Tenth meeting of the Working group on Health in Climate Change of the European Environment and Health Task Force

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Meeting report

11–12 October 2022
Virtual session
ABSTRACT
On 11 and 12 October 2022, the Working Group on Health in Climate Change (HIC) of the European Environment and Health Task Force convened virtually for its tenth annual meeting. The aim of the meeting was to review recent developments in climate change and health and identify possible climate-change related outcomes for the Seventh Ministerial Conference on Environment and Health (Budapest, Hungary, 5–7 July 2023). The Working Group unanimously elected two new Co-Chairs.

Keywords
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Executive summary

Meeting scope and purpose

The Working Group on Health in Climate Change of the European Environment and Health Task Force (EHTF) continues to promote communication and collaboration among countries and stakeholders to address the health challenges caused and aggravated by climate change in the WHO European Region.

It also serves as a platform for preparing the contributions on climate change and health for the Seventh Ministerial Conference on Environment and Health (Budapest, Hungary, 5–7 July 2023).

At the 26th UN Climate Change Conference of the Parties (COP26), WHO together with partners have established the COP26 Health Programme to bring stronger health ambition and to call upon governments to sign health sector commitments to build climate-resilient and sustainable low-carbon health systems. At the global level, the new WHO Alliance for Transformative Action on Climate and Health (ATACH) aims to bring together the countries, which have signed the COP26 Health Programme commitments to progress and drive this agenda forward and to promote accountability. Eight countries from the WHO European Region have responded positively to this call. These countries came together in May 2022 expressing the wish to establish community of practice to facilitate implementation of the commitments.

The tenth meeting of the Working Group was convened to discuss ways on how to scale up health action in climate change and formulate higher regional ambitions for the health sector in preparation of the outcomes of the Seventh Ministerial Conference on Environment and Health.

A total of 78 participants, from 29 Member States plus other stakeholders and observers, attended the virtual meeting on 11 and 12 October 2022.

The meeting had the following objectives:

- to share information on ongoing global and regional initiatives on health and climate change;
- to present the evidence from the latest reports of the Intergovernmental Panel on Climate Change (IPCC) and the Lancet Countdown on Health and Climate Change;
- to portray the knowledge base on health arguments for climate action in specific areas, such as infectious diseases, water and sanitation, and mental health;
- to provide examples of climate services to improve public health;
- to share national experiences on how to integrate health into climate action under the COP26 Health Programme initiative and promote solutions and innovation to achieve climate-resilient, low-carbon and sustainable health systems;
- to present the updated WHO tool on carbon reduction benefits on health; and
- to identify transformative commitments and actions that drive the climate change and health agenda as essential component of the commitments to be taken at the Seventh Ministerial Conference on Environment and Health.

Meeting programme

The meeting consisted of seven sessions over the course of two days. A number of Member State comments were sprinkled throughout the programme.

- The opening session provided an overview of the meeting’s background, objectives and expected outcomes.
- On procedural matters, the Working Group adopted its agenda and programme, and unanimously elected two new Co-Chairs.
Session 1 provided policy and scientific updates on climate change and health. A keynote presentation outlined the findings from the latest report of the Lancet Countdown on Health and Climate Change in Europe.

Session 2 was devoted to a panel discussion on how to implement the COP 26 Health Programme commitments in selected signatory countries. The participants supported the set-up of a community of practice and shared implementation practices at the international, national and subnational levels.

Session 3 presented new practices in climate services for health, including the new WHO/World Meteorological Organization (WMO) interactive online portal and the WMO Global Atmosphere Watch programme research activities and findings.

Session 4 presented available WHO tools with country examples to support Member States in their efforts to link climate change mitigation, air quality and health.

Session 5 provided and presented the main health findings from the sixth report of the IPCC and the WHO mental health and climate change policy brief. It also featured scientific updates on the specific aspects of climate change and health relevant to water and sanitation, infectious diseases and heat health.

During session 6 participants discussed the preparations for the Seventh Ministerial Conference on Environment and Health and endorsed the proposed approach to drawing up the Working Group’s contribution to the agenda for the Ministerial Conference.

Session 7 featured the main conclusions and next steps, as summarized below.

Main conclusions

- The year 2022 saw the convergence of three serious global crises: the COVID-19 pandemic, climate change and the energy crisis.
- Evidence on climate change and health in the WHO European Region continues to improve in 2022: the new IPCC report, the Lancet Countdown on Health and Climate Change indicators for Europe and the WHO/WMO climate services for health initiative collectively underpin the need for urgent climate action.
- Infectious diseases, water scarcity, droughts and heatwaves and their adverse effects on health, including mental health problems, are on the rise, largely due to climate change.
- The links between air pollution, climate change and health are well established, and WHO tools help countries to generate the evidence and strengthen the health arguments for making a strong business case for ambitious climate action.
- The COP26 Health Programme/ATACH initiative offers countries a platform to embrace a climate-friendly transformation of the health sector that integrates health, equity and sustainability in moving towards zero carbon emissions and climate resilience.
- The year 2023 offers a unique opportunity to present climate change in a health framework during the forthcoming Seventh Ministerial Conference on Environment and Health, which aims to increase the level of ambition and move from awareness of environment and health issues to prompt action to resolve them. Member States can align with these ambitions and support climate resilience and sustainability in health systems.
- To provide a backdrop to and support for the climate-change related health messaging and commitments to be undertaken at the Ministerial Conference, the Working Group will produce a second edition of the publication *Zero Regrets: scaling up action on climate change mitigation and adaptation for health in the WHO European Region.*
Next steps

The Working Group will prepare a statement for the EHTF, proposing a set of collectively identified, measurable, time-bound commitments on health and climate change to be considered in the draft ministerial declaration – on climate-resilient and low-carbon health systems, heat health and/or air pollution, for example – and identify “accelerators”, such as a Member State community of practice, which would give Member States the support they need to meet those commitments. The commitments should embody high-level political aspirations underpinned by specific tangible interventions.

The proposed statement and commitments will be presented to the EHTF Bureau and to the Task Force at its 12th meeting in November 2022.

The Secretariat will follow up on the planned update of the Zero regrets publication and invite Working Group members to express their interest in participating in this process.
Резюме (Executive summary in Russian)

Цели и задачи совещания

Рабочая группа по изменению климата и его влиянию на здоровье при Европейской целевой группе по окружающей среде и здоровью (ЦГОСЗ) продолжает содействовать общению и сотрудничеству между странами и заинтересованными сторонами по предупреждению и устранению угроз для здоровья, которые создаются и усугубляются изменением климата в Европейском регионе ВОЗ. Она также служит платформой для подготовки материалов по вопросам изменения климата и его влияния на здоровье для Седьмой министерской конференции по окружающей среде и охране здоровья (Будапешт, Венгрия, 5—7 июля 2023 г.).

На 26-й Конференции Сторон Конвенции ООН об изменении климата (КС-26) ВОЗ совместно с партнерами приняла Программу КС-26 в области здравоохранения, требующую усилить меры по охране здоровья и призывающую правительства подписаться под обязательствами сектора здравоохранения, которые предусматриваются создание низкоуглеродных и экологически устойчивых систем здравоохранения, способных противостоять изменению климата. На глобальном уровне недавно созданный ВОЗ Альянс за преобразующие действия в области климата и охраны здоровья (АПДКЗ, или ATACH) имеет целью объединить усилия стран, подписавшихся под обязательствами Программы КС-26 в области здравоохранения, для обеспечения прогресса в выполнении положений этой программы и повышения уровня подотчетности. На этот призыв положительно откликнулись восемь стран в Европейском регионе ВОЗ. В мае 2022 г. эти страны провели совещание, на котором выразили желание создать сообщество практической деятельности по содействию выполнению принятых обязательств.

Целями десятого совещания Рабочей группы были обсуждение путей расширения масштабов действий по охране здоровья в условиях изменения климата и формулирование более высоких целей на уровне Региона для сектора здравоохранения при подготовке итоговых документов Седьмой министерской конференции по окружающей среде и охране здоровья. В виртуальном совещании, которое проходило 11 и 12 октября 2022 г., приняли участие 78 человек из 29 государств, а также представители заинтересованных сторон и наблюдатели.

Задачи совещания состояли в следующем:

- поделиться информацией об осуществляемых в настоящее время глобальных и региональных инициативах в области охраны здоровья в условиях изменения климата;
- представить фактические данные из последних докладов Межправительственной группы экспертов по изменению климата (МГЭИК) и проекта "Обратный отсчет: здоровье и изменение климата" журнала "Ланцет";
- охарактеризовать базу знаний, на которых построены аргументы о необходимости принятия мер по борьбе с изменением климата в интересах охраны здоровья в таких конкретных областях как инфекционные болезни, водоснабжение и санитария и психическое здоровье;
- привести примеры климатических услуг, позволяющих улучшить общественное здоровье;
- поделиться опытом конкретных стран в интегрировании интересов здоровья в меры по борьбе с изменением климата в соответствии с инициативой "Программа КС-26 в области здравоохранения" и поддержке технических решений и инноваций, направленных на создание систем здравоохранения, способных противостоять изменению климата, низкоуглеродных и экологически устойчивых;
- представить обновленное программное средство расчета пользы для здоровья от снижения выбросов углерода, разработанное ВОЗ;
- определить, какие преобразующие обязательства и действия, направленные на выполнение программы в области изменения климата и его влияния на здоровье, должны стать важными элементами обязательств, которые будут приниматься на Седьмой министерской конференции по окружающей среде и охране здоровья.
Программа совещания

Программа совещания включала семь заседаний в течение двух дней. В пункты программы были включены комментарии государств-членов.

- На вводном заседании был представлен обзор предыстории, целей и ожидаемых итогов совещания.
- В пункте "процедурные вопросы" Рабочая группа утвердила повестку дня и программу совещания и единогласно избрала двух новых сопредседателей.
- На первом заседании была представлена последняя информация по вопросам политики и научных исследований в области изменения климата и его влияния на здоровье. В основной презентации были представлены выводы из последнего доклада проекта "Обратный отсчет: здоровье и изменение климата в Европе" журнала "Ланцет".
- Второе заседание было посвящено дискуссии в формате группы экспертов по вопросу о том, как реализовать обязательства, предусмотренные Программой КС-26 в области здравоохранения, в подписавшихся под ними отдельных странах. Участники поддержали идею создания сообщества практической деятельности и поделились примерами из практики реализации на международном уровне и на уровне стран и регионов внутри стран.
- На третьем заседании были представлены новые формы и методы предоставления климатических услуг для здравоохранения, включая созданный ВОЗ и Всемирной метеорологической организацией (ВМО) новый интерактивный онлайновый портал и научно-исследовательские мероприятия и результаты программы ВМО "Глобальное наблюдение за атмосферой".
- На четвертом заседании были представлены имеющиеся методические разработки ВОЗ с примерами из опыта стран, помогающие государствам-членам в их усилиях по увязыванию в единый комплекс смягчения последствий изменения климата, качества воздуха и здоровья населения.
- На пятом заседании были рассмотрены основные выводы из шестого доклада МГЭИК, касающиеся здоровья, и краткая аналитическая справка ВОЗ по вопросам охраны психического здоровья в условиях изменения климата. Также участники были ознакомлены с новыми научными данными по конкретным аспектам изменения климата и его влияния на здоровье, касающимся водоснабжения и санитарии, инфекционных болезней и мер по охране здоровья населения в периоды сильной жары.
- На шестом заседании участники обсудили подготовку к Седьмой министерской конференции по окружающей среде и охране здоровья и одобрили предложенный подход к подготовке вклада Рабочей группы в повестку дня Министерской конференции.
- На седьмом заседании были озвучены главные выводы и предложены описанные ниже дальнейшие действия.

Главные выводы

- В 2022 г. совпали три тяжелых глобальных кризиса: пандемия COVID-19, изменение климата и энергетический кризис.
- В 2022 г. продолжало улучшаться качество данных, свидетельствующих о влиянии изменения климата на здоровье: новый доклад МГЭИК, содержащийся в публикации проекта журнала "Ланцет" "Обратный отсчет: здоровье и изменение климата" показатели для Европы и инициатива ВОЗ/ВМО по предоставлению климатических услуг для здравоохранения в совокупности обосновывают необходимость немедленного принятия мер по борьбе с изменением климата.
- Наблюдается рост распространенности инфекционных болезней, дефицита воды, засух и периодов сильной жары и их негативных последствий для здоровья людей, включая...
расстройства психического здоровья, что в значительной степени вызвано изменением климата.

- Достоверно установлено наличие связей между загрязнением воздуха, изменением климата и здоровьем, а разработанные ВОЗ пособия и инструменты помогают странам получать новые свидетельства и усиливать аргументы сектора здравоохранения для обоснования необходимости самых решительных мер по борьбе с изменением климата.

- Программа КС-26 в области здравоохранения вместе с инициативой АПДКЗ (АТАСН) служит для стран платформой, на которой можно объединить усилия по реализации преобразований в секторе здравоохранения, не способствующих изменению климата, в которых гармонично сочетаются интересы здоровья населения, справедливости и экологической устойчивости при переходе к нулевому уровню выбросов углерода и к климатоустойчивости.

- 2023 год дает уникальную возможность представить проблему изменения климата в системе координат здравоохранения на предстоящей Седьмой министерской конференции по окружающей среде и охране здоровья, задачей которой является постановка более высоких целей и переход от осознания проблем окружающей среды и здоровья к незамедлительным действиям по решению этих проблем. Государства-члены могут присоединиться к достижению этих высоких целей и поддержать меры по обеспечению экологической устойчивости и способности систем здравоохранения противостоять изменению климата.

- Для того, чтобы обрисовать общую ситуацию, на фоне которой будет распространяться информация по вопросам здоровья, связанным с изменением климата, и поддержать эту деятельность и обосновать обязательства, которые предстоит принять на Министерской конференции, Рабочая группа подготовит второе издание публикации "Без сожалений: расширение масштабов деятельности по смягчению последствий изменения климата и адаптации к ним в интересах здоровья людей в Европейском регионе ВОЗ".

Дальнейшие действия

Рабочая группа подготовит заявление ЦГОСЗ, в котором будет предложен целый ряд коллективно определенных, поддающихся количественной оценке, ограниченных конкретными сроками обязательств в области здоровья и изменения климата, которые будут учтены в проекте министерской декларации (например, обязательства по созданию климатоустойчивых и низкоуглеродных систем здравоохранения, принятое мер по охране здоровья населения в периоды сильной жары и/или по борьбе с загрязнением воздуха); в нем также будут определены факторы ускорения, такие как сообщество практической деятельности государственных членов, которое позволит им получать необходимую поддержку в выполнении этих обязательств. В этих обязательствах должны быть воплощены политические устремления высокого уровня, подкрепляемые конкретными и осязаемыми мерами вмешательства.

Планируемые заявление и обязательства будут представлены Коллегии ЦГОСЗ и Целевой группе на ее 12-м совещании, которое состоится в ноябре 2023 г.

Секретариат будет контролировать ход планируемого обновления публикации "Без сожалений" и предложит членам Рабочей группы выразить заинтересованность в участии в этом процессе.
Opening and adoption of agenda and programme

The Working Group on Health in Climate Change (HIC) of the EHTF continues to promote communication and collaboration among countries and stakeholders to address the health challenges caused and aggravated by climate change in the WHO European Region. It also serves as a platform for preparing the contributions on climate change and health for the Seventh Ministerial Conference on Environment and Health, which will take place in Budapest, Hungary in July 2023.

The Working Group held its tenth meeting in a virtual format on 11 and 12 October 2022. A total of 78 participants, from 29 Member States plus other stakeholders and observers, attended the meeting. For the scope and purpose of the meeting, see Annex 1; for the agenda, see Annex 2; for the programme of work, see Annex 3; for the list of participants, see Annex 4.

Dr Nino Berdzuli, Director of the Division of Country Health Programmes in the WHO Regional Office for Europe, opened the meeting and welcomed participants. She noted that the meeting was taking place at a time of converging crises – the aftermath of the coronavirus disease (COVID-19) pandemic, the ongoing war in Ukraine and the accelerating pace of climate change, reflected in increased rates of drought, flooding and other extreme weather events. The health sector, which is responsible for about 5% of global net carbon emissions, has a duty to lead by example in action to combat climate change. At its 26th session in 2021 (COP26), the Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC) adopted the COP26 Health Programme, intended to promote low-carbon, sustainable and climate-resilient health systems and give a voice to health professionals in advocating more ambitious climate action. Under the European Programme of Work, 2020–2025 (EPW), WHO Member States aim to increase the resilience of health-care facilities to climate change and natural disasters, while improving the environmental sustainability of their operations. At the current meeting, the Working Group has the important mandate of identifying political aims and actions in the climate change and health area, for adoption by the Seventh Ministerial Conference on Environment and Health in July 2023.

Mr Oliver Schmoll, Programme Manager, Water and Climate, European Centre for Environment and Health, Bonn, Germany, outlined recent activities in the area of climate change and health, including the publication of the Working Group’s report, entitled Zero regrets: scaling up action on climate change mitigation and adaptation for health in the WHO European Region in 2021, a technical briefing on climate change and health at the WHO Regional Committee for Europe session in September 2021 and the two weeks of activities at the Health Pavilion at COP26. At the current meeting, the Working Group was invited to take stock of current evidence and knowledge on climate change and health; explore the COP26 Health Programme commitments from the regional perspective; and identify initial suggestions for outcomes of the Seventh Ministerial Conference.

Procedural matters

The Working Group adopted its agenda and programme of work. It unanimously elected two new Co-Chairs, Dr Orna Matzner, Ministry of Environmental Protection, Israel and Dr Revati Phalkey, UK Health Security Agency, United Kingdom of Great Britain and Northern Ireland. The Working Group thanked the outgoing Co-Chairs, Dr Inge Heim, Croatian Academy of Medical Science, Croatia and Dr Jutta Litvinovitch, Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, Germany, for their long-standing contribution to work of the Working Group.

Session 1. Setting the scene on climate change and health

Professor Rachel Lowe, Director, Lancet Countdown on Health and Climate Change in Europe, introduced the latest findings of the Lancet Countdown collaboration, which aims to monitor and track the risks and impacts of climate change, assess how health systems are adapting to the emerging risks, identify the health benefits of transitioning to a clean economy and describe the evolving landscape in terms of political and social engagement. The collaboration was launched in Europe in September 2021, with 29 participating institutions, including the WHO Regional Office for Europe. The
indicators produced by the collaboration will provide information for health and climate policy-making, and will also contribute data to the European Observatory on Climate and Health. The collaboration’s first publication, the scoping report *Tracking progress on health and climate change in Europe*, was launched in September 2021.\(^1\) It has also collaborated with the European Environment Agency on a report entitled *Climate change as a threat to health and well-being in Europe: focus on heat and infectious diseases*, to be published in November 2022.

The collaboration’s first indicator report, with 33 indicators, will be launched in late October 2022.\(^2\) It provides data on the health dimensions of climate change in Europe across five key domains: climate change impacts, exposures and vulnerabilities; adaptation, planning and resilience; mitigation actions and health co-benefits; economics and finance; and politics and governance. Future plans include a cluster of projects funded by the European Union Horizon Europe programme, including the Infectious Disease decision support tools and Alert systems to build climate Resilience to emerging health Threats (IDAAlert) project.

Replying to points raised by participants, Professor Lowe said that the collaboration currently collects data primarily from the European Union and European Environment Agency, but aims to cover all the Member States of the WHO European Region in due course. The collaboration is open to offers of information and the development of new indicators in areas suggested by the Working Group, including the health workforce, behaviour change and biodiversity.

The collaboration plans to expand the adaptation indicators that are of stronger relevance to policy. Current indicators relevant to health include a health vulnerability index, specifically relating to vulnerable groups in urban heat islands, and co-exposures to other risk factors such as smoke from forest fires, correlated with temperature records. Indicators related to biodiversity include the prevalence of *Anopheles* mosquitoes related to changes in land use, but there are few indicators relating to biodiversity more broadly, although relevant data sets and early-warning systems are being developed by the Lancet Countdown collaboration in Latin America. More work will be undertaken on the effects of drought and climate change on the timing and duration of flowering season of allergy-relevant trees.

Dr Maria Neira, Director, Environment, Department of Environment, Climate Change and Health, WHO headquarters, Geneva, Switzerland, outlined recent developments in climate change and health at the global level. COP27, due to take place in Egypt in November 2022, provides a valuable opportunity for the environment and health communities to put forward stronger health arguments to influence decision-makers in the health and health determining sectors. It is important to convey a positive narrative, emphasizing the enormous co-benefits for health and the economic savings made possible by appropriate climate action alongside the escalating health and economic costs of inaction. In particular, a transition to clean, renewable energy sources, aligned with Paris Agreement targets would save millions of lives due to improvements in air quality, diet, and physical activity, among other benefits.\(^3\) Sustainable food systems, limiting waste, prioritizing local production and reduced use of pesticides, could improve diets and reduce global malnutrition, including in Europe. Health-conscious urban planning, encouraging better mental health, active mobility and energy-efficient buildings, is an effective means of primary prevention of health problems. It is also essential to make health-care facilities more resilient and low-carbon, since at present they account for 5% of global carbon emissions; WHO has developed relevant tools, which have the added advantage of reducing operational costs.

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Session 2. Sharing progress on the COP26 Health Programme commitments

Panellists: Ms Esther Putman, Ministry of Health, Welfare and Sports (moderator); Mr Scott Brady, Health Care Without Harm Europe; Mr Colin O’Hehir, Department of Health, Ireland; Mr Robizon Tsiklauri, National Center for Disease Control and Public Health, Georgia; Mr Nick Watts, Chief Sustainability Officer, National Health Service (NHS), England

Eight of the 53 Member States of the WHO European Region have committed themselves to the COP26 Health Programme. The participants in the Programme support the set-up of a community of practice to lead by example and share implementation practices at the national and subnational levels, work to align the health agenda with the climate change agenda and scale up health considerations in climate change activities within the European Region, including relevant initiatives in the European Union and the G7 countries. It is important to ensure accountability through a universal reporting framework and common indicators. A number of relevant tools are available, including a decarbonization toolkit, and mentoring programme and guidance to support health-care facilities in their climate vulnerability and resilience assessments.

NHS England is committed to achieving zero carbon emissions by 2030, including in its supply chain. One third of hospitals are already installing solar panels for electricity generation. Over 80% of the changes required to achieve zero carbon emissions can be achieved without capital investment. The zero carbon project has succeeded by authorizing relatively small sums of money for improvements designed by individual doctors or nurses, who have the motivation and enthusiasm to implement them; the challenge is to grant them the autonomy required to realize their ideas and ensure that they have the skills to do so.

Responding to comments and questions from the floor, Mr Watts said that, perhaps unexpectedly, the NHS England Sustainable Development Unit had not suffered funding cuts in the ongoing economic crisis; on the contrary, stakeholders had called for more recommendations for increased efficiency and sustainability. Surveys among patients showed a high level of support for the net zero carbon strategy. The bottom-up approach and engagement of the health and care workforce is a crucial step for their wider involvement as educating, convincing and motivating them is essential to achieving net zero emissions at the health care facility level.

In Georgia, the National Health Sector Plan 2018–2022 has five strategic objectives, covering water and sanitation; healthy and safe environments for children and young people; air pollution; chemicals; and climate change adaptation and mitigation measures. Projects on the decarbonization of health care facilities and climate-smart health systems have received funding from the United Nations Development Programme. The climate-smart initiative, which began in the capital, Tbilisi, and is now being extended to the regions, collects information from the meteorological service and shares information with local government and health-care facilities. The data collected will contribute to a future roadmap for a climate-smart health service under the COP26 Health Programme.

Ireland is one of the Member States committed to the COP26 Health Programme. The country’s Climate Action Plan is a whole-of-government programme involving the energy, industry and health sectors. The Health Service Executive is developing a climate action and sustainability strategy and seeking to define the ambitions of the health sector in the area of climate action. The COP26 commitments have helped the health sector to create links with other sectors, such as energy and transport.

The Netherlands has issued a report on the environmental footprint of the health sector (also available in English) and an advisory report on sustainable devices and health care. Their Ministry is committed to supporting the health sector to deliver health care in an environmentally sound manner, by focusing on care pathways and environmentally sound treatment guidelines. Among other things,

this means incorporating sustainability aspects into the strategic vision of health-care institutions, medical guidelines and the professional training of health-care staff.

Health Care Without Harm Europe (HCWH) was one of the partners in the COP26 Health Programme and has published a range of technical resources on health-care decarbonization. Through its Operation Zero initiative, HCWH, has developed and piloted a new methodology that any national or regional health authority can use to measure its health-care emissions and establish a Paris-compatible decarbonization roadmap. HCWH’s decarbonization roadmap contains a series of high-level recommendations on how health care can close the gap and significantly reduce its emissions beyond those that the Paris Agreement commitments would help achieve, summarized by key stakeholder groups.

Panellists’ recommendations reflected the importance of political and financial support for small local changes. Policy-makers should recognize the health sector as a force for climate action. The panellists further stressed the need for strategic planning and baseline information against which progress can be measured and the importance of sharing better practice with Member States and international partners. Much of the information needed by countries already exists. Industry should be given the opportunity to demonstrate and share its own good practices.

**Session 3. Climate services to improve public health**

Dr Joy Shumake-Guillemot, WHO/World Meteorological (WMO) Joint Office for Climate and Health) spoke on opportunities for strengthening climate science to health practice. They include the WHO-WMO Study Group on Integrated Health Services, of which three Member States of the European Region are members. WHO is scheduled to attend the second meeting of the WMO Commission for Weather, Climate, Water and Related Environmental Services and Applications in mid-October 2022, which will consider infectious diseases, heat and health, and naming systems for heatwaves. WMO health focal points have been appointed from national meteorological services, including 16 focal points in 11 countries of the European Region. Other initiatives include the Global Heat Health Information Network (GHHIN), an independent forum of scientists, professionals and policy-makers aiming to act as a catalyst and knowledge broker, and a project with WHO and Health Canada on informing decision-making about indoor heat risks to human health, which will produce recommendations and a health toolkit.

A new interactive online portal, ClimaHealth, is due for launch on 31 October 2022. It will provide access to communities of practice, learning and technical resources, data and tools, including a six-step climate service framework and a readiness assessment tool. In due course, the progress dashboard on the portal will host WHO Climate and Health Survey data, providing additional information about the human impact of climate change.

Professor Alexander Baklanov, Science and Innovation Department, WMO, described the recent activities of the WMO Global Atmosphere Watch programme, which provides international leadership and capacity development in atmospheric composition observation and analysis through long-term systematic observation of the chemical composition of the Earth’s atmosphere, including both natural sources of air pollution (e.g. sand and dust storms) and anthropogenic sources (e.g.

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particulate matter), and the interaction between the two. The Global Air Quality Forecasting and Information System provides air quality modelling for health impact assessments. Other areas of activity relate to urban heat islands and the Integrated Global Greenhouse Gas Information System (IG3IS). Overall, in its work on climate change and health, WMO’s focus is on the urban environment, early-warning systems for multiple hazards and the impact of extreme weather events and peak air pollution episodes.

Responding to questions and comments from the floor, the two speakers noted that WMO’s work on indoor heat health also took account of the structure and infrastructure of buildings, with advice from architects, building materials experts and social scientists.

Session 4. Achieving health cobenefits through mitigation: an overview of WHO tools

Dr Dorota Jarosinska, Programme Manager, Living and Working Environments, European Centre for Environment and Health, Bonn, Germany, described the updated version of the WHO global air quality guidelines,9 issued in 2021, which provide recommendations for air quality levels for selected pollutants of relevance to human health. A new feature is the “interim target” – an air pollutant concentration associated with a specific decrease in health risk, which should be regarded as a step towards ultimately achieving air quality guideline levels, and could provide an achievable initial target for countries with very high levels of air pollution. The guidelines also feature “good practice statements” for certain types of particulate matter (e.g. sand, black carbon), where the available evidence is not sufficient to define a guideline level in numerical terms. The guidelines were used as a reference point in the ongoing revision of the European Union ambient air quality guidelines.

Dr Pierpaolo Mudu, Technical Officer, Living and Working Environments Programme, European Centre for Environment and Health, Bonn, Germany, introduced a number of WHO tools used in health impact assessments to measure air quality and climate change. AirQ+, now in its sixth edition, allows users to calculate the proportion of a particular health effect that can be attributed to a selected air pollutant and determine the change in health effects if air pollution levels changed in the future. Users can input their own data and change the default relative risk values as required, and are invited to complete a survey on the AirQ+ website.10 The software can also be used for education and training. Two further tools are GreenUr,11 used to quantify the impact of green spaces on health, and the Health Economic Assessment Tool (HEAT),12 used for the economic assessment of the health benefits of walking or cycling, with an updated air pollution component.

Dr Joseph Spadaro, Consultant, European Centre for Environment and Health, Bonn, Germany, described the new decision support tool CLIMAQ-H, which is a redesigned version of CaRBonH, a downloadable Excel software package for the calculation of nationally determined contributions (NDCs). The CLIMAQ-H tool compares different carbon mitigation pathways by comparing their potential health and economic cobenefits in the near term (i.e. to 2030). It is preloaded with country-specific default data, which can be supplemented or modified by the user, for 49 Member States of the European Region. The emphasis is on the use of a reduced set of readily available input data, e.g. reductions in emissions of particulate matter and gaseous constituents.

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Dr Natasa Markovska, Senior Researcher, Macedonian Academy of Sciences and Arts, North Macedonia, presented a case study of the use of CaRBonH. The study was intended to evaluate the benefits for human health associated with improvements in ambient air quality that could be expected from implementation of the mitigation policies and measures in the energy sector that were proposed in the country’s enhanced NDCs. The tools used were the MARket ALlocation (MARKAL) model, designed to calculate reductions in air pollutant emissions, and CaRBonH. The estimated preventable mortality from air pollution emissions in 2030 was 143 deaths, representing 28% of the total avoidable deaths in that year. The estimated economic benefit from premature deaths avoided in 2030 was US$ 266 million in 2005 prices, representing 2.8% of the country's gross domestic product in 2019.

The results of the study were well received by the Ministry of the Environment and Ministry of Economy, and will be used in the preparation of the country’s next NDCs and its ongoing preparations for accession to the European Union. The next step at national level is to enable qualitative and quantitative analysis of the synergies and trade-offs between the NDCs and a number of Sustainable Development Goals (SDGs), primarily SDG3: Good health and well-being. North Macedonia will adopt the updated CLIMAQ-H tool. The existing assessment of economic and environmental effectiveness of the NDC policy and measures can be further extended to incorporate the economic cobenefits of reducing air pollutant emissions through carbon mitigation interventions.

Participants noted the likely additional risk of air pollution related to the burning of wood and other polluting fuels in the coming winter, owing to the current energy crisis. Dr Jarosinska acknowledged the risk, but noted that some mitigation measures are available, such as adjustments to wood-burning stoves. She further acknowledged the likely environmental impact of the explosions in the Nord Stream gas pipeline earlier in October 2022, although no modelling had yet been conducted.

Responding to further questions and comments from the floor, Dr Spadaro noted that CLIMAQ-H will show how health trends may change in line with specific mitigation measures; however, observational analysis of what actually happens will also be required. The CLIMAQ-H outputs can be expressed in terms of improvements in air quality, health gains and monetized health benefits, and as the number of deaths averted or the increase in life expectancy. Another possible approach is the human capital approach, which estimates the amount that people would have earned if they had lived longer. In principle, CLIMAQ-H could be used to predict the health benefits accruing from full implementation of the NDCs of European Union Member States, both for individual countries and for the European Union as a whole.

Session 5. Specific aspects of climate change and health

Health in the sixth report of the Intergovernmental Panel on Climate Change

Dr Diarmid Campbell-Lendrum, Head, Climate Change and Health Unit, WHO headquarters, Geneva, Switzerland, reported on the recent health-related findings of Working Group II of the IPCC. The likely impact on human health, well-being and mental health includes increased mortality and morbidity due to extreme heat events and foodborne, waterborne and vector-borne diseases; mental health disorders; and disruption of health services by extreme events such as flooding. No part of the world will be spared, but low-income countries, and low-income groups in all countries, will be disproportionately affected. Awareness of the effects of climate change on mental health has increased considerably; young people are particularly affected, but there is evidence that they suffer less distress if they have greater confidence that their government is taking action.

Proactive adaptation and strengthening the overall resilience of health systems can confer significant levels of protection against the impact of climate change. There is increasing awareness of the health cobenefits of mitigation measures; for example the economic benefits for human health of

improvements in air quality could amount to more than the cost of mitigation measures. Scaling adaptation alongside drawing collateral benefit from mitigation action is of importance for global public health.

Water and sanitation: key issues and opportunities

Dr Guy Howard, University of Bristol, United Kingdom, described the impact of climate change on water and sanitation. The threats involve both water quantity – floods, landslides and drought – and water quality – waterborne diseases, increased concentration of pollutants and saltwater intrusion. Higher temperatures lead to an increased demand for water, while also increasing water treatment requirements and favouring the growth of pathogens and algal blooms. They also reduce the efficiency of biological treatment of wastewater and the stability of residual chlorine in water supplies. Threats recognized more recently include wildfires in more northerly areas (Scotland, Scandinavia) and the thawing of permafrost. Resilient water and sanitation services are vital to the resilience of the whole society: this will require adaptive management covering economic and regulatory instruments, infrastructure, environment and end-user behaviour, as well as strong risk management approaches (water safety plans, integrated water resource management, modelling, etc.).

Responding to questions and comments from the floor, he noted that the lack of human and technical resources was a major challenge, particularly in smaller, low-resource countries in the European Region and elsewhere. Risk assessments are often conducted on an ad hoc basis, with no consideration of emerging risks such as those associated with widespread irrigation of crops. Increased surveillance will be required to guard against wildfires in areas given over to nature conservation, which can also act as valuable carbon sinks to mitigate the effects of climate change.

Climate change and infectious diseases in Europe

Dr Jan Semenza, University of Heidelberg, Germany, outlined the links between climate change and infectious diseases carried in food, water or the air. Extreme climate events bring threats such as waterborne pathogens or mosquitoes to new areas that do not have the preventive infrastructure required to combat them. The new threats may also combine in a cascading risk pathway: for example, higher temperatures increase the population of mosquitoes infected with West Nile virus, which transmit the infection to the human population; asymptomatic people may then donate blood, which potentially spreads the disease further. A research study using artificial intelligence analysed data from the Copernicus Climate Change database in Europe and concluded that rates of West Nile virus disease were dependent on temperatures in the second quarter of the year, with implications for early warning of outbreaks and protection of blood supplies. Achievement by all Member States of the core capacities laid down in the International Health Regulations (2005), including surveillance, risk communication and monitoring of cross-border threats, is critical. A narrow, siloed and linear assessment of risk will misinform decision-makers and policy-makers about the magnitude and pattern of future risks of endemic and emerging diseases and the opportunities to modify policies to enhance infectious disease control programmes.

Responding to questions and comments from the floor, he drew attention to the potential of climate change vulnerability assessments to break down silos and bring health and non-health sectors together and engage communities. One participant stressed the need to raise awareness among the public of previously unfamiliar diseases and threats.

Mental health and climate change

Mr Christian Schweizer, Scientist, Climate Change and Health, WHO headquarters, Geneva, Switzerland, drew attention to the impact of climate change on mental health. Climate change exacerbates many of the social and environmental risk factors influencing the already high and increasing burden of mental health and psychosocial problems; it is particularly serious for young people and those in low- and middle-income countries and/or vulnerable groups. The associated mental health problems include anxiety and depression, feelings of helplessness and fear, and emerging conditions such as ecological grief, eco-anxiety and solastalgia (distress specifically caused
by environmental change) – all of which are natural and justifiable in the current real climate emergency, but which can seriously affect people’s well-being. Although the issue is not yet fully understood, enough knowledge is available for action to be taken; for instance, it has been shown that young people are less distressed if they feel that their government is taking action to combat climate change.

WHO has published a policy brief on climate change and mental health.\textsuperscript{14} It outlines five key approaches: integrating climate change considerations in mental health policies and programmes; integrating mental health and psychosocial support in climate change and health policies and programmes; building upon global climate commitments; implementing multisectoral and community-based approaches to reduce vulnerability; and addressing the current large gaps in funding, both for mental health and for responding to the health impacts of climate change.

Responding to comments and questions from the floor, he said that the mental health effects of extreme and sudden weather events were more fully addressed in policies and programmes than the longer-term, slow-onset effects. More could be done to address mental health issues in climate mitigation and adaptation plans.

### Preventing health effects of heat: update of evidence and guidance on heat-health action planning

Dr Vladimir Kendrovski, Technical Officer, Water and Climate Programme, WHO European Centre for Environment and Health, Bonn, Germany, presented updates on heat-health planning. Extreme high temperatures were responsible for over 10 000 premature deaths in the European Region in the summer of 2022 alone; it is predicted that heat-related mortality will double over the next 30 years.

WHO published guidance on heat-health action plans in 2008.\textsuperscript{15} A recent survey shows that all the 17 participating Member States used heat-health action plans in the design of their own response or as background information. Areas requiring further implementation include real-time surveillance of heat-health hazards, long-term urban planning and preparedness of health systems. A further publication in 2021, entitled “Heat and health in the WHO European Region: updated evidence for effective prevention”\textsuperscript{16} called for heat-health action plans to be amended in the light of fresh evidence on the effects of climate change and for heat-health planning to be integrated into general public health planning. Accordingly, a project to update the heat-health guidance, jointly funded by the European Commission, is due to begin in October 2022 and run until 2025, providing a step-by-step guide to developing a heat-health strategy and the accompanying communications strategy. Fourteen factsheets on heat health will likewise be updated.

In the ensuing discussion, one participant noted the challenges posed by the wide-ranging and diverse impact of extreme heat events, ranging from the immediate effects to longer-term effects such as increases in waterborne diseases. Another pointed to the lack of data and information on the social and equity aspects of heat health and the need to raise awareness of the implications of extreme heat events at the system level – for agriculture and ecosystems, for example. A third participant stressed the importance of ensuring that action plans were fully implemented and consistently monitored and evaluated.

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Session 6. Preparations for the Seventh Ministerial Conference on Environment and Health

Ms Francesca Racioppi, Head, WHO European Centre for Environment and Health, Bonn, Germany, invited participants to contribute to the forthcoming Seventh Ministerial Conference on Environment and Health (Budapest, Hungary, 5–7 July 2023). At this event, Member States will review progress in the implementation of the Ostrava Declaration on Environment and Health and agree on future policy priorities and commitments in environment and health, bearing in mind the lessons learned from the COVID-19 pandemic (“building forward better”) and the need to increase resilience to deal with the triple crisis of climate change, environmental pollution and loss of biodiversity – all of which have significant negative impacts on human health.

The “Budapest approach” will see a renewed emphasis on water, sanitation and hygiene and communicable diseases. Intergenerational solidarity and the participation of youth will form an integral part of the approach, given added momentum by the recent adoption by the United Nations General Assembly of resolution A/76/300 on the human right to a clean, healthy and sustainable environment. The EHTF Bureau and the WHO Regional Office for Europe Secretariat have identified four cross-cutting priorities: improving governance, investing in human resources, advancing knowledge and tools for effective action, and promoting partnerships for joint action on shared priorities.

Two new initiatives will be launched at the Ministerial Conference: European Environment and Health Process partnerships between Member States and the campaign for resilience and building forward better. A number of background documents will be issued, including new estimates of the environmental burden of disease in the region. Significant events in the run-up to the Ministerial Conference include the latest edition of the Bonn Dialogues, on risk communication for environment and health (virtual event on 14 October 2022), and the twelfth meeting of the EHTF (Bonn, 23–24 November 2022).

Mr Schmoll presented a proposal that the Working Group should produce an updated version of the document Zero regrets: scaling up action on climate change mitigation and adaptation for health in the WHO European Region, issued in 2021, for consideration as a background document for the Ministerial Conference.

The participants agreed that the year 2023 offers a unique opportunity to present climate change in a health framework during the forthcoming Seventh Ministerial Conference on Environment and Health, and Member States need to take advantage of its ambitions to support climate resilience and sustainability in health systems. During the discussion in plenary, participants:

- stressed the need to move from awareness to action and proposed formulating a Working Group’s contribution to the agenda for the Ministerial Conference, with a small number of detailed, outcome-oriented commitments, which are actionable by the health sector and represent an ambitious political aspiration to strengthen regional resilience to the impacts of climate change;
- supported the need to break down “silos” and ensure that health, climate change and the interactions between them are considered in all policies and by all sectors, particularly in national climate adaptation and mitigation plans;
- supported the proposal to present an update of the Zero regrets publication to the Seventh Ministerial Conference, with most recent scientific evidence and priorities. Several participants expressed their willingness to contribute to the update process;
- proposed several areas to be addressed in the updated Zero regrets document, including but not limited to addressing the link between climate change, health security and the International Health Regulations (2005), ways on how to overcome the financial and human resource challenges of implementation at country level, the links to energy security and efficiency, the food systems context, mental health and climate change, the integration of climate change...
aspects in the One Health approach, and the interface between the agendas of nature and biodiversity with climate change.

The Working Group discussed how more Member States in the WHO European Region can be encouraged to adopt and pursue the commitments of the COP26 Health Programme. The Working Group suggested calling upon the EHTF to consider inclusion reference to the commitments of the COP26 Health Programme and links to existing processes. Participants supported creating a region-focused initiative in promoting and implementing the commitments of the COP26 Health Programme and now ATACH. Such initiative should be tailored to each country, based on its unique characteristics and climate impacts. It offers opportunity to embrace a climate-friendly transformation of the health sector that integrates sustainability, health and equity in moving towards zero carbon emissions and climate-resilience. A robust monitoring and evaluation framework would enable Member States to concentrate on the areas in which they wish to take action and compare results within the Region.

Session 7. Conclusions and next steps

Main conclusions

- The year 2022 saw the convergence of three serious global crises: the COVID-19 pandemic, climate change and the energy crisis.

- Evidence on climate change and health in the WHO European Region continues to improve in 2022: the new IPCC report, the Lancet Countdown on Health and Climate Change indicators for Europe and the WHO/WMO climate services for health initiative collectively underpin the need for urgent climate action.

- Infectious diseases, water scarcity, droughts and heatwaves and their adverse effects on health, including mental health problems, are on the rise, largely due to climate change.

- The links between air pollution, climate change and health are well established, and WHO tools help countries to generate the evidence and strengthen the health arguments for making a strong business case for ambitious climate action.

- The COP26 Health Programme/ATACH initiative offers countries a platform to embrace a climate-friendly transformation of the health sector that integrates health, equity and sustainability in moving towards zero carbon emissions and climate resilience.

- The year 2023 offers a unique opportunity to present climate change in a health framework during the forthcoming Seventh Ministerial Conference on Environment and Health, which aims to increase the level of ambition and move from awareness of environment and health issues to prompt action to resolve them. Member States can align with these ambitions and support climate resilience and sustainability in health systems.

- To provide a backdrop to and support for the climate-change related health messaging and commitments to be undertaken at the Ministerial Conference, the Working Group will produce a second edition of the Zero Regrets publication.

Next steps

The Working Group will prepare a statement for the EHTF, proposing a set of collectively identified, measurable, time-bound commitments on health and climate change to be considered in the draft ministerial declaration – on climate-resilient and low-carbon health systems, heat health and/or air pollution, for example – and identify “accelerators”, such as a Member State community of practice, which would give Member States the support they need to meet those commitments. The commitments should embody high-level political aspirations underpinned by specific tangible interventions, such as the creation of national heat-health action plans; they will need to be at a level that ministers of health are authorized to endorse. The commitments must be flexible enough to adapt
to the prevailing situation in each Member State and to different forms of government, such as highly
decentralized federal systems. A monitoring system with appropriate indicators would provide
evidence to promote the health message in other sectors.

The proposed statement and commitments will be presented to the EHTF Bureau and to the Task
Force at its 12th meeting in November 2022.

The Secretariat will follow up on the planned update of the Zero regrets publication and invite
Working Group members to express their interest in participating in this process.
Annex 1. Scope and purpose

The Working Group on Health in Climate Change (HIC) of the European Environment and Health Task Force continues to promote communication and collaboration among countries and stakeholders to address the health challenges caused by climate change in the WHO European Region. It also serves as a platform for preparing the contributions on climate change and health for the Seventh Ministerial Conference on Environment and Health, which will take place in Hungary in July 2023.

The COVID-19 pandemic has added to the climate change-related public health crisis in the Region, putting communities and health systems under unprecedented strain. The WHO Manifesto for a healthy recovery from COVID-19 and the core messages, articulated by the Working Group in the paper Zero regrets: scaling up action on climate change mitigation and adaptation for health in the WHO European Region, set out a series of asks and prescriptions that support building more climate-friendly, sustainable and healthy societies. It is essential that climate change becomes a central concern for the health systems agenda with the health sector taking a leading role in supporting climate action.

At the 26th UN Climate Change Conference of the Parties (COP26), WHO together with the United Kingdom Presidency of COP26, Health Care Without Harm and the UNFCCC Climate Champions Programme have established the COP26 Health Programme to bring stronger health ambition to COP26 and to call upon governments to sign health sector commitments to build climate-resilient and sustainable low-carbon health systems. So far, in the WHO European Region, nine countries have responded positively to this call. These countries came together in May 2022 expressing the wish to establish community of practice to facilitate implementation of the commitments. At the global level, the new WHO ATACH alliance aims to bring together the countries, which have signed the Health Programme commitments to progress and drive this agenda forward and to promote accountability.

The overall objective of the tenth meeting of the Working Group is to discuss ways on how to scale up health action in climate change and formulate higher regional ambitions for the health sector in preparation of the outcomes of the Seventh Ministerial Conference on Environment and Health. The specific meeting objectives are to:

- Share information on ongoing global and regional initiatives on health and climate change;
- Present the evidence from the latest reports of the IPCC and the Lancet Countdown on Health and Climate Change;
- Portray the knowledge base on health arguments for climate action in specific areas, such as infectious diseases, water and sanitation, and mental health;
- Provide examples of climate services to improve public health;
- Share national experiences on how to integrate health into climate action under the COP26 Health Programme initiative and promote solutions and innovation to achieve climate-resilient, low-carbon and sustainable health systems;
- Present the updated WHO tool on carbon reduction benefits on health; and
- Identify transformative commitments and actions that drive the climate change and health agenda as essential component of the commitments to be taken at the Seventh Ministerial Conference on Environment and Health.

The meeting is expected to provide a stocktake of current evidence and knowledge on health in climate change and identify regional priorities to prepare for the outcomes of the Seventh Ministerial Conference, while bringing a regional perspective to the WHO Alliance for Transformative Action on Climate and Health.
Annex 2. Agenda

1. Opening and adoption of agenda and programme
2. Global and regional initiatives on climate change and health, including the new WHO Alliance for Transformative Action on Climate and Health
3. The 2022 European report of the Lancet Countdown on Health and Climate Change
4. Update on the evidence of the health effects of climate change in the WHO European Region
5. Sharing of national experiences on how to integrate health into climate action under the COP26 Health Programme initiative
6. Collaboration for health-focused climate science and services
7. Achieving health cobenefits through mitigation: presentation of the updated WHO tool on carbon reduction benefits, including illustration by a country example
8. Identification of transformative actions on climate and health for the seventh Ministerial Conference on Environment and Health
9. Summary of the meeting and next steps
10. Closure of the meeting
## Annex 3. Programme of work

**Tuesday, 11 October 2022**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:45–09:30</td>
<td>Checking in to the Zoom session and testing sound and video</td>
</tr>
<tr>
<td>09:30–09:55</td>
<td>Opening and welcome <em>(Nino Berdzuli, WHO Regional Office for Europe)</em></td>
</tr>
<tr>
<td></td>
<td>Background, objectives and expected outcomes <em>(Oliver Schmoll, WHO European Centre for Environment and Health)</em></td>
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<tr>
<td>09:55–10:10</td>
<td>Procedural matters</td>
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<tr>
<td></td>
<td>Election of Co-Chairs</td>
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<tr>
<td>10:10–10:55</td>
<td><strong>Session 1: Setting the scene on climate change and health</strong></td>
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<tr>
<td></td>
<td>WHO global policy updates on climate change and health <em>(Maria Neira, WHO headquarters)</em></td>
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<tr>
<td></td>
<td>The 2022 Europe report of the Lancet Countdown on Health and Climate Change: towards a climate-resilient future <em>(Rachel Lowe, Catalan Institution for Research and Advanced Studies/Barcelona Supercomputing Center, Spain)</em></td>
</tr>
<tr>
<td></td>
<td>Q&amp;A</td>
</tr>
<tr>
<td>10:55–11:10</td>
<td>Health break</td>
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<tr>
<td>11:10–12:15</td>
<td><strong>Session 2: Sharing progress on the COP 26 Health Programme commitments</strong></td>
</tr>
<tr>
<td></td>
<td>Summary from the technical consultation on the COP26 Health Programme commitments by countries in the WHO European Region <em>(Esther Putman, Ministry of Health, Welfare and Sport, Netherlands)</em></td>
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<tr>
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<td>Panel discussion (moderated by Esther Putman):</td>
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<tr>
<td></td>
<td>• Nick Watts, Chief Sustainability Officer, National Health Service, United Kingdom</td>
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<tr>
<td></td>
<td>• Colin O’Hehir, Department of Health, Ireland</td>
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<tr>
<td></td>
<td>• Robizon Tsiklauri, National Center for Disease Control and Public Health, Georgia</td>
</tr>
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<td></td>
<td>• Scott Brady, Health Care Without Harm</td>
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<tr>
<td></td>
<td>Q&amp;A</td>
</tr>
<tr>
<td>12:15–12:45</td>
<td><strong>Session 3: Climate services to improve public health</strong></td>
</tr>
<tr>
<td></td>
<td>Share learning and identify opportunities for strengthening climate science to health practice in the WHO European Region <em>(Joy Shumake-Guillemot, WHO/WMO Joint Office for Climate and Health)</em></td>
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<tr>
<td></td>
<td>Air quality and climate: the WMO Global Atmosphere Watch Programme research activities and findings <em>(Alexander Baklanov, World Meteorological Organization)</em></td>
</tr>
<tr>
<td></td>
<td>Q&amp;A</td>
</tr>
<tr>
<td>12:45–13:45</td>
<td>Lunch break</td>
</tr>
<tr>
<td>13:45–15:00</td>
<td><strong>Session 4: Achieving health cobenefits through mitigation: an overview of WHO tools</strong></td>
</tr>
<tr>
<td></td>
<td>Improving air quality and mitigating climate change to protect health <em>(Dorota Jarosinska, WHO European Centre for Environment and Health)</em></td>
</tr>
<tr>
<td></td>
<td>WHO tools on air pollution, climate change mitigation and health: AirQ+ and CLIMAQ-H <em>(Pierpaolo Mudu, WHO European Centre for Environment and Health, and Joe Spadaro, WHO consultant)</em></td>
</tr>
<tr>
<td></td>
<td>Achieving health gains through the implementation of climate change policies: the case study of North Macedonia <em>(Natasha Markovska, Macedonian Academy of Sciences and Arts)</em></td>
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<tr>
<td></td>
<td>Q&amp;A</td>
</tr>
<tr>
<td>15:00</td>
<td>Closure of Day 1</td>
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</tbody>
</table>

**Wednesday, 12 October 2022**
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>08:45–09:30</td>
<td>Checking in to the Zoom session and testing sound and video</td>
</tr>
<tr>
<td>09:30–11:05</td>
<td><strong>Session 5: Specific aspects of climate change and health</strong></td>
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<tr>
<td></td>
<td>Health in the sixth report of the Intergovernmental Panel on Climate Change (Diarmid Campbell-Lendrum, WHO headquarters)</td>
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<tr>
<td></td>
<td>Water and sanitation: key issues and opportunities (Guy Howard, University of Bristol, United Kingdom)</td>
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<td></td>
<td>Climate change and infectious diseases in Europe (Jan Semenza, University of Heidelberg, Germany)</td>
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<td></td>
<td>Mental health and climate change (Christian Schweizer, WHO headquarters)</td>
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<td></td>
<td>Preventing health effects of heat: Update of evidence and guidance on heat-health action planning (Vladimir Kendrovski, WHO European Centre for Environment and Health)</td>
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<tr>
<td></td>
<td>Q&amp;A</td>
</tr>
<tr>
<td>11:05–11:15</td>
<td>Health break</td>
</tr>
<tr>
<td>11:15–13:15</td>
<td><strong>Session 6: Preparations for the seventh Ministerial Conference on Environment and Health</strong></td>
</tr>
<tr>
<td></td>
<td>Towards an outcome of the seventh Ministerial Conference on Environment and Health (Francesca Racioppi, WHO European Centre for Environment and Health)</td>
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<tr>
<td></td>
<td>Zero regrets: Scaling up action on climate mitigation and adaptation for health in WHO European Region toward Ministerial Conference (Revati Phalkey, UK Health Security Agency, and Oliver Schmoll, WHO European Centre for Environment and Health)</td>
</tr>
<tr>
<td></td>
<td>Discussion in plenary and breakout rooms.</td>
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<tr>
<td></td>
<td>Please refer to the Guidance note for participants (working paper #6) for the proceedings of this session and the guiding questions for the discussion. Please prepare accordingly.</td>
</tr>
<tr>
<td>13:15–14:00</td>
<td>Lunch break</td>
</tr>
<tr>
<td>14:00–14:50</td>
<td><strong>Session 6 (continued)</strong></td>
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<tr>
<td></td>
<td>Discussion in plenary.</td>
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<tr>
<td></td>
<td>Please refer to the Guidance note for participants (working paper #6) for the proceedings of this session and the guiding questions for the discussion. Please prepare accordingly.</td>
</tr>
<tr>
<td>14:50–15:00</td>
<td><strong>Session 7: Conclusions and next steps</strong></td>
</tr>
<tr>
<td>15:00</td>
<td>Closure of the meeting</td>
</tr>
</tbody>
</table>
Annex 4. List of participants

Armenia
Nune Bakunts
National Center for Disease Control and Prevention
Ministry of Health

Austria
Christina Lampl
Austrian National Public Health Institute
Andrea Schmidt
Austrian National Public Health Institute

Belarus
Larisa Karpuk
Scientific and Practical Centre of Hygiene under the Ministry of Public Health

Croatia
Lovro Bucic
Croatian Institute of Public Health

Estonia
Ramon Nahkur
Ministry of Social Affairs
Aive Telling
Ministry of Social Affairs

Georgia
Robizon Tsiklauri
National Center for Diseases Control and Public Health

Germany
Karin Höppner
Federal Ministry of Health
Jutta Litvinovitch
German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

Greece
Akrivi Spyridonidou
Ministry of Health

Ireland
Colin O’Hehir
Department of Health

Israel
Isabella Karakis
Ministry of Health
Orna Matzner
Ministry of Environmental Protection
Italy
Francesca de'Donato
Department of Epidemiology
Lazio Regional Health Service

Latvia
Dace Būmane
Ministry of Health

Lithuania
Mintare Juiglaitė
Health Promotion Center of The Institute of Hygiene

Luxembourg
Laurence Wurth
Ministère de la Santé

Malta
Kristina Cassar
Ministry for Health

Monaco
Hervé Raps
Centre Scientifique de Monaco

Netherlands
Lisbeth Hall
National Institute for Public Health and the Environment

Michiel Hoorweg
Ministry of Health, Welfare and Sports

Esther Putman
Ministry of Health, Welfare and Sports

North Macedonia
Natasa Markovska
Macedonian Academy of Sciences and Arts

Norway
Mohamed Gawad
Norwegian Institute of Public Health

Per E. Schwarze
Norwegian Institute of Public Health

Stig Atle Vange
Norwegian Ministry of Health and Care Services

Portugal
Anabela Santiago
Directorate-General of Health
Romania
Ioan Chirila
National Institute of Public Health

Oana Iacob
National Institute of Public Health

Ioana Vasiliu
Ministry of Environment

Angelica Marilena Voinoiu
National Institute of Public Health

Russian Federation
Roman Buzinov
Federal Service for Surveillance on Consumer Rights, Protection and Human Wellbeing

Tatiana Gololobova
Federal Medico-biological Agency

Andrei Guskov
Federal Service for Surveillance on Consumer Rights, Protection and Human Wellbeing

Liudmila Karpikova
Federal Medico-biological Agency

Anna Kahasanova
Federal Service for Surveillance on Consumer Rights, Protection and Human Wellbeing

Valeria Leendeva
Federal Medico-biological Agency

Olga Malykh
Federal Service for Surveillance on Consumer Rights, Protection and Human Wellbeing

Kirill Mamaev
Ministry of Health

Vitalii Veprintsev
Federal Service for Surveillance on Consumer Rights, Protection and Human Wellbeing

Maria Vodianova
Federal Medico-Biological Agency

Slovakia
Nina Depesová
Public Health Authority

Michaela Paulíková
Public Health Authority

Slovenia
Ana Hojs
National Institute of Public Health

Spain
David A. Cáceres
Ministry of Health

**Sweden**
Ida Knutsson
Public Health Agency of Sweden

**Turkey**
Sena Ergun
Ministry of Health
Elif Tosun
Ministry of Health

**Turkmenistan**
Guzalia Gazizova
Ministry of Health and Medical Industry of Turkmenistan

**United Kingdom of Great Britain and Northern Ireland**
Revati Phalkey (registered but unable to attend\(^{17}\))
United Kingdom Health Security Agency
Nick Watts
National Health Service England

**Representatives of other organizations**

**United Nations and related organizations**
Alexander Baklanov
World Meteorological Organization
Switzerland

Jemal Durdykova
United Nations Development Programme
Turkmenistan

Joy Shumake
World Meteorological Organization
Switzerland

**European Commission**
Aleksandra Kazmierczak
European Environment Agency
Denmark

\(^{17}\) Participated in election session only.
Other intergovernmental organizations
Eva Csobod
Regional Environmental Center
Hungary

Nongovernmental organizations
Scott Brady
Health Care Without Harm Europe
United Kingdom

Bistra Mihaylova
Women Engage for a Common Future (WECF)
Germany

Temporary advisors
Guy Howard
University of Bristol
United Kingdom

Rachel Lowe
Barcelona Supercomputing Center (BSC)
Spain

Jan Semenza
University of Heidelberg
Germany

Observers
Sarah Warren
Simcoe Muskoka District Health Unit
Canada

World Health Organization

Headquarters
Diarmid Campbell-Lendrum
Unit Head
Climate Change and Health
Switzerland

Maria Neira
Director
Environment, Climate Change and Health
Switzerland

Tara Neville
Technical Officer
Climate Change and Health
Switzerland
Christina Romanelli  
Technical Officer  
Climate Change and Health  
Switzerland

Christian Schweizer  
Scientist  
Climate Change and Health  
Switzerland

**WHO Regional Office for Europe**  
Nino Berdzuli  
Director  
Division of Country Health Programmes  
Denmark

Melanie Boeckmann  
WHO Consultant  
Germany

Dorota Jarosinska  
Programme Manager  
Living and Working Environments  
European Centre for Environment and Health  
Germany

Vladimir Kendrovski  
Technical Officer  
Water and Climate  
European Centre for Environment and Health  
Germany

Pier Mudu  
Technical Officer  
Living and Working Environments  
European Centre for Environment and Health  
Germany

Francesca Racioppi  
Head of Office  
European Centre for Environment and Health  
Germany

Andrea Rhein  
Programme Assistant  
Water and Climate  
European Centre for Environment and Health  
Germany

Stephanie Sangalang  
WHO Consultant  
Germany
Oliver Schmoll  
Programme Manager  
Water and Climate  
European Centre for Environment and Health  
Germany

Joseph Spadaro  
WHO Consultant  
Spain

Rapporteur  

Teresa Lander

Interpreters  

Levon Gzokyan  
Russian Federation

Irina Zubanova  
Russian Federation
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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Luxembourg
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United Kingdom
Uzbekistan

World Health Organization
Regional Office for Europe
UN City, Marmorvej 51
DK-2100 Copenhagen Ø, Denmark
Tel.: +45 45 33 70 00 • Fax: +45 45 33 70 01
E-mail: eurocontact@who.int • Website: www.who.int/europe