



**World Health
Organization**

REGIONAL OFFICE FOR **Europe**

Assessment of capacity in WHO European Member States to address health-related aspects of chemical safety

Presented at the WHO Regional Office for Europe workshop:

“Health aspects of chemicals safety: strategic directions for actions”, Bonn, Germany, 17–19 October 2012

ABSTRACT

This report presents the results of an on-line survey carried out by the WHO Regional Office for Europe in July–September 2012 to assess and identify gaps in the existing capacity of the WHO European Member States to address the health-related aspects of chemical safety and meet their commitments to the Parma Declaration on Environment and Health.

KEYWORDS

Capacity building
Chemical safety
Emergency preparedness
Environment and Public Health
Environmental exposure
International cooperation

Address requests about publications of the WHO Regional Office for Europe to: because priority actions should aim filling in gaps.

Publications
WHO Regional Office for Europe
UN City, Marmorvej 51
DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office web site (<http://www.euro.who.int/pubrequest>).

© World Health Organization 2013

All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

CONTENTS

BACKGROUND	1
OBJECTIVE OF THE SURVEY	2
STRUCTURE OF QUESTIONNAIRE AND METHOD OF ANALYSIS	2
ANALYSIS OF RESPONSES.....	4
LEGISLATION.....	4
INTERAGENCY COOPERATION.....	8
RISK-REDUCTION POLICIES, PROGRAMMES AND PLANS	8
INFORMATION EXCHANGE.....	9
RISK ASSESSMENT	10
EDUCATION AND TRAINING	12
HEALTH-SECTOR PARTICIPATION IN THE IMPLEMENTATION OF MULTILATERAL INTERNATIONAL AGREEMENTS IN THE AREA OF CHEMICAL SAFETY.....	13
EMERGENCY PREPAREDNESS AND RESPONSE.....	15
MANAGEMENT OF CARCINOGENS, MUTAGENS, REPRODUCTIVE TOXICANTS, ENDOCRINE-DISRUPTING AND BIOACCUMULATIVE CHEMICALS	16
MANAGEMENT OF CONTAMINATED SITES	19
CONCLUSIONS	20
ANNEX	22

Background

There are a number of reasons for governments and public organizations at the national and international levels to improve the regulation of chemical in their countries: the multiplicity and severity of the health effects of exposure to chemicals; the growing burden of diseases caused by chemicals and mixtures of chemicals; the rapid increase both in the volume and diversity of the chemical products on the market; and the movement of chemicals and products containing chemical substances. International agreements, such as the Strategic Approach to International Chemicals Management (SAICM),¹ the International Health Regulations (IHR),² conventions of the International Labour Organization (ILO),³ and multilateral environmental agreements,⁴ recognize that some essential elements are required to assure sound chemical management, including strong legislation, risk-reduction strategies and plans, information exchange, specific measures for the protection of vulnerable and highly exposed groups of the population, intersectoral coordination and cooperation with multistakeholder engagement and last, but not least, sufficient capacity of all stakeholders.

The Parma Declaration on Environment and Health⁵ adopted at the Fifth Ministerial Conference on Environment and Health in Parma, Italy, on 10-12 March 2010, and its Commitment to Act, call for action to strengthen the prevention of diseases arising from exposure to chemicals. WHO Member States are committed to contributing to SAICM, to protecting children from the risks posed by exposure to harmful substances and preparations, and to acting on the identified risks of exposure to carcinogens, mutagens, reproductive toxicants, and endocrine disruptors. World Health Assembly resolutions WHA55.16, WHA58.3, WHA58.22, WHA59.15, WHA63.25 and WHA63.26 urge Member States to build the necessary capacity in the health sector to enable it to participate in the implementation of international chemicals-related agreements, and to respond to all the health aspects of chemical emergencies and emerging issues.

¹ Information available: http://www.saicm.org/index.php?option=com_content&view=article&id=72&Itemid=474, accessed 23 October 2013.

² *International Health Regulations (2005). Second edition.* Geneva, World Health Organization, 2008 (http://whqlibdoc.who.int/publications/2008/9789241580410_eng.pdf, accessed 23 October 2013).

³ Information available: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C170; www.ilo.org/ilolex/cgi-lex/convde.pl?C174, accessed 23 October 2013.

⁴ Information available: <http://synergies.pops.int/Home/tabid/813/language/es-CO/Default.aspx>, accessed 23 October 2013.

⁵ *Parma Declaration on Environment and Health.* Copenhagen, Regional Office for Europe, 2010 (http://www.euro.who.int/__data/assets/pdf_file/0011/78608/E93618.pdf, accessed 23 October 2013).

Objective of the survey

The purpose of the survey was to assess capacities in the WHO European Member States to for addressing the health aspects of chemical safety in their countries. The questionnaire annexed to this report was developed to collect the information; the target groups included medical, environmental and other professionals (e.g. biologists, chemists and toxicologists).

The analysis, which was presented and discussed during the WHO Regional Office for Europe workshop, "Health aspects of chemicals safety: strategic directions for actions", in Bonn, Germany, on 17-19 October 2012, will serve as a basis for planning short- and medium-term action to facilitate the implementation of sound chemical management in the Member States in accordance with the Parma Declaration on Environment and Health, and the various World Health Assembly resolutions and international agreements on the prevention and mitigation of chemical exposure and the reduction of risks and burden of disease.

Structure of questionnaire and method of analysis

The questionnaire (Annex) was developed by the WHO European Centre for Environment and Health of the WHO Regional Office for Europe, in consultation with experts from Albania, Belarus, Georgia, Germany, Kazakhstan, the Netherlands (WHO Collaborating Centre on Risk assessment), Poland, the Russian Federation, Serbia, Slovenia, and the United Kingdom (WHO Collaborating Centre on Public Health Management of Chemical Incidents). All of the notes and proposals made by the experts were taken into account and included in the questionnaire.

The final version of the questionnaire included 37 questions grouped into 10 different categories addressing chemicals-management activities and chemicals of concern, taking vulnerable population groups into account. A brief explanation of the rationale behind the questionnaire and how to use it was included (via internet link using SurveyMonkey® software).

The data were aggregated to define priority action taken to meet the requirements of the Parma Declaration on Environment and Health (2010), relevant WHA resolutions, IHR and other international agreements in the area of chemical safety.

Chemicals-management activities

All relevant international agreements, such as the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal (1989), the Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade (1998), the Stockholm Convention on persistent organic pollutants (2001), IHR and SAICM, include requirements for and recommendations on action to protect human health and the environment, with the following priorities: strengthening of relevant legislation; implementation of risk-reduction programmes; establishment of

emergency-preparedness and response measures; management of contaminated sites; monitoring; risk assessment; information exchange; education and training. Questions addressing these action areas were included in the questionnaire.

Chemicals of concern

In the Parma Declaration on Environment and Health, ministers of health and the environment, and high-level country representatives agreed "...to act on the key environment and health challenges of our time that include...concerns raised by persistent, endocrine-disrupting and bio-accumulating harmful chemicals and (nano)particles..." (page 3e). The same priority chemicals, as well as carcinogens, mutagens and reproductive toxicants, are also indicated in regional priority goal 4 of the Parma Commitment to Act. WHA Resolution 63.25 on the improvement of health through safe and environmentally sound waste management⁶ and WHA 63.26 on the improvement of health through sound management of obsolete pesticides and other obsolete chemicals⁷ urge Member States and WHO to: assess the health aspects of wastes management with the aim of making it safe and environmentally sound; work with relevant institutions, such as the Basel Convention, the Food and Agriculture Organization (FAO), the United Nations Environment Programme (UNEP), and SAICM; improve health through the sound management of waste, obsolete pesticides and chemicals; adopt or strengthen national policies and legislation; and increase support for training, capacity-building and the coordination of activities. Questions based on these documents were included in the questionnaire, as well as questions relating to the elimination of asbestos, taking its hazardous characteristics and WHO policy concerning this chemical into account.

Vulnerable population groups

The aim included in the Parma Commitment to Act, "to protect each child from the risk posed by exposure to harmful substances and preparations, focusing on pregnant and breast-feeding women and places where children live, learn and play", determined the inclusion of specific questions on policy and activities to protect these population groups.

A statistical analysis of the on-line responses was carried out using Microsoft Excel and MonkeySurvey® software programmes.

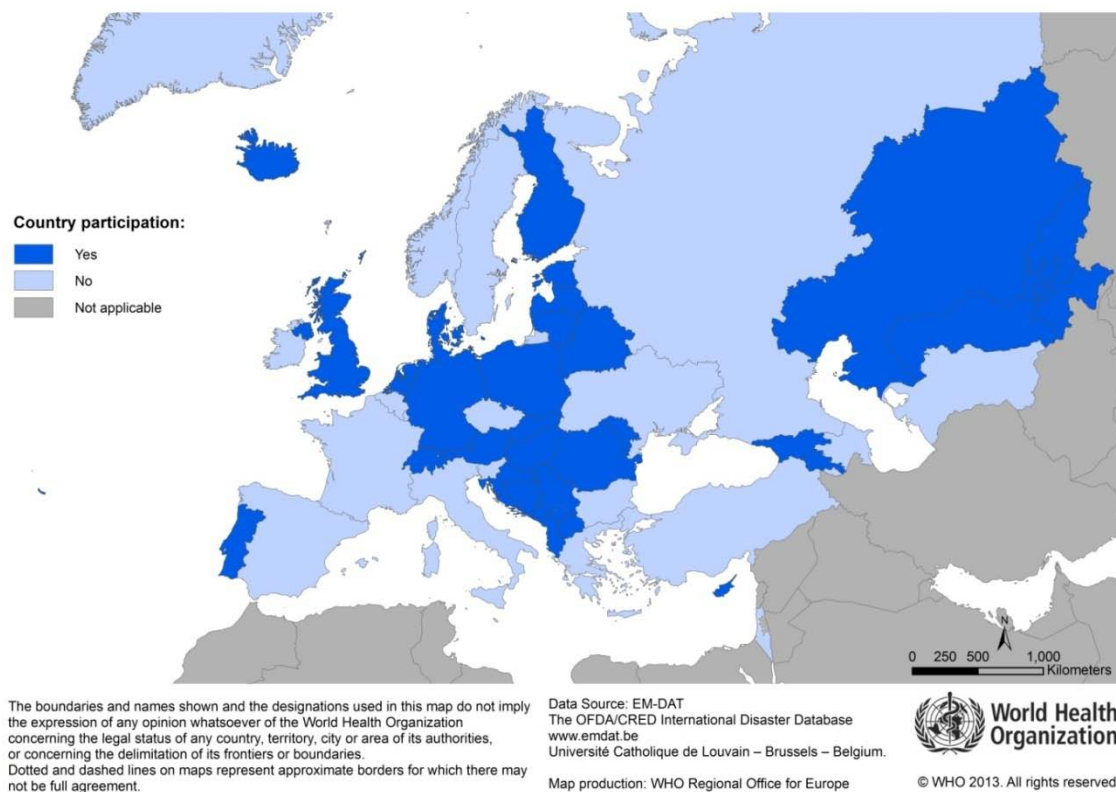
⁶ World Health Assembly resolution WHA63.25 on improvement of health through safe and environmentally sound waste management. In: *Sixty-third World Health Assembly, Geneva, 17–21 May 2010. Resolutions and decisions. Annexes* (WHA/63/2010/REC/1 (http://apps.who.int/gb/ebwha/pdf_files/WHA63-REC1/WHA63_REC1-en.pdf, accessed 23 October 2013).

⁷ World Health Assembly resolution WHA63.26 on improvement of health through sound management of obsolete pesticides and other obsolete chemicals. In: *Sixty-third World Health Assembly, Geneva, 17–21 May 2010. Resolutions and decisions. Annexes* (WHA/63/2010/REC/1 (http://apps.who.int/gb/ebwha/pdf_files/WHA63-REC1/WHA63_REC1-en.pdf, accessed 23 October 2013).

Analysis of responses

Of the 53 WHO European Member States, 33 (approximately two thirds) participated in the survey: Albania, Andorra, Armenia, Austria, Belarus, Bosnia and Herzegovina, Croatia, Cyprus, Denmark, Estonia, Finland, Georgia, Germany, Hungary, Iceland, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Malta, Montenegro, Netherlands, Poland, Portugal, Republic of Moldova, Romania, Serbia, Slovakia, Switzerland, Tajikistan, The Former Yugoslav Republic of Macedonia, United Kingdom, and Uzbekistan (Fig. 1).

Fig.1. Country participation in the survey

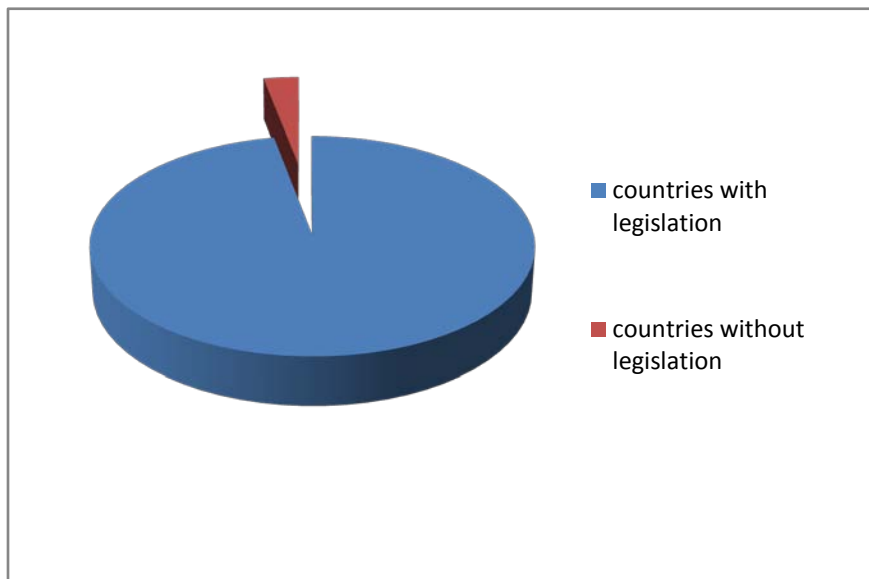


Legislation

The questionnaire included questions pertaining to chemicals-related legislation pertaining to the life-cycle approach, the precautionary principle, limitations and prohibitions, premarketing procedures, specific requirements to protect the most vulnerable population groups (e.g. pregnant and breast-feeding women, children), and prohibition of the use, sale and production of chrysotile asbestos.

According to the responses, all except one of the all Member States that participated in the survey have specific legislation to regulate chemicals management (Fig. 2).

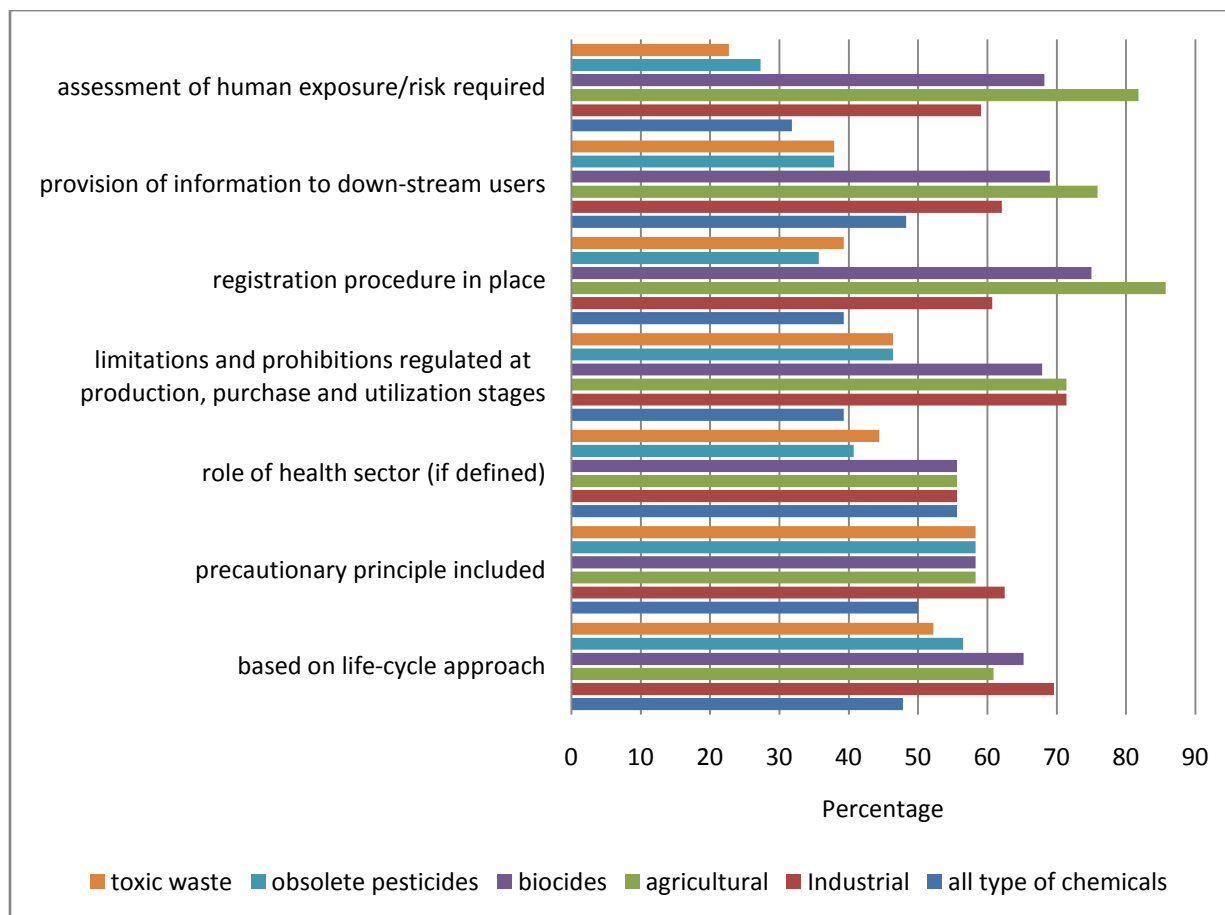
Fig 2. Proportions of countries with/without legislation on chemicals management



Only three Member States reported (less than 10%) having legislation that regulates manufactured nanoparticles and nanomaterials. These types of chemicals (nanoforms) are not discussed in this document in view of the gaps in the legislation and in the methodology pertaining to their use, as well as in knowledge about addressing the specific needs of vulnerable population groups revealed by the survey.

The characteristics associated with the management of different types of chemicals and with the relevant legislative measures do not differ significantly across the Region (Fig. 3).

Fig. 3. Elements of chemicals management and chemicals-related legislation



More than a half of the countries responded that they use the life-cycle approach as their basis in developing legislation and that they apply the precautionary principle. In addition, the same countries reported that they have requirements for registering chemicals, providing information to down-stream users, and carrying out exposure assessment at the premarketing stage.

Agricultural chemicals are registered in almost all Member States in the Region.

Two thirds of the Member States have legislation including specific requirements for the protection of pregnant and breast-feeding women, as well as children, from chemical hazards. Positive responses about the existence of occupational safety regulations for the protection of women vary from 63% of the countries (all types of chemicals) to 33% (management of toxic waste). Less than a half of the countries have prohibited the use of the most dangerous chemicals in products destined for this vulnerable group (Fig. 4).

A similar situation was revealed in relation to the protection of children in places where they learn and play and to prohibition of the use of chemicals in all products for children (Fig.5).

Fig. 4. Specific requirements for the protection of pregnant/breast-feeding women from occupational exposure (blue) and exposure to dangerous chemicals in products (red)

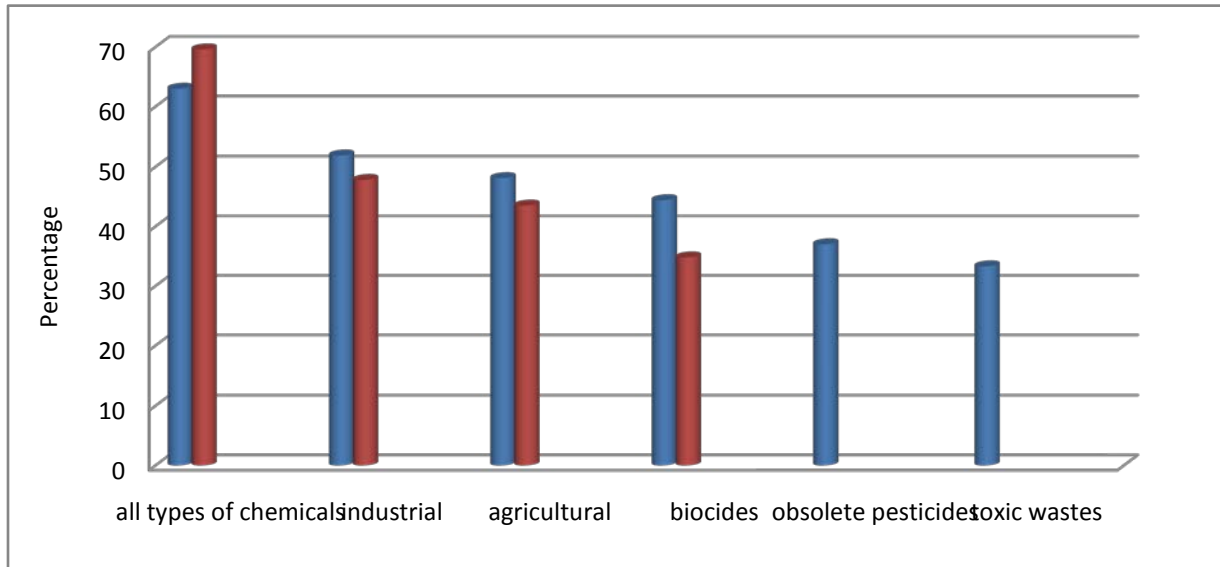
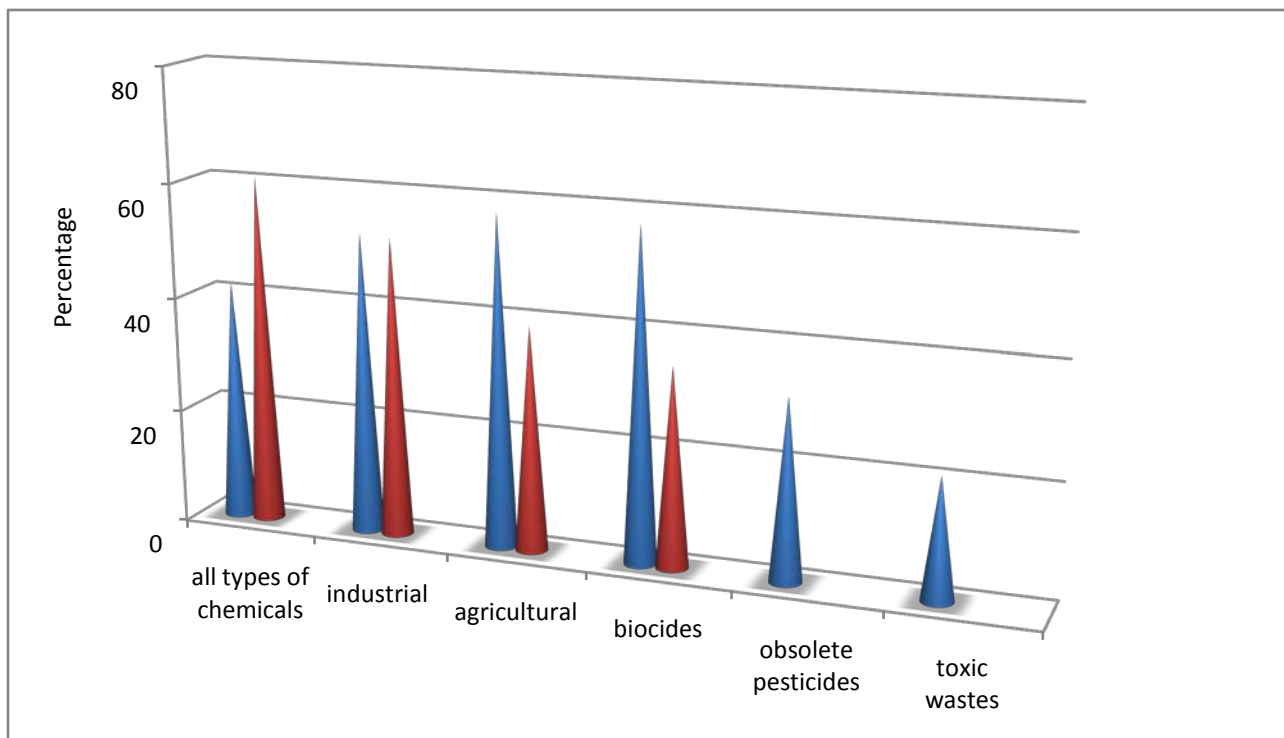
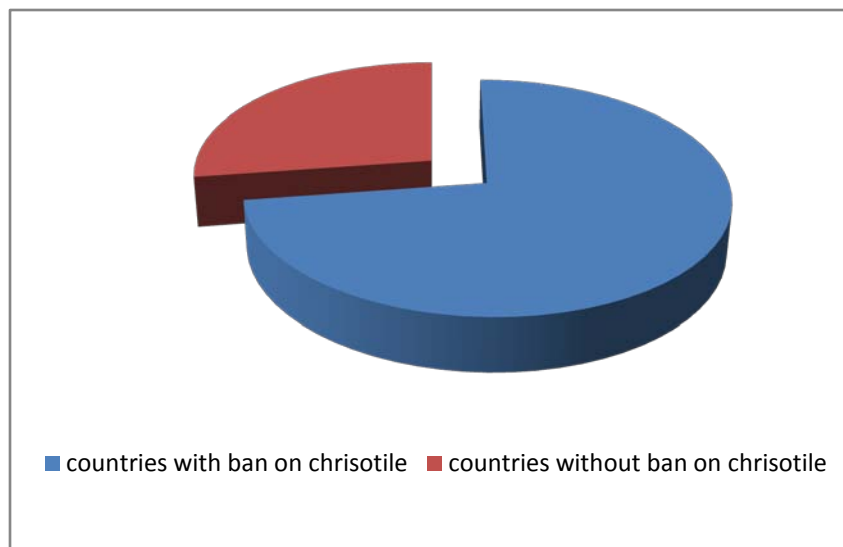


Fig. 5. Specific requirements for the protection of children from exposure to chemical hazards in places where they learn and play (blue) and from dangerous chemicals in products (red)



Seventy-two per cent (72%) of the countries in the Region have banned the production, sale and use of chrysotile asbestos by law (Fig. 6).

Fig. 6. Proportions of countries with/without ban on production, sale and use of chrysotile asbestos



Interagency cooperation

Recognizing that a multisectoral approach is essential to the implementation of sound chemical management, 95% of the countries reported having established a mechanism of interagency cooperation in the area of chemical safety. The health sector is represented in this mechanism in the majority (97%) of the countries in question.

Risk-reduction policies, programmes and plans

Policies and action plans to reduce chemical risk are in place in 87.9% of the Member States (29 responded positively) where health-sector specialists participated in their development and implementation (Fig. 7). However, in only half of these countries are programmes set up to reduce/eliminate chemical risks in children (Fig. 8).

Fig. 7. Rate of countries that have developed risk-reduction policies/action plans

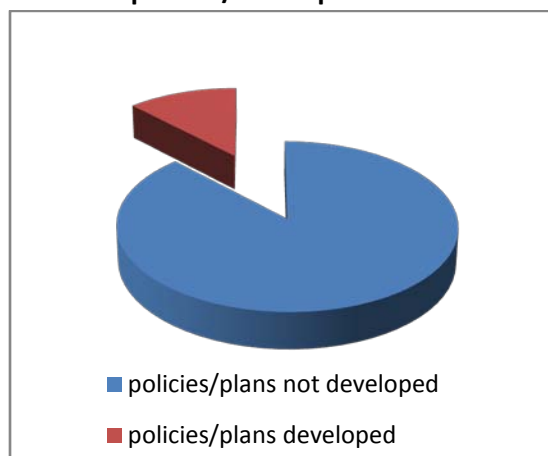
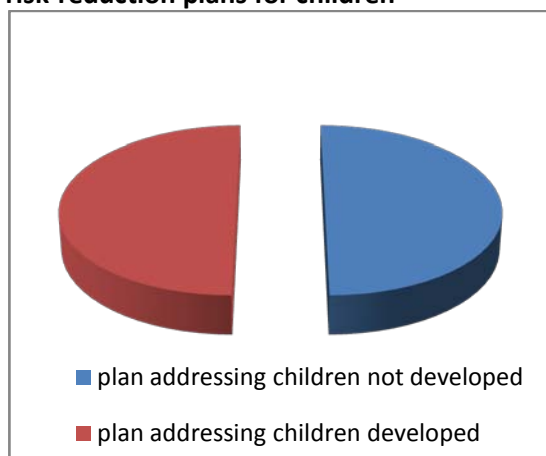
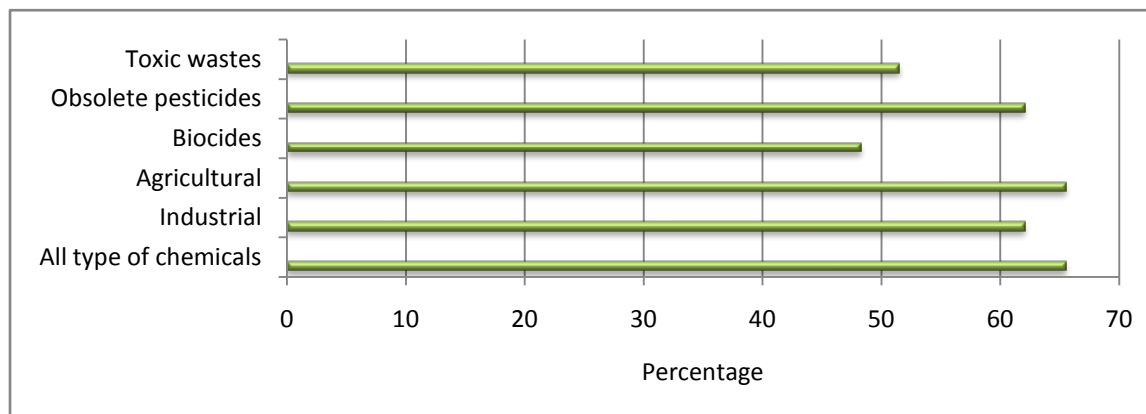


Fig. 8: Rate of countries that have developed risk-reduction plans for children



The proportion of countries with policies to reduce the risk of various chemicals, and action plans to implement them, is higher for agricultural and industrial chemicals (65 %) and lower for biocides (48%) (Fig. 9).

Fig.9. Types of chemicals addressed by policies and plans

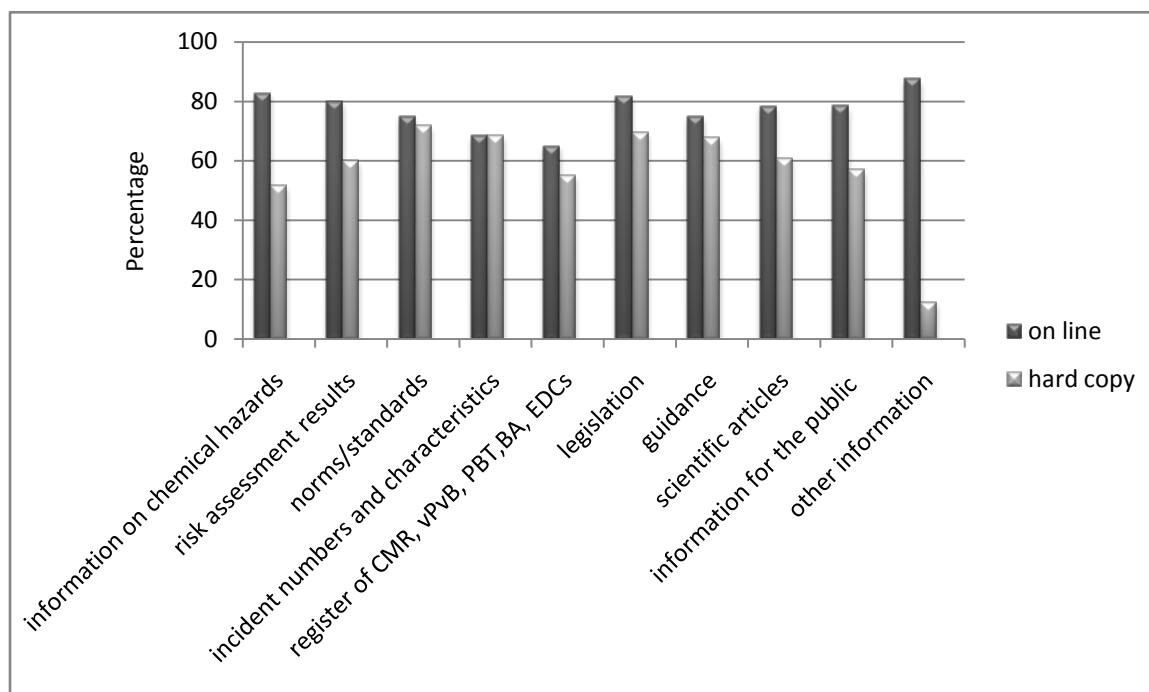


Information exchange

Only one Member State indicated the absence of any official source of information on chemicals. A lot of information regarding chemicals management is provided on line, including the registration dossiers submitted within the frame of the EU registration procedure, geographical information, announcements about specific dangerous products on the market, press releases, web sites of the European Chemical Agency and labour inspectorates, help desks, information on nanoparticles and biocides, registers for complaints about cosmetics, etc.

In the majority of the countries, priority was given to providing information on chemical hazards and legislation (Fig. 10).

Fig.10. Availability of information (on line and in hard copy)



Note. CMR = carcinogenic, mutagenic or toxic to reproduction; vPvB = very persistent and very bioaccumulative; PBT = persistent, bioaccumulative and toxic; BA = bioaccumulative; EDCs = endocrine-disrupting chemicals.

Risk assessment

Around two thirds of the responding Member States reported using risk assessment as an essential instrument in the decision-making process. A lack of human, laboratory and financial resources were indicated. Most responders considered that the necessary resources partly satisfied their countries' needs (Figs 11 and 12).

Some Member States reported that very few dedicated specialists were able to assess risks at the national level, training for human resources was limited and insufficient, and laboratory resources could not cover current needs.

Fig. 11. Use of risk assessment (RA) in the decision-making process in countries of the WHO European Region

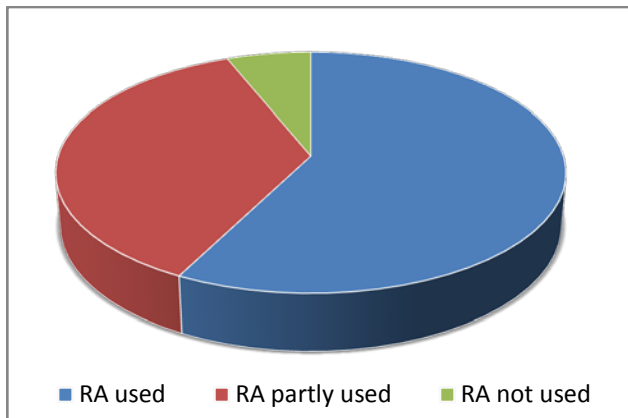
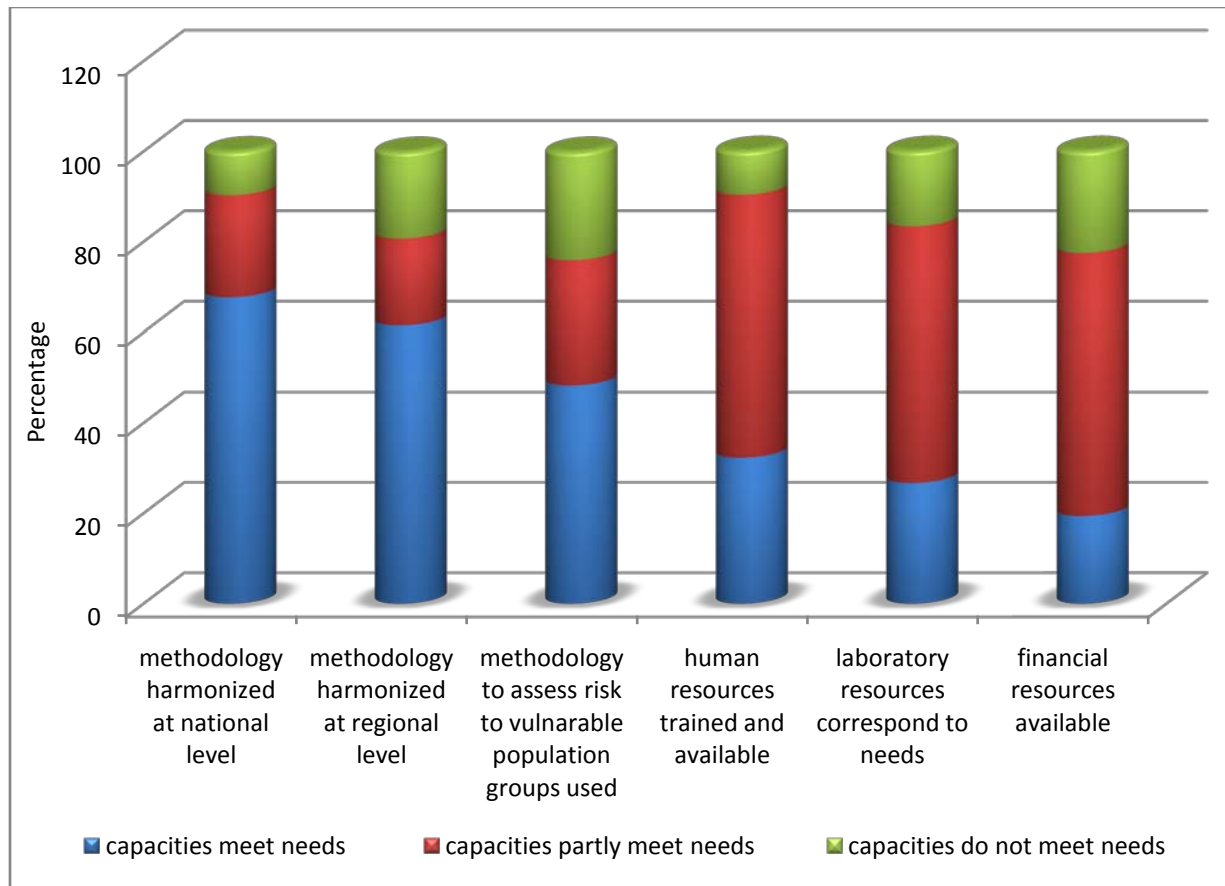


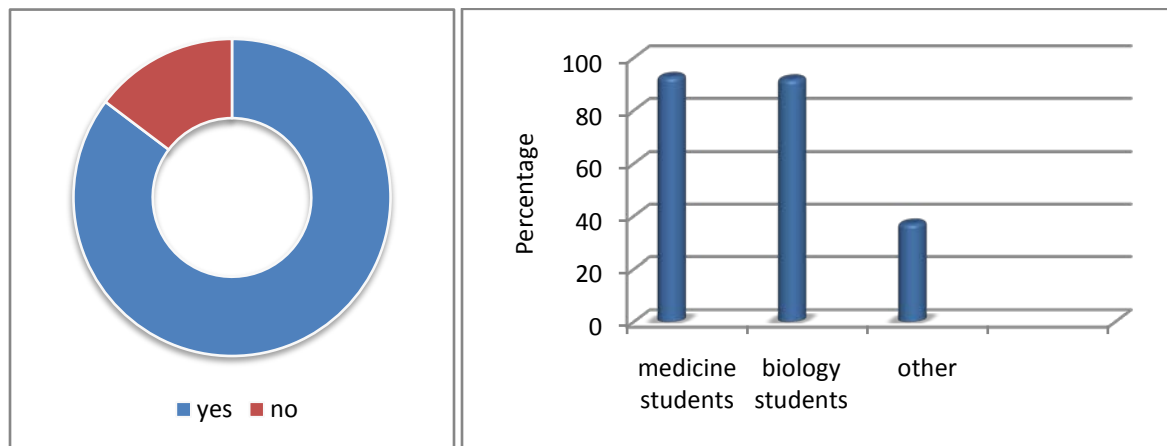
Fig.12. Capacities for risk assessment in WHO European Member States



Education and training

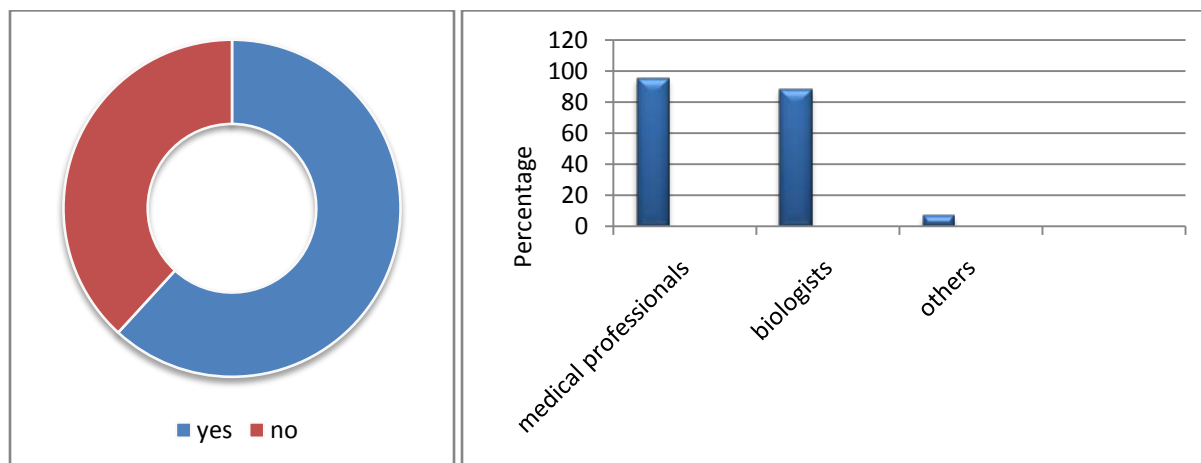
In most of the countries in the Region, basic courses in toxicology and epidemiology are included in the curricula of higher education institutions. Students of medical and biological science are the core groups (Fig. 13).

Fig. 13. Proportion of toxicology, epidemiology and risk-assessment courses in university curricula and categories of course students



Two thirds of the Member States responded that medical, biological and other professionals are trained in toxicology, risk assessment and noncommunicable disease epidemiology (Fig. 14).

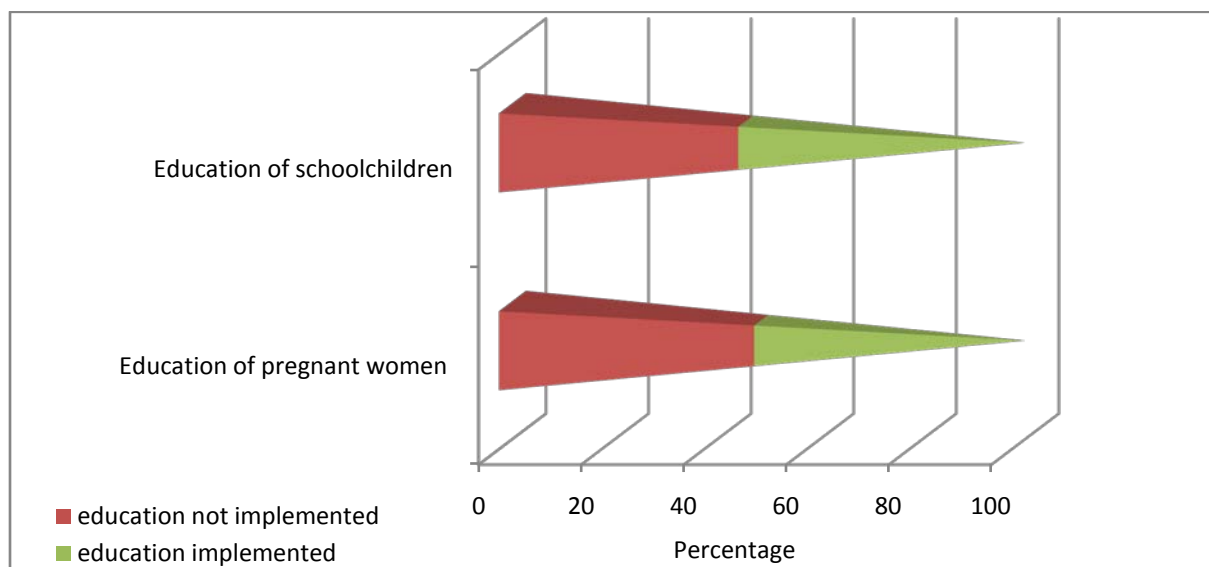
Fig. 14. Postgraduate training courses in toxicology, epidemiology of noncommunicable diseases and risk assessment



Many other professional categories were also indicated as being educated in toxicology, epidemiology and risk assessment: chemists, food managers, pharmacists, environmental health specialists, ecology scientists, public health specialists, clinical biochemistry specialists, engineers etc. Curricula are developed mostly for master's studies and doctoral degrees.

Information, education and training are considered to be critical elements of sound chemical management. Unfortunately, requirements/procedures for informing pregnant and breast-feeding women and educating schoolchildren about the risks associated with chemicals and how to avoid them existed in only half of the Member States (Fig. 15).

Fig.15. Rate of countries that have introduced procedures for informing schoolchildren and pregnant/breast-feeding women about risks associated with chemicals



Health-sector participation in the implementation of multilateral international agreements in the area of chemical safety

There are a number of legally binding agreements (the Basel, Rotterdam and Stockholm Conventions, IHR) and voluntary agreements (SAICM, the Globally Harmonized System for Classification and Labeling of Chemicals (GHS)), which aim to protect human health and the environment from negative chemical impact. A multisectoral approach is indicated as one of the main principles for implementation of the agreements at both the national and international levels.

The World Health Assembly and the International Conference on Chemicals Management (ICCM)⁸, in their resolutions, have recognized the essential role of the health sector in the implementation of international chemicals-related agreements.

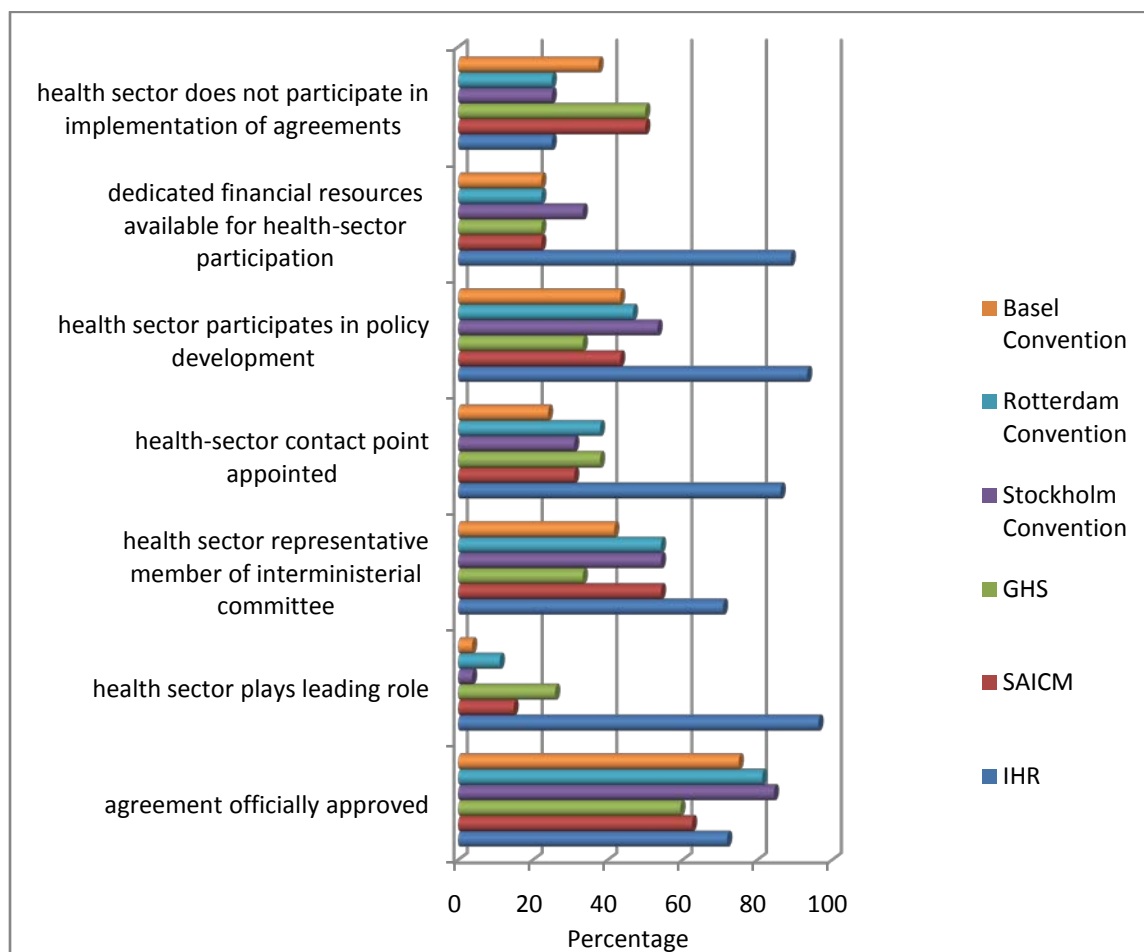
Eighty per cent (80%) of the European Member States have officially committed to an international agreement on chemical safety, the highest proportion to the Stockholm Convention on Persistent Organic Pollutants. The health sector is mostly involved in IHR implementation, while only one third of the Member States reported having appointed a health-sector contact point for SAICM.

In half of the Member States, the health sector does not participate in the development and implementation of policy on chemical safety. The gap is even bigger for GHS and SAICM. The same situation applies to health-sector representation in interministerial committees on international agreements.

Only a fifth of the Member States reported the presence of financial resources to cover participation in the implementation of international agreements at the national level (Fig.16).

⁸ Information available: http://www.saicm.org/index.php?option=com_content&view=article&id=96&Itemid=485, accessed 23 October 2013.

Fig. 16. Health-sector involvement in the implementation of international agreements

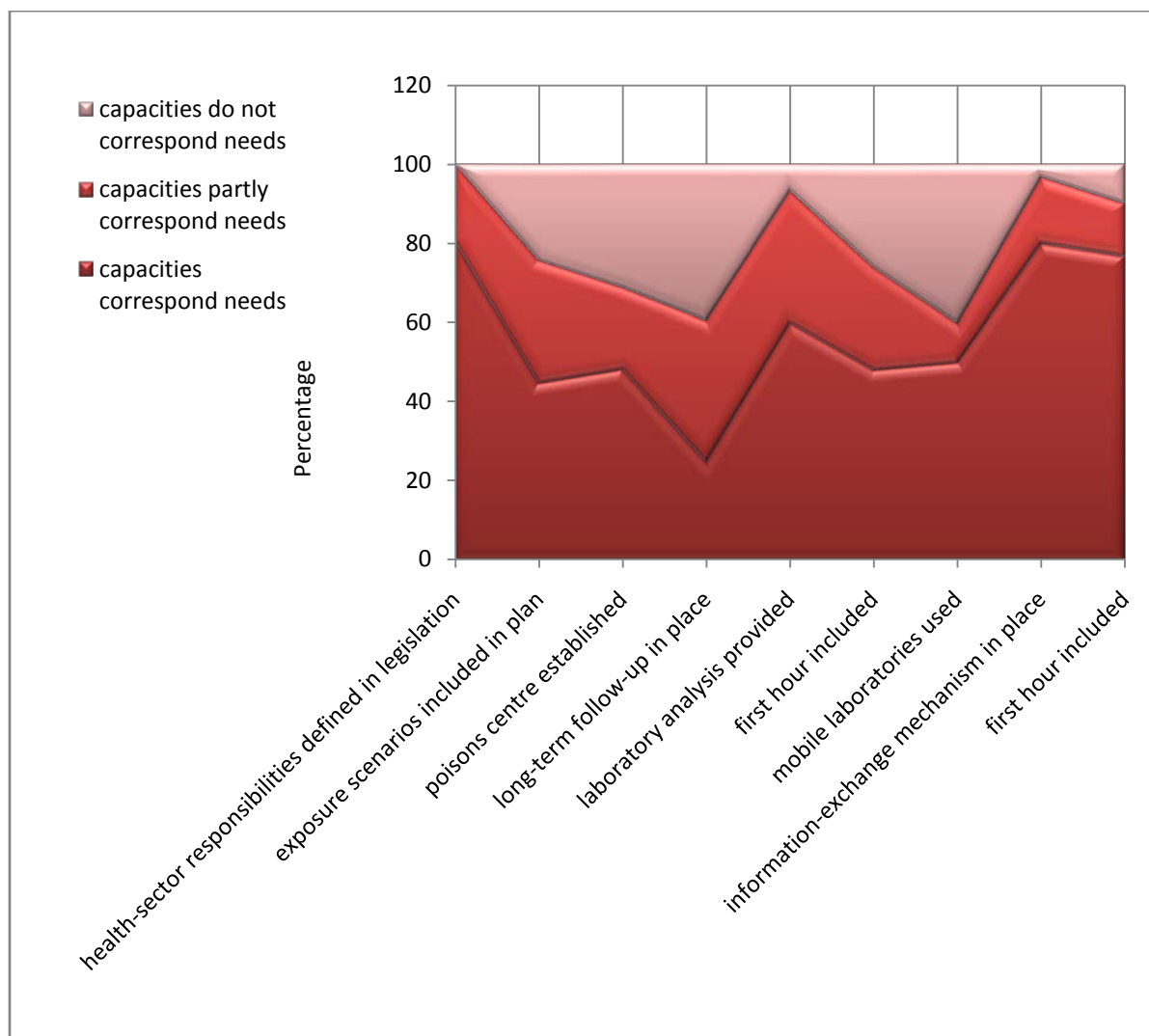


Emergency preparedness and response

Ninety per cent (90%) of the responders reported having developed a plan for emergency preparedness and response and all of them indicated that the health sector had been involved in its development and implementation. Eighty-five per cent (85%) of the Member States had included IHR requirements in their plans.

However, the capacity of Member States to respond to emergency situations differs significantly around the Region (Fig. 17).

Fig. 17. Emergency-response capacity in WHO European Member States



The survey revealed that the main gaps in the area of emergency preparedness and response related to exposure scenarios/modelling, the establishment of poisons centres, long-term epidemiological follow-up, and the development of exposure monitoring and analytical laboratory capacity.

Management of carcinogens, mutagens, reproductive toxicants, endocrine-disrupting and bioaccumulative chemicals

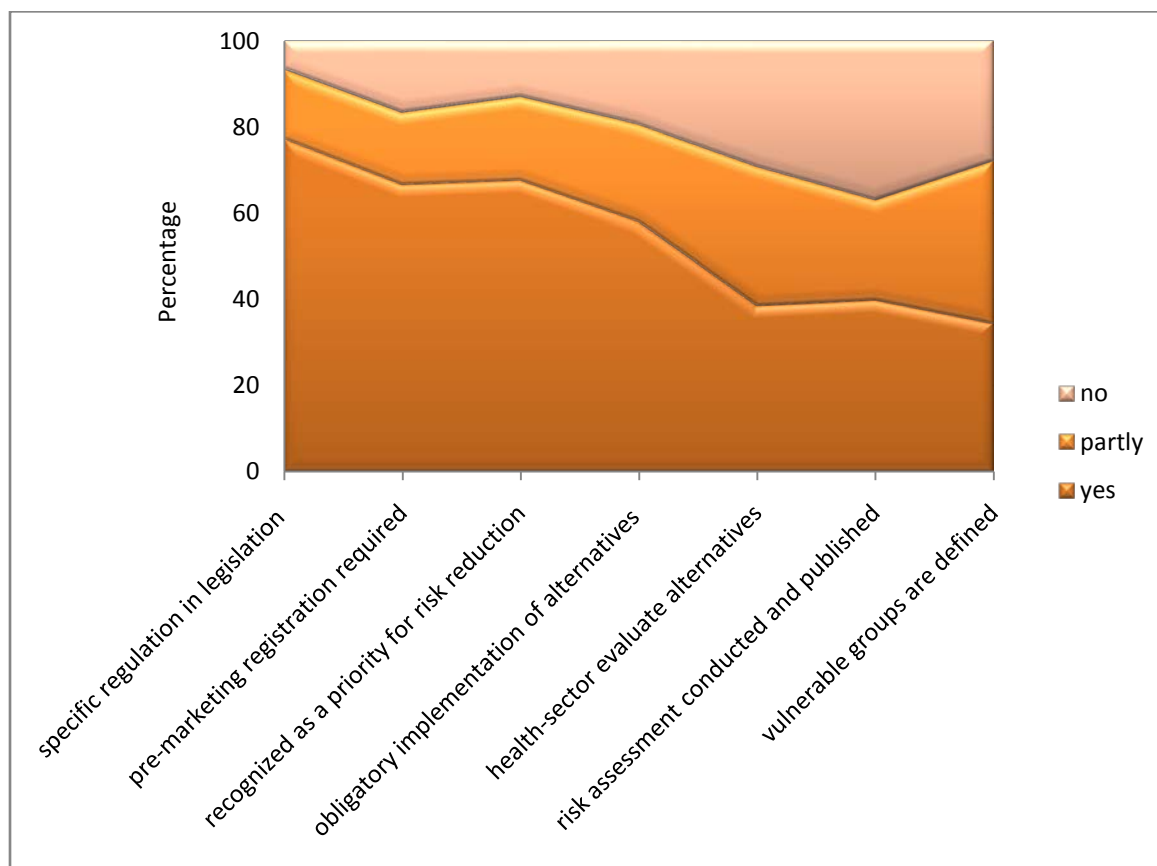
The Parma Declaration and its Commitment to Act specifically address the management of chemicals that have the properties of carcinogens, mutagens, reproductive toxicants (CMR), endocrine disruptors (EDCs) and bioaccumulative chemicals (BA). Adequate capacities are

necessary in the Member States for them to be able to protect their populations, especially the most vulnerable groups, from the harmful health effects of these chemicals.

Several different aspects of the management of CMR, BA and EDCs were addressed in the questionnaire, such as legislation and obligatory requirements (Fig. 18), monitoring of media related risks and human biomonitoring (Fig. 19).

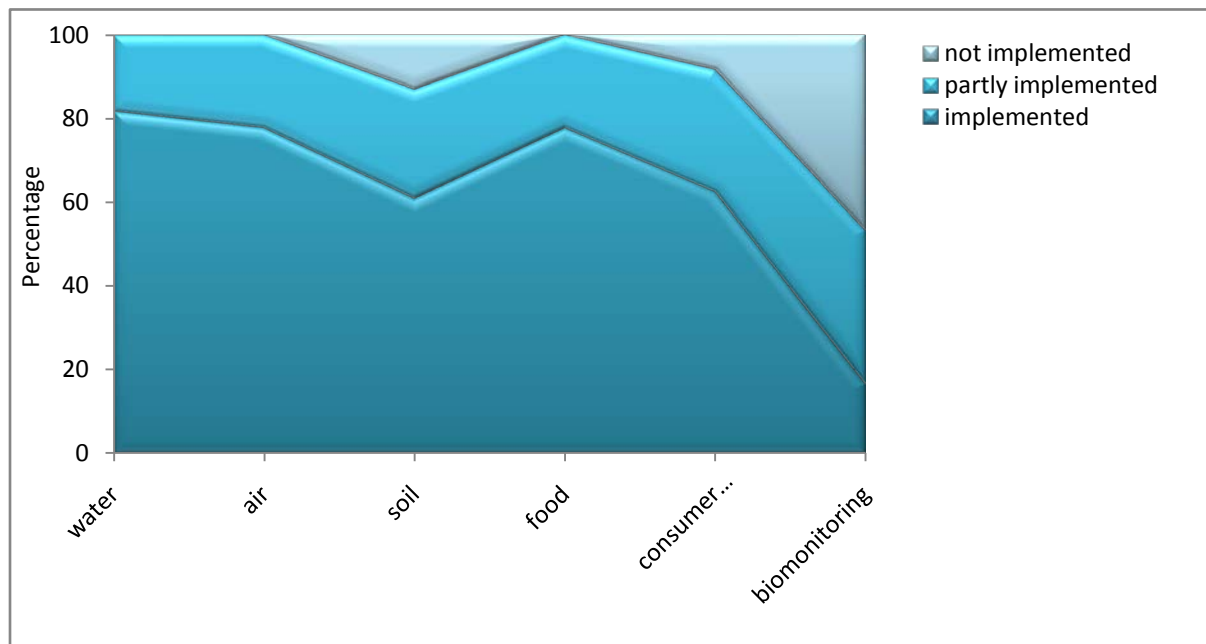
According to the results of the analysis, not all countries in the Region have specific legislation to regulate management of CMR and BA chemicals. In the majority of the countries there are no requirements for regulation of EDCs. Most probably this is the result of nonrecognition of these chemicals as a priority at the country level. In most of the Member States, the health sector does not participate in the evaluation of alternatives, risk assessment is not conducted and the most vulnerable groups are not defined (Fig. 18).

Fig. 18. Characteristics of legislative base and management of CMR, BA and EDCs in the WHO European Member States



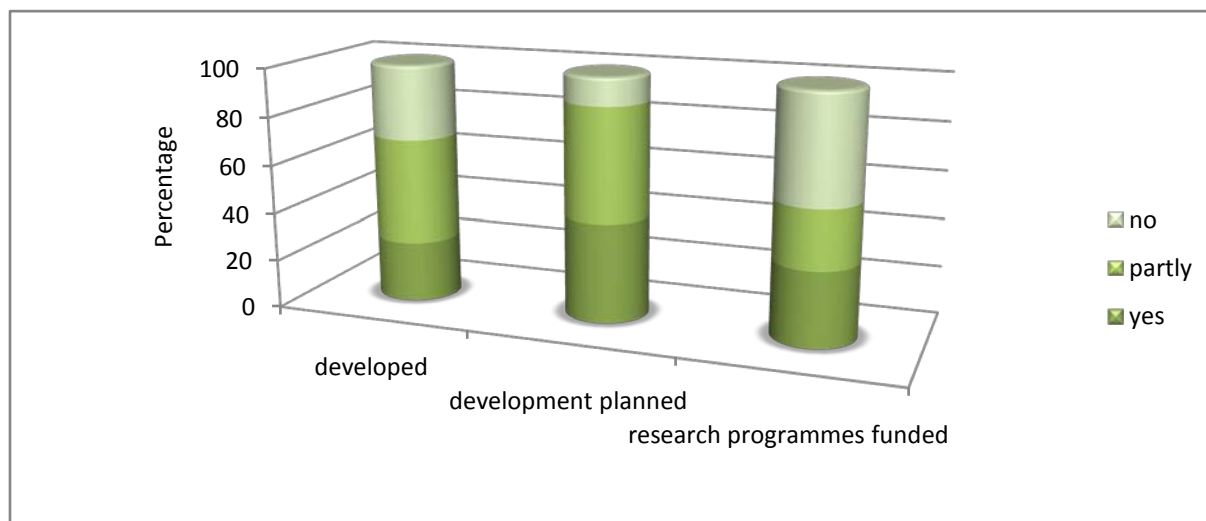
At the same time, practically all of the countries have capacities for monitoring CMR and BA pollution of water, air and food (fully or partly). A lesser number of countries (around 60% of the responders) monitor the pollution of soil by CMR and have the capacities to identify these chemicals in consumer products. Only 20–50% has human biological monitoring programmes in place for assessing exposure to CMR, BA chemicals and EDCs (Fig. 19).

Fig. 19. Monitoring of media specific risk and exposure



The survey revealed that risk-reduction programmes aimed at reducing exposure to and risks of CMR, BA chemicals and EDCs are developed in less than 20 % of countries and partly developed in half of them. A comparable situation was revealed regarding the development and implementation of research programmes that provide scientific background for consideration in introducing risk-reduction measures. In two thirds of the Member States, research programmes are either not funded at all or are only partly funded (Fig. 20).

Fig. 20. Implementation of risk-reduction and research programmes



Management of contaminated sites

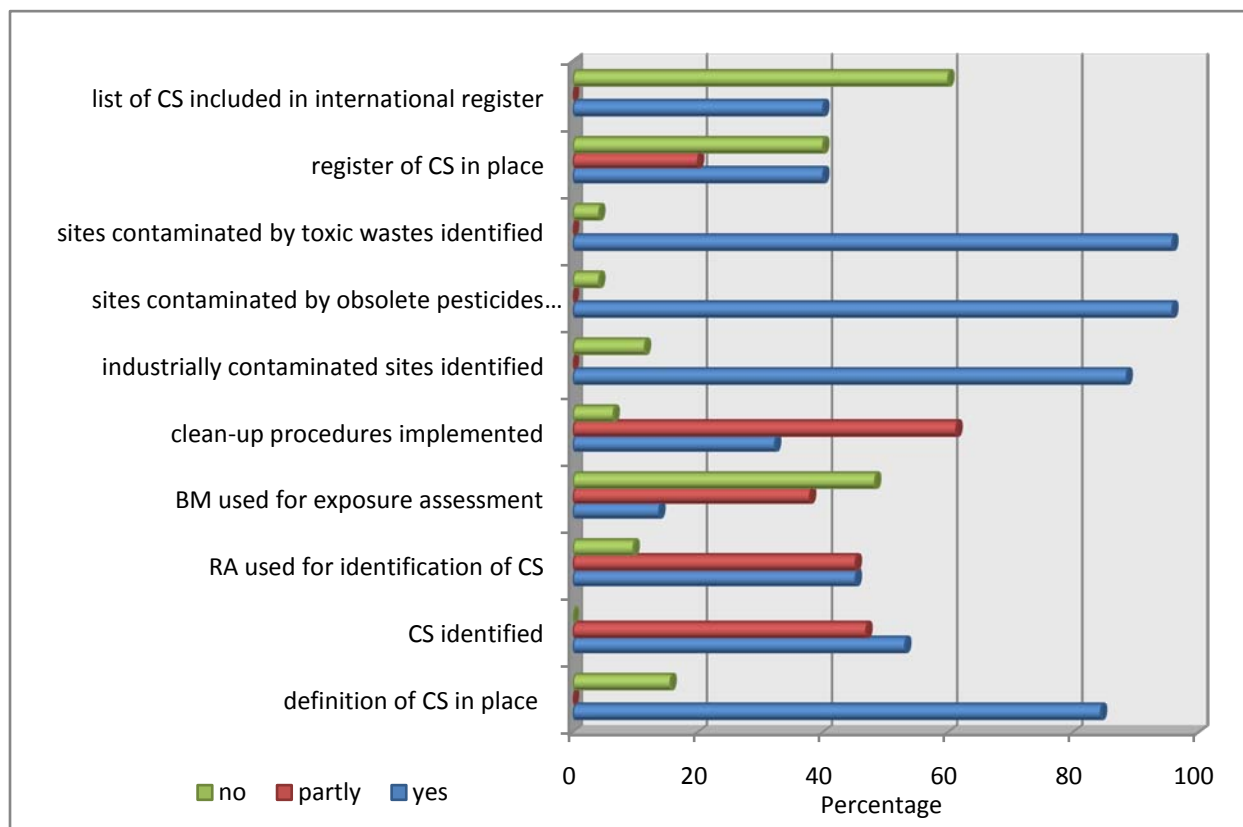
The problem of contaminated sites still exists in the WHO European Region where there are thousands of industrially contaminated sites (CS), and where population groups living in these sites may be exposed to highly hazardous chemicals. It is necessary to build national capacities to identify CS, assess risks and implement risk-reduction measures to prevent acute and chronic diseases caused by chemicals.

The survey revealed that in 15% of the responding Member States there is no definition of CS and only half of them identified CS on their territories. Risk assessment was the basis for identification of CS in less than a half of the Member States and biological monitoring was used to this end in 13%.

More than 90% of the Member States implement clean-up procedures to reduce the risks of chemical exposure in industrially contaminated sites (88.5%) and in sites contaminated by obsolete pesticides and toxic wastes (95.8%).

A CS register has been set up and is publicly available in 40% of the Member States; the same percentage has included information on CS on their territories in an international register (Fig. 22).

Fig.22. Management of contaminated sites (CS)



Note. BM = biological monitoring; RA = risk assessment.

Conclusions

Two thirds of the WHO European Member States participated in the Survey. Different groups of Member States were represented in the survey, such as the European Union Member States and countries of south-eastern and central Europe and central Asia. The results of the survey can be used to analyse the current capacity existing in the Region for addressing health-related aspects of chemical safety and identifying main achievements and gaps in this area.

The majority of the Member States have developed chemical legislation with the inclusion of the precautionary principle and the life-cycle approach. Risk-reduction strategies have been implemented in more than half of the Member States; in 90%, university curricula include education in basic toxicology, epidemiology and risk assessment. The survey revealed a high level of preparedness and response to emergency situations and concern about contaminated sites and related exposure. Most of the Member States use risk assessment as an essential tool in the decision-making process.

Nevertheless, there are still gaps. Capacity building should remain an ongoing process if sound chemical management is to be achieved.

So less than a half of the Member States have developed and adopted legal requirements relating to the assessment of exposure to, and the risk of exposure to, biocides and toxic wastes. The same countries have not adopted specific legal requirements in connection with the protection of pregnant/breast-feeding women and children from harmful chemicals in products. Risk-reduction policies and programmes specifically designed for child protection are in place in only half of the Member States. In some countries, there is a lack of human, laboratory and financial resources for the assessment of chemical risk. Educational programmes for pregnant women and children on chemical risks are not in place in many countries. The health sector is involved in international agreements (not counting IHR) in one third of the Member States. More than half do not have the capacities needed for developing scenarios of exposures in emergency situations, nor for performing long-term follow-up of health impact. In many countries, there are no poisons centres. Only 20% of the Member States have sufficient capacities for assessing exposures to carcinogens and other harmful chemicals and enough funds to conduct scientific research.

The findings of the survey confirm the existence of gaps in chemicals management that should be addressed at the national and international levels to protect the population from exposure to harmful chemicals.

Annex

Questionnaire for assessment of national capacities to address health aspects of chemical safety

Please, answer to 7 August, 2012 Dr. Irina Zastenskaya WHO European Center for Environment and Health Hermann-Ehlers-Strasse, 10, 53113, Bonn, Germany	E-mail: zastenskayai@ecehbonn.euro.who.int Tel: +49 228 8150 430; fax: +49 228 8150 440
--	--

Introduction

The Declaration adopted by the Fifth Ministerial Conference on Environment and Health in Parma and its 'Commitment to Act' call for strengthening actions to prevent diseases arising from exposure to chemicals. Member States (MS) are committed to contribute to the Strategic Approach to International Chemicals Management (SAICM), to protect each child from the risks posed by exposure to harmful substances and preparations, and to act on the identified risks of exposure to carcinogens, mutagens and reproductive toxicants, as well as endocrine-disrupting. World Health Assembly resolutions (WHA 55.16, 58.3, 58.22, 59.15, 63.25, 63.26) urges MS to build capacity in health sector to participate in implementation of international "chemical" agreements and to respond to all health aspects of chemical emergencies and emerging issues.

The purpose of this questionnaire is to collect information on capacities to address health aspects of chemical safety at national level in the Member States of European Region of WHO. The data will be aggregated and presented to the consultative meeting to be convened in Bonn, October, 2012, to define priorities of actions following the Parma conference commitments, relevant WHA resolutions, requirements of International Health Regulations (IHR) and other international agreements in chemical safety area.

The target groups of this questionnaire are medical, environmental and other (biologists, chemists, toxicologists) professionals who are involved in health aspects of chemicals management.

The questionnaire consists of 6 parts. The first part collects information to confirm the identity of the country and the organization responding to the questionnaire that is necessary for WHO officer to make direct contact with the respondent as necessary. The remaining parts include questions relating to chemicals management at national and international level. It is estimated that the questionnaire can be completed in 30 minutes.

Choosing an answer, please fill in appropriate box with X. Please, use the additional space if you wish to provide additional information or comments relevant to a question. You may also use this space for additional information if the question is considered "not applicable" or in case you would like to provide information of relevant activities (for example, some legislation is under development or not planned to be developed, why? or if monitoring of other chemicals of national concern is in place, list those chemicals; etc.)

1. Identity of respondent

Country: _____

Name of respondent: _____

Institution: _____

E-mail address: _____

Direct telephone number: _____

2. Country capacity to address health aspects in chemicals management

2.1 Legislation

Is there specific legislation that regulates chemicals management*? Yes No

*legislation of chemical management in a context of this questionnaire doesn't include legislation on environmental media (air, water, soil, food) protection

If yes, please, indicate some characteristics of legislation:

	All types of chemicals	Industrial	Agricultural	Biocides	Nanoparticles/nanomaterials	Obsolete pesticides and chemicals	Toxic chemical wastes
Life-cycle approach is a basis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Precautionary principle is included	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Role of health sector is defined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limitations and prohibitions are regulated at production, purchase and utilization stages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pre-marketing procedures that are required:							
- Registration/similar procedure (any procedure that leads to official permission of chemicals production and use by authorised governmental organization)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Information of chemicals hazard to health for downstream users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Human exposure/risk assessment/exposure scenario	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Other (please specify)							
Requirements to protect pregnant and breast-feeding women are included:							

Protection on working places	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Prohibition of use of hazardous chemicals in products for this category	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Other (please specify)							
Requirements to protect children are included:							
- Protection on places where children learn and play	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Prohibition of use of hazardous chemicals in products for this category	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Other (please specify)							

Is (use, sale, production, etc.) chrysotile asbestos banned by law in your country?

Yes No

Provide any additional remarks, notes, proposals, if applicable:

2.2. Interagency cooperation

Is the inter-ministerial/interagency cooperation mechanism* in place? Yes No

*council, committee, any other form of different stakeholders cooperation for implementation of intersectoral approach to chemicals safety

If yes, please, indicate

Is the health sector a member of the mechanism Yes No

If not, please, explain why

Provide any additional remarks, notes, proposals, if applicable:

2.3. Risk reduction policy, program(s)/ plan(s)

Is (Are) policy/ action plan(s) to reduce chemicals risk developed? Yes No

If yes, please, indicate

Does a health sector participate in its (their) implementation? Yes No

What types of chemicals are covered by policies or action plan(s):

All types of chemicals	Industrial	Agricultural	Biocides	Nanoparticles/nanomaterials	Obsolete pesticides and chemicals	Toxic chemical wastes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provide any additional remarks, notes, proposals, if applicable:

Is there policy/action plan to reduce/eliminate risk of chemicals for children developed? Yes No

2.4. Information exchange

Is (Are) there any source(s) of official information of chemicals? Yes No

If yes, what kind of information it (they) provide(s)

	Chemicals hazard information	Risk assessment results	Norms/standards	Incidents number and characteristics	Register of CMR*, vPvB, PBT, BA, DES	Legislation	Methodological documents, guidance	Scientific researcher, articles	Information for public, vulnerable groups	Any other information
On-line	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On hard copies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* CMR – carcinogens, mutagens, reproductive toxicants, vPvB – very persistent and very bioaccumulative chemicals, PBT – persistent bioaccumulative and toxic chemicals, BA – bioaccumulative chemicals, DES – disrupting of endocrine system chemicals

If you checked “any other information”, please, indentify it

Provide any additional remarks, notes, proposals, if applicable:

2.5. Risk assessment

Is risk assessment (e.g., hazard identification, exposure assessment, dose-response relationship, risk analysis) a necessary part for decision-making? Yes Partly No

If yes or partly, please, indicate the following:

- 2.5.1. Methodology is harmonized at national level Yes Partly No
- 2.5.2. Methodology is harmonized at regional – level Yes Partly No
- 2.5.3. Methodology to assess risk for vulnerable groups (children, pregnant women, others) is used Yes Partly No
- 2.5.4. Human resources are trained and available Yes Partly No
- 2.5.5. Laboratory resources correspond to needs Yes Partly No
- 2.5.6. Financial resources are available Yes Partly No

For each item you checked “partly” additional information is appreciated:

2.6. Education and training

2.6.1. Is university curricular (toxicology, risk/exposure assessment) in place on a permanent basis?

Yes No

If yes, which categories of students are educated?

Medical students Yes No

Biological science students Yes No

Others (please indicate)

At what stage of education?

Master degree students Yes No

Doctoral degree students Yes No

Others (please indicate at what stage)

2.6.2. Are training courses (toxicology, risk assessment) in place on a permanent/periodic basis?

Yes No

If yes, what categories of professionals are trained?

Medical professionals Yes No

Biologists, Physiologists Yes No

Master degree students Yes No

Doctoral degree students Yes No

Others (please indicate)

2.6.3. Is a requirement/procedure to inform pregnant and breast-feeding woman about possible chemicals risk and ways to avoid that risk in place?

Yes No

2.6.4. Do school curricula include information on chemicals risk

Yes No

3. Health sector participation in the implementation of multilateral international agreements

In table below, please, indicate health sector participation in international agreements' implementation at national level

	IHR	SAICM	GHS**	Stockholm Convention	Rotterdam Convention	Basel Convention
Agreement is officially approved in the country*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health sector plays leading role in implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health sector representative is a member of interministerial committee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact point in health sector is appointed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health sector participates in policy, action programs/plans development and implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Separate financial resources/funding mechanism for health sector activity is available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health sector doesn't participate in the agreements' implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Officially approved means that agreement is signed, ratified by country or country officially confirmed approval of non-binding international instrument

**GHS - Globally Harmonized System of Classification and Labeling of Chemicals

4. Chemical emergency preparedness, prevention and response

- Is emergency preparedness and response plan in place? Yes No
- If yes, did health sector participate in the plan development? Yes No
- Are IHR requirements included in the plan? Yes No
- If yes, is health sector involved in the response to emergency according to the plan? Yes No

	Yes	Partly	No
Health sector/institutions responsibilities are defined in relevant legislation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure scenario/modeling is included in the plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poison center is implemented according to WHO recommendations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Longterm epidemiological follow-up and exposure monitoring is in place and used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laboratory analysis can be provided for monitoring during incidents incl. during first hour after incident	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Mobile laboratories are used for analysis for identification and quantification of chemicals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information exchange mechanism is in place incl. during first hour after incident	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

For each item you checked "partly" additional information is appreciated

5. Management of carcinogens, mutagens, reproductive and endocrine disrupting, and bioaccumulative toxic substances

	Yes	Partly	No
Are there specific requirements for handling those chemicals in legislation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a specific pre-marketing registration procedure for those chemicals implemented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are those chemicals defined as a priority for risk reduction measures implementation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the requirement to use, where possible, less hazardous alternative an obligation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does health sector participate in evaluation of proposed alternatives?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is risk assessment of those chemicals conducted and results published?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are vulnerable population groups defined and specific protective measures developed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is monitoring of media specific risk (water, air, soil, food, consumer products) in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please, indicate media:			
Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consumer products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is human biomonitoring used for risk assessment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are national programs/ plans to reduce risk of those chemicals:			
Implemented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planned to be developed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not planned to be developed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a national program (e.g., law, by-law, strategy, action plan) for elimination of asbestos-related diseases developed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are research programs in chemical safety specifically funded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For each item you checked "partly" additional information is appreciated

6. Contaminated sites management

Is there a definition of "contaminated site" in the country? Yes No

Are contaminated sites identified in the country? Yes Partly No

If "yes" or "partly":

Was risk assessment used to define contaminated sites? Yes Partly No

Was biological monitoring used to define exposed population? Yes Partly No

Was (is) cleaning up procedure implemented? Yes Partly No

Is register of contaminated sites formed and publicly available?

Yes Partly No

If "yes" or "partly", please identify:

Industrial contaminated sites:

Yes No

Obsolete pesticides and chemicals contaminated sites:

Yes No

Toxic wastes contaminated sites:

Yes No

Is information of contaminated sites included in international (any) register?

Yes No

Additional information of needs, priorities is appreciated: