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The WHO Regional Office for Europe convened a meeting on “Chemical policy and programmes to protect human health and environment in a sustainability perspective” at the European Centre for Environment and Health, Bonn, Germany on 4 and 5 July 2016. The representatives of Member States, other stakeholders and invited experts discussed actions aimed at the protection of human health, particularly vulnerable groups (pregnant women, infants and children), from the negative impacts of chemicals in a sustainability context. Proposals for consideration by the Sixth Ministerial Conference on Environment and Health in 2017 were identified, taking into account the latest scientific knowledge shared during the meeting. The meeting also provided regional input to the formulation of the WHO road map for action towards the 2020 goal on sound management of chemicals and beyond.

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# Chemical policy and programmes to protect human health and environment in a sustainability perspective

**Report of a WHO Meeting  
Bonn, Germany**

**4-5 July 2016**



**World Health  
Organization**

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REGIONAL OFFICE FOR **Europe**

# **Chemical policy and programmes to protect human health and environment in a sustainability perspective**

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## ABSTRACT

The WHO Regional Office for Europe convened a meeting on “Chemical policy and programmes to protect human health and environment in a sustainability perspective” at the European Centre for Environment and Health, Bonn, Germany on 4 and 5 July 2016. The representatives of Member States, other stakeholders and invited experts discussed actions aimed at the protection of human health, particularly vulnerable groups (pregnant women, infants and children), from the negative impacts of chemicals in a sustainability context. Proposals for consideration by the Sixth Ministerial Conference on Environment and Health in 2017 were identified, taking into account the latest scientific knowledge shared during the meeting. The meeting also provided regional input to the formulation of the WHO road map for action towards the 2020 goal on sound management of chemicals and beyond.

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## Abbreviations

ANSES	French Agency for Food, Environmental and Occupational Health and Safety
EDCs	endocrine-disrupting chemicals
HBM	human biomonitoring
HBM4EU	European Human Biomonitoring Initiative
ICCM	International Conference on Chemicals Management
IPChem	Information Platform for Chemical Monitoring
IPEN	International POPs Elimination Network
POPs	persistent organic pollutants
SAICM	Strategic Approach to International Chemicals Management
SDGs	Sustainable Development Goals
SMART	specific, measurable, attainable, realistic and timely
UNEP	United Nations Environment Programme
WHO ECEH	WHO European Centre for Environment and Health, Bonn

## Introduction

Protection of vulnerable population groups from the negative impacts of chemicals, including through the implementation of the Strategic Approach to International Chemicals Management (SAICM), is one of the priorities of the WHO European Region, as expressed in the Parma Declaration on Environment and Health, adopted by the Fifth Ministerial Conference on Environment and Health (Parma, Italy, 10–12 March 2010). The development and implementation of advanced policies and legislation have been recognized as a major step to be taken by the Member States of the Region in order to achieve the 2020 goal in chemical safety (1). Alignment of chemical safety actions at regional level with the Sustainable Development Goals (SDGs) and targets, including target 3.9 calling for a sustainable reduction in the number of deaths and illnesses from hazardous chemicals by 2030 and target 12.4 encouraging 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, will significantly contribute to progress in chemical safety.

The WHO Regional Office for Europe, supported by funding from the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, convened a meeting on “Chemical policy and programmes to protect human health and environment in a sustainability perspective” at the WHO European Centre for Environment and Health (WHO ECEH), Bonn, Germany on 4 and 5 July 2016, to discuss possible action in the area of chemical safety for consideration by the Sixth Ministerial Conference on Environment and Health in 2017.

In a series of presentations, the newest scientific knowledge, experiences and best practical examples were shared with the meeting participants to facilitate discussion during several round tables and in working groups (for the programme of the meeting, see Annex I).

The meeting was attended by 44 experts from 31 countries, including representatives of 27 Member States, international and nongovernmental organizations and WHO temporary advisors (for the list of participants, see Annex II). Mr Ivan Erzen (Slovenia) and Ms Martine Röhl (Belgium) were elected co-Chairs.

The meeting was opened by Ms Elizabet Paunovic, head of WHO ECEH, who welcomed the meeting participants and stressed the importance of shaping the regional agenda in chemical safety for the next 15 years, in line with major strategic commitments such as the SDGs and World Health Assembly resolutions and decisions, including resolution WHA69.4 on the role of the health sector in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond, as well as regional commitments including the Health 2020 policy framework and the Minsk Declaration on the life-course approach in the context of Health 2020 (2). She expressed confidence that consultations with the Member States and scientific experts would lead to the formulation of specific, measurable, attainable, realistic and timely (SMART) objectives for consideration by the Sixth Ministerial Conference on Environment and Health.

The meeting aimed to gain an overview of core elements of policies to protect vulnerable population groups and life stages from the negative impacts of chemicals throughout their life cycle; to identify objectives and actions for consideration by the Sixth Ministerial Conference on Environment and Health; and to formulate regional input into the discussion on the development of a global road map for the implementation of World Health Assembly resolution WHA69.4.

## Health-related aspects of chemical safety in global and regional policies and strategies

The growing scientific evidence of the effects on human health of exposure to chemicals, especially at vulnerable life stages, confirms the fact that sound management of chemicals is a health issue. In its outcome document, “The future we want”, the 2012 United Nations Conference on Sustainable Development reaffirmed the aim of achieving the 2020 goal (3). The SDGs explicitly address the role of human health and chemicals through the commitments to “substantially reduce the number of deaths and illnesses from hazardous chemicals” by 2030 (target 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 (target 12.4). Also relevant is target 6.3, “eliminating dumping and minimizing release of hazardous chemicals and materials” (4). In May 2016, in its resolution WHA69.11, the World Health Assembly confirmed its commitment to working towards the SDGs. WHA resolution 69.4 (2016) focuses on the role of the health sector in enhancing progress towards the SAICM 2020 goal and discussion of the post-2020 agenda in chemical safety, and calls upon the WHO Secretariat to develop, in consultation with Member States, a road map to be submitted for consideration at the 140th session of the WHO Executive Board in January 2017. The resolution urges Member States to engage proactively and to take concrete action to accelerate progress in preventing health impacts of chemicals in close cooperation with other sectors, strengthen networking capacities and support the regional and global efforts of the WHO Secretariat.

At the European level, relevant policies include the Parma Declaration on Environment and Health (2010) (5), in which chemicals are addressed in the Regional Priority Goal 4; the Health 2020 policy framework (2012) (6), and, most recently, the Minsk Declaration on the life-course approach in the context of Health 2020 (2015) (7).

Policy development and strengthening of legislation, promotion of scientific research for evidence collection, capacity-building, and facilitation of action to protect vulnerable populations with the involvement of all stakeholders are reflected in strategic documents, at both global and regional level.

The representative of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety of Germany, the country which holds the presidency of SAICM and will coordinate discussion of chemicals management beyond 2020, stressed that the management of chemicals and waste in sustainable development is a priority topic on the agendas of other international organizations, in particular the United Nations Environment Programme (UNEP). At its second session in May 2016, the United Nations Environment Assembly requested the Executive Director of UNEP to coordinate action and support Member States in their policies and actions for the achievement of the SDGs, taking into account national needs and priorities, as well as in the consideration of opportunities presented by sustainable chemistry, including linkages to sustainable consumption and production. The International Conference on Chemicals Management, at its fourth session (Geneva, 28 September–2 October 2015), approved the “Overall orientation and guidance for achieving the 2020 goal”, a voluntary tool to set priorities for SAICM implementation in the period to 2020, which highlighted the need to strengthen capacities in all sectors, including health, and agreed on close cooperation to ensure implementation of multilateral agreements, including the International Health Regulations (2005). An intersessional process will take place regularly to discuss recommendations for action beyond 2020 with the involvement of all stakeholders.

Preparations for the Sixth Ministerial Conference on Environment and Health, scheduled for 2017, stress the importance of SMART targets, with suggested topics including the protection of vulnerable groups, local populations at risk in “hotspots” and prevention of exposure to selected hazardous chemicals, e.g. asbestos.



## Protecting vulnerable population groups and life stages from the negative impacts of chemicals through their life cycle

The driving forces for the development of policies and strategies to protect human health from the negative impacts of chemicals include the growing evidence and the high cost of disease and ill-health caused by exposure to chemicals across the life course, especially in vulnerable groups such as unborn babies and children. Exposure to chemicals and their effects are monitored through hazard identification and comparative risk assessment tools and monitoring and surveillance tools, particularly human biomonitoring (HBM). Effective chemical policies and legislation respect the precautionary principle and “polluter pays” principle, the public’s right to know the facts and intergenerational equity. Data on toxicity, use, hazards and sources of exposure throughout the life cycle of chemicals should be provided by manufacturers and users, and also generated by governments (e.g. through biomonitoring programmes). Governments should promote rapid screening, prioritization and decision-making processes for a broad range of chemicals, avoiding a chemical-by-chemical approach. Education and training, research, development and implementation of safer chemical alternatives and implementation of specific actions aimed at protection of vulnerable populations are among the core elements of policies and legislation at national level. Involvement of all stakeholders, including industry as a key partner, is one of the main conditions to ensure their successful implementation.

Identification of preventable exposures in early life is of paramount importance in decreasing the burden of noncommunicable diseases. In 2012, 38 million out of 56 million deaths were attributable to these diseases. The risk of noncommunicable diseases increases through the life course, and the maximum benefit can be gained from timely interventions in early life.

The central nervous system is one of the most sensitive target organs, because of the complex processes during the early development of the human brain: cell division and differentiation, migration, axon formation, generation and weeding of synapses, and myelination. These stages have to happen in a particular sequence, and any deviation may be impossible to repair or compensate for. In addition, we rely on the complete central nervous system, resulting from integrated functions of its various parts, and any deficit is likely to impact on cognition, motor function or behaviour. In this regard, the brain differs from all other organ systems, where some reserve function is available so that minor deficits will not impact health. A total of 12 substances are known for certain to have an adverse impact on human brain development prenatally or early postnatally. In addition, about 200 chemicals are known to be capable of causing neurological symptoms in adults, and should therefore be considered potential or likely “brain drainers”; these include several metals and other inorganic compounds, organic solvents, about 100 pesticides and a variety of other industrial compounds. These substances likely pass the placenta and many are also eliminated in breast-milk, thus causing elevated exposures during infancy, with possible risks to the child's developing brain. The effects of exposure to chemicals during this period are often irreversible. With better research information, the acknowledged toxic thresholds for well recognized hazardous substances (such as lead, methylmercury and ethanol) have gradually been reduced. As with other underestimations of neurotoxic risks in the past, current knowledge on “brain drainers” is probably incomplete, with regard both to the causative substances themselves and to their toxicity at habitual exposure levels.

Environmental science has certain limitations, and complex research results may be difficult to translate into clear policy recommendations or public health advice. The precautionary principle should be applied when placing chemicals on the market in order to prevent negative impacts, especially in children and their brain development in the early stages of life. These types of effects can have serious implications for the next generation's cognition and other functions that are crucial for quality of life and for society. It is therefore imperative that chemical control efforts take into account this highly vulnerable target organ in this susceptible population.

To obtain more data on exposure to environmental contaminants, Member States of the European Union joined a five-year programme (the European Human Biomonitoring Initiative - HBM4EU) to monitor and scientifically assess human exposure to chemicals and its potential health impact; the project will be launched by the end of 2016. The programme will promote laboratory excellence and capacity-building, timely access to data for policy-makers and open access to publications and research data, using the data infrastructure of the Information Platform for Chemical Monitoring (IPChem). The initiative brings together 22 European Union Member States, Iceland, Israel, Norway and Switzerland. Seven groups of chemicals will be included in the HBM programme in the initial stage: flame retardants; phthalates; polyfluorinated compounds; polycyclic aromatic hydrocarbons; aniline family; cadmium and chromium (Cr6+); and bisphenols. Emerging substances and chemical mixtures are also considered for inclusion in the European HBM framework.

Epidemiological studies provide a unique opportunity to deliver information on both exposure levels and their health effects. For example, in Poland two research projects were conducted to investigate the health effects of phthalates. A study of an association between prenatal phthalate exposure and pregnancy duration and birth outcomes in 10 regions enabled researchers to conclude that DEP (diethyl phthalate) was linked with decreased pregnancy duration, whereas DiNP (diisononyl phthalate) was related to decreased head circumference in the infant. Moreover, prenatal exposure to DnBP (diisononyl phthalate) and DEHP (mono-2-ethyl-5-hydroxyhexyl phthalate) were negatively associated with motor development in children, and BBzP (butyl-benzyl phthalate) increased the risk of food allergy. A study of fertile men strongly suggests a negative association between exposure to DEHP and DiNP and sperm quality, motility and other parameters.

Country-specific data add valuable information for policy development and provide health-based arguments supporting the legislative process.

An overarching goal of the Netherlands chemicals policy is to achieve a nontoxic environment. This aspiration is realized through active participation of all stakeholders in the European Union chemicals policy and compliance with European Union and international legislation, with much attention being paid to their practical implementation. Such an approach has been applied, for example, to respond to concerns about health effects due to pesticide use affecting residents living close to flower fields and fruit orchards, as well as concerns about exposure to asbestos through weathering of asbestos roofs. Nationwide discussion involving all interested parties, including communities, resulted in the decision to conduct an extensive study of exposure to plant protection products in 2015–2021, to be followed by legislative proposals taking into account the results of the scientific investigation, and a ban on (outdoor) asbestos roofs and their full removal, coming into effect in 2024. In the Netherlands, the identified factors for success in the protection of vulnerable groups are a combination of regulatory and voluntary actions by industry, involvement of stakeholders and the media, specific action addressing vulnerable groups, and proactive scientific research.

The discussion of legislation aimed at prevention of early-life exposure to endocrine disrupting chemicals (EDCs) is continuing at European Union level. In June 2016, the European Commission published for discussion two draft regulations which lay down the criteria for identifying endocrine disruptors, including: a stricter approach to the selection of scientific data for consideration, limited to scientific evidence collected in studies which apply systematic review methodologies; a shift from a hazard-based to a risk-based approach; a proven endocrine mode of action. The criteria are proposed for further discussion by European Union Member States, which will influence their adoption by the European Commission.

In order to provide an overview of the existing scientific knowledge on early-life exposures, WHO convened an international expert meeting on avoidable early environmental exposures (Geneva, 13–14 June 2016). The meeting resulted in a decision to prepare a publication

outlining the WHO view of the problem, to develop a road map for actions aimed at prevention of early-life exposures, and to develop a mobile application to raise awareness and share information on ways of preventing harmful effects and taking action at government and individual levels.

### From science to policy (panel discussion)

There is no doubt that policies and actions developed by governments should have a solid scientific basis. Given a wide range of hazardous chemicals of concern, prioritization of scientific research is necessary to make a difference in preventing exposure and minimizing risk. To do this, criteria for prioritization need to be defined, involving people who can contribute to that process. For example, for the European HBM programme, managers and leaders of national (or subnational) HBM programmes, representatives of different agencies and policy-makers were involved in setting priorities among groups of chemicals. At the same time, a certain level of flexibility should be allowed so that emerging issues can be addressed. Various criteria and tools for prioritization are available, including: the burden of disease methodology; societal impact and costs, such as loss of productivity and other economic consequences; societal concerns; and results of non-target exposure screening, such as HBM findings, that provide information on exposure dose. Policies should focus on vulnerable population groups, whichever groups of chemicals are prioritized.

The interests of different stakeholders can also influence prioritization. For example, scientists may be driven by gaps in scientific knowledge and available methods for studies; politicians may focus on the potential for avoiding exposure and preventing public health effects in order to maximize risk mitigation and respond to “hot” topics in the mass media; the “right to know” and the desire to obtain reliable information on the current situation, as well as health concerns, are driving forces for the public. Industry is expected to play an important role in the collection of scientific knowledge. Under European Union legislation, industry should provide data on chemicals and prove the safety of their production, use, transportation and disposal. Governments should focus on action enabling industry to fulfil its role and ensure that methods used for the evaluation of chemicals take all relevant effects into account. Guiding documents developed by governments for the implementation of a self-monitoring system by industry would assist in producing safer products.

Implementation of the precautionary principle is challenging, given the many uncertainties of science, especially when classic risk-assessment approaches are not sufficient to address the risks, for example in the case of early-life exposure or exposure to chemical mixtures and chemicals for which no safe limits have been determined. There are several conditions for applying the precautionary principle:

- scientists are expected to ensure transparency in communication of uncertainties and present the probability of causalities based on evidence from toxicological and epidemiological studies;
- information on economic costs and safer alternatives should be presented;
- disagreement between different scientific authorities and communication of different messages should be avoided; communication of risk by authorized scientific bodies, e.g. the Health Council of the Netherlands, could be the correct choice in this context;
- a dialogue should be conducted with industry to promote voluntary measures for the manufacture of safer products – a “positive” list of chemicals for safer production prepared by the Swedish Chemicals Agency can be provided as an example of facilitating dialogue with industry;
- risks should be communicated to the public to promote the taking of protective measures by citizens themselves, for example by pregnant women to protect their unborn child; reliable information should be provided by industry and governments when communicating risk, taking into account economic circumstances – for

example, the practicality of buying organic food which is usually much more expensive; another condition is a clear explanation of the limits for policy development and the adoption of protective measures at a governmental level.

## **Chemicals and health in a sustainable development perspective**

The 2030 Agenda for Sustainable Development and the 17 SDGs were adopted by the United Nations General Assembly in September 2015. Chemicals and health are mentioned explicitly in SDG 3, SDG 6 and SDG 12. Chemicals, waste management and human health are also relevant to other SDGs – indeed, to all of them. Given that each government sets its own national targets guided by the global level of ambition but taking into account national realities, capacities, policies and priorities, health-care authorities should consider the mainstreaming of chemicals and health issues in the sustainable development agenda when planning environmental health protection measures.

The SDGs clearly state that the main provision for achieving sustainable development is partnership of all stakeholders. Industry can make an input into sustainable management of chemicals through application of the concept of sustainable chemistry. The volume, number and complexity of chemical products and their dynamic flow and the increasing emissions of chemicals are the main challenges to reducing the negative impact of chemicals that can be addressed within the concept of sustainable chemistry, going beyond the optimization of individual chemical products and processes.

Sustainable chemistry is a set of principles intended to enhance the contribution of chemistry to sustainability. It requires business models, ethical business decisions and social action. Designing products rationally, preventing pollution at source and reducing the need for chemicals are all elements of sustainable chemistry. The complete and rapid mineralization of any products released to the environment, including pharmaceutical products, must be ensured in order to reduce exposures and thus health effects. An associated concept, that of the “circular economy”, promises great environmental benefits, but the risk of persistence of toxic chemicals in the environment and the need to protect the health of the workers dealing with the products concerned must not be ignored. There must be a transparent social dialogue with civil society. Thus, sustainable chemistry is a new, timely and urgently needed overarching approach from which everyone can benefit. Implementation of this approach is of the utmost importance for the SDGs and has great potential to protect human health and environment in a sustainability perspective.

Implementation of the SDGs in the context of health in relation to chemicals at a national level requires a coordinated approach at government level and capacity-building. Moving towards sound chemicals management, the Republic of Moldova has set up a centre for chemical safety and toxicology to assess chemical risk factors throughout the chemicals life cycle, introduce technology for collection and analysis of data on the toxicity of products on the market and plan the response to public health emergencies and chemical accidents. Priorities include conducting research and teaching toxicology at university level, adopting standards and methodologies, monitoring foodstuffs, setting up toxicology units in relevant institutions and recording cases of acute poisoning.

## **Mainstreaming of chemicals in national sustainable development strategies: challenges and opportunities (panel discussion)**

Sound chemicals management and the role of health and well-being in sustainable development are explicitly addressed in the SDGs, creating a new platform for the further development of chemical safety at national and regional level.

In many countries of the WHO European Region, the basis for accelerating the sustainable management of chemicals is already in place. This provides opportunities for mainstreaming

action for the protection of human health from the negative impact of chemicals in the economic development agenda, of which some examples are given below.

- Chemicals are already on the political agenda; policies, strategies and relevant legislation exist and provide the legislative basis for strengthening the sustainable management of chemicals; in the Russian Federation the Government's programmatic framework for biological and chemical safety was endorsed by a presidential order; advanced legislation on chemicals and waste management is being implemented in Germany and other European Union countries; in the Republic of Moldova, the national law on chemicals regulation was discussed by parliament; a new strategy for chemicals was recently developed in Slovakia.
- All countries are gaining experience, to a greater or lesser extent, of interagency and interstakeholder collaboration and coordination; for example, the Government Committee on Biological and Chemical Substances in the Russian Federation and the State-run research programme involving, in addition to the health authorities, the agricultural, trade and industry government bodies. The French Agency for Food, Environmental and Occupational Health and Safety (ANSES) involves five ministries, including the ministries of agriculture and labour; ANSES is concerned with risk assessment rather than risk management and tailors its guidance to policy-makers, on the one hand, and technical end-users, on the other. In Slovakia, the Government working group for chemicals management includes representatives of six key ministries. Interagency consultations in the Republic of Moldova have led to the development of chemical safety legislation with a clear description of the mandate of all agencies involved.
- Specific needs for the protection of children and pregnant women have been considered; specific regulations protect pregnant women in occupational settings as well as children, including different standards and specific regulations for products for these categories of person are on place in many countries; in some countries, specific research centres for children and the environment have been created; best practices in these areas should be shared in order to implement more effective policies to protect vulnerable populations and promote equity and protection of human rights.

At the same time, there are many challenges in addressing chemicals and health issues when planning economic development in the context of sustainability. Some of these are discussed below.

- Implementation of the principles of the circular economy that use less hazardous chemicals, reduce waste production significantly and use fewer natural resources. However, the circular economy is not a panacea; for example, some wastes are nonrecyclable or require a lot of energy for recycling, and all necessary evaluations, including the environment and health impact, should be performed in order to decide which wastes come into this category. Sometimes it is technically impossible to impose strict protective measures because of potential conflicts with economic priorities; however, economic growth should not be pursued at the expense of the environment and human health.
- Needs for education and competence-building: usually people working on the recycling of waste have a relatively low level of education and are highly exposed; increasing recycling can pose new risks and burdens to human health and the environment, which should be taken into consideration at the planning stage.
- Lack of data: from the large number of studies conducted in recent decades, we have gathered a lot of data on exposure to contaminants in food and on air pollution; it is a very different story for indoor exposure and exposure to chemicals in products. Lack of information on nanomaterials is a problem in the majority of countries. Evaluation



of the risks of chemical mixtures remains the biggest problem globally; the current approach of evaluating only single chemicals (the “chemical by chemical” approach) should be revised to correspond more closely to real-life exposures.

- The distinction between risk assessment and risk management: in France, risk assessment and risk management functions are divided, which allows more objective and independent assessment of the risks of chemicals. An open dialogue between all stakeholders, transparency and equal access to information is a prerequisite for addressing this challenge.
- Lack of a tradition of careful management of chemicals in countries and the potential conflict between economic development and its cost to the environment and human health: gaps between developed and developing countries must be bridged in order to create a sound chemical safety culture throughout the Region.
- The balance between national and international/European Union legislation: in European Union countries, 90% of legislation is European-Union-based legislation. When planning stricter measures in national policies and strategies, European Union countries should find a way to prove their value and integrate them into European Union legislation.

There are thus multiple opportunities and challenges that should be taken into account for mainstreaming health-related aspects of chemicals management into the Sustainable Development Agenda at the national level.

### Priority objectives and actions

Priority objectives and actions were discussed in three parallel working groups. The meeting participants stressed the fact that the objectives should inspire and encourage innovation, for example by focusing on new and emerging issues and challenging existing practices, as well as addressing known areas of concern.

The discussion in working groups resulted in identification of several priority objectives for consideration by the Sixth Ministerial Conference on Environment and Health, which are outlined below.

- Reduce risks from priority chemicals for vulnerable population groups and vulnerable life stages through the development, strengthening and implementation of policies and legislation, focused on the protection of vulnerable groups and populations in hotspots. Situational analysis and identification of priority chemicals and areas for intervention should dictate policy development. Certain core elements should be considered when developing policies: risk assessment and the cumulative risk of exposure to multiple chemicals when evaluating chemical risks for vulnerable populations; a harmonized approach for assessment of the risks of different products at national and international level; prevention of transfer of “dirty” technologies from more developed to less developed countries; promotion of scientific research; explicit labelling of “cleaner” products; strong engagement of the health sector, avoiding conflicts with economic development priorities as much as possible; socioeconomic analysis and sound arguments for risk-reduction measures, such as a likely reduction in the burden of disease.
- Create mechanisms and means to raise awareness of the health impacts of chemicals, in particular for vulnerable population groups and life stages. This can be achieved by developing and including relevant material in curricula for undergraduate and postgraduate training for health-care professionals, medical students, government officials, the public and schoolchildren; providing access to relevant databases and registers; developing tools to improve the risk-communication skills of relevant professionals.

- Strengthen partnerships between State and non-State stakeholders and ensure that the health sector fulfils its role in sound chemicals management. Involvement of industry plays a pivotal role in progress in chemical safety; measures to build stronger collaboration with industry were proposed, in particular development of regulations and voluntary initiatives, creation of mechanisms for economic stimulation, promotion of alternatives, etc.
- Advance implementation of the relevant multilateral environmental agreements to promote sound management of chemicals in the WHO European Region. Implementation of these agreements will create a sound basis for promotion in many other areas, including, but not limited to: development of new methods for hazard and risk assessment; prevention of trafficking in illegal products; building capacities for environmental and human biomonitoring, surveillance and risk assessment; prioritization of certain chemicals.
- Call for a ban on all forms of asbestos.<sup>1</sup>

### **State, non-State stakeholders and individuals: sharing responsibility for protecting human health from the negative impacts of chemicals**

Intersectoral coordination mechanisms and involvement of all relevant stakeholders are required to ensure the safe management of chemicals and implementation of the SDGs (SDG 17). If the partnership is to be effective, all stakeholders must be involved, including both State actors (legislators, ministry of health and other ministries, food and medical products agencies, customs agencies) and non-State actors (industry representatives, professional societies, trade unions, nongovernmental organizations, academia). Analysis of good examples of coordination, cooperation and partnerships such as prevention of illegal trafficking in the pesticide DDT in Tajikistan and partnerships under the “nontoxic environment” initiative in Sweden make it possible to propose effective and integrative opportunities for sound chemicals and waste management in the health and SDG context: improving intersectoral cooperation and partnerships; learning from past and current multistakeholder partnerships; developing national and regional indicators for the SDGs and targets relevant for sound chemicals and waste management and human health; and making metagovernance explicit.

Successful intersectoral and multisectoral collaboration is a challenge owing to the lack of clarity about the mandate and leadership of different agencies, the lack of a national framework, a lack of capacity and training, gaps in the information-sharing system and limited resources including a lack of sustained funding. The ideal to aim at is a shared policy process, with open and informed discussion, sufficient resources and time for effective multisectoral collaboration generating demonstrable evidence of the benefits of collaboration.

In Bosnia and Herzegovina, a deliberate collaboration engaging different stakeholder groups (government, civil society and private sector) and sectors (health, environment, economy) in achieving a joint policy outcome has been promoted by means of technical group meetings, round-table discussions, education workshops (with representatives of the industry playing an active role) and mutual projects.

The sector leading chemicals management in a country should be the one responsible for managing intersectoral collaboration and ensuring involvement of all relevant parties. No matter which sector is assigned a leading function, the health sector should be strongly involved in chemicals management at both national and international level.

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<sup>1</sup> The Russian Federation opposed this objective.

The responsibilities of individual stakeholders differ, but should be well-coordinated. It is practically impossible for national governments fully to control the entire life cycle of chemicals. The main responsibility should lie with the industry that produces and/or uses chemicals. Public participation in chemicals management should be more strongly encouraged.

Nongovernmental organizations working at the global level, e.g. the International POPs Elimination Network (IPEN), and the regional level, e.g. the Health and Environment Alliance (HEAL), focus on the promotion of a nontoxic environment and good health in a human rights perspective, advocacy for international legally binding instruments and regional (European Union) legislation, awareness-raising and support for a dialogue with decision-makers. Regional mechanisms focus on the prevention of pollution and are guided by the cost-internalization principle, the precautionary approach and the consumer's right to know. There are numerous examples of successful nongovernmental initiatives: for example, the campaign to ban the use of the herbicide glyphosate in Europe, elimination of EDCs, disclosure of harmful products on the market, and education of vulnerable populations. In Belarus, nongovernmental websites such as [www.ecoidea.by](http://www.ecoidea.by) and [www.greenmap.by](http://www.greenmap.by) (in Russian and English) provide information on chemicals in products and their health effects in order to educate consumers on avoiding exposure to hazardous chemicals. The site receives up to 130 visitors per day, seeking brief nonspecialist advice or more detailed technical and medical information.

Medical professional societies can play many important roles in the prevention of acute and chronic negative effects on the population. Their contribution is duly recognized in the "Strategy for strengthening the engagement of the health sector in the implementation of SAICM", adopted by the International Conference on Chemicals Management at its third session in 2012 (8). For example, the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) plays a significant role in chemical safety and development of programmes to protect human health from exposure to chemicals in the WHO European Region. In Azerbaijan, the Azerbaijan Toxicologists' Society contributed to the response to a number of incidents involving chemical hazards, including a major subway fire in the capital, Baku, in 1995 and a fire in a residential building in 2015; raised awareness of the national government and international community about a stockpile of pesticides in Djangi village; advocated for safety of products used in building works; worked for safety during mass gatherings; and shared scientific and dissemination of information to the public through publications, such as guidance on the handling of mass casualties in emergencies and the management of snakebite. Future priorities include the development of a national register of potentially hazardous chemicals, harmonization of epidemiological data on acute poisoning and advice on the optimization of chemical safety legislation. A joint toxicology centre in the southern Caucasus subregion is proposed to strengthen capacity for SAICM implementation.

## **Stakeholders' mandate and responsibilities in the area of chemicals and health (panel discussion)**

Multisectoral and multistakeholder coordination is the main pillar of sound chemicals management. SAICM provided a good example of open discussion involving all stakeholders. The majority of decisions are expected to be taken at national and regional level, with involvement of all interested parties: key ministries such as public health, environmental protection, agriculture, finance and justice; customs agencies; emergency management services; public and professional nongovernmental organizations; the scientific community; industry. Local communities and those who are affected by exposure to chemicals can constitute an additional driving force in the decision-making process.

The lead agency should ensure that all relevant stakeholders are involved in the process. Commonly, the lead agency is the ministry of health or ministry of environment. Whichever



ministry leads on chemical safety at the national level, an institutional mechanism should be in place and enforced by government regulations or legislation. The lead sector should be responsible for: 1) coordination of knowledge collection and investment in science; 2) raising funds, dealing with the ministry of finance to obtain additional resources and building the necessary capacity to use these resources effectively; 3) assessing the effectiveness of interventions to protect human health and generating statistics showing that management of a specific chemical has saved a certain number of years of human life as the main indicator. Ideally, the respective roles and responsibilities of the government sector and industry should be defined in legislation.

Since government bodies and other stakeholders have differing roles and sometimes conflicting interests, it is a challenge to create an effectively functioning mechanism. However, there is considerable experience of intersectoral and multistakeholder coordination in many countries. For example, ANSES conducted a dialogue with stakeholders on the results of risk assessment at two separate levels: policy-makers and other stakeholders (the latter in order to share expertise). ANSES reviews its contract or charter with stakeholders twice a year and whenever it publishes an Opinion; this increases credibility and trust and provides an opportunity to ask questions of the experts. Stakeholders are: ministries, nongovernmental organizations, trade unions, civil society. Industry, agriculture and nongovernmental organizations are end users, and ANSES shares the state of the art with them and shows what risk assessment can achieve, what the uncertainties are, and how the end users can contribute to new risk-management technology. In Slovenia, an interministerial working group has been created to facilitate implementation of the Parma Declaration on Environment and Health. Representatives of industry and nongovernmental organizations are invited to take part in the discussion.

A discussion forum should be pluralistic, avoiding manipulation by any of the participants, and should acknowledge the value of the differences between them.

Countries are encouraged to create a platform for partnerships to promote sustainable development and achieve sound chemicals management. All recent public health policies have stressed the importance of working together: Health 2020, the Minsk and Parma Declarations and the Health in All Policies approach (9) are by no means the only examples. The recommendation to formalize intersectoral coordination does not exclude the promotion of networks and informal partnerships, which may be more effective than formal arrangements in some cases. For example, in Bosnia and Herzegovina, the Government encountered opposition from industry, which feared a loss of business resulting from new legislation. The Government organized open discussion days and invited established European chemicals manufacturers to talk to the representatives of chemical industry in Bosnia and Herzegovina to explain to them how they could make a profit while still strictly following legislative requirements (i.e. while abiding by European legislation).

It is possible to involve and reach consensus with all shareholders, under the following conditions: all participants are well-informed about the topic under discussion; scientific debate predict the decision-making discussion; all relevant information is available, including information on alternatives and alternative decisions; health and environmental impact and economic costs are calculated; uncertainties are transparently and clearly communicated. All steps in the process must be clear and there must be clear links with others in the process. Ideally, all stakeholders should talk in the same room and transparently communicate their concerns and fears. For example, the European Union REACH regulation (10) refers to “competent authorities” that meet 3-4 times a year in a joint meeting of all relevant European directorates, nongovernmental organizations, etc.

## Road map for health-sector engagement in the Strategic Approach to International Chemicals Management

In May 2016, at its sixty-ninth session, the World Health Assembly adopted resolution WHA69.4 on the role of the health sector in SAICM towards the 2020 goal and beyond. The resolution calls upon the WHO Secretariat to present to the Health Assembly, at its seventieth session in May 2017, a road map outlining concrete actions to enhance health-sector engagement towards meeting the 2020 goal and to contribute to relevant targets of the 2030 Agenda for Sustainable Development.

The proposed road map includes the following headings for “areas of action”: a) knowledge, monitoring and reporting; b) risk reduction; c) institutional capacity strengthening; and d) health in chemicals policies, leadership and coordination. The draft road map also included proposals for “cross-cutting themes”, e.g. mainstreaming gender; collaboration with other sectors; and building on existing efforts.

The meeting provided an opportunity for a regional consultation on the draft road map, facilitated by a discussion paper (11). Working in three groups, the meeting participants discussed the proposed areas of action and cross-cutting themes, and were invited to identify major priorities, the role of the Member States and the WHO Secretariat in implementing these priorities, and the best ways to link the road map to the SDGs.

General remarks included the risk of duplication of commitments under the road map (a global instrument) and the outcome document of the Sixth Ministerial Conference on Environment and Health (binding only on Member States of the WHO European Region). Suggested cross-cutting themes included vulnerable groups, social determinants of health and “gender inequality” rather than “gender mainstreaming”.

The road map should be divided into action to be completed before the 2020 deadline and action thereafter, and reflect the terminology and thematic structure of SAICM as far as possible. The title should include the word “chemicals” and explain the “2020 goal” more clearly.

A number of additional actions were proposed in the thematic areas of the road map.

### **Knowledge, monitoring, data collection and sharing (rather than “reporting”)**

- Surveillance of acute and chronic health effects of chemical exposures; development of environmental health indicators related to chemical exposures.
- Promotion of and support for data collection and sharing.
- Creation of a common database for monitoring and detection of chemical events (communicable and noncommunicable diseases, poisonings).
- Involvement of mass media, nongovernmental organizations, volunteers.
- Improvements in reporting/information-sharing between Member States about hazardous products.
- Use of existing mechanisms for sharing information between States.
- Uniform methodology and format for data collection on acute and chronic poisonings, also covering environmental health indicators, chemical incidents, exposure to chemicals.
- Improvement of the ability to access, interpret and apply scientific knowledge and data.
- Development of tools for impact assessment of chemicals.
- Strengthening coordination of scientific research.

### **Health risk management (rather than “risk reduction”)**

- Development and enforcement of regulations relating to illicit and/or potentially hazardous products/chemicals, their restriction and prohibition.
- Risk management and risk reduction plans for dangerous products.
- Creation/strengthening of early warning systems, potentially within the framework of the International Health Regulations (2005).
- Provision of chemical classification data in national languages.
- Inspection and enforcement, identification of hazardous products on the market and their elimination from the market; creation/strengthening of early warning systems for dangerous products.

### **Institutional capacity-strengthening**

- Strengthening of laboratory and analytical capacity.
- Institutionalization of risk assessment.
- Improvement of stakeholders' capacity to access, interpret and apply scientific knowledge and data.
- Training for decision-makers, government officials and technical experts.
- Implementation of effective mechanisms, e.g. the European Chemical Emergency Network (ECHEMNET) in other Member States.
- Strengthening the mechanism for intersectoral collaboration.

### **Health in chemicals policies, leadership and coordination**

- Health-sector involvement in implementation of the multilateral environmental agreements and SAICM.
- Definition of the health sector's role in national legislation and enforcement of this role.

The different roles of Member States and WHO were emphasized. Member States should commit themselves to sound management of chemicals, including legislation, inventory and monitoring. WHO should provide political support and guide countries in implementing the road map. Technical support requested from WHO included recommendations on risk assessment, a harmonized platform for information collection including comparable data formats, chemicals registers and indicators, tools for interpretation of scientific information and risk assessment results, risk communication tools and training materials.

## **Conclusions, including on the scope of a possible policy commitment towards the Sixth Ministerial Conference on Environment and Health**

Member States have agreed that the Sixth Ministerial Conference on Environment and Health should aim to adopt a short political declaration, focusing on existing commitments, and a set of SMART targets aligned with the SDGs. Priorities in the area of chemicals and other hazardous substances include the protection of vulnerable groups – pregnant women, infants, children and people living in pollution hotspots – by:

- developing and implementing relevant policies and strategies;
- creating mechanisms and means for raising awareness of the health impacts of chemicals;
- strengthening partnerships between State and non-State stakeholders and ensuring that the health sector fulfils its role in sound chemicals management;
- advancing implementation of the relevant multilateral environmental agreements; and
- calling for a ban on the most hazardous substances, e.g. asbestos<sup>1</sup>.

The goals of the Parma Declaration, particularly Regional Priority Goal 4 on the health of children, are still relevant.

Suggested elements for the proposed policy commitments include:

- a central theme e.g. “improving quality of life”;
- new and emerging health threats;
- promotion of focused scientific research;
- monitoring and surveillance;
- avoiding the transfer of “dirty” technologies from developed to developing countries;
- harmonization of risk-assessment methodology and data collection;
- creation/enforcement of a legal framework to protect consumers from illicitly imported products;
- changing stakeholders’ behaviour through education and training;
- creation of partnerships between all stakeholders, including the chemical industry;
- promoting cooperation between SAICM and the national focal points responsible for implementation of the International Health Regulations (2005).

Prioritization among chemicals and identification of emerging actions are key points for facilitating the translation of science results into policies. Certain criteria can be applied to decide priorities, such as the burden of disease; societal impact and costs; loss of productivity and other economic consequences; societal concerns; and results of non-target exposure screening, such as HBM findings. The precautionary principle should be considered when insufficient scientific data are available but there is evidence of negative chemical impacts.

However, implementation of the precautionary principle is challenging, and several conditions should be kept in mind when applying it: transparency in communication of uncertainties and the probability of causalities based on evidence from toxicological and epidemiological studies; information on economic costs and safer alternatives; full agreement between different scientific authorities; a dialogue with industry to promote voluntary measures for the manufacture of safer products; communication of risk to the public to promote the taking of protective measures by citizens themselves.

Sound chemicals management and the role of health and well-being in sustainable development are explicitly addressed in the SDGs, creating a new platform for the further development of chemical safety at national and regional level. Experience gained from implementing sound chemicals management provides opportunities for mainstreaming of chemicals and health in sustainable development agendas: in many countries of the WHO European Region, the basis for accelerating the sustainable management of chemicals is already in place; chemicals are on the political agenda; all countries are gaining experience

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<sup>1</sup> The Russian Federation opposed this objective.

of interagency and interstakeholder collaboration and coordination; specific needs for the protection of children and pregnant women have been considered. To support inclusion of chemicals and health in national development strategies, the following priority actions can be considered: implementation of the principles of the circular economy; education and competence-building; filling-in of gaps in data and revision of the “chemical by chemical” approach; consideration of the distinction between risk assessment and risk management; establishment of a tradition of careful management of chemicals and the elimination of any potential conflict between economic development and the cost of this development for the environment and human health.

Most decisions are expected to be taken at national and regional level to address chemicals and health in a sustainability perspective, with involvement of all interested parties as a key factor in the success of the process. Since government bodies and other stakeholders have differing roles and sometimes conflicting interests, it is a challenge to create an effectively functioning mechanism. To overcome these challenges, the lead agency should create a platform for an open exchange of opinions in order to reach consensus among all shareholders. Sharing all available information related to a topic of discussion, including information on alternatives and alternative decisions, health and environmental impact, economic costs, organization of scientific debates prior to the decision-making discussion, transparent and clear communication of uncertainties; and demonstration of all steps of the process and links between partners in the process are of paramount importance for getting State and non-State stakeholders involved.

## Closure

Dr Dorota Jarosinska, Programme Manager, Environmental Exposures and Risks, WHO ECEH, thanked participants for their contribution and outlined the next steps: further discussions on the preparations for the Sixth Ministerial Conference on Environment and Health and submission of the draft road map for the implementation of the 2020 goal on environmentally sound management of chemicals. She declared the meeting closed at 16:30 on Tuesday 5 July 2016.

## References

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11. See document EUDCE1408123-5.1-64555/T.2.

## Annex I. Programme of the meeting

WORLD HEALTH ORGANIZATION  
REGIONAL OFFICE FOR EUROPE

WELTGESUNDHEITSORGANISATION  
REGIONALBÜRO FÜR EUROPA



ORGANISATION MONDIALE DE LA SANTÉ  
BUREAU RÉGIONAL DE L'EUROPE

ВСЕМИРНАЯ ОРГАНИЗАЦИЯ ЗДРАВООХРАНЕНИЯ  
ЕВРОПЕЙСКОЕ РЕГИОНАЛЬНОЕ БЮРО

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### EUROPEAN CENTRE FOR ENVIRONMENT AND HEALTH

**Chemical policies and programmes to protect  
human health and environment in a sustainability  
perspective**

EUDCE1408123-5.1-64555/4

**Bonn, Germany  
4-5 July 2016**

20 May 2016  
Original: English

### Programme

**Monday, 4 July 2016**

08:30 - 09:00	Registration
09:00 - 09:30	<b><i>Opening of the meeting</i></b> Dr Elizabet Paunovic, Head of the WHO European Centre for Environment and Health (WHO ECEH) Introduction of participants Purpose and expected outcome of the meeting Dr Dorota Jarosinska, WHO ECEH  Election of co-chairs and rapporteur  Adoption of the agenda
09:30 - 10:30	<b><i>Session 1: Health-related aspects of chemical safety in global and regional policies and strategies – setting the scene</i></b> Introduction of the meeting document “Commitments on health-related aspects of chemical safety in global and regional strategic documents” Ms Nida Besbelli, Turkey
09:40 - 10:10	Keynote presentation: Strategic Approach to International Chemicals Management – to 2020 goal and beyond Mr Vassilios Karavezyris, Germany

10:10 - 10:30	<p>WHA Resolution on the role of the health sector in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond</p> <p>Ms Victoria Tunstall, Canada</p>
10:30 - 10:50	<i>Coffee break</i>
10:50 - 12:30	<p><b><i>Session 2: Protecting vulnerable population groups and life stages from the negative impacts of chemicals – approaches and tools</i></b></p> <p>Introduction of the meeting document “An overview of core elements of policies and legislation to protect human health, in particular vulnerable groups and life stages, from the negative impacts of chemicals”</p> <p>Dr Leonardo Trasande, USA</p>
11:00 - 11:30	<p>Keynote presentation: Identification of preventable early-life risks to health</p> <p>Professor Philippe Grandjean, Denmark</p>
11:30 - 11:45	<p>Human biomonitoring - a tool for assessment of human exposure to chemicals at regional and national level</p> <p>Professor Arnd Hoeverler, the European Commission</p>
11:45 - 12:00	<p>Diagnosis first - what are the levels of exposure, and their potential health effects?</p> <p>Professor Wojciech Hanke, Poland</p>
12:00 - 12:15	<p>Precautionary approach to policies and programmes to protect human health from negative impacts of chemicals – the Dutch experience</p> <p>Mr Jochem van der Waals, the Netherlands</p>
12:15 - 12:30	<p>From science to regulation of EDCs: is EC proposal of June 2016 scientifically relevant?</p> <p>Professor Jean-Pierre Bourguignon, Belgium</p>
12:30 - 13:20	Lunch
13:20 - 14:30	<b><i>Session 2 (continued):</i></b>
13:20 - 13:30	<p>Avoidable early environmental exposures: outcomes of a WHO international expert meeting, 13-14 June 2016</p> <p>Dr Emiko Todaka, WHO HQ</p>
13:30 - 14:30	Panel discussion 1: protection of vulnerable groups in all life stages



	from the negative impacts of chemicals: science as a basis for policy development (panellists: Professor Philippe Grandjean, Professor Wojciech Hanke, Professor Arnd Hoeveler, Dr Leonardo Trasande, Mr Jochem van der Waals, Mr Steffen Wengert; facilitated by Ms Joanne Vincenten)
14:30 - 16:20	<b><i>Session 3: Chemicals and health in a sustainable development perspective</i></b> Sustainable development goals: chemicals and health Dr Irina Zastenskaya, WHO ECEH
14:40 - 14:55	Sustainable chemistry: benefits for human health Professor Klaus Kümmerer, Germany
14:55 - 15:10	Chemicals and health in national sustainable development agenda - country example Dr Iurie Pinzaru, Republic of Moldova
15:10 - 15:30	<i>Coffee break</i>
15:30 - 16:20	Panel discussion 2: mainstreaming of chemicals in national sustainable development strategies: challenges and opportunities (Panellists: Dr Jan Janiga, Professor Klaus Kümmerer, Mr Jean-Nicolas Ormsby, Professor Peter Part, Dr Iurie Pinzaru, Dr Marina Shevireva; facilitated by Ms Joanne Vincenten)
16:20 - 18:00	<b><i>Session 4: Towards formulating actions to be included in the outcome document of the 6<sup>th</sup> Ministerial Conference on Environment and Health (discussion in working groups)(facilitated by: Mr Branislava Matic, Ms Eirian Thomas, Ms Lindita Tafaj)</i></b> Introduction Dr Srdan Matic, WHO/EURO

## Tuesday, 5 July 2016

09:00 - 10:00	Reporting from the WGs to the plenary
10:00 - 12:30	<b><i>Session 5: Sharing responsibilities for the protection of human health from the negative impacts of chemicals – the roles of stakeholders and individuals</i></b>
10:00 - 10:15	Stakeholders role in the protection of vulnerable population groups in a sustainability context Dr Joachim Monkelbaan, Switzerland
10:15 - 10:30	The civil society perspective on protecting human health from the

	negative impacts of chemicals Ms Genon Jensen, HEAL
10:30 - 10:45	The role of national professional and scientific organizations in chemical safety Professor Ismayil Afandiyev, Azerbaijan
10:45 - 11:05	<i>Coffee break</i>
11:05 - 11:20	Intersectoral collaboration at national level: challenges and ways to strengthening Ms Dzejna Milakovic-Ramadani, Bosnia and Herzegovina, Republika Srpska
11:20 - 11:35	Human right for living in safe environment and the right to know about hazards: how to achieve it? Mr Evgeniy Lobanov, Belarus
11:35 - 12:30	Panel discussion 3: stakeholders mandate and responsibilities in the chemicals and health area (Panellists: Professor Ismail Afandiyev, Professor Jean-Pierre Bourguignon, Ms Vassiliki Karaouli, Mr Evgeniy Lobanov, Ms Dzejna Milakovic-Ramadani; facilitated by Dr Joachim Molkenbaan)
12:30 - 13:30	<i>Lunch</i>
13:30 - 15:15	<b><i>Session 6: WHA resolution on the role of the health sector in SAICM – towards the health-sector road map to 2020 goal and beyond (discussion in working groups)</i></b> (facilitated by: Ms Szymon Domagalski, Mr Tamas Pandics, Ms Barbara Werschkun) Introduction to the road map development Ms Victoria Tunstall, Canada
15:15 - 15:35	<i>Coffee break</i>
15:35 - 16:15	Reporting from the WGs to the plenary
16:15 - 17:00	Plenary discussion on a scope of commitments towards the 6 <sup>th</sup> Ministerial Conference on Environment and Health
17:00 - 17:30	Wrap-up and closure of the meeting

## Annex II. List of participants

WORLD HEALTH ORGANIZATION  
REGIONAL OFFICE FOR EUROPE



ORGANISATION MONDIALE DE LA SANTÉ  
BUREAU RÉGIONAL DE L'EUROPE

WELTGESUNDHEITSORGANISATION  
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ВСЕМИРНАЯ ОРГАНИЗАЦИЯ ЗДРАВООХРАНЕНИЯ  
ЕВРОПЕЙСКОЕ РЕГИОНАЛЬНОЕ БЮРО

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**Chemical policies and programmes to protect  
human health and environment in a sustainability  
perspective**

EU DCE1408123-5.1-64555/5

**Bonn, Germany  
4-5 July 2016**

4 July 2016  
Original: English

### List of participants

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Bürogemeinschaft in der Remise

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**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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The WHO Regional Office for Europe convened a meeting on “Chemical policy and programmes to protect human health and environment in a sustainability perspective” at the European Centre for Environment and Health, Bonn, Germany on 4 and 5 July 2016. The representatives of Member States, other stakeholders and invited experts discussed actions aimed at the protection of human health, particularly vulnerable groups (pregnant women, infants and children), from the negative impacts of chemicals in a sustainability context. Proposals for consideration by the Sixth Ministerial Conference on Environment and Health in 2017 were identified, taking into account the latest scientific knowledge shared during the meeting. The meeting also provided regional input to the formulation of the WHO road map for action towards the 2020 goal on sound management of chemicals and beyond.

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