

Analysis of stakeholder
views on future development in
chemical safety
in the WHO European Region

ABSTRACT

In preparation for the Sixth Ministerial Conference on Environment and Health (June 2017), the WHO Regional Office for Europe conducted a series of interviews to collect the views of stakeholder representatives on the short-term action they felt was required in the area of chemicals safety to ensure the protection of vulnerable population groups. Among the interviewees were representatives of governmental agencies in the health and environment sectors, nongovernmental organizations, research institutions and industry. The report summarizes the priority action proposed, the roles and responsibilities of different stakeholders, and the opinions of the interviewees on how to promote the application of relevant scientific knowledge through risk-reduction policies.

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WHO Regional Office for Europe

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What this analysis represents

This analysis is a compilation of the opinions expressed by those who took part in the stakeholder consultation conducted by the WHO European Centre for Environment and Health (ECEH), Bonn, Federal Republic of Germany, of the WHO Regional Office for Europe, between 18 August and 22 September 2016. It demonstrates the diversity of views – at times controversial – that exist on action required to increase chemical safety in the WHO European Region.



And what it does not

The views expressed in this publication are not the official opinion of WHO, nor do they reflect any agreement of the WHO Member States.

Executive summary

Increasing scientific evidence of the effects of exposure to chemicals on human health, especially at vulnerable life stages, confirms that the sound management of chemicals is a health issue. This notion is explicitly reflected in the new European health-policy framework, WHO Health 2020 Agenda (Health 2020), and the United Nations 2030 Agenda for Sustainable Development (2030 Agenda).

On 4–5 July 2016, the WHO European Centre for Environment and Health (ECEH), Bonn, Federal Republic of Germany, of the WHO Regional Office for Europe held a meeting to discuss chemical policies to protect human health and the environment from the perspective of sustainability. As a follow-up, WHO considered it important to obtain a greater understanding of the needs of key stakeholders in this area and called for a stakeholder analysis to investigate their needs.

The aim of the analysis was to gather the views of governmental and nongovernmental stakeholders on the core action needed in the WHO European Region to promote progress in the area of chemical safety, with a focus on protecting vulnerable population groups and vulnerable life stages. The initiative was one of the preparatory activities leading to the Sixth Ministerial Conference on Environment and Health planned to take place in Ostrava, Czechia, on 13–15 June

2017 during which “chemicals and health” would be one of the priority themes.

A questionnaire was compiled and the questions were presented to governmental and nongovernmental stakeholders through telephone and Skype interviews held between 18 August and 22 September 2016 (Annex 1). Their responses were analysed and summarized into groups covering: priority action in chemical safety for vulnerable groups; key sectors and stakeholders that should be involved; barriers to and facilitators of the implementation of evidence into policy; and recommended ways forward.

Results

A total of 18 diverse stakeholders from countries of central Asia and central and eastern Europe, as well as the European Union (EU) Member States, participated in the interviews, which were based on three broad themes focused on identifying:

- *what* action is considered a priority;
- *who* needs to be involved;
- *how* to translate research results and other knowledge about chemicals and health into policy, and overcome the greatest barriers.

What action is considered a priority?

The participants proposed a large number of priority issues that could contribute to the implementation of Health 2020, and the 2030 Agenda, including:


- improving the management and control of hazardous substances, in particular endocrine disrupting chemicals (EDCs), pesticides, heavy metals, mercury and asbestos;
- minimizing human exposure to chemicals by increasing the safety of food, water, air, soil and waste, and consumer products, the priority being to address air pollution;
- strengthening legislation and regulation, especially those relating to implementation and enforcement in Member States, and transposing examples of effective chemical regulations (for example, relevant EU legislation) throughout the WHO European Region;

- increasing research in chemical safety, filling data gaps through innovation, the early identification of hazards and causation, and setting exposure limits and standards for vulnerable groups;
- developing, implementing and monitoring national action plans, specifying quantitative targets and timelines for chemical safety and defining the roles and responsibilities of the stakeholders involved;
- enhancing awareness raising about, and the visibility of, chemical-safety issues, including the transparency of chemical content, the negative impact of chemicals on human health and the environment and where responsibility lies, and the need to increase commitment to policy action;
- facilitating capacity-building and intersectoral collaboration to enhance communication, research and knowledge sharing;

- ensuring that industry manages and coordinates the production and use of chemicals appropriately through the implementation of the Responsible Care initiative and the adoption and implementation of the *Globally Harmonized System for Classification and Labelling of Chemicals (GHS)*.

Who needs to be involved?

A whole-of-government, whole-of-society approach, which defines who is responsible and who does what, is needed to address the management of chemicals successfully. The use of interministerial committees, involving senior officials, should be formalized and a lead agency agreed upon. Industry should be involved in collaborative approaches and joint action to share innovations, technical information, specialists, and skill sets. Experts and professionals, as well as intergovernmental and nongovernmental organizations, need to ensure that evidence is widely communicated and good practice advocated with a view to its being adopted, implemented and monitored. The media, general public and champions of the cause of chemical safety also have strong roles to play in bringing the issue to the forefront and pressing for



the necessary action to be taken to safeguard those exposed to chemicals at the workplace and society as a whole.

How to translate knowledge and overcome barriers to the process

Most of the participants considered the greatest barrier to be lack of leadership and commitment, not only to adopting evidence-based chemical-safety policy, legislation and regulation, but also – and more importantly at the moment – to implementing and enforcing these measures. They felt that there was a great need for increased cooperation among ministries, other governmental authorities and key stakeholders, including industry, and better coordination of their roles and responsibilities. At the same time, there is a need for enhanced information about chemicals and evidence relating to causality and exposure.

Stakeholders viewed the current economic crisis as an obstacle to Member States' taking action on critical health and environmental issues, including chemical safety. Greater visibility of chemical safety overall would spread knowledge about and increase awareness of the issue and, hopefully, result in appropriate policy action. In

addition, the knowledge and technical skills required to implement evidence are lacking, indicating a need for more capacity-building among key stakeholders.

Those interviewed also shared their views on action that WHO could consider taking to support Member States in several areas, including leadership, evidence sharing, capacity-building and awareness raising, and proposed issues for discussion and commitment during the Sixth European Ministerial Conference on Environment and Health scheduled to take place in Ostrava, Czechia, on 13-15 June 2017.



Introduction

Increasing scientific evidence of the effects of exposure to chemicals on human health, especially at vulnerable life stages, confirms that the sound management of chemicals is a health issue. This notion was explicitly reflected in the United Nations 2030 Agenda for Sustainable Development, which commits to “substantially reduce the number of deaths and illnesses from hazardous chemicals” by 2030 (Sustainable Development Goal (SDG) 3.9), and to “achieve the environmentally sound management of chemicals and all wastes throughout their life cycle in order to minimize their adverse impacts on human health and the environment” by 2020 (SDG 12.4) (1).

To address this priority, in 2016, the WHO European Centre for Environment and Health (ECEH) of the WHO Regional Office for Europe (hereafter, WHO ECEH) implemented a one-year project entitled “Chemical policy and programmes to protect human health and the environment in a sustainability perspective”. The project (funded by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety) aims to promote, in the Member States of the WHO European Region, the development and implementation of policies for the protection of human health from the negative impact of chemicals through the life cycle, with a focus on vulnerable life stages and population groups.

To kick off the project, WHO ECEH held a meeting of representatives of the Member States, experts and stakeholders on 4-5 July 2016 to discuss existing chemical policies on the protection of human health and the environment from the perspective of sustainability. As a follow-up to this meeting, and to obtain a greater understanding of the needs of a broader group of key stakeholders, the WHO Regional Office for Europe and WHO ECEH called for a consultation to investigate stakeholder views on the future development of chemical safety in the WHO European Region. WHO ECEH conducted the consultation between 18 August and 22 September 2016 and analysed the results, which are the subject of this publication.

Aim

The consultation was organized as a series of interviews with state and non-state stakeholders to gather their views on action they considered necessary to promote progress in the area of chemical safety in the WHO European Region, with a focus on the protection of vulnerable population groups and vulnerable life stages. This initiative was one of the WHO activities leading the Sixth Ministerial Conference on Environment and Health planned to take place in Ostrava, Czechia, on 13-15 June 2017, for which “chemicals and health” was identified as a priority theme.



Methods

This report was created on the basis of the information gathered through interviews conducted by telephone and/or over Skype with representatives of invited stakeholders.

The questionnaire (Annex 1) was drafted taking the aims and objectives of the analysis and current information on chemical safety provided by the WHO Regional Office for Europe into account. The resulting broad framework of leading, open-ended questions was considered appropriate for the diverse set of key stakeholders identified by WHO ECEH. A corresponding recording template was developed, which allowed some level of comparison and contrast of the responses according to theme. The questions were reviewed by the relevant WHO ECEH team members and edited by a designated consultant.

The interviewees were mainly country representatives and stakeholders who would not be able to participate in the Sixth Ministerial Conference on Environment and Health to be held in June 2017. The first interview served as a test: the participant was asked whether the questions were clear and encouraged to suggest any changes that might improve their clarity. Adjustments were made accordingly.

Confidentiality was agreed with each participant before the interview, which lasted approximately 45 minutes. Probing took place to obtain specific information: the country context and professional role of each participant, as well as their views on the situation relating to chemical safety in their countries and their values and beliefs, were taken into consideration with respect to each question. All comments were recorded in the questionnaire template. If further clarification of any of the comments was felt necessary after the interviews, the designated consultant sent a request to the participant(s) in question.

The responses received during the interviews were analysed and resulted in: a grouping of priority action relative to vulnerable groups; an indication of the key sectors and stakeholders that should be involved; a list of the barriers to and facilitators of the translation of evidence into policy; and recommendations on ways forward.



Results of the analysis

Participant profiles

A total of 18 stakeholder representatives participated in the interview process. These included: governmental and technical experts; representatives of nongovernmental and intergovernmental organizations and industry; and journalists. The participants (12 female and 6 male) were from WHO Member States in central Asia, central and eastern Europe and Caucasus, and Member States of the European Union (EU).

The participants provided their responses within local, national, subregional, WHO European Region, and global geographical contexts. Serving in professional roles, such as, researchers, decision- or policy-makers or advisors, knowledge brokers, and implementers, their areas of expertise included agriculture, chemical safety and chemical management, engineering, economics, ecology, epidemiology, chemistry, journalism, law, medicine, molecular biology, pharmacy, physics, policy analysis, public health, risk assessment, and toxicology. On average, the participants had more than 25 years of professional experience in their areas of expertise.

The interviews were based on three broad themes with a focus on:


1. identifying *what* the priorities were at the regional, subregional and national levels to ensure progress in protecting human health and the environment from the negative impacts of chemicals, in particular in ensuring the protection of vulnerable population groups and life stages;
2. describing *who* needs to be more involved to achieve sound chemicals management;
3. proposing *how* to translate research on and knowledge about chemical safety into policy and identifying the greatest barriers to be overcome to achieve this.

The publication is structured according to the themes of the questionnaire (Annex 1).



Theme 1. Priority action (what?)

The large number of priority issues communicated by the participants were analysed and grouped into eight categories: (i) monitoring and control of hazardous substances; (ii) effective management of human exposure; (iii) adoption, implementation and enforcement of legislation; (iv) research and data gaps; (v) development, implementation and monitoring of national action plans; (vi) awareness raising about and visibility of chemical safety; (vii) capacity; and (viii) safe management and coordination of chemicals.



PRIORITY ISSUES IDENTIFIED

- (i) Monitoring and control of hazardous substances
The most frequently cited hazardous substances were EDCs and pesticides, in connection with which monitoring, managing and controlling obsolete pesticides stockpiles, setting exposure limits for vulnerable groups, and applying the precautionary principle to policies regulating these chemicals need to be enhanced. These were followed by heavy metals, mercury, and asbestos (requiring identification, elimination, safe removal, and replacement).
- (ii) Effective management of human exposure
The effective management and safety of food, water, air, soil, waste and consumer products was an issue often raised during the interviews, with air pollution identified as the priority for action. Access to standardized tools and resources and examples of national action plans for exposure assessment was identified as important.¹


1 WHO proposes to include action related to exposure assessment in plans for the implementation of sound chemicals management or national action plans on environmental health.

- (iii) Adoption, implementation and enforcement of legislation
Many laws and regulations exist in Member States, which are often party to international agreements; however, a framework for, and commitment to, their implementation and enforcement are not always in place.

Member States could consider introducing effective regulations, such as the EU *Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)* regulation (2), as well as other successful chemical regulations, for example, on improving labelling.²

Exposure limits for vulnerable populations and regulations on chemical control need to be established, as well as ways of harmonizing them and achieving greater cooperation and consistency with respect to their implementation in countries.

2 WHO supports the implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (3) and the strengthening of national capacity to ensure it.



Policy-makers should ensure that industry demonstrates the safety of products before exposing them to the public, especially vulnerable populations, and that it removes hazardous substances and replaces them with safe alternatives.

Taxes on dangerous products should be raised to influence public decision on using them until they can be removed from the market. For example, the *Clean Air Act (4)* of the United States of America placed higher taxes on leaded gasoline until it was completely removed from the market and replaced with unleaded gasoline.

The interviews revealed the opinion that: “policy change is possible, accept that it is possible, find alternatives to business as usual, and make the relevant changes”.

(iv) Research and data gaps

Research in chemical safety should aim at:

- enhancing innovation and developing substitutes and safer alternatives;
- increasing work on early identification and early warnings;

- identifying causation, setting exposure limits, and determining the adjustments necessary with respect to vulnerable populations;
- supporting independent and authoritative research with regulatory targets;
- improving the testing of chemicals properties to identify hazards at critical life stages;
- setting norms and standards for concentration levels, evaluating toxic material and minimizing the effects of chemicals;
- improving data necessary for assessing and evaluating chemical risks to vulnerable populations;
- increasing action towards decarbonizing society, including the development of market alternatives to harmful chemicals;

In addition, a paradigm shift is needed as regards taking action even when not all of the evidence is available. As expressed by interviewees during the consultation, “we need to be more

prudent about control measures before damage becomes more widespread” and “we need to learn how much knowledge is enough to take action”.

(v) Development, implementation and monitoring of national action plans

National environmental health action plans (NEHAPs) for chemical safety, which specify quantitative targets and timelines and define the roles and responsibilities of key stakeholders, should be in place in all Member States with public reporting commitments.

(vi) Awareness-raising about and visibility of chemical safety

Targeted tools and resources built on evidence-based strategies are needed to increase the awareness of all stakeholders and the whole of society. This includes enhancing transparency: the public has the right to know what substances products contain. The awareness and knowledge of decision-makers about chemical safety also need to be enhanced to raise the issue on the political agenda and gain support for evidence-based policy action.

Awareness-raising campaigns about chemical safety should also address who is responsible for what, and who pays.

(vii) Capacity

To ensure the capacity necessary to address chemical safety, the following action was proposed:

- increase collaboration across the fields of science, sociology, psychology, and medicine with the aim of sharing information resulting from research, and effectively translating and communicating it to diverse stakeholders;
- increase research capacity to address identified knowledge gaps;
- share knowledge, good practice, and lessons learnt on chemical safety widely to develop a more equal playing field across Europe;
- consolidate knowledge about good practice in a compendium of relevant information on chemicals, for example, on how to use them safely and whether there is a need to replace them with safer alternatives;

- increase knowledge about risk assessment and risk management to ensure that there is an adequate understanding of the chemicals risks that should be minimized and eliminated.

(viii) Safe management and coordination of chemicals

Industry needs to assess the safety and quality of chemicals. Programmes that encourage industry to report on the implementation of the Responsible Care initiative (5) should be promoted as should the sharing of national experiences in involving industry in chemicals management.

Harmonized systems, such as GHS (3), to ensure a consistent approach to chemical safety should be adopted and implemented.

REGIONAL AND SUBREGIONAL PRIORITIES

Based on the outcome of the interviews, it was not possible to identify specific subregional priorities; however, some examples of concrete action needed at the national, regional and/or subregional levels were provided, as follows:

- the collection and safe disposal of mercury-containing bulbs, the sound management and removal of pesticide stockpiles, the effective treatment of wastewater the elimination of open burning of dangerous products, and bans on and the safe removal and replacement of asbestos (most commonly reported by interviewees representing countries of eastern Europe, Caucasus and central Asia);
- the provision of assistance in data monitoring, awareness campaigns, uptake of good practice, supported by policy and evaluation measures to determine levels of success (most often mentioned by interviewees representing countries of central and eastern Europe); and
- the establishment of local-community activities, such as waste treatment, recycling and safe chemical storage, to raise awareness, spread knowledge among the population, and promote cooperative management (many EU citizens are unaware of the negative effects of high consumer product usage on health and the environment since product waste is processed and stored outside their communities).

VULNERABLE GROUPS

Children were immediately viewed as an important vulnerable group, as they have decades ahead of them during which they can be affected by chemicals pollution. Pregnant women who bring these children into the world and become their primary nurturers are also highly vulnerable.

Workers were also viewed as vulnerable populations, as many are unknowingly exposed to dangerous environments, including asbestos, pesticides and heavy metals.

BENEFITS OF CHEMICAL-SAFETY ACTION BEYOND HEALTH

The priority action identified showed clear links to the SDGs of the United Nations 2030 Agenda (1) and co-benefits beyond those linked to health, such as the reduction of illness and infections. This would reduce health-care costs and free funds for issues other than those related to health and health insurance, such as education and community infrastructure.

A reduction in the production of hazardous products would also reduce pollution, improve waste management, and increase the

availability of safer food products; decarbonization as a result of safer energy alternatives and the generation of local energy would create local jobs and reduce poverty.

As well as a diverse range of other benefits, less hazardous chemical exposure would mean a healthier start for infants. They would have the chance of becoming not only healthy citizens, but also active citizens, both at school and in the community.

Safe products would increase consumer confidence, which in turn would increase purchasing power and overall economy.

New learning to create and sustain a safe environment would spread from countries in the European Region to developing countries in other areas and contribute to increasing sustainable development at the global level.

In addition to preventing ill-health and increasing well-being, chemical safety contributes to the availability of affordable and clean energy and to climate-related action.

CHILDREN'S RIGHTS

Children must be ensured the same level of safety as that afforded to adults. REACH (2) has been implemented in the EU Member States, but its good practices could also be considered by other countries of the European Region in developing or improving their chemical-safety regulations.

Participants in the consultation asked: “why should children in the EU have a safer environment than children living outside the EU?” and “is this a discrimination of human rights for children?”³ For example, a global survey on the contamination of breast milk with persistent organic pollutants, conducted by the United Nations Environment Programme and WHO in 2012, revealed a higher level of contamination with pesticides in central Asia than in other geographical areas (6).

Harmful products, which have been banned and removed from the market in western Europe, are still being made, stored, sold and exposed to the public, including vulnerable populations in countries

3 WHO promotes the development and implementation of policies and programmes to protect vulnerable populations in all countries, focusing on national priorities.

of central and eastern Europe.⁴ The participants were clear: “this needs to end”.

EQUITY

To achieve greater equity in and coordination of action towards chemical safety, support of and participation in the activities of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) and the SAICM need to be increased; this, in turn, would help meet the SDGs of the 2030 Agenda (1).

During the consultation, the view was expressed that “asbestos should not be openly produced, sold and or used at all in the WHO European Region”. There is an immediate need to develop environment-and-health legislation with strict enforcement measures for countries in transition so that they are protected at the same level as EU countries.

4 The development and implementation of relevant national legislation, including the prohibition of products containing hazardous chemicals, could be considered to protect the internal market from hazardous products; the prevention of the illegal traffic of chemicals and chemical products is one of objectives of the Overarching Policy Strategy of the Strategic Approach to International Chemical Management (SAICM).

MEASURING THE SUCCESS OF CHEMICAL-SAFETY ACTION

Co-beneficial action should be integrated, and it should be implemented and monitored using quantitative indicators established in NEHAPs for, among others, biomonitoring, risk assessment, regulation-enforcement control and policy/programme evaluation.

Setting measureable targets as part of the 2030 Agenda (1) and implementing relevant action would facilitate measured progress in the protection of human health and the environment, and result in diverse co-benefits.



Theme 2. Key stakeholder/actor engagement (who?)

A comprehensive approach to minimizing the adverse effect of chemicals on human health and the environment is required. A whole-of-government, whole-of-society approach that defines “who is responsible and who does what” is needed to address this issue successfully.

GOVERNMENTS

At all levels of government (national, subnational, municipal), there is a need for the greater involvement of senior policy-makers in raising the priority of and commitment to action on the issue of chemical safety. Stronger links and shared action across the different government levels and the multisectoral and multidisciplinary stakeholders are required to coordinate the adoption, implementation and enforcement of evidence-based priority action effectively.

Interministerial committees, involving senior officials, should be established in all Member States to formalize joint decision-making and coordinate action. It would be important to agree on a lead role to ensure governance and management. This includes the adoption, enforcement and monitoring (through inspection controls) of the implementation of legislation and regulations aimed at identifying, monitoring, banning, restricting, limiting, and replacing hazardous substances with safer alternatives.

To balance the immediate financial and political demand or interest that chemicals appear to evoke, governments need to be more health oriented. The issue of chemical safety needs to be placed higher on the political agenda if more concrete, rather than primarily

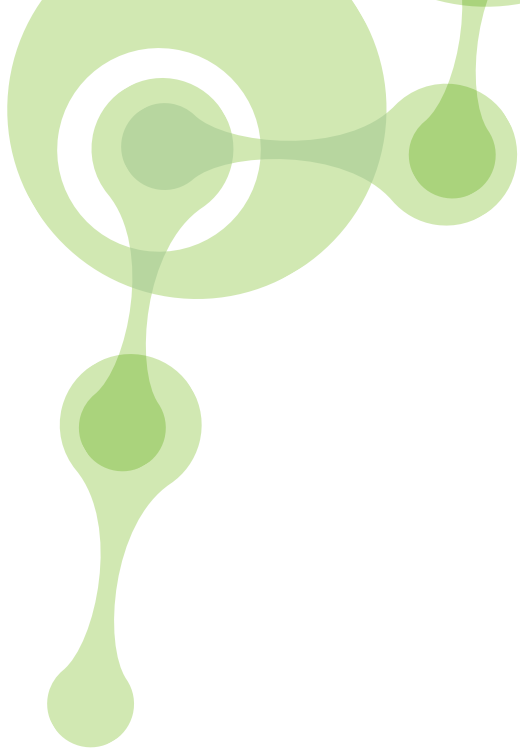
administrative, action and a designated budget are to be secured. Government support of awareness-raising and capacity-building activities could contribute to achieving this goal.

INDUSTRY

Industry (manufacturers, distributors, point-of-purchase locations) was identified by the participants in the consultation as an important stakeholder. It is, therefore, necessary to determine how best to engage with industry leaders and learn about their business interests.

Industry has specialists in, and technical information and specific skills related to, chemical safety, which could be shared to help build the capacity of different stakeholders. However, industry needs to enhance innovation in materials and technology that would increase the use of green chemistry, and help find safer alternatives for hazardous chemicals.

Establishing joint action, ways of collaborating (structured agreements, memoranda of understanding), and public/private partnerships with industry could be the key to initiating win/win situations. Formal agreements are important for collaboration even



if only to define the roles of the different parties involved. As pointed out by participants in the interview sessions, “these agreements can draw groups together and, when there are challenges, help towards better dialogue on joint action in an open and transparent manner”. Joint action could be started in one country and, if successful, scaled up to involve others. To help build capacity and achieve the greatest impact, information sharing and teaching should be increased.

Establishing a fund for independent research in chemical safety, with financial support from industry for priority action, would be a great asset.

Employers, trade unions and businesses have important and distinct roles to play in the field of occupational health and safety and should be more proactive in taking responsibility for informing employees and consumers, pregnant women in particular, about – and protecting them from – chemicals risks and hazards.

EXPERTS AND PROFESSIONALS

Experts and professionals in the different sectors need to build stronger, more sustained collaboration to address the issue of chemical safety effectively. This includes, for example, greater cooperation among the fields of health, medicine, toxicology, economy, agriculture, chemistry, engineering, communications, social psychology, ethics and risk communication.

Research must be independent and forward thinking and should include safer innovation and safer design. The resulting knowledge about chemicals should be made available to industrial workers, risk assessors and policy-makers as early as possible in their professional careers to ensure that action towards chemical safety is taken in the initial stages of the chemicals life cycle.

Research provides knowledge that should be translated into informative and educational tools and resources that are widely communicated and accessible. Plain-language summaries of this knowledge, tailored to target audiences, would help towards its transformation into relevant policies and programmes.

NONGOVERNMENTAL ORGANIZATIONS

Nongovernmental organizations (NGOs) can collaborate on raising greater awareness about chemical safety by calling for the adoption, implementation and enforcement of evidence-based good practice, sharing victims' stories, using human biomonitoring case examples, and advocating for the removal of, bans on, and safer alternatives to chemical products.

NGOs are also effective knowledge-brokers. They can use their capacity to support and promote the translation of science into policies and programmes through a balanced, step-by-step approach and, thus, become unique partners in strategy planning and implementation.

INTERGOVERNMENTAL ORGANIZATIONS

Intergovernmental organizations need to strengthen their role in communicating knowledge about and evidence-based good practices in chemical safety more widely, and in supporting the adoption, implementation and enforcement of the latter.

Greater support of and participation in the activities and commitments of IOMC, SAICM and the European Chemical Agency

is needed; this, in turn, would contribute to reaching the SDGs of the 2030 Agenda (1).⁵

Partnerships should also be sought with key agencies in other parts of the world with expertise in chemical safety, such as relevant national institutions in USA.

THE MEDIA

The media's role in influencing target audiences is important with respect not only to raising awareness about chemical risks, but also to supporting action to reduce the negative impact of chemicals on human health and the environment. As expressed during the interviews, if journalists had a greater awareness of priority chemical-safety issues, they would be better able to increase the awareness of both the public and policy-makers.

5 Intergovernmental organizations provide guidance and support action towards sustainable development. Most action to ensure SAICM implementation takes place at the national level.

THE GENERAL PUBLIC: CHILDREN, PREGNANT WOMEN, EMPLOYEES, AND VICTIMS

The general public, and specifically the more vulnerable populations, such as children and pregnant women, should be made more aware of chemical-safety issues. This would enable them to put more pressure on governments and industry to protect their rights, thus creating a momentum for action. Victims of the negative impact of chemicals and hazardous substances should be encouraged to share their stories to bring more attention to the issue; they should be compensated for the damage to their health and receive support in dealing with it. It is believed that if citizens were aware of the presence of hazardous chemicals in certain products, they would boycott them.

In implementing strategies to address the negative impact of chemicals, the focus should be on children, pregnant women, workers exposed to hazardous chemicals, and victims of hazardous chemicals. These groups need to be as engaged and empowered as key stakeholders.

CHAMPIONS OF THE CAUSE

Champions are people who speak or act publicly to advance a cause towards a better outcome; in the case of chemicals, they actively promote chemical safety at the national, regional and global levels. In many countries, champions have played an important role in the chemical-safety domain and their work in advocating for chemical safety should be maximized in the future.

DIFFERENCES OF OPINION AMONG KEY ACTORS

The stakeholder representatives interviewed expressed the following diverse opinions on issues related to chemical safety.

- Workers exposed to hazardous chemicals should be included as a vulnerable group, along with children and pregnant women.
- Researchers and professionals need to take an active role in translating science into policy: they have a duty “not only to publish their results but also to protect society”.

- Harmonized approaches to and the classification of chemicals as hazardous to human health are important aspects of chemical safety. Agreement among scientists on the safety thresholds for chemicals is critical in relation to assessing their health impact and promoting the development of risk-reduction policy. In addition, some research in this area is influenced by politics, which creates a barrier for its translation into policy.
- NGOs need to take a balanced approach in advocating chemical safety and consider both the pros and the cons of implementing action related to chemical safety.
- Ministerial conferences on environment and health and the declarations emanating from them have hitherto not been effective enough to promote substantial changes in the area: new mechanisms of implementing action, based on the 2030 Agenda (1) and the Paris Agreement (7), are required.
- Governments can initiate voluntary action, but assurances that policies will eventually be implemented and enforced are also needed.
- Scientific authorities should conduct policy assessments as a basis for evaluation, the results of which should be transparent to stakeholders and the public.
- Strict regulation of industry is needed to ensure that chemical substances do not affect the population, in particular vulnerable groups, such as children and pregnant women. Industry should be required to demonstrate that their products are safe for human health and the environment, and are not harmful to consumers.
- Industry should be able to demonstrate how to use chemicals safely and prove that not all substances need to be removed, or replaced with safer alternatives.
- Stakeholders need to build on shared values to achieve the desired chemical-safety goals, and this requires a mutual understanding with industry. The process and stakeholder engagement in it are important components of a successful outcome; ensuring a balance of opinions during the process would help to achieve this with integrity. It is not necessarily helpful that everyone has the same opinion; it is, however, essential to foster collaboration and build unprejudiced

relationships, that is, increase trust, confidence and respect, which will lead to enhanced dialogue towards compromise and positive solutions.

- If industry were invited to participate on this basis, it would come on board. It was stressed by the participants that “companies want to provide products and services that are not harmful to health, in particular in local and regional settings where employees, employers and their families live in the communities that the companies serve”. In the bigger picture, industry needs to recognize that there are mutual benefits to having safe workplaces and safe community environments. An economy will, in the end, only be as healthy as its population.



Theme 3. Knowledge-transfer cycle (how?)

Transferring and translating knowledge about chemicals into policy is a difficult and complex process. To facilitate this, it is important to:

- have a clear, time-bound, target from the start;
- ensure that all key stakeholders are engaged early in the process, that their roles towards a shared aim are defined, and that there is mutual respect for the collaborative work to be carried out;
- raise awareness about research evidence and create educational tools and resources for specific target audiences to support the transfer of knowledge into policy; and
- review barriers to and facilitators of the translation of evidence into policy; barriers need to be addressed on an ongoing basis with the aim of transforming them into facilitators.

During the interviews, the participants came up with a number of barriers to the translation of evidence into policy, and proposed action to facilitate it, based on their experiences.

BARRIERS TO TRANSLATING EVIDENCE INTO POLICY AND PROPOSED FACILITATORS

Leadership

The barrier most frequently brought up by the participants, and which they considered to be the greatest, was lack of leadership and commitment, not only in connection with the adoption of evidence-based chemical-safety policy, legislation and regulation, but also – and more importantly – with the implementation and enforcement of these measures. The views of the participants included the following.

- Leadership of the implementation and enforcement of a number of international agreements in support of chemical safety is lacking. It is necessary to consider how to implement current conventions, agreements and declarations in the overarching light of the 2030 Agenda (1) and the *Paris Agreement* (7).
- Greater leadership is required in balancing political interests, self-serving approaches and perceived financial benefits in order to put evidence-based policy into action. For example, industry should demonstrate that their products and processes are not harmful to human health or the environment before they release them to consumers. Understanding the context and perspectives of the different stakeholders is also important; for example, the goals of agriculture advocates may differ from those of advocates of parks and tourism.
- Policy-making processes are long and complicated, involving too many people with different political interests. These processes need to be streamlined.
- The results of risk assessments should be integrated into policy discussion. They should include the socioeconomic implications of the impact of chemicals on human health, especially vulnerable groups, and proposals of new, safer alternatives.

Management and coordination

In this area, the participants considered it necessary to:

- address the lack of cooperation among ministries, other governmental authorities and key stakeholders in many countries of the European Region, and coordinate roles and responsibilities;
- agree on priority action relevant to the implementation of plans and targets, including lead roles, tasks and associated budgets, as well as the appropriate monitoring and reporting of such action;
- find a common language to enable optimal communication and coordination of action among the different actors, which includes considering problems related to health and the environment in an integrated way rather than as isolated issues;
- address the existing lack of trust among the actors, for example, by involving industry as a key stakeholder in the process of chemical safety (through discussion, knowledge sharing, training, and joint start-up projects).

Evidence strategy

There should be a greater understanding of the difficulties policy-makers meet in endeavouring to make effective policy and put it into action when not all of the necessary information is available.

Lessons learnt need to be more effectively transferred to Member States. For example, the REACH regulation (2) could be reviewed to determine improvements needed with regard to chemical safety and an updated version made available for adoption, implementation and enforcement in all Member States.

The lack of investigation into, and monitoring of, exposure to hazardous chemicals limits the possibility of carrying out sound risk assessment.

Early-warning systems that support the prompt identification of risks, such as those connected with hormonal disruption, need to be developed and implemented. This requires researchers to agree, for example, on which substances should be identified as endocrine disruptors.

Data

Data registries, such as those for cancer, are an important source of information; yet, in some countries, these registries do not specify cause, type, or patient profile (gender, age, history).

More data and information on causality are required: it is critical for all key stakeholders to know and understand the causal link to harm. When a reasonable amount of data shows the causal link and scale of the issue, the precautionary principle should be applied.

Clear guidelines are needed on improving data collection and the roles of all stakeholders in this exercise, including industry whose data are needed to complete the picture.

Funding

Lack of funding is an ongoing problem. Funds do exist, however, and a shift is needed to allocate some of them for priority policy action related to chemical safety. As one participant put it, “there will always be a lack of funds, yet one cannot wait until enough have been secured, or action will never happen”.

Industry could assist by contributing through an independent fund for research and development related to chemical safety, for example, towards finding safer alternatives.

Context

The current economic crisis was viewed as an obstacle to many Member States taking action on a number of critical health-and-environment issues, including chemical safety.

It was pointed out during the interviews that the increasing regulation of chemical safety leaves industry with less time, capacity and funds for innovation, the available resources being used for administrative tasks, such as managing REACH (2) implementation and regulation requirements.

Visibility

Lack of visibility with respect to chemical safety has an impact at many levels, resulting in low levels of awareness and knowledge, less decision-making and little action, including enforcement. Increased awareness and transparency would provoke demands on government to take action to protect the public.

Chemical-safety campaigns should be more specific, with clear, concrete, targeted messages. Interviewees felt that there had been too many mixed messages about chemical safety, which was confusing to many stakeholders.

There should be more transparency: the public has a right to know what chemicals their food, water and consumer products contain.

Overall awareness-raising should be an integral part of national chemical-safety plans or NEHAPs.

Capacity

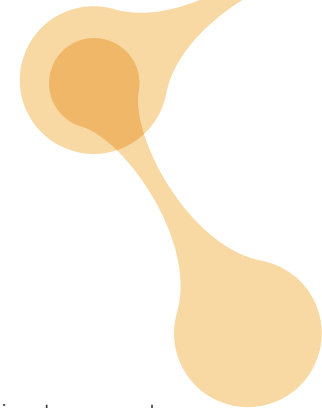
There is a lack of the technical skills required to translate and transfer knowledge into policy. This situation is worsened by the frequent replacement of many key actors (government officials, personnel), which necessitates training new people.

Engaging with industry and determining an open method of sharing knowledge and specific skill sets could improve stakeholder capacity.

SUGGESTIONS OF WHO SUPPORT

The participants suggested specific action that WHO could consider taking to provide leadership, raise the priority of chemical safety, and minimize the adverse impact of chemicals on human health and the environment. This included:

- building and maintaining the trust of key stakeholders, including the general public, by providing them with the best available knowledge and evidence, being transparent, balancing interests, promoting health as a political priority and communicating clearly;
- making information (such as number of people affected, associated costs and policy options) available to policy-makers in a timely manner;
- stimulating and increasing the capacity of key stakeholders at the national and regional levels by engaging in more joint activities (for example, developing and sharing standardized tools and resources; conducting training seminars for industry and undergraduate training courses; preparing risk communications; developing data-collection tools and data registries; facilitating/promoting the harmonized classification



of chemicals; supporting laboratory analyses; and developing country case examples and national action plans), and developing a common language with medical professionals, academics, NGOs and industry to enhance the recognition of hazardous chemicals and protection mechanisms;

- developing an action plan for chemical safety and supporting the development, implementation and enforcement of national action plans relating to, among others, the areas of food, water, air, product safety, and waste management;⁶
- developing specific action plans to push slow-moving issues, such as endocrine disruptors and nanotechnology, and taking specific action to conduct assessments of exposure to waste and chemical mixtures and ensure that action towards consumer safety is conducted in an integrated way for the environment as a whole;

6 WHO recommends that action to protect populations from the negative impact of chemicals be an integral part of a NEHAP and/or a SAICM implementation plan and/or sustainable development policy and encourages countries to identify priorities and address them (8).

- sharing good examples of NEHAPs;
- leading and supporting awareness-raising action to promote investigation into and uptake of safer alternatives to hazardous chemicals (for example, conducting campaigns on POPs in milk and addressing the economics of hazardous substances, waste management and air pollution);⁷
- enhancing its leadership role in securing international agreements and extending the scope of new conventions with action on chemical safety to meet the requirements of the 2030 Agenda (1) and the *Paris Agreement* (7);⁸
- fulfilling its mandate and increasing its level of credibility by making specialists available to provide competent responses,

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- 7 Ongoing campaigns in central and eastern Europe that are in need of support include those dealing with the safe disposal of mercury bulbs, the management of wood burning and pesticide stockpiles, and the safe removal and replacement of asbestos.
- 8 WHO, in consultation with the Member States, is developing a roadmap to enhance health-sector engagement in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond, which will be presented for the consideration of the World Health Assembly during its 70th session in May 2017.

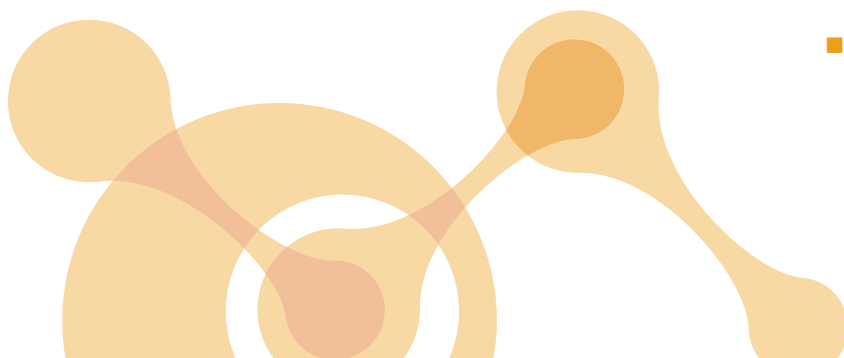
participating actively in SAICM (for example, through representation in the Secretariat), meeting commitments within prescribed budgets and timeframes, and taking action on information gained towards achieving the targets of relevant roadmaps and declarations;

- creating a method of calculating country wealth other than basing it on gross domestic product, for example, by using indicators of health and well-being and considering social and environmental aspects. which could support the use of safer alternatives;
- investigating how to support whistle-blowers;
- conducting a consultation on the protection of human health, involving key ministries and stakeholders, with the aim of improving the chemical-safety situation.

CALL TO ACTION ON CHEMICAL SAFETY. SIXTH EUROPEAN MINISTERIAL CONFERENCE ON ENVIRONMENT AND HEALTH, OSTRAVA, CZECHIA, 13-15 JUNE 2017

During the interviews, stakeholder representatives made the following proposals for presentation at the Sixth European Ministerial Conference on Environment and Health with a view to an immediate call to action. These were to:

- test all chemical products produced in and imported to the countries, according to the EU directives on chemical safety, as a form of good practice;
- develop, implement, review and update all NEHAPs with targets for chemical safety, including funding and timelines;
- immediately strengthen existing legislation and regulations relating to chemicals with violation penalties;
- review and revise chemical-safety legislation and regulations to make them more coherent and their implementation process more streamlined and effective;



- agree on a joint priority-action agenda to address chemical safety;
- develop a standardized minimum core set of chemical-safety regulations and monitoring indicators that could be adopted, implemented and enforced consistently at the national and regional levels in all Member States in the WHO European Region;
- adopt, implement and enforce regulations for the safer development of alternatives to hazardous substances, which are both accessible and affordable;
- commit to and enact policies and programmes to support the 2030 Agenda (1) and the *Paris Agreement* (7) and move chemical safety forward;
- put mechanisms in place (including a common language) that would increase transparency for all stakeholders;
- ensure the efficient operation of pollutant release-and-transfer registers so that information about the release of toxic chemicals is transparent to the public;
- respect the public’s “right to know” by developing, adopting, implementing and enforcing transparency regulations at the national and regional levels;
- establish technical- and funding-support mechanisms to ensure the adoption, implementation and enforcement of good practice in chemical safety across the WHO European Region to reduce inequality and support the 2030 Agenda (1);
- develop and implement a campaign across the WHO European Region to increase awareness, spread knowledge about and promote action towards chemical safety with a focus on Members States in central and eastern Europe;
- create a mechanism with indicators of measurable achievement in chemical safety that is linked to the 2030 Agenda (1) and the *Paris Agreement* (7) with the aim of fostering more action than has resulted from existing declarations.

Conclusions

In the WHO European Region, the implementation of evidence-based action is required to ensure the sound management of chemicals and reduce their negative effects on human health and the environment. This would best be supported by a paradigm shift, in accordance with which decision-makers would learn how to take action even in the absence of all the evidence. Understandably, funding will be an ongoing issue, but funds do exist and a shift is needed to allocate some of them to high-priority policy action on chemical safety in Member States.

Key stakeholders should consider taking joint action to develop, adopt, implement and monitor, on an ongoing basis, national action plans for chemical safety with clearly defined targets, timelines, budgets, roles and responsibilities. In addition, public reporting is essential in every Member State in the Region.

Greater cooperation is required across sectors and key stakeholders, in connection with which clear leadership is important, as well as commitment not only to adopting policy related to chemical safety, but also to consistently implementing and enforcing it. Awareness and understanding of context, both cultural and community, are also essential if the probability of the successful adoption,

implementation and monitoring of evidence-based policy for sound chemical management is to increase.

Products should not be exposed to the public until they have been proven safe for use. Therefore, substitutes and safer alternatives need to be developed. In addition, more research is needed on the early identification of and warning about hazardous chemicals. Further research should be aimed at identifying causation, setting exposure limits and determining what adjustments should be made for vulnerable populations.

The effective and consistent control of food, water, air, soil, consumer-product and waste-management safety is essential in all Member States. Hazardous substances, such as EDCs, pesticides, heavy metals, mercury, and asbestos, need to be identified and eliminated, or replaced with safer alternatives.

There is a need to increase the visibility of risks caused by chemicals and action towards their prevention and sound management. Mentoring key stakeholders and enhancing their capacity in this area would contribute to creating greater awareness and building knowledge as the basis of effective policy in Member States. Using

clear and concise language in translating research findings into easily accessible, targeted tools and resources would support their uptake. Increasing transparency is also essential as the public has the right to know what chemicals are present in common products and the environment.

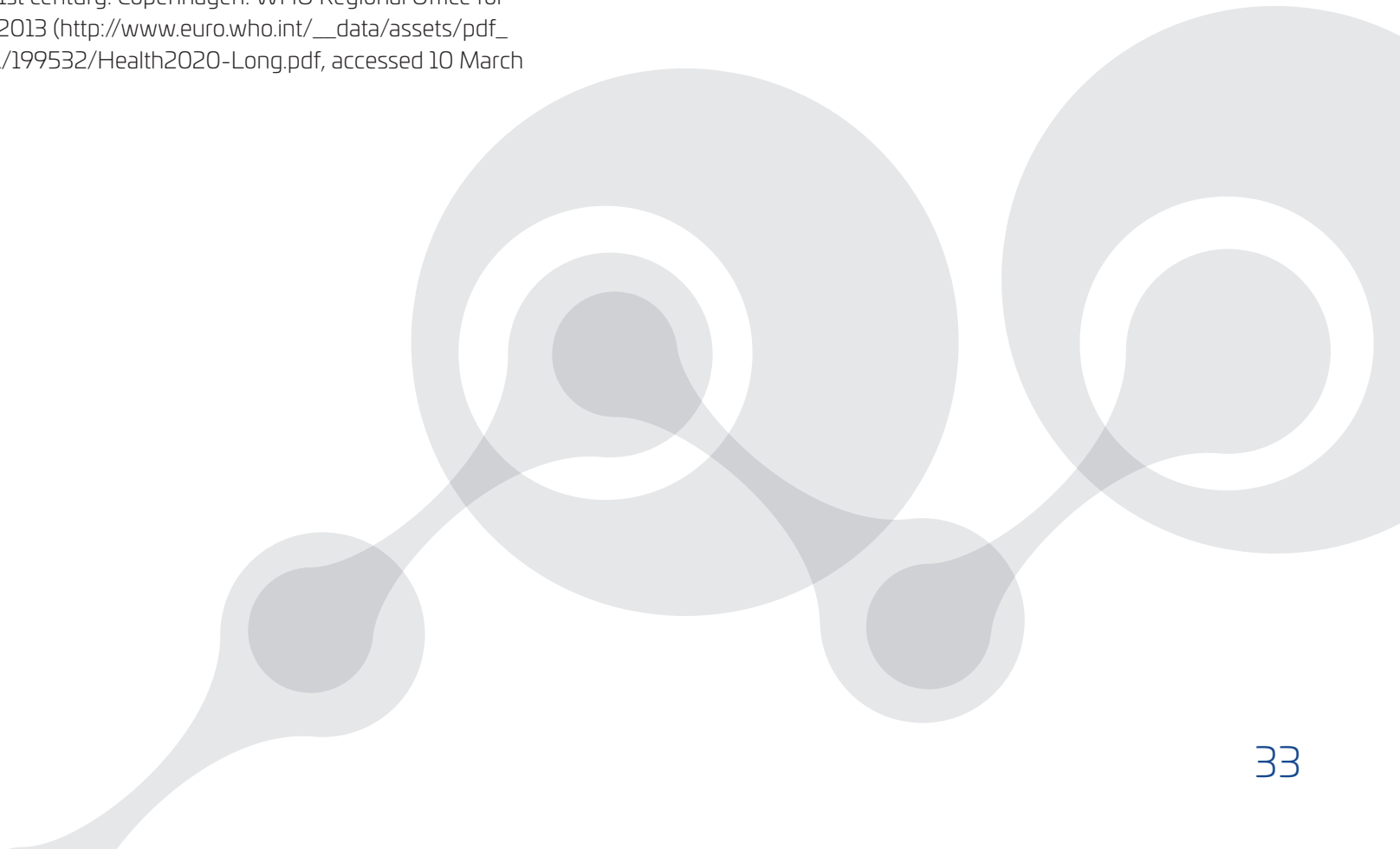
WHO should be empowered to take on a leadership role to: advance the uptake of evidence-based policies for chemical safety; enhance capacity-building by sharing country case studies and lessons learnt; and increase the visibility of high-priority issues related to chemical safety by supporting the above recommended actions in collaboration with key stakeholders. It would be necessary to provide countries of central and eastern Europe with additional support in transferring and implementing effective chemical-safety policy existing in other parts of the Region.

The above action would help the WHO European Region to fulfil the requirements of the Health 2020 Agenda (9) and the 2030 Agenda (1).

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Annex 1.

Questionnaire for stakeholder consultation on chemical safety, 18 August-22 September 2016

Theme 1. Priority action (what?)

A great deal of evidence-based good practice exists in reducing the negative impact of chemicals on health and environment.

- What specific priority action should be adopted, implemented and monitored (enforced) at this time that would allow the most vulnerable groups (children, pregnant women) to achieve the greatest gains?
- Why you think such action is important? (*Seek justification.*)
- What capacities are needed to implement it?
- Can this action be linked to SDGs and show co-benefits beyond those related to health?
(*Probe at the regional and national levels.*)
- What indicators and targets can be used to measure the success of this action by a set time? (*Probe for barriers to and facilitators of the various stages of this process.*)

Theme 2. Key stakeholder/actor engagements (who?)

Most of the main chemical-policy frameworks and programmes highlight the importance of stakeholder involvement (such as, ministries and agencies, public organizations, the research community, industry and successful partnerships). Yet, it is a challenge to build effective partnerships to achieve and sustain the environmentally sound management of chemicals and chemical waste to minimize their adverse impact on human health and the environment.

- What is your role in chemicals safety?
- Which stakeholders need to and can be more involved?
- Should more formal engagements or partnership structures be formed (for example, high-level, cross-sectoral committees, working groups, memoranda of understanding)?
- Do you have experience to share about successful partnership engagements, champions, or co-benefits gained?
- How do we engage with industry to achieve win/win action to reduce the negative impact of chemicals on health and the environment?
- Do you have industry engagement models/guidelines to share?
(Probe for barriers and facilitators at various stages of this process including individual values, perspectives, preferences and interests.)

Theme 3. Knowledge transfer cycle (how?)

How can the good-practice identified be used to contribute to increasing the success of current policies and programmes in the real world (adoption, implementation, enforcement and monitoring)?

- What do you feel are the greatest barriers to putting knowledge into chemical policies and programme actions? (*Probe for regional and national level barriers.*)
- What are/ have been your biggest hurdles to overcome?
- What support and assistance are you in need of and how can WHO assist?
- What has been useful to move you forward in this process?
- What lessons learnt could you share?
- What type of commitment from the Sixth Ministerial Conference on Environment and Health (June 2017) could support the adoption and implementation of the policies needed? (*Probe further to see what other issues are of concern such as evidence, monitoring, awareness, knowledge, financial limitations, political interests, legal issues, etc.*)

As our last question: is there anything that you would like to say in relation to the topic or not addressed in the questions or our discussion so far?

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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