



World Health Organization

HEALTH SECTOR IMPLEMENTATION STRATEGIC APPROACH TO INTERNATIONAL CHEMICALS MANAGEMENT (SAICM)

FACILITATION BY THE WORLD HEALTH ORGANIZATION

Updated 29 August 2008

INTRODUCTION

1. The World Health Assembly (WHA) Resolution 59.15 on the Strategic Approach to International Chemicals Management (SAICM) welcomed SAICM, urged Member States to take full account of the health aspects of chemical safety in national implementation of SAICM and requested the Director-General of WHO to facilitate health sector implementation focusing on human health-related elements. The full resolution is available on the WHO SAICM webpage, http://www.who.int/ipcs/features/saicm_revised/en/index.html.

2. The detailed health sector priorities advocated by WHO during the SAICM negotiations were identified through consultations with its Member States. These priorities are set out in Annex 1 and can be summarized under the following headings:

- Actions to improve ability to access, interpret and apply scientific knowledge.
- Filling of gaps in scientific knowledge.
- Development of globally-harmonized methods for chemical risk assessment.
- Development of better methods to determine impacts of chemicals on health, to set priorities for action and to monitor progress of SAICM.
- Building capacities of countries to deal with poisonings and chemical incidents.
- Strategies directed specifically at the health of children and workers.
- Work to promote alternatives to highly-toxic and persistent chemicals.
- Strategies aimed at prevention of ill-health and disease caused by chemicals.

3. The health-sector priorities identified by WHO are well reflected in the SAICM Overarching Policy Strategy and Global Plan of Action.

4. This paper provides information on current and proposed WHO activities in support of SAICM implementation, including activities aimed at facilitating the broader engagement of the health sector. In some cases, proposals for new activities and increased emphasis on existing activities will rely on securing additional donor support. In all of its efforts WHO is guided by the health sector priorities and its mandate as the directing and coordinating authority for health within the United Nations system.

5. The paper reflects activities of WHO including its Regional Offices. There are 193 WHO Member States grouped into six regions; Africa, the Americas, the Eastern Mediterranean, Europe the Western Pacific, and South-East Asia (<http://www.who.int/about/regions/en/index.html>) WHO has a country office in almost all of its Member States, headed by a WHO Representative. This comparative

advantage allows WHO to be in close proximity and work cooperatively with countries in their SAICM implementation activities.

CURRENT AND PROPOSED WHO INITIATIVES

6. Key current WHO activities and proposed activities (dependent on funding and further consultation), are provided in this section of this document, organized according to: global activities addressing the health sector priorities; activities addressing WHO facilitation of health sector implementation; and information on regional activities.

7. Actions to improve ability to access interpret and apply scientific knowledge. Examples:

- INCHEM is a publicly available, free-of-charge to the end-user, web and CD database containing thousands of publications on chemicals. WHO has offered INCHEM as a formal contribution to the SAICM chemical clearing house. INCHEM receives in the order of 450,000 unique visitors per month, and it is hoped that access to INCHEM through the planned Global Portal (a development led by OECD) will further broaden its availability.
- Development of norms and guidance for the collection, recording and use of biomonitoring data for risk assessment, surveillance and to evaluate the effectiveness of primary prevention. Possible actions include strategies for harmonisation of methods for producing comparable exposure monitoring data, interpretation and communication of results. This work will support regional strategies for health and the environment and monitoring exposure trends for persistent organic pollutants.
- Development and updating international guidelines directed at assisting countries to develop effective regulatory responses to control exposure to hazardous chemicals in specific environments (e.g. drinking-water, wastewater use in agriculture, bathing water, etc.).
- Development of guidance on assessing the priority of actions to focus public health efforts (e.g. in the context of drinking-water).
- Development of a Risk Assessment Toolkit for country/local use, which will include tools such as how to identify priorities and problems, and case studies, for example how to identify and assess severely hazardous pesticide formulations.
- A range of other activities will be elaborated addressing the interpretation and application of scientific knowledge. Also refer to the health sector priority on development of globally-harmonized methods for chemical risk assessment.

8. Filling of gaps in scientific knowledge. Examples:

- Assessing the risks of chemicals which contribute to environmental burdens of disease including the development of 'fast track' approaches for critical issues and tackling issues associated with multi-media exposure, and focused risk assessments based on country needs.
- Preparation of high-quality international chemical risk assessments that can be used by countries for identifying, prioritising and managing risks to public health. e.g. to date 238 Environmental Health Criteria Documents and 73 Concise International Chemical Assessment Documents have been published.
- Joint FAO/WHO Meetings on Pesticide Residues (JMPR), for pesticide assessments.
- Joint FAO/WHO Expert Committee on Food Additives meetings (JECFA), for assessment of food contaminants and food additives.
- Supporting country assessments to identify health issues arising from chemicals, e.g. in drinking-water.

- Focussed projects on recent/emerging issues, including the health impacts of manufactured nanomaterials, and endocrine disruptors.

9. Development of globally-harmonized methods for chemical risk assessment. Examples:

- The IPCS Project on Harmonization of Approaches to the Assessment of Risk from Exposure to Chemicals has numerous activities that produce internationally-harmonized guidance for risk assessors. New emphasis is being placed on dissemination and uptake of the methods produced. Current initiatives include development of guidance addressing the problem of risk assessment of aggregate and cumulative exposure to chemicals, i.e. exposure to mixtures of chemicals in real-life scenarios.
- Use of toxicogenomics for risk assessment (with OECD).

10. Development of better methods to determine impacts of chemicals on health, to set priorities for action and to monitor progress of SAICM. Examples:

- A WHO publication on the burden of disease caused by environmental factors (25%) was released on 15 June 2006. Building upon this work, new country-by-country data were released in June 2007 showing the detail of impacts of environmental factors on health http://www.who.int/quantifying_ehimpacts/countryprofiles/en/
- The INTOX Data Management System provides a means of collecting internationally comparable data on exposures to chemicals to support countries in implementing primary prevention measures. Currently 17 poisons centres in developing countries use this system. Projects in the training and use of the system to collect data to guide prevention activities, improve burden of disease and chemical injury data and collect data useful for implementation of chemicals conventions and agreements such as the Rotterdam Convention.
- Further work focusing on the public health impacts of exposure to chemicals is planned. This work will include both burden of disease approaches and health impact assessments.
- New work is needed on ways to monitor the progress and effectiveness of SAICM in relation to human health.

11. Building capacities of countries to deal with poisonings and chemical incidents. Examples:

- Efforts continue to foster the establishment of poisons centres in the many countries that have no centre, or insufficient centres. Tools for use by poisons centres need to be kept up to date, e.g. data management system and internationally harmonized terminology for documenting poisoning cases, poisons information and antidote monographs, training materials and networks of poisons centres.
- The Global Chemical Incident Alert and Response System identifies and responds to chemical incidents of potential international public health concern, in accordance with the International Health Regulations (2005). This work is undertaken in partnership with WHO programmes on health Action in Crises (HAC), Epidemic and Pandemic Response (EPR) and those dealing with preparedness and response to natural occurrence, accidental release or deliberate use of biological and chemical agents or radionuclear materials that affect health.
 - Most recently the team has responded to chemical incidents in Angola (mass poisoning with bromide), Iraq (thallium poisoning), Mongolia (gold mining) and Senegal (battery recycling and lead poisoning).

- Further development work is planned, for example, to enhance the capacity of poisons centres to respond to public health threats from chemicals, to provide teaching materials on clinical toxicology and to assist in the implementation of the Globally Harmonised System of Classification and Labelling of Chemicals.

12. Strategies directed specifically at the health of children and workers. Examples:

- Guidance and training materials related to children's health, e.g. guidance on how to establish Paediatric Environmental Health centres, and a Training package for the health sector on children's health and the environment.
- Long-term research studies on children's health and the environment.
- The 60th World Health Assembly in May endorsed a WHO global plan of action on workers' health 2008-2017 (Resolution WHA60.26) http://www.who.int/gb/ebwha/pdf_files/WHA60/A60_R26-en.pdf. In addition to a number of measures to protect and promote the health of workers, the global plan of action calls upon all Member States to define essential interventions for assessment and management of chemical risks in the working environment, and in particular integrated chemicals management at the workplace, as well as to strengthen environmental protection with regards to workers' health through implementation of the risk reduction measures foreseen in SAICM. Activities to implement the Global Plan of Action are being developed through regional consultations and with ILO and partners in the Global Network of WHO Collaborating Centres for Occupational Health http://www.who.int/occupational_health/publications/newsletter/gohnet13_26nov07. Production of some 1,600 International Chemical Safety Cards for the workplace (with ILO), with most available in 17 languages. Work is commencing on including on the cards the new chemical classifications in accordance with the Globally Harmonized System of Classification and Labelling.
- Promotion of and implementation of the International Chemical Control Toolkit (or "control banding") approach, which is a practical tool for use in small-scale workplaces to identify necessary controls for chemicals to minimize exposure (with ILO and UNITAR). WHO provides the Secretariat. More work at country level, e.g. with pilot countries is needed.

13. Work to promote alternatives to highly-toxic and persistent chemicals. Examples:

- The 2005 WHO Workshop on Chrysotile Asbestos Substitutes provides an example of one way to assess and make available information on safer substitutes.
- New efforts will be placed on interventions, including utilizing settings-based approaches, such as schools and villages.
- Development and implementation of tools for disease prevention and control, including assessment of the costs and benefits of interventions, best-practice solutions and guidance for effective decision-making.

14. Strategies aimed at prevention of ill-health and disease caused by chemicals. Examples:

- WHO is implementing its new prevention strategy for environmental health. This covers the following main themes, which all have a chemicals aspect: assessing and managing environmental risks to health; interventions for healthy environments; and emerging issues in health, environment and development.
- One example of an action under this heading is provision of guidance on minimizing generation of hazardous chemicals, such as in health care waste incineration.

WHO FACILITATION OF HEALTH SECTOR IMPLEMENTATION

15. WHO facilitation of health sector implementation

- In all of the above activities, WHO will work with, and facilitate participation of, health sector partners, including Member States, WHO Collaborating Centres, IPCS Participating Institutions, non-governmental organizations, and with the health sector generally, as needed.
- WHO maintains a SAICM website: http://www.who.int/ipcs/features/saicm_revised/en/index.html which provides information for the health sector. In addition, details of specific WHO activities on chemicals, for example by the International Programme on Chemical Safety, are available from the following website: <http://www.who.int/ipcs/en/>

WHO REGIONAL ACTIVITIES ON CHEMICALS SAFETY - HIGHLIGHTS AND PRIORITIES

16. The following sections outline highlights and priorities of the six WHO regional offices. This information will be updated over time, as the SAICM implementation progresses.

REGIONAL OFFICE FOR EUROPE (EURO)

17. WHO EURO aims to promote a healthier environment, intensify primary prevention and influence public policies in all sectors so as to address the root causes of environmental threats to health. EURO medium term (2008-2013) priority actions which will support SAICM are provided below.

18. Develop and update evidence-based assessments, norms and guidance on priority environmental health risks (e.g., air quality, chemical substances, EMF, radon, drinking water, waste water reuse); provide technical support to international environmental agreements and for monitoring the MDGs.

- Identify progress in scientific evidence on health impacts of air pollutants allowing improvement of the existing (or creation of new) WHO guidelines.
- Provide the Convention on Long Range Transboundary Air Pollution with the assessment of health risks from pollutants transported over long distances.
- Facilitate participation of Member States from WHO-Euro in SAICM, Rotterdam and Stockholm conventions and in other international agreements or programs.
- Develop and update evidence-based assessments and guidance for monitoring priority environmental health risks and the MDGs.
- Establish environment and health information system supporting policy-making in Europe.
- Assessment of occupational burden of disease in Europe.
- Development and implementation of EURO Regional Programme on Workers Health (good practice guidance).
- Support the countries to eliminate the hazardous child labour.

19. In accordance with WHA 59.15, EURO reports that five countries (Croatia, Estonia, Hungary, Latvia and Slovakia) have provided focal points from the health sector to maintain contact with WHO on SAICM matters.

Recent highlights include :

The review of “Health risks of heavy metals from long range transport of pollution”, conducted by WHO as a contribution to the work on the UN Convention on Long Range Transboundary Air Pollution, was finalized and published in 2007.

WHO, acting as a secretariat of the Joint WHO-Convention Task Force on Health has also contributed to the review of the Gothenburg Protocol of the LRTAP and to other items of the Working Group on Effects work plan, including the review of the capacities of the EECCA countries to the assessment of health effects of air pollution and the evaluation of the “Health risks of PM from various sources”.

In 2008, WHO EURO initiated a new round of work to prepare indoor air quality guidelines for chemicals

20. Technical support and guidance to countries for the implementation of primary prevention interventions that reduce environmental health risks, enhance safety, and promote public health, including in specific settings and among vulnerable population groups (e.g. children, elderly).

- Develop and implement chemical emergency response capacity, enhancing chemical safety.
- Support countries in the risk assessment and management of chemical exposures of vulnerable populations (e.g. WHO EURO response to the lead poisoning of minority groups in Kosovo).

Recent highlights include:

The workshop of on “Reducing health risks from mercury exposures in the European Region of WHO” was held from 7 to 8 November, 2007 in Bonn, Germany. Twenty-five experts from 20 countries participated at the workshop. The workshop was organized to discuss regional needs for exposure prevention and recommend further steps to improve understanding of the mercury problem and its solutions, in particular in the Eastern European, Caucasus and Central Asian (EECCA) countries.

A pilot study was conducted in Temirtau Kazakhstan upon the request of the Ministry of Health and Ministry of Agriculture of Kazakhstan in order to assess health effects of mercury released from a contaminated site. The field project included the examination of mercury-exposed participants to assess for typical clinical effects of chronic elemental mercury burden. The specimens collected (urine, hair, blood, breast milk) were analyzed for mercury. The results from the field mission and the laboratory were combined and evaluated.

Chemical incidents in the European region that may have national and or international implications were followed-up and support was provided in collaboration with the Country Offices. Seventeen moderate to severe chemical incidents happened in 2007 and some more locally reported minor incidents were verified.

Assessments of the current capacities of the ministries of health in Azerbaijan, Armenia and Moldova for emergency preparedness and response with special reference to legal framework and institutional arrangements in place for prevention, mitigation, preparedness and response to potential natural and man-made disaster situations relevant in the country context were conducted. Core capacities for implementation of the International Health Regulations, capacities for dealing with a disaster involving the release of a chemical substances (accidental or intentional) were evaluated. The pilot assessments were organized in the context of the EC DG Sanco project on “Support health security and preparedness planning in selected EU neighboring (ENP) countries..

WHO EURO has prepared an assessment tool to assist in the assessment of chemical safety capacities with a particular emphasis on public health aspects of Annex 1 of the International Health Regulations (IHR, 2005). It builds on the general IHR self assessment tool distributed to IHR National Focal Points in January 2008. A meeting on “The Role of Health Systems in Chemical Safety for EECCA Countries” was held in Minsk, Belarus, 20 - 22 February 2008. The objective of the meeting is to review the capacity of health system of EECCA countries in the field of chemical safety and to identify needs for international support for national and sub-regional priority actions strengthening health system role, especially in preparedness and response to chemical emergencies. The Workshop recommended a Russian-Language system to collect data on poisons. WHO EURO is supporting the translation of the IPCS INTOX Data Management System into Russian for this purpose.

A meeting on the “Sound management of hazardous chemicals including pesticides” was held in Bonn, Germany, 13-14 August 2008. The objective of the meeting is to reduce the health and environmental risks connected with the use of pesticides including the impacts of climate change. It aims to assist in the sound management of pesticides, focusing on risk reduction, protection of human and environmental health, and share experiences on these issues between European countries including Eastern Europe, Caucasus and Central Asia

21. Technical assistance and support to countries for strengthening occupational and environmental health policy- making, planning of preventive interventions, service delivery and surveillance.

- Assist Member States in upgrading their air quality monitoring network, focusing on development of monitoring of particulate matter.
- Provide technical support to the Member States for strengthening policies and actions related to chemical safety.
- Technical assistance and support to countries for strengthening environmental health policy-making and surveillance (EHIS).
- Human biomonitoring and environmental health surveillance.
- Support countries to strengthen the health system for delivery of occupational health services and surveillance.
- Implementation of WHO global and regional strategy to reduce occupational risks in countries in transition.

Recent highlights include:

The European Environment and Health Information System, ENHIS, has been established as a web-based information service (www.ENHIS.org). The ENHIS site hosts several products focusing on environment and health issues related to the Children's Environment and Health Action Plan for Europe (CEHAPE), such as:

- 26 indicator-based assessments, some of which have also been replicated at national level;
- The CEHAPE indicator-based report “Children’s health and the environment in Europe: a baseline assessment”;
- An overview and analysis of environment and health policies in Europe, including an inventory and a series of topic-based assessments in 18 EU countries;
- Country information, including ENHIS indicator-based country profiles and most relevant recent information and evidence for European countries;
- Methods and tools, including the tool for health impact assessment of outdoor air pollution in European cities *HIAir*.

In March 2007, the Fifth Meeting of European Network of WHO Collaborating Centres in Occupational Health was held in Buxton, UK, with 60 participants from 27 collaborating centres and 25 national focal points in occupational health to review the progresses and to plan the work plan. In October, 2007 the Baltic Sea Network on Occupational Health and Safety was held in Bonn, and discussed the work plan of 2008. In November 2007, a coordination meeting of WHO, ILO, and EU was organized by Bonn office in Vilnius to plan coordinated actions in 2008-2009.

In 2008, the WHO EURO regional workplan to implement the Global Plan of Action on Workers Health in the European region will be further developed in consultation with WHO contact persons and WHO Collaborating Centres for Occupational Health. The meeting of WHO contact persons for occupational health will be held in Helsinki, on 22 and 23 September 2008 and the meeting of WHO Collaborating Centres will be held in Madrid, from 14-16 October 2008.

22. Guidance, tools, and initiatives supporting the health sector to influence policies in priority sectors (e.g. energy, transport, agriculture); assessing health impacts; costs and benefits of policy alternatives in those sectors; and harnessing non-health sector investments to improve health, environment and safety.

- Guidance, tools supporting the health sector to influence policies in priority sectors.

23. Enhance Health Sector leadership to support a healthier environment and influence public policies in all sectors so as to address the root causes of environmental threats to health. Including by responding to emerging and re-emerging environmental health concerns from development, evolving technologies, global environmental change as well as consumption and production patterns.

- Regular engagement of global and regional policymakers and stakeholders in high-level health and environment forums.

Recent highlights include:

Planning for the Fifth Ministerial Conference on Environment and Health which will take place in 2009 in Italy. This ministerial initiative was launched in Europe in 1989 with the aim to eliminate the most significant environmental threats to health as rapidly as possible, with the approach that prevention is better than cure. Progress made towards this goal is marked by a series of ministerial conferences held every five years. The Fourth Ministerial Conference on Environment and Health took place in Budapest, in 2004 under the theme "The future of our children". The second High-level meeting for the preparation of the Fifth Ministerial Conference will take place in Madrid from 22-24 October 2008.

WHO EURO has an EU project on "Enhanced policy advice on environment and health (PAVEL). The nanotechnologies work package of the project will bring together existing research, reviews, reflection and discussions on nanotechnologies and develop a WHO approach to the issue.

24. As part of its support for collaborative research WHO is co-sponsoring the Central and Eastern Europe Conference on Health and the Environment (CEECH). For further details see <http://www.ceeche.org>. This is a joint approach initiated and supported by European and US institutions, aimed to analyze and better define the complex links between health and environment. . The third edition of CEECH, will be held in Cluj-Napoca, Romania, from 19-22 October 2008 following earlier Conferences in Prague 2004, and Bratislava 2006. The main Conference will focus on sustainable mining, risk assessment and management, and environmental health with a special focus on climate change and children's health.

REGIONAL OFFICE FOR AFRICA

25 The Strategic Approach for International Chemical Management provides the framework for chemical safety work by the WHO Regional Office for Africa. WHO works with countries and partners to:

- Integrate chemical issues into the broader development agenda.
- Promote ratification of relevant conventions.
- Strengthen country capacities for implementation of international norms and standards.
- Promote alternatives in order to reduce and phase out highly toxic pesticides.
- Support capacity building.

26. Specific emphasis is given to the following activities:

- Development of national profiles.
- Capacity building to deal with poisonings and chemical incidents.
- Judicious use of pesticides in the context of integrated vector management.
- Surveillance and pollution prevention.

27. The first African Inter-Ministerial Conference on health and the Environment was held from 26-29 August 2008 in Libreville, Gabon (<http://www.unep.org/health-env/>). The Conference explored ways to address key priorities and linkages in line with its theme “Health security through healthy environments”. It reviewed existing mechanisms and opportunities to address environmental challenges facing Africa. An agreement on specific actions required for changes in institutional arrangements and investment frameworks was discussed. The Conference comprised a technical and high-level segment and considered a number of issues relevant to SAICM including current and emerging chemical risks and legislative and policy tools. A Declaration setting out the joint commitments of African Health and Environment Ministers was agreed at the Conference.

REGIONAL OFFICE FOR THE EASTERN MEDITERRANEAN

28. Priority activities:

- Collaborate with relevant UN agencies and NGOs to promote the ratification of international conventions on environment addressing chemicals management.
- Provide technical support to countries participating in the SAICM process to develop the health-related aspects of their national implementation plans.
- Provide technical support to countries to update their national profiles for chemicals management.
- Provide a technical capacity building package to selected countries for chemicals management.
- Provide technical support to countries for the establishment and strengthening of poisons and chemicals information centres.

REGIONAL OFFICE FOR THE WESTERN PACIFIC

29. Regional initiative on environment and health

This initiative which is relevant for both the WHO Western Pacific Region and also the South-East Asia Region, started with the first high-level meeting in November 2004 held in Manila, involving the director and director-general level officials of both ministries of health and the

environment from countries of ASEAN and East Asia (China, Japan, Mongolia and Republic of Korea). Following the recommendations of this meeting, a ministerial Regional Forum on Environment and Health was organized for August 2007, and a Charter of the Regional Forum endorsed. WHO and UNEP are the joint secretariat to the Regional Forum. Two of the priorities identified for 2008-2010 under the Charter are related to the work of SAICM:

- Toxic chemicals and hazardous substances; and
- Contingency planning, preparedness and response in environmental health emergencies (including chemical emergencies).

30. For each priority area, a regional Thematic Working Group (TWG), involving relevant government agencies, academic institutions, non-governmental organizations, international agencies, and other relevant groups, was established at the regional level.

31. The work plans of the two TWGs are also aligned with the recommendations of the Asia Pacific SAICM regional meeting. The TWG meetings to finalize the work plans will be held in June 2007. Health input was provided to the work plans of the TWGs.

32. Building capacities of countries to deal with poisonings and chemical incidents

- Efforts will continue to establish poisons centres in countries where no such centre exists, and strengthen the functions of existing poisons centres and expand the network of poisons centres in developing countries in the Region (priority countries: Cambodia, Lao PDR, Mongolia, and Pacific island countries). In 2007, WHO supports Cambodia and Mongolia in this area.
- Collaboration will continue to support the development of national capacity in planning and preparation for, and responding to, chemical incidents (priority countries: China, Philippines, Viet Nam). In 2007, WHO supports China in this area.
- In response to an urgent government request, WHO provided three rapid assessment team missions to Mongolia from October 2007 to March 2008 to examine mercury and cyanide contamination associated with informal gold mine operations. A survey of environmental contamination and human exposure assessments was conducted.

33. Strategies directed specifically at the health of children and workers

- Under the Healthy Environments for Children Initiative, WHO continues to collaborate with countries to address chemicals in the environment that affect the health of children (priority countries: Mongolia, Philippines, Japan, Pacific island countries). Through the facilitation of WHO, the experiences in Japan in this area were presented at the Scientific Conference on Environment and Health held in Seoul in early May 2007.
- The third Scientific Conference of the Regional Forum on Environment and Health in South-East and East Asian countries was held in Jeju, Republic of Korea with the theme of environmental health from fetus to the elderly, where various papers on environmental effects on pregnancy and birth, children's environmental health and elderly environmental health were presented.
- The establishment of a WHO Collaborating Centre in the Republic of Korea with a focus on children's environmental health is being considered.
- Elimination of asbestos-related diseases has become a major concern in Asia. WHO and ILO co-sponsored the first Asia Asbestos Conference organized by the Health Ministry of Thailand in July 2006 in Bangkok. With the support of WHO, the Ministry of Health, Viet Nam organized a national conference on asbestos. A WHO regional meeting on occupational health held in November 2007 addressed the asbestos issues and recommendations to tackle the problem.

- The WHO Collaborating Centre on Occupational Health at the University of Occupational and Environmental Health, Japan, has started a project called the Asian Asbestos Initiative, involving several Asian countries and the WHO and the ILO.
- WHO continues to support countries in developing national capacity to deal with chemicals at workplaces. In 2007, collaboration is being extended to Cambodia and Mongolia.

REGIONAL OFFICE FOR SOUTH-EAST ASIA

34. WHO has an office in each of the 11 South-East Asia (SEA) region Member States. There are five WHO chemical safety advisers in the SEA region. WHO works with chemical safety focal points in all eleven SEAR national governments (MoH and/or MoE and/or Min Ag).

35. In their current 2006-2007 WHO sponsored work plans, all SEAR countries are implementing environmental health activities which are part of the SAICM GPA. Priority activities are focussing on capacity building and information sharing for health, environment and agriculture professionals and policy makers from government and non government organizations on the following topics:

- Strengthening institutional networking to address the health impacts of, and mitigation measures for, arsenic contamination of ground water.
- Promoting the use of WHO Guidelines and Training Modules for the diagnosis, surveillance and management of arsenicosis.
- Improving drinking water quality management by applying water safety plans.
- Conducting applied total diet studies on chemical contaminants throughout the food chain and evaluate the impacts on human health.
- Using evidence based data on chemical food contaminants (pesticide and heavy metal residues) for national policy making.
- Advising consumer groups on how to more effectively interact with other stakeholders to improve food safety and public health.
- Reducing reliance on pesticides through Community based participatory approaches such as the integrated management of disease vectors and pest crops (IPVM).
- Monitoring poisonings to reduce exposure to highly toxic pesticides at community level.
- Assessing heavy metals exposure of workers to reduce their burden of disease
- Assessing exposure and promoting alternative cooking methods to reduce respiratory illnesses related to indoor air pollution
- Creating national capacity for the sound management of hazardous wastes and health care waste through large training programmes.
- Using the life cycle and healthy settings approaches to prepare national action plans for the protection of children's environmental health.
- Establishing a regional help desk for chemical safety to provide basic advice to countries on availability of expertise, policy guidance, funding and on implementation of relevant multilateral environmental agreements.

REGIONAL OFFICE FOR THE AMERICAS.

36. The Pan American Health Organization (PAHO) as WHO's Regional Office for the Americas works with countries and partners to:

- Support the implementation of the National Chemical Substances Profiles.
- Promote and support the participation of the countries of the Region in SAICM, as well as in international agreements: Rotterdam, Stockholm, Basel, and others.
- Promote the coordination of risk assessment methodologies in contaminated sites.

- Support the exchange and dissemination of information on chemical products in virtual libraries, such as the Regional Virtual Library of Toxicology developed by SDE/PAHO: <http://www.bvsde.paho.org/>.
- Support projects to strengthen poisoning surveillance systems directed to toxic substances of main concern such as: pesticides and mercury among others.
- Support projects designed to substitute/eliminate the use of persistent organic pollutants, for example: DDT in Central America and Mexico.
- Support and promote information and knowledge management through the establishment of networks of professionals and institutions linked to chemical safety, like RETOXLAC in Latin America and the national networks in Argentina, Brazil, Chile, Mexico, Panama, among others, which contribute to the creation of protocols, guides, educational materials, and multicentre research.
- Promote and support projects to strengthen and or create toxicological centre.
- Promote the coordination of national information systems for the report of poisoning/exposure cases, through INTOX/IPCS or their own national software.
- Develop subregional programs of comprehensive action to reduce risks on chemical substances.
- Develop and implement a Regional Workers' Health Program with a module on chemical substances.
- Develop and implement a Regional Child Health Program that includes, among others, WHO proposed activities such as: national profiles on the status of Children's Environmental Health (CEH), training package for the health sector, CEH's indicators, and promotion of the Environmental Pediatric History (Green Sheet).
- Support the development of response capabilities diagnosis and the preparation of health sector plans to address chemical incidents.
- Develop training materials for the various levels associated with chemical products, such as: primary management of poisoning cases, risk assessment, risk communications, etc. Many of these are available in self-teaching methodologies: <http://www.bvsde.paho.org/sde/ops-sde/cursotoxi.html>.

37. PAHO/WHO Activities supporting countries in compliance with the HEMA Agenda of Cooperation of the Declaration of Mar del Plata:

- Advisory services and/or support projects geared toward strengthening the pesticide poisoning surveillance systems. Example: PLAGBOL, PLAGSALUD and others.
- Jointly with ACTO it has participated in projects geared toward reducing the risks by exposure to mercury in Amazon region.
- Advisory services for the implementation of projects and/or work plans geared toward reducing the impact on health and environment of pesticides and mercury. Example in MERCOSUR.
- Strengthen the mechanisms of cooperation among the countries for priority chemical products.
- Compile, produce, and to disseminate information through different means for facilitates access of the people's to the information and to the knowledge of adverse effects to the health and the environment by exposure to chemical substances. Information available in the Virtual Toxicology Library of SDE/PAHO (<http://www.bvsde.ops-oms.org>)
- Advisory services for the strengthening of the national risk assessment systems for the pesticide registry and risk assessments in contaminated sites.
- Implementation of subregional plans for prevention, preparation, and response to chemical emergencies, example in the Andean Region.
- Advisory services for development and implementation of plans of response to chemical emergencies.
- Development of instruments of education, promoting the distance learning on chemical substances and its impact on health and environment.

- Promote the organization of fora on children's environmental health
- Prepare Children Environmental Health Atlas.

CONCLUSION

38. WHO will periodically update this paper to reflect work completed, views of Member States and feedback from the health sector generally, and to reflect the available resources for future efforts.

39. WHO programme delivery mechanisms will be at the global, regional and country level, through WHO's extensive network of regional and country offices. It is hoped that SAICM regional meetings will play an important role in identifying regional priority activities in which WHO can play a part.

Register your interest in health sector activities

40. In order to facilitate implementation of health-related elements of SAICM health sector contacts worldwide are invited to register their interest in receiving updates on health-sector activities and/or inclusion in a shared workspace WHO plans to develop to facilitate health sector implementation activities. Please register your interest by providing your full contact details to the following e-mail address: ipcsmail@who.int, specifying SAICM on the subject line.

SAICM HEALTH SECTOR INPUT

1. This annex provides a summary of the input from the health sector to SAICM over the course of its development. .
2. In the context of coordination of health-sector views, countries have called strongly for a multi-sectoral, multi-stakeholder process for development, implementation and assessment of SAICM, to reflect the principle that human beings lie at the centre of concerns for sustainable development. The need for integration of chemicals into mainstream health policies is agreed, as is the contribution that the sound management of chemicals can make to achievement of the WSSD Plan of Implementation and the Millennium Development Goals.
3. The importance of establishment and strengthening of inter-sectoral processes and approaches at regional and country level is emphasized. Use of advocacy, community empowerment, participation and ownership is highlighted. Coordination at all levels should be improved, including at national, regional and international levels.
4. SAICM implementation should involve periodic follow-up and assessment of progress and include the use of indicators of human exposure and health. Mechanisms for ongoing health-sector engagement in the process of implementation at all levels need to be agreed.
5. Currently, the following main areas of health input for SAICM are foreseen.
 - **Filling of gaps in abilities to access, interpret and apply knowledge** (e.g. improved availability of information on the hazards, risks and safe use of chemicals (including those in manufactured products), in forms relevant to end users, and improved use of existing risk assessments).
 - **Development and use of new and harmonized methods for risk assessment**, e.g. methods for assessment of dose-response relationships and risks to vulnerable groups, in particular children, pregnant women and fertile people, the elderly and the poor; new tools for risk assessment, making best use of (molecular) epidemiology, clinical and exposure data, and scientific advances in toxicogenomics; harmonized methods for risk assessment of carcinogens, mutagens, reproductive toxins, genotoxins and immunotoxins; and new risk assessment methods relevant to real-life exposures, e.g. aggregate/cumulative exposures, use of simple analytical methods for in-field exposure assessment.
 - **Development of better methods and criteria to determine the impact of chemicals on health (and thereby on economy and sustainable development) to set priorities for action, for the detection of chemicals, and to monitor progress of SAICM.** This will also assist with implementation of Millennium Development Goals and place chemicals and health on development assistance agenda. These methods should be able to be used at country level. Means of determining health impacts of policy decisions are required.
 - **Building capacities of countries to deal with poisonings and chemical incidents.** An integrated approach to establishment and strengthening of poisons centres and surveillance, alert and response mechanisms for chemical incidents is proposed. This would include technical cooperation on a regional basis.
 - **Filling of gaps in science** (e.g. gaps in understanding of endocrine disruptors).
 - In addition to risk assessment methods, broad **strategies specifically directed to the health of children and young families** are needed. These would include recommendations arising from Forum IV.
 - Inclusion of specific **actions for worker health protection**, including farmers and children, and linking of these to broader health policy and actions, in consultation with the labour sector.
 - Inclusion of a **range of preventive strategies**, education and awareness raising, and capacity building in risk communication.
 - As a priority, further **work to promote alternatives to highly-toxic, persistent and bioaccumulating chemicals**, taking into account the whole life-cycle of chemicals including waste. This would include using tools such as cleaner production and integrated pest and vector management.