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**Implementation towards the achievement of the 2020 goal
of sound chemicals management: overall orientation and
guidance on the 2020 goal**

**Priorities of the health sector towards achievement of the 2020
goal of sound chemicals management: results of the World
Health Organization consultation**

Note by the secretariat

The secretariat has the honour to circulate a report by the World Health Organization on priorities of the health sector towards the achievement of the 2020 goal of sound chemicals management (see annex). The report describes the results of a survey of health sector stakeholders on priorities and activities and their implications for the implementation of the Strategic Approach to International Chemicals Management and for the overall orientation of and guidance to Strategic Approach stakeholders, for the period 2015–2020. The report is reproduced as received by the secretariat, without formal editing.

* SAICM/ICCM.4/1.

Annex



Priorities of the health sector towards achievement of the 2020 goal of sound chemicals management

Results of WHO consultation

I. Background

1. The Strategic Approach to International Chemicals Management (SAICM), adopted by the International Conference on Chemicals Management (ICCM) in 2006¹, sets out the strategies, policies and plans of action to achieve the 2020 goal, articulated in paragraph 23 of the Johannesburg Plan of Implementation², *to achieve the sound management of chemicals throughout their lifecycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.*

2. Previously, during the negotiation of the Strategic Approach the health sector, through a process facilitated by WHO and as reported to the 59th World Health Assembly¹, identified a number of priorities which are reflected in the Strategic Approach (referred to in the present report as “health sector priorities”). In addition to the health sector priorities, the third session of the International Conference adopted a strategy for strengthening the engagement of the health sector in the implementation of the Strategic Approach, and suggested possible activities to be undertaken voluntarily to fulfil the objectives of the strategy (referred to in the present report as “activities”).

3. Due to the need to reflect on progress towards the 2020 goal, the third session of the International Conference (17-21 September 2012, Nairobi) requested the SAICM secretariat to prepare an *Overall Orientation and Guidance (OOG) for achieving the 2020 goal of sound management of chemicals*³, on what needs to be done to achieve the 2020 goal, including understanding the gaps in implementation and prioritizing actions. The fourth session of the International Conference (28 September – 2 October 2015), is expected to adopt the OOG.

4. In accordance with the need to reflect on progress, the present report summarizes the views of health sector stakeholders on health-sector priorities and activities related to the 2020 goal, as collected through an online survey⁴, for consideration by the International Conference in finalizing the OOG. The views were collected through an online questionnaire, open from 4 June to 17 July 2015.

II. Analysis of survey results

5. In total, 62 survey forms were completed by governmental respondents (45) and other respondents (17) from 51 countries. “Other” respondents included universities, research institutes and non-governmental organizations. Figure 1 shows the regional distribution of responses.

¹ WHO (2006). Collaboration within the United Nations system and with other intergovernmental organizations, including United Nations reform process Strategic Approach to International Chemicals Management. Fifty-ninth World Health Assembly A59/41.

Available at: http://www.who.int/gb/archive/pdf_files/WHA59/A59_41-en.pdf.

² Adopted by the World Summit on Sustainable Development (Johannesburg, South Africa, September 2002).

Report available at: http://www.un.org/jsummit/html/documents/summit_docs/131302_wssd_report_reissued.pdf

³ SAICM/ICCM.4/6.

⁴ The survey questions and other documents related to the online survey are available at: <http://www.who.int/ipcs/en>.

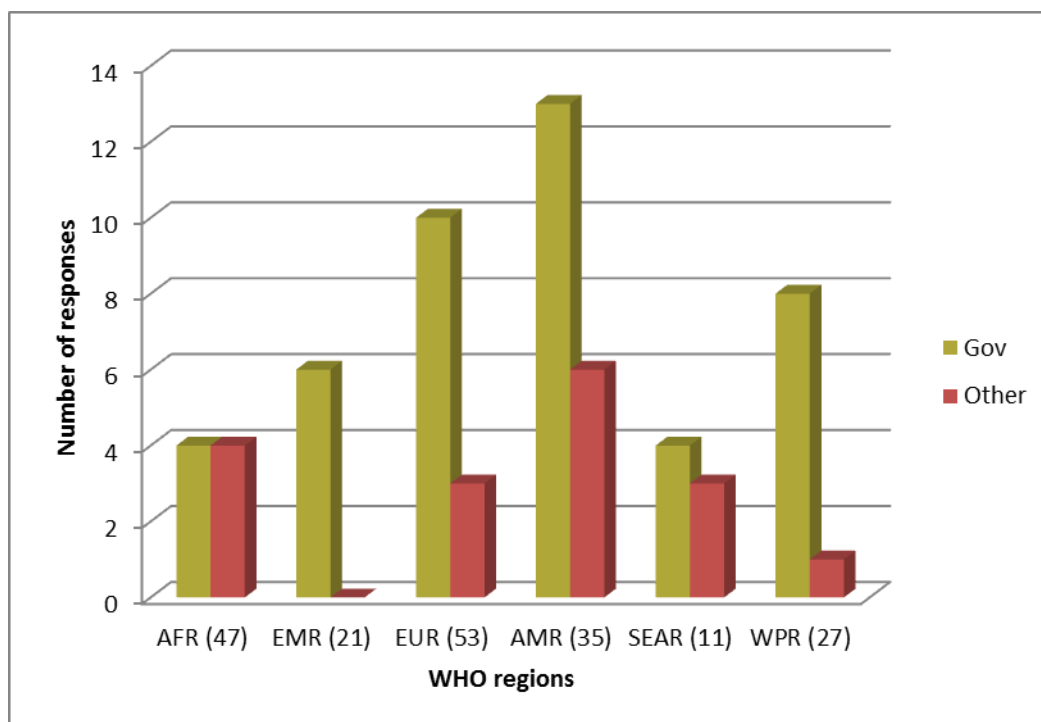


Figure 1. Distribution of responses by WHO region. The number of WHO Member States for each region appears in brackets. AFR: African region, EMR: Eastern- Mediterranean region, EUR: European region, AMR: American region, SEAR: South-East Asia region, WPR: Western Pacific region

Analysis of responses on the importance of the established priorities and activities

6. As the objective of the survey was to collect the views of health sector stakeholders on the level of attention required for the different priorities and activities identified previously, respondents were asked, for each priority and activity separately, whether the priority/activity needs high, medium or low attention to reach the 2020 goal. Table 1a and 1b provide an overview of responses regarding the health sector priorities. Table 2a and 2b provide an overview of responses regarding activities.

Table 1a. Ranking of health sector priorities: Governmental respondents

Health sector priority	High (%)	Medium (%)	Low (%)
Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach	84.4	13.3	2.2
Formulating strategies aimed at prevention of ill-health and disease caused by chemicals	82.2	13.3	4.4
Formulating strategies directed specifically at the health of workers	75.6	22.2	2.2
Building capabilities of countries to deal with poisonings and chemical incidents	73.3	24.2	2.2
Formulating strategies directed specifically at the health of children	73.3	24.2	2.2
Promoting alternatives to highly toxic and persistent chemicals	71.1	17.8	11.1
Filling of gaps in scientific knowledge	64.4	31.1	4.4
Elaborating globally harmonized methods for chemical risk assessment	64.4	28.9	6.7
Actions to improve ability to access, interpret and apply scientific knowledge	64.4	26.7	8.9

Table 1b. Ranking of health sector priorities: Other respondents

Health sector priority	High (%)	Medium (%)	Low (%)
Formulating strategies directed specifically at the health of children	82.4	11.8	5.9
Actions to improve ability to access, interpret and apply scientific knowledge	70.6	23.5	5.9
Promoting alternatives to highly toxic and persistent chemicals	70.6	17.6	11.8
Building capabilities of countries to deal with poisonings and chemical incidents	64.7	29.4	5.9
Formulating strategies aimed at prevention of ill-health and disease caused by chemicals	64.7	17.6	17.6
Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach	52.9	35.3	11.8
Formulating strategies directed specifically at the health of workers	52.9	35.3	11.8
Filling of gaps in scientific knowledge	47.1	35.3	17.6
Elaborating globally harmonized methods for chemical risk assessment	29.4	35.3	35.3

Table 2a. Ranking of activities: Governmental respondents

Activity	High (%)	Medium (%)	Low (%)
Awareness-raising	86.7	8.9	4.4
Strengthening professional training and development	80.0	17.8	2.2
Increasing the number of joint actions by sectors	66.7	31.1	2.2
Empowering SAICM focal points to engage with other sectors	66.7	26.7	6.7
Creating healthy health-care settings	60.0	33.3	6.7
Building on existing networks in the health sector	55.6	40.4	4.4

Table 2b. Ranking of activities: Other respondents

Activity	High (%)	Medium (%)	Low (%)
Awareness-raising	76.5	17.6	5.9
Strengthening professional training and development	70.6	29.4	0.0
Building on existing networks in the health sector	64.7	35.3	0.0
Increasing the number of joint actions by sectors	52.9	41.2	5.9
Creating healthy health-care settings	47.1	29.4	23.5
Empowering SAICM focal points to engage with other sectors	41.2	52.9	5.9

7. Additional information by WHO region appears in Annexes A to F.

8. The following paragraphs summarize input from respondents as to why the priority or activity requires high, medium or low attention.

9. *Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach* was classified most often by governmental respondents as high priority (Table 1a), either because of the need to develop standardized methods to

determine health impacts of exposure to chemicals or the need to monitor effectiveness of implemented strategies and approaches. Respondents argued that it is challenging to establish a causal relationship between exposure to chemicals and health effects, and that adequate information, a necessity for risk- and safety management, is lacking. Multiple respondents recognized the need to have (more) (bio-) monitoring/ surveillance data, ideally accompanied by guidelines to interpret the results. Some respondents argued that developing countries need affordable and practical methods to be able to determine the impacts of chemicals.

10. *Formulating strategies aimed at prevention of ill-health and disease caused by chemicals* is ranked second according to governmental respondents (Table 1a). Reasons mentioned are that it is better to focus on prevention rather than clinical management of adverse health effects and that preventive strategies are often scarcely developed. Respondents argued that the health sector should organize itself regarding monitoring of production processes involving chemicals and aim to intervene preventively to chemical exposures and focus on strengthening health information systems such that information is properly stored – which will also aid in guiding further actions. An important part of strategies, mentioned by a number of respondents, should be training since most problems caused by chemicals are due to improper use rather than its hazardous properties. Other respondents (Table 1b) added that it would help if countries are aware of costs of chemical-based health effects even though they think *Formulating strategies aimed at prevention of ill-health and disease caused by chemicals* is less of a priority.

11. *Formulating strategies directed specifically at the health of workers* was mentioned often by governmental respondents as high priority (Table 1a), for example because there is a lack of specific policies for workers health or workers are not always aware of safety standards at work with regards to chemicals. Examples of strategies mentioned by respondents include regular screening and health surveillance, educating workers on safety standards and the chronic and acute effects of chemicals on health, implementation of exposure and risk reduction measures and training programs for physicians. One respondent mentioned that an intercourse between occupational safety and health and medical services must be facilitated (e.g. public health training should not only focus on communicable diseases but also on risk assessments and risk communication). Other respondents (Table 1b) noted that substantial work in this area has been done by the International Labour Organization, Environmental Protection Agency or OECD, but what is missing is an overview of all worker health protection strategies that exist globally and an analysis why some of these strategies do not always work to reduce chemical exposures, in order to prioritize focus areas.

12. *Building capabilities of countries to deal with poisonings and chemical incidents* was prioritized as high by 73.3% of governmental respondents (Table 1a), either because emergency response is non-existent or inadequate, or because poison centres are understaffed or lack trained specialists and are poorly equipped or disconnected from other services (i.e. no access to composition databases of commonly used chemicals). One respondent argued that the promotion of applying the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) can contribute significantly. Among other respondents 53% prioritized *Building capabilities of countries to deal with poisonings and chemical incidents* as high (Table 1b), even though respondents recognized the need to build laboratory capacities, to engage medical professionals and train health ministries.

13. Many survey respondents were of the view that, as children are a particular vulnerable group in terms of health effects upon chemical exposure, *Formulating strategies directed specifically at the health of children* should receive high priority (Table 1a). Ideas for suggested strategies include setting safety standards, and improving methods to identify potential health risks for children and susceptible windows of development. Other respondents were also of the view that *Formulating strategies directed specifically at the health of children* needs high priority (Table 1b), and should include educating children in primary and secondary school on chemicals and chemical risk reduction and exposure prevention methods. One respondent cautioned that health problems at older ages should also be emphasized in protective policies.

14. Although *Promoting alternatives to highly toxic and persistent chemicals* is considered important according to 71.1% of governmental respondents (Table 1a), a number classified it as low priority, either because they believe that it is more important to limit the use of toxic and persistent chemicals of which the use is not entirely necessary, because some countries have no access to new alternatives and/or technologies, or a lack of knowledge and interest or political will block progress for this priority. Some argued that work has already been conducted in this area or that others should take a leading role in this, such as the technology and innovation sector, companies or UN agencies.

15. *Filling of gaps in scientific knowledge* was less often assigned high priority by governmental respondents (Table 1a). Views included that the priority is more a duty of developed countries or that

there is a wealth of information but insufficient capacity to access and use the information. However still 64 % of governmental officials considered *Filling of gaps in scientific knowledge* high priority and emphasised the need for more knowledge on the effects of endocrine disruptors, pharmaceutical compounds, carcinogenic environmental pollutants, nanotechnology or the effects of mixture of chemicals. Forty-seven percent of other respondents consider *Filling of gaps in scientific knowledge* high priority (Table 1b), for example because more attention should be paid to public education and protection (i.e. knowledge on how to manage chemicals and reduce health risk in case of uncertainties). Others argued that the priority is too vague and that by now there is sufficient evidence to take a precautionary approach. The respondents who did classify *Filling of gaps in scientific* as high priority argued that it will support science-based (risk assessment) decision making and lead to good evidence based management of chemicals.

16. *Elaborating globally harmonized methods for chemical risk assessments* was ranked relatively lower in terms of attention needed, however 64.4% of governmental respondents (Table 1a) classified it as high priority, reasoning that harmonization of risk assessment methodologies contributes to managing chemical risks because resulting data is consistent, facilitates acceptance of risk assessments among countries which could allow for work-sharing and reduction of duplication of efforts, and strengthens cooperation with other ministries (Table 1a). A substantial number of respondents argued that it is difficult to develop methods that apply to all countries' conditions. Only 29.4% of other respondents assigned *Elaborating globally harmonized methods for chemical risk assessments* as requiring high attention (Table 1b). Respondents argued it might not be helpful as part of an overall effort to improve chemicals management, because it takes too much time or that it is already being done.

17. *Actions to improve ability to access, interpret and apply scientific knowledge* was ranked last by governmental respondents in terms of priority (Table 1a) although 64% assigned it high priority; whereas other respondents ranked it second (Table 1b). Other respondents argued that it should receive attention because of the need to understand how to access and interpret data (by general public, clinicians and policy makers) and how to translate scientific insights into policy making. In addition, they argued, it is difficult -especially for developing countries- to understand and get access to new scientific discoveries, including combined effects of chemicals or hazardous substances in electronic products.

18. Most governmental respondents reasoned that *Awareness- raising* has high priority (Table 2a) because people should be aware of chemical risks to make informed decisions. Currently, respondents argued, there is a lack of reliable information regarding properties, alternatives and safe use of hazardous substances. Respondents requested materials on strategies, information products or awareness health campaign programs (with technical information since this knowledge is often missing) in order to be able to make the general public aware of chemical risks and how to avoid these. Other ideas included emphasising the cost of inaction, providing information on alternatives and risk mitigation measures. A recurrent issue is the fact that access to information is essential, combined with an understanding how to interpret this information. Training was often mentioned as an important part of awareness- raising, either for workers or governmental respondents. Other respondents also classified *Awareness- raising* as highest priority (Table 2b) and reasons are similar to those suggested by governmental respondents.

19. *Strengthening professional training and development* is mentioned often as high priority by governmental respondents (Table 2a), either because of a lack of trained health professionals, the need to strengthen existing training programs, the fact that training is an important tool to work on public safety regarding chemicals exposure, or a combination of these arguments. One respondent mentioned the lack of projects involving collaboration between countries. Suggestions made were to incorporate health-effects upon chemical exposure in the curriculum of medical professionals or to implement a nationwide program entitled "Train the trainers". Other respondents also stressed the importance of training, either for governmental officials, non-governmental organizations or medical care professionals. One respondent argued that professional training and development is a cross-cutting imperative that will enable progress in other SAICM goals and priorities, including *Awareness-raising* and *Creating healthy health-care settings*.

20. Reasons mentioned by governmental respondents for giving high priority to *Increasing the number of joint actions by sectors* include that it will aid the development of coordination and joint activities regarding chemicals management, thereby involving different sectors. It will also help to identify gaps, reduce duplication of initiatives and efforts, and facilitate the implementation of global systems including GHS. Reducing complexity of implementing cooperative activities will facilitate undertaking joint actions but some respondents argued that, rather than focus on increasing the number of actions, attention should be paid to enhancing effective intersectoral collaboration. One respondent

commented that local policy makers should be mindful of country's obligations regarding multilateral agreements, whereas other government respondents took to the opportunity to give examples of actions where joint actions are particularly necessary; these include illegal international traffic of chemicals and waste, and pharmaceutical waste management. One participant pointed to the use of Health in all Policies, as a useful approach. In general, other institutions prioritized *Increasing the number of joint actions by sectors* more often as having only "medium priority", since, some argue, as an action on its own it is difficult to pursue, it could be incorporated in other activities.

21. A challenge, according governmental respondents for the activity *Empowering SAICM focal points to engage with other sectors*, is the fact that in many countries mainly ministries of environment are involved. Reasons why attention should be given to this priority include that involvement of other sectors is important for the implementation of sound management of chemicals at national level (this would inter alia enhance the implementation of the regional and MEA agreements). Hence, collaboration with other sectors is needed which will ensure more engagement. A positive outcome of working on this priority is that it will give greater visibility to the health sector. Some countries mentioned issues regarding SAICM focal points, including that they have no SAICM focal point for their country, its roles and responsibilities are not understood or recognized, or that, although multisectoral networks have been established, these are not operational. In some cases for SAICM quick start program projects, engagement was not followed up in the implementation phase or ceased when the project was finished. One respondent from an "other" organization argued that the selection of SAICM focal points should be well thought through to ensure that SAICM focal points have sufficient knowledge to be able to fully understand chemical risks. Another respondent argued that NGO focal points should be better established and connected to the network.

22. Sixty percent of governmental respondents prioritized *Creating healthy health-care settings* high (Table 2a) because healthy health-care settings are often absent or below standard. Some respondents argue that improving health care settings reduces the burden of disease and associated costs. One respondent suggested putting priority in those areas which enable the health care professionals to educate people using health care services. Others suggested improving specialized care for adverse health effects resulting from chemical exposure. Arguments why *Creating healthy health-care settings* should receive less priority are that, rather than creating additional settings, the existing ones should be improved, or, before deciding on priorities, first a situation assessment should be conducted to be able to understand the urgency of the situation. Some argue that health care settings have already improved thanks to health promotion campaigns. Other respondents reason that *Creating healthy health-care settings* should receive high priority because health workers and patients are now often at risk of exposure from waste and hazardous chemicals used in health care settings. A reason given as to why it should not receive high priority is that the focus should not only be on health-care settings but also on schools, workplaces, homes etc.

23. Although a considerable number of respondents stated *Building on existing networks in the health sector* as medium priority, still many reasons why it is an important priority were given, including the importance to harmonize efforts of different networks (e.g. trade unions, NGOs, industry), the fact that networks are currently poorly established/ coordinated (e.g. reporting system and databases are not well maintained), integration of chemicals management should be strengthened in health promotion policies via health sector networks, and cooperation between networks will aid in reaching the 2020 goal of sound chemicals management. A higher percentage of other organizations classified *Building on existing networks in the health sector* as high priority (Table 2b) and emphasised the need for strong networks to save resources. One respondent mentioned that developing countries might not have the regulatory infrastructure to conduct risk assessments and thus rely on others.

Analysis of responses to survey questions about additional health sector priorities and activities

24. In the final part of the survey respondents were invited to identify any additional priorities and activities important for the achievement of the 2020 goal along with the rationale and what is needed to address the additional priority/activities. Twenty-four governmental respondents and 11 respondents from other organizations provided input.

25. Government respondents emphasized most often the need to: strengthen policies and strategies, including legislation; better understand the size of the problem in their countries and therefore a need for improved environmental and bio-monitoring, health surveillance and laboratory capacities; strengthen the health system and institutions including human resources and capacities, because even where plans are in place underfunding limits the capacity of the health system to address all the challenges; put in place and use the multi-sectoral inter-ministerial processes at country level

already called for under SAICM but not yet achieved; share expertise among countries on both risk assessment and risk management approaches.

26. Other respondents emphasized most often “greening” the health sector by addressing chemicals used in health-care settings, the importance of education and training of the health sector and research.

III. Additional information on health sector priorities

27. Stakeholders wishing to review information on progress thus far in implementing the Strategic Approach are referred to the following reports by the SAICM Secretariat and by WHO: Summary report on progress in the implementation of the Strategic Approach for the period 2011-2013⁵, and Report by the World Health Organization on the engagement of the health sector in the Strategic Approach to International Chemicals Management⁶.

28. From 22-23 June 2015, the WHO regional office for EURO organised a meeting on Implementation of Strategic Approach to International Chemicals Management in the health sector. As a contribution to the wider discussion on identifying priorities of the health sector towards achieving the 2020 goal on sound chemicals management, representatives of WHO European Region Member States identified priorities most relevant for the region. The priorities identified can be found in Annex A.

29. In July 2014, the WHO regional office for Africa has published a regional assessment report on *Chemicals of Public Health Concern in the African Region and their management*. This report aimed to identify chemicals that are of major public health concern and assess public health hazards associated with them, understand their distribution across the region and evaluate their management systems. A gap analysis with strengths and challenges in the management of chemicals of public health concern, recommendations and proposed actions can be found in Annex B, together with a more detailed analysis of the African regional priorities as identified via the online survey.

30. On 7 July 2015 the WHO/Pan American Health Organization facilitated a regional bilingual discussion session on the WHO survey during which Member State representatives identified priorities most relevant for the region. A summary of this discussion session, together with a more detailed analysis of survey responses for the Region of the Americas, can be found in Annex C.

31. On 5 August 2015 the WHO Regional Office for South East Asia hosted a webinar to discuss regional health sector priorities. A summary of this discussion, together with a more detailed analysis of survey responses for the South-East Asian Region, can be found in Annex D.

IV. Summary and implications for the Overall Orientation and Guidance

32. Overall, the results of the WHO consultation indicate that the previously identified health sector priorities remain high priority for governmental health sector stakeholders. Most emphasis was given to *Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach* and *Formulating strategies aimed at prevention of ill-health and disease caused by chemicals*. The majority of the health sector priorities also remain high priority for health sector stakeholders from other organizations. Differences between the responses by the two groups may reflect the diverse nature of the health sector and the different roles played by governments compared to other organizations.

33. However, since the health sector priorities were developed, significant work has been done, and further experience has been gained in the sound management of chemicals by the health sector. This impacts on the emphasis given to certain of the priorities as well as providing further examples of actions that can be taken to support achievement of the priorities.

34. Regarding the previously identified activities, governmental and other health sector stakeholders expressed similar views on the priority to be given to the activities, with both groups identifying *awareness-raising* and *strengthening professional training and development* as top and second priority, respectively. Almost all of the activities were ranked “high” for both groups of stakeholders, indicating the continued relevance of the *Strategy for strengthening engagement of the health sector in the strategic approach*.

⁵ SAICM/ICCM.4/3.

⁶ SAICM/ICCM.4/INF/3.

35. To inform the work of the health sector in the period to 2020, the following Section V has been prepared containing updated health sector priorities based on input received during the WHO online survey and other consultations described in this report.

36. In relation to the proposed Overall Orientation and Guidance, in general, the updated health sector priorities are reflected in the Guidance, either explicitly or implicitly. In particular the health sector priorities correlate well with, and will act to support, the 11 basic elements set out in the Overall Orientation and Guidance, as described in Section V.

37. However, health sector stakeholders give more importance to certain actions and use different language to express them. There may therefore be benefit in the Conference adopting a decision on the Overall Orientation and Guidance that refers to the contribution that the health sector stands to play through implementation of the health sector priorities and activities. For this purpose, and to inform the work of the health sector in the period to 2020, the following section V has been prepared, incorporating input received during the WHO online and other consultations described in this report.

V. SAICM health sector input to implementation of the Strategic Approach, and the Overall Orientation and Guidance, for the period 2015 to 2020

38. During the negotiation of the Strategic Approach the health sector, through a process facilitated by WHO and as reported to the 59th World Health Assembly, identified a number of priorities which are reflected in the Strategic Approach. These “health sector priorities” were based on input from 78 countries.

39. In addition to the health sector priorities, the third session of the International Conference adopted a Strategy for strengthening the engagement of the health sector in the implementation of the Strategic Approach, which suggested possible activities to be undertaken voluntarily to fulfil the objectives of the strategy.

40. In 2015, in order to take stock and inform health sector priorities and activities in the remaining period to 2020, WHO consulted with health sector stakeholders about the attention needed in future to the identified priorities and activities as well as any additional priorities and activities. Input was received from 45 governmental stakeholders and 17 other stakeholders from 51 countries. Additional input was also provided through WHO regional consultations and reports. A detailed report of this input was submitted to the fourth session of the International Conference, including updated health sector priorities.

41. During the development of the Strategic Approach, countries emphasized the importance of work at regional and country level, and the 2015 WHO consultations demonstrated that in some regions and countries certain priorities will need more attention than others. Detailed information to guide future regional work can be found in the above-mentioned WHO report.

42. In the 2015 WHO consultation, governments and other health sector stakeholders in the Strategic Approach reaffirmed the continued relevance of the activities set out in the Strategy for strengthening the engagement of the health sector in the implementation of the Strategic Approach. These activities are cross-cutting and will support implementation of the health sector priorities in the period to 2020.

43. A summary of the main global priority areas of health input to implementation of the Strategic Approach, and the Overall Orientation and Guidance follow. These represent updated health sector priorities for the period 2015 to 2020. Included in parentheses are the “basic elements” of the Overall Orientation and Guidance that the priority will particularly support.

- **Devising better and standardized methods to determine impacts of chemicals on health, to set priorities for action and to evaluate the effectiveness of policies and progress of the Strategic Approach.** These methods should be able to be used at country level and will also assist in implementation of the Sustainable Development Goals. More monitoring and surveillance data are needed, accompanied by guidance to interpret results. (Supports basic element j)
- **Formulating strategies aimed at prevention of ill-health and disease caused throughout the life course by chemicals, including strategies directed specifically at the health of children and workers.** This should include strategies such as improved methods to identify susceptible windows of development in children, and worker screening and health surveillance. Strategies need to include strengthening legislation, policies and health information systems,

training, education and capacity building in risk communication. Expertise in implementing strategies needs to be shared among countries. (Supports basic elements *a, c, d* and *g*)

- **Building capabilities of countries to deal with poisonings and chemical incidents and emergencies**, and to achieve the core capacities for chemicals under the International Health Regulations (2005). This requires establishment and institutional strengthening of poisons centres, as well as fully functioning surveillance, alert and response mechanisms for chemical incidents and emergencies. (Supports basic elements *d* and *i*)
- **Promoting alternatives to highly toxic and persistent chemicals**, taking into account the life-cycle of chemicals including waste. This requires interaction between the health and other sectors that develop new chemicals, technologies and products. (Supports basic element *k*)
- **Filling of gaps in scientific knowledge**, such as gaps in understanding of endocrine-active chemicals, nanomaterials, and combined exposures to multiple chemicals. This will facilitate better risk assessment and risk management decision-making. (Supports basic element *h*)
- **Elaborating globally harmonized methods for chemical risk assessment**, to enhance transparency and understanding, enable work-sharing and reduce duplication of effort, particularly in hazard assessment. More work is needed to develop exposure assessment methodologies that are applicable to different country use patterns and climate. (Supports basic element *h*).
- **Actions to improve ability to access, interpret and apply scientific knowledge, particularly** in developing countries, as well as making knowledge available in forms relevant to end users. These actions include using new science in risk assessment, the sharing and use of existing risk assessments, and sharing experience in risk management. (Supports basic element *e*)

44. The capacity of the health sector to implement the identified priorities and activities varies greatly between countries and regions. Institutional strengthening will be required in many countries in order to achieve the 2020 goal, and is an urgent need in countries with weak health systems facing multiple health challenges.

ANNEX A

European Region

- **Governmental respondents were from the following countries:** Armenia, Austria, Belgium, Bosnia and Herzegovina, Denmark, Hungary, Lithuania, Slovenia and Switzerland
- **Analysis of regional priorities to the online survey**

Ten governmental respondents from the European Region submitted the online survey and identified the following priorities and activities most often as high priority:

Priority:

- Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach

Activity:

- Awareness- raising

Three other organizations from the European Region submitted the survey and identified the following priorities and activity most often as high priority:

Priorities:

- Actions to improve ability to access, interpret and apply scientific knowledge
- Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach
- Formulating strategies directed specifically at the health of children
- Formulating strategies aimed at prevention of ill-health and disease caused by chemicals.

Activity:

- Awareness-raising
- **The following paragraphs presents the meeting outcomes of a EURO meeting on regional health sector priorities**

1. As a contribution to the wider discussion on identifying priorities of the health sector towards achieving the 2020 goal on sound chemicals management, the representatives of WHO European Region Member States have identified the priorities most relevant for the region, as listed below.
2. The priorities were identified at a regional workshop, held from 22-23 June 2015 in Bonn, Germany, on “Implementation of the Strategic Approach to International Chemicals Management in health sector and health sector priorities to 2020 goal in the WHO European Region”. In order to assist the discussions regarding regional priorities, a background document was prepared containing a list of existing actions addressed to the health sector of relevance to the WHO European region. In selecting priority areas, the meeting participants also stressed that this does not mean that other areas are not important, and work can and should still continue in those areas as well.
3. The following priority areas were identified:
 - I. Policy development and strengthening legislation

A key element towards achieving the 2020 goal for the health sector is to develop and implement policy and to strengthen legislation, in a number of areas, including identifying the role of the health sector, promoting implementation of safer alternatives to toxic chemicals, undertaking monitoring and surveillance towards achieving risk and health impact assessments, integrating chemicals issues into the broader development agenda, developing capacities for assessing the costs of inaction on chemicals issues, and establishing or strengthening governmental mechanisms to provide liaison and coordination between all parties involved in chemical safety activities and ensuring health-sector participation. All of these policy developments should take into account and address the specific needs of vulnerable and highly exposed population groups and all stages of chemicals life-cycle.

II Monitoring, surveillance, risk assessment, and evidence collection

Developing and strengthening regional and national integrated monitoring and surveillance systems is necessary to improve exposure and risk assessment and evidence gathering to contribute to timely and evidence-based decisions about chemicals management. Actions should be taken to acquire human bio-monitoring and exposure data, data on environmental pollution and food contamination, and health surveillance including poisonings. This will also require improved and global access to information on the impacts of chemicals on human health, harmonizing approaches to assess exposure and risks of hazardous chemicals to people at various stages of life, collecting information on chemicals in products related to effects on human health, establishing guidelines for “healthy” soil, water, air, food and products (including standards for new chemicals).

III. Capacity building

As a major cross-cutting theme towards the actions needed to achieve the 2020 goal, capacity-building was identified as a priority for a number of areas, including:

- Strengthening institutional capacities

Building capacities of countries to implement the SAICM Health Sector Strategy, including the creation and/or strengthening of poison control centres to deal with acute and chronic poisonings and chemical incidents.

- Strengthening human resources

That includes developing training programmes for health care and public health professionals and safety practitioners regarding environmental and occupational risks of chemicals, and specifically chemicals effects on children including developmental origins of health and disease. Actions should also be taken to build capacities for assessing and monitoring health risks related to exposure to hazardous chemicals, gathering evidence, diagnosing, treating health disorders, and to incorporate chemical safety awareness and understanding of the GHS labelling system in, inter alia, school and university curricula.

- Strengthening capacities for safer procurement and use of chemicals (which include pharmaceuticals) and medical wastes management by the health sector.

- Strengthening capacities for implementation of international agreements relating to chemicals and wastes

Engaging in SAICM to cooperate proactively with SAICM national focal points to maximize collective efforts related to chemicals and waste management, get involved in national, regional, and international SAICM forums, engage with other sectors in the sound chemicals management, promote inclusion of health priorities in the national SAICM implementation plans, and participate in inter-sectoral coordination mechanisms on chemicals management.

IV. Scientific research

Scientific research to provide evidence based recommendations which can be easily translated for policy makers were identified as a priority in the following areas: developing harmonized methodologies and new tools for risk assessment (especially for vulnerable groups) relevant to real-life exposures (e.g. aggregate/cumulative exposures, use of simple analytical methods for in-field exposure assessment), methodologies for health surveillance, indicators for assessment of chemicals exposure and effects, and scientific advances in toxicogenomics, incorporating early development in the studies of the etiology of human disease, and comparative assessments to ensure safety of alternative products.

As regards emerging policy issues, it was considered that priorities for these (such as EDCs, highly hazardous pesticides, carcinogens, lead in paint) should be set at the national level based on national assessments.

ANNEX B

African Region

- **Governmental respondents were from the following countries:** Congo, Cote d'Ivoire, Mauritius and Togo
- **Analysis of regional priorities to the online survey**

Four governmental respondents from the African Region submitted the online survey and identified the following priorities and activities most often as high priority:

Priorities:

- Elaborating globally harmonized methods for chemical risk assessment
- Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach
- Building capabilities of countries to deal with poisonings and chemical incidents
- Formulating strategies directed specifically at the health of children
- Formulating strategies directed specifically at the health of workers
- Promoting alternatives to highly toxic and persistent chemicals
- Formulating strategies aimed at prevention of ill-health and disease caused by chemicals

Activities

- Awareness-raising
- Building on existing networks in the health sector
- Empowering Strategic Approach focal points to engage with other sectors
- Strengthening professional training and development

Four other organizations from the African Region submitted the survey and identified the following priority and activities most often as high priority:

Priority:

- Filling of gaps in scientific knowledge

Activities:

- Awareness-raising
- Building on existing networks in the health sector
- Strengthening professional training and development
- **The following text presents the gap analysis, and recommendations and proposed actions from the Regional Assessment Report of AFRO (published in July 2014) on *Chemicals of Public Health Concern in the African Region and their management*.**

GAP ANALYSIS

5.1 Strengths and challenges

Table 13. Strengths and challenges in the management of chemicals of public health concern

Factors	Strengths	Challenges
Chemicals of major public health concern in the African Region	Chemicals of potential public health concern in the Region identified	Inadequate capacity for appropriate management of the chemicals
Potential sources of exposure	Potential sources of exposure defined for all major chemicals of public health concern Elimination of the use of leaded petrol, a major achievement that has been successfully implemented in the majority of African countries	Limited knowledge on chemical risks Inadequate resources for prevention of exposure to chemicals
Legislation and policy	Implementation of the Libreville Declaration as it relates to chemical management Remarkable progress in the development of national legislation and policies by many Member States International conventions, protocols, multilateral environmental agreements and non-binding legal agreements on chemical management such as the Strategic Approach to International Chemicals Management (SAICM) policy framework that Member States have ratified	Many of the toxic chemicals concerned not taken into account in existing legislation Poor implementation and enforcement of national legislation and MEAs
Coordination, collaboration and partnership	Formal and informal structures for collaboration of relevant sectors exist in many countries in the Region Partnership with WHO, UNEP, SAICM and other bodies	Lack of mechanisms for coordination and collaboration among relevant sectors
Human resource capacity	Plans for development and strengthening of human resource capacity in many countries National training institutions in many countries in the Region	Inappropriate allocation of existing human resources in the Region Lack of toxicologists in the African Region
Surveillance capacity	IHR (2005), which covers chemical hazards and outbreaks of illness of public health importance of chemical aetiology	Environmental public health surveillance systems for chemical incidents generally absent Inadequate collaboration among human surveillance units, poisons centres, chemical reference laboratories and relevant environmental sectors
Laboratory capacity	Reference laboratories in some Member States that deal with most chemicals identified as being of major public health concern	Inadequate laboratory equipment and essential reagents in existing national reference laboratories Lack of regional external quality assessment programmes for chemicals of major public health concern
Capacity of poisons centres	International agencies willing to support the establishment and strengthening of poisons centres in the Region	Few countries have poisons centres or toxicology units with adequate resources
Management of chemical waste	National legislation on waste in many countries in the Region, plus the Basel and Bamako conventions that Member States have ratified	Growth of industries in Africa without appropriate infrastructure for chemical waste management
Management of chemical stockpiles, contaminated sites and facilities	International initiatives such as the African Stockpiles Programme that are supporting African countries in the disposal of existing obsolete stockpiles	Lack of chemical recycling and disposal facilities in the African Region

RECOMMENDATIONS AND PROPOSED ACTIONS

Recommendations

- (a) Chemicals of major public health concern in the African Region
 - Develop standards, regulations, guidelines and tools for the safe management of chemicals
- (b) Potential sources of exposure
 - Develop standard operating procedures for limiting occupational and environmental exposure.
 - Develop and disseminate health-promotion materials in collaboration with relevant programmes
- (c) Legislation and policy
 - Develop strong enforcement mechanisms for implementation of existing legislation, including MEAs
 - Develop comprehensive policies for an integrated approach to chemical management using a life-cycle approach
- (d) Coordination, collaboration and partnership
 - Implement intersectoral coordination mechanisms for the safe management of chemicals
 - National multisectoral task forces that deal with issues related to public health and the environment to include chemicals on their agenda
 - Enhance regional partnerships to deal with chemical issues such as waste management and illegal transboundary movement of chemicals
- (e) Human resource capacity
 - Develop training packages on chemicals that can be used to upgrade the capacity and capability of public health professionals
 - Include chemical training packages in the curricula of national public health institutions
- (f) Surveillance capacity
 - Enhance early warning systems for detection of chemicals of public health concern, for example, create or strengthen surveillance units, poisons centres or toxicology units, chemical reference laboratories etc.
 - Conduct surveillance of chemical exposure for potentially exposed groups, especially the most vulnerable such as children and pregnant women
 - Enhance surveillance capacity of countries for monitoring chemicals in the environment that could have impact on human health
 - Foster intersectoral collaboration in the sharing of information and surveillance data
- (g) Laboratory capacity
 - Develop at least the minimum capability for atomic absorption spectrometry for analysis of heavy metals in all countries in the Region
 - Establish mechanisms for collaboration of national laboratories in different sectors working on chemicals
 - Identify and/or establish regional reference laboratories for confirmation of chemicals of public health concern
- (h) Capacity of poisons centres
 - Utilize existing WHO guidelines to establish and equip poisons centres
 - Map the capacities of existing poisons centres
 - Develop regional guidelines for establishment of new poisons centres
 - Upgrade the capacities of existing poisons centres as necessary

- (i) Management of chemical waste
 - Identify the industries principally responsible for the discharge of toxic chemicals and implement strict regulatory mechanisms to control them
 - Advocate for appropriate recovery and recycling technology working in close collaboration with relevant stakeholders
 - Develop promotional materials to enhance public awareness of waste management issues, for example on characterization of chemical waste
 - Organize subregional training sessions on management of chemical waste in collaboration with national and international counterparts
- (j) Management of chemical stockpiles, contaminated sites and facilities
 - Establish mechanisms for management and disposal of chemical stockpiles and prevention of their future accumulation
 - Advocate for decontamination of contaminated sites and facilities

Priority actions

- a) Dissemination of this report to all relevant stakeholders
- b) In-depth on-site evaluation of chemical management systems in selected countries based on the findings of this report
- c) Elaboration of a regional 2015–2020 strategy for management of chemicals to address the issues and challenges identified in this report
- d) Development where and as necessary of norms and standards on the capacities required for chemical management, taking account of existing guidelines such as those of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), SAICM etc.
- e) Development of comprehensive training packages for public health professionals on chemical management, working in close collaboration with other WHO programmes and relevant stakeholders
- f) Provision of technical support to Member States for the implementation, monitoring and evaluation of the 2015–2020 regional strategy after it is developed

ANNEX C

Region of the Americas

- **Governmental respondents were from the following countries:** Antigua and Barbuda, Brazil, Canada, Chile, Cuba, Ecuador, Honduras, Panama, Paraguay, Saint Lucia and Uruguay
- **Analysis of regional priorities to the online survey**

Thirteen governmental respondents from the region submitted the online survey and identified the following priority and activity most often as high priority:

Priority:

- Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach

Activity:

- Awareness- raising

Six other organizations from the region submitted the online survey and identified the following priorities and activities most often as high priority:

Priorities:

- Building capabilities of countries to deal with poisonings and chemical incidents
- Formulating strategies directed specifically at the health of children

Activities:

- Awareness-raising
- Building on existing networks in the health sector
- Strengthening professional training and development
- **The following paragraphs presents the outcomes of a webinar on regional health sector priorities**

To supplement the online survey, particularly to discuss regional health sector priorities, WHO/PAHO facilitated a regional bilingual discussion session on 7 July 2015. Many of the health sector stakeholders present at the webinar noted that health sector participation in chemicals management is limited and needs to be increased. There was also a discussion of the need for increased capacity in various areas, including:

- access to participatory methods in environmental health;
- investigation of teratogenic effects of chemicals and application/interpretation of toxicological results;
- ability to prevent and treat acute poisonings, particularly for vulnerable groups;
- monitoring and surveillance activities; biomonitoring markers and strategies for specific groups or segments of the population;
- training of professionals in the health sector (and in other sectors (cross-cutting))

The following was also noted:

- There is a need for Focal Points specific to the health sector because the issues are health specific. i.e. acute poisonings
- Need to work with other sectors and look for resources in other departments
- It can be difficult to demonstrate benefits/costs due to time lag between exposure and health effects.
- Intersectoral communication is important.
- Developed countries focus predominantly on toxic compounds whereas developing countries are dealing with polluted environments due to mining and other heavy industrial activities.
- Need for and availability of preventive tools and for knowledge transfer where tools do exist.

- It is important to consider the types of industries in countries in the region, i.e., mining, agriculture, oil sector, chemical sector and to adjust tools to specific target groups.

Finally, it was noted that we are adding responsibility to the health services and need political support for this work. It was suggested that declarations, like the MERCOSUR commitment to strengthen chemicals safety, could be used to increase support within the chemicals community.

ANNEX D

South-East Asia Region

- **Governmental respondents were from the following countries:** Bhutan, India, Myanmar and Thailand
- **Analysis of regional priorities to the online survey**

Four governmental respondents from the South-East Asia Region submitted the online survey and identified the following priorities and activities most often as high priority:

Priorities:

- Building capabilities of countries to deal with poisonings and chemical incidents
- Formulating strategies aimed at prevention of ill-health and disease caused by chemicals

Activities:

- Awareness- raising
- Building on existing networks in the health sector
- Strengthening professional training and development
- Increasing the number of joint actions by sectors

Three other organizations from the South-East Asia Region submitted the online survey and identified the following priorities and activities most often as high priority:

Priorities:

- Actions to improve ability to access, interpret and apply scientific knowledge
- Elaborating globally harmonized methods for chemical risk assessment
- Formulating strategies directed specifically at the health of children
- Promoting alternatives to highly toxic and persistent chemicals

Activities:

- All activities were identified as high priority by all three organizations
- **The following paragraphs presents the outcomes of a webinar on regional health sector priorities organized by the WHO Regional Office for South East Asia.**

WHO Regional Office for South East Asia webinar on regional health sector priorities

To supplement the online survey, particularly for those health-sector stakeholders unable to respond in the given timeframe, the WHO Regional Office for South-East Asia held a webinar for health-sector focal points for chemical safety on 5 August 2015. Focal points from Indonesia, Thailand, and Maldives participated and confirmed the following priorities from the online survey as pertinent for the region i) building capabilities of countries to deal with poisonings and chemical incidents and ii) formulating strategies aimed at prevention of ill-health and disease caused by chemicals. Interest was expressed in accelerating progress in building capacity for laws and regulations on chemical safety and for using globally harmonized methods for risk assessment. The usefulness of targeting of specific chemicals was raised to either by type of risk or category or the impact on vulnerable groups such as children or affecting reproductive capacity. It was noted that earlier prioritization had supported targeting chemicals of high public health concern including highly hazardous pesticides and implementation of international priorities such as mercury and the International Health Regulations (2005). Greater use of webinars in future would be a useful way of information dissemination on different topics.

ANNEX E

Western Pacific Region

- **Governmental respondents were from the following countries:** Brunei Darussalam, Cambodia, Japan, Lao People's Democratic Republic, Malaysia, Philippines, Samoa, Solomon Islands

- **Analysis of regional priorities to the online survey**

Eight governmental respondents from the Western Pacific Region submitted the online survey and identified the following priority and activity most often as high priority:

Priority:

- Formulating strategies directed specifically at the health of workers

Activity:

- Awareness-raising

One other organization from the Western Pacific Region submitted the online survey and identified the following priority and activities most often as high priority:

Priority:

- All priorities were classified as high priority

Activities:

- Empowering Strategic Approach focal points to engage with other sectors
- Creating healthy health-care settings
- Increasing the number of joint actions by sectors

ANNEX F**Eastern-Mediterranean Region**

- **Governmental respondents were from the following countries:** Iran (Islamic Republic of), Jordan, Libyan Arab Jamahiriya, Somalia and Sudan
- **Analysis of regional priorities to the online survey**

Six governmental respondents from the Eastern-Mediterranean Region submitted the online survey and identified the following priorities and activity most often as “high priority”:

Priorities:

- Devising better ways to determine impacts of chemicals on health, to set priorities for action and to monitor progress of the Strategic Approach
- Formulating strategies aimed at prevention of ill-health and disease caused by chemicals

Activity:

- Awareness-raising

No other organizations from the Eastern-Mediterranean Region submitted the online survey.
