



World Health
Organization

REGIONAL OFFICE FOR Europe

REGIONAL COMMITTEE FOR EUROPE
65TH SESSION

Vilnius, Lithuania, 14–17 September 2015



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Environment and health in the WHO European Region: progress, challenges and lessons learned



Working document

Regional Committee for Europe
65th session

EUR/RC65/11

Vilnius, Lithuania, 14–17 September 2015

17 July 2015

150478

Provisional agenda item 5(a)

ORIGINAL: ENGLISH

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This document describes progress in the WHO European Region in meeting the commitments made at the Fifth Ministerial Conference on Environment and Health, held in Parma, Italy, in March 2010. It also presents the lessons learned since the inception of this unique intersectoral process – the first of its kind in the WHO European Region.

It draws on the content of the report – *Improving environment and health in Europe: how far have we gotten?* – launched at the High-level Mid-term Review meeting of the European Environment and Health Process (EHP), held in Haifa, Israel, on 28–30 April 2015, and on the feedback provided by Member States and partners at that meeting.

In particular, the report describes progress towards achieving the time-limited targets adopted in the Parma Declaration on Environment and Health for water and sanitation, children's daily environment, air quality, chemical safety and asbestos-related diseases. It also addresses progress in responding to climate change and implementation of multilateral agreements of relevance for environment and health. It highlights the role of strategic partners, such as international agencies, the European Union, nongovernmental organizations and young people, in the EHP. It describes trends in research and in understanding inequalities in environmental health and the economic dimension and implications of the environment on health.

Substantial progress has been made in several, but not all, domains, and progress remains uneven among Member States. Policies have been elaborated at national and international levels, resulting in measurable gains, although concerns remain for some indicators. More must be done to reduce the persistently high burden of disease due to environmental factors and its unequal distribution among European citizens.

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Introduction

Environment and health remain relevant and can be tackled only by working across sectors

1. As one fifth of all deaths in the WHO European Region are attributable to environmental exposures, one of the four priorities of the Health 2020 policy framework is to create supportive environments and resilient communities.
2. Some of the challenges, such as air pollution, certain forms of chemical contamination and inadequate water and sanitation in parts of the European Region, are scientifically well understood, and policies are available to support effective interventions. However, several European Member States are struggling to make sustainable progress. Addressing this “unfinished agenda” is mainly a matter of national political commitment and capacity. Other challenges, such as the use of new technologies, strategic options for long-term energy security, multiple exposures to complex mixtures of chemicals and global climate change, which is increasing the severity and frequency of extreme weather events, require better understanding (including of effective interventions and policies). They have regional and/or global implications and will require strong international collaboration.
3. Diseases related to environmental exposures place a heavy burden on the resources of health systems; in particular, a vast proportion of noncommunicable diseases, such as cardiovascular and respiratory diseases and cancers, is attributable to the environment. According to the most recent estimates of the burden of disease, 482 000 deaths are attributable to ambient air pollution and 117 200 to household air pollution in the WHO European Region annually. Most preventive interventions and policies depend, however, on other sectors, such as the environment, energy, transport, industry, agriculture, education, urban planning or economy. Tackling the problem therefore requires sustained intersectoral action, and the health sector must influence, through effective advocacy, the political agenda of other sectors in a whole-of-government and whole-of-society approach.
4. Contemporary public health recognizes the significant burden of disease attributable to environmental factors and emphasizes the need for health in all policies to address the interrelated social, behavioural and environmental determinants of health. However, within the health sector, environmental policies and actions are not commonly viewed as an upstream approach to preventing disease.
5. In 2007, the *British Medical Journal* conducted a survey on the most important medical advances since its first issue.¹ The sanitary revolution that introduced clean water and sewage disposal was voted the most important medical advance since 1840.

¹ Ferriman A. BMJ readers choose the “sanitary revolution” as the greatest medical advance since 1840. *BMJ*. 2007;334:111. doi:10.1136/bmj.39097.611806.

6. The obvious relevance of environmental public health interventions became somewhat obscured due to dramatic improvements in the physical environment, particularly in urban settings, significant progress in addressing most deadly diseases following the discovery of vaccines and antibiotics and unprecedented extension of life expectancy in the 20th century as a result of the advancing medical technologies. The focus of the health sector's interventions shifted towards prevention based on addressing individual behaviour, early diagnosis and treatment of complex and multifactorial noncommunicable diseases and the vast expansion of individual medical care.

7. This evolution is not surprising considering that the health sector started to embrace the role of advocate for health through policy actions led by other sectors only recently, and that the necessary complex preventative responses often clash with important economic interests, which make it very difficult for health actors to step outside the boundaries of their primary mission, that is, curing diseases more than trying to address their complex social and environmental determinants.

Working across sectors: European Environment and Health Process

8. Through a series of ministerial conferences since 1989, the European Environment and Health Process (EHP) has provided the ministries of health and of environment of European Member States with a unique platform for defining priorities for the Region and for working together to address major determinants of health and well-being, as an example of Health 2020 in action. The WHO European Centre for Environment and Health, currently located in Bonn, Germany, provides the scientific and technical capacity to implement the work mandated by the ministerial conferences.

9. The Fifth Ministerial Conference on Environment and Health, held in Parma, Italy, in March 2010, resulted in a set of general commitments and time-limited targets with regard to water, sanitation, air pollution, chemical safety and support for safe, active living. The Conference welcomed a regional framework for action on climate change and health and adopted a new governance mechanism for the EHP by establishing the European Environment and Health Ministerial Board. This consists of four members elected by the WHO Regional Committee for Europe and four by the Committee on Environmental Policy of the United Nations Economic Commission for Europe (UNECE), representatives of UNECE, the United Nations Environmental Programme (UNEP), the European Commission and WHO, and the Chairperson and Co-Chairperson of the European Environment and Health Task Force (EHTF), which includes representatives of all Member States and relevant intergovernmental and nongovernmental organizations. It decided to hold a high-level mid-term review meeting to evaluate progress in honouring the commitments made in the Parma Declaration on Environment and Health.

10. *Improving environment and health in Europe: how far have we gotten?*² was one of the documents prepared for the High-level Mid-term Review meeting of the EHP in Israel in April 2015. It was produced by the WHO European Centre for Environment and Health, with the support of an editorial board consisting of EHTF members representing Estonia, Germany, Italy, Slovenia, the European Environment Agency, the Health and Environment Alliance, the Regional Environmental Center for Central and Eastern Europe, UNECE, UNEP, the United Nations Development Programme and the WHO Secretariat. Contributions were made by other EHTF members representing nongovernmental organizations, young people and the European Commission.

11. The report shows that approximately a quarter of Europe's burden of disease is attributable to exposure to environmental factors, despite substantial progress in environment and health in the past few decades. Four of five Europeans die from noncommunicable diseases, driven by, among other things, ageing populations and determinants such as poor diet, tobacco and alcohol abuse and a sedentary lifestyle, which have long been identified as underlying causes. Strong evidence also links health outcomes such as cardiovascular and respiratory diseases, type 2 diabetes and cancer to air pollution, chemical and physical agents and climate change (both directly through the effect of heat and cold waves and indirectly through exacerbation of the effects of air pollution), suggesting a stronger relevance of several environmental factors for health than thought previously. Thus, significant health gains could be made by reducing harmful environmental exposures and risk factors.

Progress in implementing the Parma Declaration

12. This section describes the main findings of *Improving environment and health in Europe: how far have we gotten?* – including information and data on topics covered in the Parma Declaration.

Ensuring public health by improving access to safe water and sanitation

13. More than 90% of citizens in the WHO European Region have access to improved water and sanitation facilities; however, serious inequalities persist, notably for poor and rural populations and marginalized and vulnerable groups, with 67 million people lacking access to basic sanitation and 100 million lacking piped drinking-water on their premises. As a consequence, 10 deaths a day from diarrhoea are still attributable to unsafe water and poor sanitation and hygiene in the European Region. The Parma Declaration set the goal of providing each child with safe water and sanitation by 2020, in particular, in educational and day-care facilities.

² *Improving environment and health in Europe: how far have we gotten?* Copenhagen: WHO Regional Office for Europe; 2015 (<http://www.euro.who.int/en/media-centre/events/events/2015/04/ehp-mid-term-review/publications/improving-environment-and-health-in-europe-how-far-have-we-gotten>, accessed 15 June 2015).

14. Progress has been slow. A key instrument for triggering action at the national level is the Protocol on Water and Health, a policy instrument that emerged from the Third Ministerial Conference on Environment and Health, held in London, United Kingdom, in 1999, with the aim of protecting human health and well-being through better water management. It is jointly supported by the WHO Regional Office for Europe and UNECE and currently counts 26 States parties.

Preventing disease through improved outdoor and indoor air quality

15. Air pollution is the most important single environmental health risk factor. About 600 000 premature deaths were caused by ambient (outdoor) and indoor air pollution in the WHO European Region in 2012. The harmful pollutants in the air include particulate matter – an important risk factor for major noncommunicable diseases, such as cardiovascular diseases, cancer and childhood asthma. In countries for which data on air quality are available, more than 80% of the population is exposed annually to levels of particulate matter above the WHO air quality guidelines. All socioeconomic groups experience premature deaths and diseases due to ambient air pollution, but there are more than five times more deaths and diseases associated with household air pollution in low- and middle-income countries than in high-income countries. Suitable policies are therefore needed to improve air quality. Amendments to the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone and the Protocol on Heavy Metals to the Convention on Long-range Transboundary Air Pollution, both adopted in 2012, will contribute to a further decrease in emissions of particulate matter, ozone precursors and heavy metals in the European Region.

16. Globally, the European Region has the highest mortality rate attributable to tobacco use, and exposure to tobacco smoke negatively affects health throughout the life-course. In accordance with the WHO indoor air quality guidelines and the WHO Framework Convention on Tobacco Control, Member States agreed in the Parma Declaration to ensure that kindergartens, schools and public recreational settings be free of tobacco by 2015. Progress has been substantial (for example, 38 Member States have banned smoking in schools), but the goal has yet to be met.

Addressing obesity and injuries through safe environments, physical activity and healthy diets

17. Providing healthy and safe physical environments for children in their daily life is another time-bound goal, set for 2020. Significant progress has been made in safeguarding children below the age of 14 years against unintentional and road traffic injuries, although progress has been uneven across the European Region. For example, there were more than 60% fewer deaths in high-income countries between 2000 and 2011 but only 34% fewer in low- and medium-income countries.

18. More than 60% of the 35 Member States that participated in a survey (particularly high-income countries) had introduced new policies on children's environments and injuries since the Fifth Ministerial Conference on Environment and Health in 2010. Yet significant policy gaps remain in order to make the built environment more conducive to integrating physical activity into daily life. In particular, further policy and

infrastructure improvements are required for active transport, such as cycling and walking to school, and for enabling physical activity in all settings of a child's life.

19. The Transport, Health and Environment Pan-European Programme is the international policy platform that supports countries in achieving this target. The Paris Declaration: City in Motion – People First!, the outcome document adopted at the Fourth High-level Meeting on Transport, Health and Environment, held in Paris, France, in April 2014, renewed commitments to increase green, healthy mobility and reduce noise and air pollution through a new partnership to promote cycling.

Preventing disease arising from chemical, biological and physical environments

20. Various measures have been taken in the WHO European Region to prevent diseases due to exposure to harmful chemicals and to reduce exposure to carcinogens, mutagens and reproductive toxicants. A notable step forward was the adoption, in 2013, of the Minamata Convention on Mercury, the aim of which is to protect health and the environment from highly toxic mercury. Each year, 1.8 million children, who are especially vulnerable to mercury-related neurological effects, born in the European Union have methylmercury levels in hair above the adjusted safety limit of 0.58 µg/g.

21. The Parma Declaration also commits countries to preparing national programmes by 2015 to eliminate asbestos-related diseases. Asbestos is responsible for approximately 50% of all deaths from occupational cancer and is one of most widespread environmental health hazards in the Region. WHO and the International Labour Organization believe that the most efficient way to eliminate asbestos-related diseases is to stop the use of all forms of asbestos. As of 2014, however, about 300 million people in the European Region were still living in countries that had not banned the use of all forms of asbestos. Even after its use is banned, it remains in the environment; the safe removal and disposal of asbestos-containing waste are still challenges in countries that have banned the use of all forms of the material. Eleven of the 31 countries that responded to a WHO survey were making periodic inventories of materials still containing asbestos.

Climate change and health

22. Climate change has serious health consequences. Climate warming is unequivocal; the aim of action today is to limit it as much as possible. The results of a survey conducted among Member States to assess progress in implementation of the regional framework *Protecting health in an environment challenged by climate change: European Regional Framework for Action* (which was welcomed in the Parma Declaration) indicate that they have acted rapidly in response to immediate health risks of climate change such as heat waves and outbreaks of infectious and/or vector-borne diseases. For example, heat-health action plans have been established in 18 countries. In 2013, a new seven-year framework was endorsed to improve the surveillance and control of invasive mosquitoes and the prevention and control of re-emerging vector-borne diseases in the European Region.

23. Because of the short- and long-term health risks associated with climate change, further action should be included in national adaptation strategies or action plans. Furthermore, the capacity of health systems should be strengthened to cope with the increasing demands resulting from climate change, including extreme weather events, and to make health infrastructure resilient to climate change.

24. The health sector has an important role to play in reducing emissions of greenhouse gases resulting from its own operations. Some 15 000 hospitals release about 250 million tonnes of carbon dioxide a year, representing nearly 4.2% of the total European greenhouse gas emissions. A growing number of Member States are experimenting with policies, practices and technologies to reduce greenhouse gas emissions to help adaptation to climate change, which also have significant local health benefits in the short term. These include greater use of renewable energy sources in generating electricity (for example, photovoltaic panels) and more efficient combustion of fossil fuels – measures that also reduce ambient air pollution. Putting such policies into practice can result in significant health cost savings, particularly by reducing the burden of noncommunicable diseases.

Lessons learned: key messages from the EHP Mid-term Review

25. Similar to the concept of social determinants of health, environment and health became an accepted notion; however, it is very difficult to draw up and implement relevant clear-cut policies and interventions. Being inherently cross-sectoral, no sector, including the health sector, developed a proper and full sense of ownership and none of the relevant sectors placed it at the centre of its agenda. The lessons learned in the 26 years of the EHP are therefore very valuable.

26. The EHP has provided a close symbiosis between multilateral, national and regional actions. Within a framework of targets, monitoring and support for achievement, it has enabled domestic priority-setting around shared agendas and the exchange of know-how and experiences. Solving often complex, even wicked environmental problems requiring tough choices by governments inevitably necessitates multisectoral action, together with high-level political commitment and processes and governance institutions and tools, to achieve optimum outcomes. The EHP has also supported collaborative technical networks and platforms across the European Region.

27. The EHP provides the essential multi-track collaboration, bringing coherence to the political, strategic and technical areas. Its advantages have included further coherent links to other policy frameworks, including Health 2020 and the sustainable development goals agenda. Such links provide strong institutional legitimacy, broad convening capacity among partners and actors, and excellent links to political governing bodies within the United Nations system. In this way, strong, inclusive and transparent processes can link the complexity of global issues with clear and focused high-level political messages.

28. The key conclusions from the 2015 Mid-term Review of the EHP can be summed up as the following.

- (a) To effectively address environmental determinants of health, there is no alternative to working across sectors.

- (b) Intersectoral work will only take place around a shared, common agenda.
- (c) The EHP makes a difference on the ground – it sets targets, supports their achievement and measures progress.
- (d) Member States consider the EHP as very useful for national implementation of policies and interventions by enhancing national priority-setting; by providing knowledge, evidence and normative guidance; by offering opportunities and platforms for exchange of experiences; and by linking the domestic policy agenda with multilateral and cross-border instruments.
- (e) Strong linkages between European Region and national levels are essential to ensure coherence and to maintain essential political commitment to implementation.
- (f) Substantial technical support, as well as the availability of forums and platforms for collaboration at the technical level, are of great importance.
- (g) Identifying politically engaging content and topics for cross-sectoral work mobilizes Member States and stakeholders and captures political and public attention.
- (h) Many of the public health issues today are wicked and complex problems that require tough choices by governments. Attracting and engaging the highest policy-making levels and ministers are essential for the advancement of the agenda.
- (i) A coherent linkage to other relevant policy frameworks and processes, such as Health 2020 or the post-2015 sustainable development goals, is required.
- (j) Good intersectoral governance is needed. However, such governance is only a tool to achieve the clearly defined outcomes of a cross-sectoral process.
- (k) The close partnership between WHO and the United Nations Economic Commission for Europe provides the EHP with strong institutional legitimacy, a clear mandate and broad convening capacity and should ensure a close linkage with the political governing bodies of both sectors.

A changing context for action in environment and health

29. The context in which Member States operate is changing. Since the Parma Declaration was made in 2010, the persistent economic crisis and shrinking budgets have put environment and health in jeopardy of being perceived as a luxury, secondary to other priorities or, potentially, damaging to the economic policy objectives of expanding business, increasing competitiveness and reducing economic inputs. Also, a marked socioeconomic divide is increasing, which translates into environmental health inequalities.

30. Since the Fifth Ministerial Conference on Environment and Health, two major developments have been seen at the regional and global levels: the adoption of the new WHO European health policy framework (Health 2020) and the post-2015 development agenda. These new policy platforms can be used to promote an integrated response to the underlying social, economic and environmental determinants of health. At the same time, the EHP may serve as an optimal implementation mechanism for a number of

sustainable development goals in the WHO European Region. Such an integrated response is a precondition for any further substantial, sustainable gains in health and well-being in Europe.

Relevance of Health 2020 to environment and health

31. The focus of Health 2020 is understanding the relation between health and development. Health is both an important investment and driver of development and one of the most significant results of development. Investment in health is critical to the successful development of modern societies and their political, social and economic progress.

32. The strong emphasis of Health 2020 on equity is consistent with the Rio Political Declaration on Social Determinants of Health, adopted by the World Conference on Social Determinants of Health in 2011, which acknowledges that “Health in all policies, together with intersectoral cooperation and action, is one promising approach to enhance accountability in other sectors for health, as well as the promotion of health equity and more inclusive and productive societies”.

33. Health 2020 recognizes that the environmental determinants of health are of equal importance for creating, maintaining and restoring health, and the creation of resilient communities and supportive environments is one of the four priorities for action in the WHO European Region.

Relevance of the post-2015 development agenda to environment and health

34. The United Nations Conference on Sustainable Development (Rio+20), held in Rio de Janeiro, Brazil, in 2012, was influenced by the notion of preventing human activities that could result in trespassing on the interlinked planetary boundaries that define a safe operating space for humanity.³

35. In a statement of direct relevance to the EHP, the heads of government noted, “We are convinced that action on the social and environmental determinants of health, both for the poor and vulnerable and for the entire population, is important to create inclusive, equitable, economically productive and healthy societies”.⁴ In the light of these ambitious, partly overlapping agendas, more work is needed to identify the policies that simultaneously benefit sustainability, health and health equity; avoid interventions and policies meant to improve one area (for example, the green economy) but that have negative effects on others (for example, health or equity); and identify and

³ Steffen W, Richardson K, Rockström J, Cornell SE, Fetzer I, Bennett EM et al. Planetary boundaries: guiding human development on a changing planet. *Science*. 2015;347(6223). doi:10.1126/science.1259855.

⁴ United Nations General Assembly resolution 66/288 on the future we want. New York: United Nations; 2012 (A/RES/66/288*); http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/66/288 , accessed 16 June 2015).

contribute to the development of healthy sustainable development goals across the thematic areas of Rio+20.

36. The sustainable development goals and related targets provide an important point of departure for shaping the EHP and for making it a relevant component of the implementation mechanism for the post-2015 development agenda.

Addressing current and future challenges

37. Building on lessons learned from the Millennium Development Goals, harmonization with the post-2015 development agenda is essential. The process, therefore, must identify inclusive key environment and health policy areas; promote behavioural changes; help catalyse global solidarity for sustainable development; promote peaceful societies and strong institutions; contribute to formulating and measuring the conditions and outcomes of a green economy; and strive further towards equity.

38. To address current and future challenges, policies and responses must be devised and implemented through collaboration among sectors. The WHO Regional Office for Europe has already underscored the importance of whole-of-government approaches to promote public health within its regional public health framework Health 2020. To achieve further progress in environment and health, it remains important to establish links and strategic partnerships with different actors, stakeholders and processes; ensure effective engagement of the public and other stakeholders in decision-making on environment and health; raise public awareness and strengthen capacities and institutions to address environment and health challenges; and enhance the understanding and use of economic arguments to support action on environment and health issues.

39. An additional factor of great importance is the full use of established policy instruments and tools, such as treaties and multilateral environmental agreements (MEAs) that are of direct relevance to implementation of the commitments made within the EHP. Examples are the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, which was one of the outcomes of the Third Ministerial Conference on Environment and Health, held in London, United Kingdom, in 1999, jointly administered by WHO and UNECE, and the UNECE Convention on Long-range Transboundary Air Pollution, of which the task force on health is chaired by the WHO European Centre for Environment and Health (see the Annex for a list of MEAs and processes). These provide a negotiated level for addressing important environmental issues that will have a marked effect on the entire population, across geopolitical borders. They also foster international collaboration, accountability and oversight. They are powerful policy tools for steering change and addressing inequalities in exposure to pollutants of concern and can have important impacts on sectoral policies in the environment, transport and energy sectors, as well as in agriculture and industry.

40. The period up to the Sixth Ministerial Conference on Environment and Health in 2017 should see continuing work towards meeting the Parma Declaration targets and further assessment of the unprecedented global and transboundary environment and

health challenges of the 21st century. The Sixth Ministerial Conference will provide an opportunity for Member States and stakeholders in the EHP to rethink, reinvigorate and steer the political agenda for environment and health in Europe in directions that will benefit the health of all Europeans while delivering sustainable development to the WHO European Region and the world.

Annex. Multilateral instruments (treaties, agreements and programmes) of direct relevance to the European Environment and Health Process

Instrument	Date
Health security	
Codex Alimentarius	1961
Vienna Convention on Early Notification of a Nuclear Accident	1986
Vienna Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency	1986
International Health Regulations (2005)	2005
Governance	
Convention on Access to Information, Public Participation in Decision-making, and Access to Justice in Environmental Matters	1998
Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context	2003
Chemical safety	
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	1989
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	1998
Stockholm Convention on Persistent Organic Pollutants	2001
Strategic Approach to International Chemicals Management	2006
Minamata Convention on Mercury	2013
Climate change	
Convention on Biological Diversity	1992
United Nations Framework Convention on Climate Change	1992
United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa	1994

Instrument	Date
Air quality	
Convention on Long-range Transboundary Air Pollution	1979
Vienna Convention for the Protection of the Ozone Layer	1985
Montreal Protocol on Substances that Deplete the Ozone Layer	1987
WHO Framework Convention on Tobacco Control	2003
Water and sanitation	
Marine pollution assessment and control component of the Mediterranean Action Plan to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean	1975
Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes	1999
Transport and health	
Transport, Health and Environment Pan-European Programme	2002

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