assessment.
	Oman	Among countries
	Pakistan	Within country and international
	Sudan	Both technical and financial resources
	Syria	Training
	Tunisia	Capacity building must be supported

	Yemen	Resources
EURO	Armenia	Structure for chemical safety management, equipment, training for medical and laboratory personnel including poisoning remediation
	Cyprus	In terms of training and support to infrastructure.
	Estonia	The SAICM should focus on the need for technical and financial assistance to developing countries and identify various financial and economic restraints. Also, international collaboration of scientists and specialists should be increased, and a well working information exchange network should be developed.
	Finland	Priorities among countries
	Hungary	Financial resources for developing countries
	Israel	Exchange of knowledge, special courses for professionals; empowerment of local professionals is more effective than a paternalistic approach of having experts from developed countries do the ongoing supervision in site in developing countries; emphasis on education and prevention
	Poland	Harmonized approach to professional education and training in public health, environmental health and chemical safety
	Slovak Republic	Professionals in risk assessment, risk management, risk communication, environmental health. Awareness to use the existing structures and institutions, stakeholders (healthy cities, healthy schools, healthy kindergarden, healthy workplaces, healthy children in healthy families).
	Spain	Priorities among countries
	Switzerland	Priorities among countries.
	Turkey	Priorities among countries.
SEARO	Indonesia	Training related to Environmental Impact Analysis, Environmental Health Impact Analysis, Risk factor analysis, environmental health epidemiology, Toxic hazardous waste management, and clinical emergency. Provide emergency protection apparatus. Develop guidance on case and public health management, Provide clinical and environmental health laboratory.
WPRO	Australia	The priorities identified in the IFCS Bahia Declaration continue to provide an appropriate direction for efforts to improve the coordination and strengthening of capacity building initiatives.
	Cook Islands	Revive pesticide board, Registration/consumer protection.
	Kiribati	Assisting developing countries and those in transition for the establishment of a national or regional laboratory for performing chemical testing; Assisting developing countries in the training of those engaged in the storage, preparation, distribution and use of chemicals. Such training can be termed as "Chemical management protocol".
	Lao	Resources/priorities (institutional capacity building) for example, TOT.

	Marshall Is	Again, the WHO may have to, as part of the dialogue, establish communication network with the member state to ascertain what resources and priorities that are most needed in the development of the capacity building.
	Palau	Capacity building for regulating agencies: Training, Certification, Public Education and Development of database.
	Papua New Guinea	Technical and equipment support
	Philippines	<p>Technical and financial mechanisms to support developing countries and countries in transition in the following:</p> <p>Evaluation of technologies</p> <p>Information for chemicals management decision-making processes of government,</p> <p>Health and safety considerations in handling, reuse, recycling and disposal of unwanted stocks, obsolete, expired and outdated chemicals</p> <p>Cleaner technology options in manufacturing processes, recycling and disposal of chemicals</p> <p>Building legislative capacities of governments</p> <p>Researches (Development of data to reduce uncertainties in risk assessment, Development of risk assessment methods and models especially for children, Risk management and risk communication, Health effects of mixed chemicals, Definition of health end-points, Health/Effects of low-dose chronic exposures, Health effects of Chemicals at Background levels)</p> <p>Foster cooperation and sharing of expertise</p> <p>Industry contribution to efforts of SAICM</p>
	Solomon Islands	Focused on generating political will and attaining adequate resources for national control agency/structure
	Vanuatu	Need to provide training for users, managers and agencies directly involved with chemical management in Vanuatu.

D. Development and implementation aspects

AFRO	Angola	Participation in the process (3).
	Central African Republic	Participation in the different processes, implementation, follow-up and evaluation
	Congo	Participation in the global process (management of chemical products, mobilization of financial and human resources) Establishment of regional and sub-regional commissions. Participation in the process and follow-up
	Equatorial Guinea	Support for participation in process
	Gambia	Participation in SAICM process, setting up of national structures of SAICM.
	Kenya	Participation in SAICM process
	South Africa	Positive involvement in the SAICM process including local government participation
AMRO	Suriname	Get stakeholders active involvement during development and implementation Link/translate the SAICM activities to daily live for the general public
EMRO	Iran	Participation in SAICM process
	Jordan	The development of SAICM cannot be successful without the appropriate involvement of all stakeholders in the process of chemicals management, including government agencies, industry, environmental and health NGOs in consistence with the domestic laws and regulations, and the developing countries should be encouraged to do so. The implementation of SAICM in a satisfactory manner cannot be reached without a strong commitment from the developed countries and international agencies concerned with chemicals management to support the developing countries in different aspects.
	Oman	Development and follow up
	Pakistan	Participation in SAICM process and follow-up
	Sudan	Participate in SAICM if possible and follow up the process
	Tunisia	Via government and safe and neutral coordination
EURO	Cyprus	Cyprus has just joined the SAICM system.
	Estonia	A rough frame of international policy should be worked out and a scheme should be provided how to bring it into force and a system of regular discussions/workshops about troubles and advances should be made.
	Finland	Participation in SAICM process
	Poland	Harmonization of the European processes on environment and health including chemicals management

	Slovak Republic	To invite all stakeholders. The professional expertise has to be used (health sector leading role responsibility in health effects assessment, terminology, etc). To invite all stakeholders also at national level, intrasectoral level, different professions, experts and public.
	Spain	Follow-up process
	Sweden	The responsibility of industry and the role of other stakeholders for implementation should be underlined. Sweden believes it is of utmost importance that the process is open and transparent and that all different stakeholders are consulted during the process.
	Switzerland	Participation in the process (multi-stakeholder process, producer, user, government, NGO).
	Turkey	Applications of management processes in each country.
SEARO	Indonesia	Will participate in WHO SEAR chemicals meeting, Forum IV and SAICM PrepCom
WPRO	Australia	Development should continue to be through a multi-stakeholder process.
	Cook Islands	Improve/maintain a healthy partnership with SAICM.
	Kiribati	Identification of the most relevant counterpart of SAICM in every member country; Ensure multi-stakeholder participation on the development, implementation and follow-up process.
	Lao	Participation in SAICM process
	Marshall Is	Perhaps the SAICM participation and implementation scheme should be done according to different designated regions.
	Palau	Participation in SAICM, Contact Person in Country Identified, Follow-up process with contact person
	Papua New Guinea	Participation through Dep of Environment and Conservation and Dep. Of health
	Philippines	Ensure participation of developing countries in the conference of parties and governing bodies Ensure multi-stakeholder participation (i.e. environment, health, agriculture, industry, peoples organization, etc. Utilize existing coordinative set-up within the international organizations for follow-up and monitoring of implementation.
	Solomon Islands	Proposed “national model” to be further developed by facilitating the design and evaluation of alternative structures in candidate countries, perhaps with existing good controls or large needs
	Vanuatu	In country training is very important which can allow participation of more than one person going for training overseas.

Overall priorities

AFRO	Angola	Capacity building. Also mentioned as the most urgent issue to be addressed was Poisons Centre. Life-cycle approach. Health effects.
	Central African Republic	Food and environmental safety and quality
	Congo	Ecosystem and health of the population. Addressing environmental pollution (sea, air, food). Health and environment actions are interlinked and cannot be dissociated. Life-cycle approach.
	Equatorial Guinea	Effects of chemical substances on health
	Kenya	All issues A-D are important
	Rwanda	Health effects, impact in developing countries, capacity building in developing countries, ecotoxicology
	South Africa	Soil and groundwater remediation guidelines, coordination, capacity building
AMRO	Suriname	A1 (Addressing the widening gap among countries in following (international) chemical safety policies Data generation on health and environmental quality related to developing countries Developing of full cost accounting framework related to developing countries) and A4 (Chronic exposure to chemical and mixtures of chemicals and the health risk assessments)
EMRO	Iran	Chemical safety laboratory and analytical methods, health and environmental quality, training, chemicals/pesticides/waste management.
	Jordan	All areas mentioned are important.
	Pakistan	Goals 1. Health 2. Cost-Efficiency 3. Environment; Scope All industrial chemicals and their effluents; Specific topics Agricultural chemicals, petroleum, leather; Capacity building
	Syria	Training, waste disposal and waste management, pollution
EURO	Armenia	Health aspects of chemicals and waste, industrial production, transportation, storage of pesticides, obsolete stocks, capacity building
	Estonia	The combined effects of chemicals should be brought into light as one of the major chapters for better understandings of the actual impact of chemicals.
	Finland	There is an urgent need to rationalize risk assessment so that all health risks will be treated in a similar way. It is important that epidemiological findings and so called reality checks should be more emphasized in the chemicals management.
	Hungary	Whole of life cycle, followed by polluter pays, followed by financial resources for developing countries
	Israel	Drinking water safety; portable monitoring equipment, quick management protocols
	Poland	Harmonization of the European processes on environment and health including chemicals management

	Slovak Republic	To reach balanced approach, scientifically based and efficient philosophy (strategy).
	Spain	Specific health effects as cancer and endocrine effects
	Switzerland	Implementation and/or strengthening of the existing international agreements.
SEARO	Indonesia	Not under this question, however the opening section stated the most urgent issues to be addressed are: Lack of Coordination among programs, sectors, nationally and internationally, Lack of information /evidence base, The poor quality, availability, and accessibility of case and public health services.
WPRO	Australia	Implementation of existing international agreements and the strengthening of capacity building initiatives.
	Cook Islands	Environmentally friendly chemicals/pesticides.
	Kiribati	Answers on Development of SAICM and implementation; Capacity building; and coordination are top priority.
	Marshall Is	As per Question A1.
	Palau	Answers on Coordination and Development of SAICM
	Papua New Guinea	Technical support
	Philippines	Capacity building remains as a top priority since implementation of these legally binding instruments would be at the country level and this would encompass cross-cutting issues on chemicals and its impact on health and the environment.
	Solomon Islands	Short term: national consensus on suitable local model, with associated policy support and resourcing. Longer term: Positive promotion of good/safe use
	Vanuatu	Training of chemical managers and other key players.