



Climate change and environment in 2021

*A summary report of sessions on climate change and environment at the
14th European Public Health conference*

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The 14th European Public Health conference was held between the 10th and 12th November, 2021, remotely. This report summarises the key messages from the Climate Change track, which included:

- Communication and public health;
- Learning from the pandemic and getting ready for the next one;
- Capturing the breadth and depth of the digital health era –beyond the COVID-19 pandemic;
- and Climate change, justice and public health plenaries.

A list of the sessions that were summarized for the report can be found in the Annex. Subscribe to the EUPHA Environment and health section on the section’s webpage, right menu, [here](#).

| Key Messages

1. We need more potent communication strategies to bring health to the centre of the climate change conversation and deliver information to the policy makers.
2. In order to reduce health harms derived from climate change, we should invest in digitalisation and green technologies.
3. Horizontal and vertical coordination at all levels are essential to restrain and prevent foodborne diseases, especially those from fungi and mycotoxins and to stop the spread of insects across Europe.
4. Creating green spaces in cities, walkable areas and having sanitary facilities are core for a better health.

| Introduction

The COVID-19 pandemic exposed many of the fragilities in our public health infrastructures and exacerbated the underlying disparities in our societies. Unfortunately, the parallels with climate change and its impact on health are hard to miss: a crisis preventable with planning and adaptation/mitigation; health consequences with tremendous impacts in economic systems; and a disproportionate burden for communities with low socioeconomic level, high comorbidities groups and displaced populations. The main direct impacts will be felt as heat waves, droughts, heavy storms, and sea-level rise, and indirect impacts are countless but include vector-borne and airways diseases, food and water insecurity, undernutrition, and forced displacements.

Within its mission as a leading public health organization in Europe, the European Public Health Association (EUPHA) aims to promote and strengthen research in the field of environment-related diseases. The EUPHA Environment and health section believes that the public health sector has the best equipped group of professionals to increase the response and planning capacity in this field, and this was made clear at the 14th European Public Health (EPH) Conference 2021.

At the workshops, round tables, plenaries and several oral presentations, health was put at the centre of the climate change debate. With it, links to the COVID-19 pandemic, absence of enough evidence for climate adaptation and mitigation strategies, the progressive lack of funding, the additional impacts on vulnerable people, were also thoroughly discussed, as were challenges and opportunities for the Climate Pact and Green Deal, and the almost infinite potential of new green technologies and the digitalisation of health.

Even in the midst of a pandemic, it is clear that climate change is still the biggest global health threat of the 21st century. We hope the lessons we learned at this 14th EPH Conference, from multidisciplinary action to the benefits of a One Health approach, are known by many, as this is a fight we cannot win alone.

| Evidence-based science for the health impacts of climate change

The global knowledge basis for climate change and health is increasing rapidly, as is apparent from the increasing number of publications on this subject (figure 1).

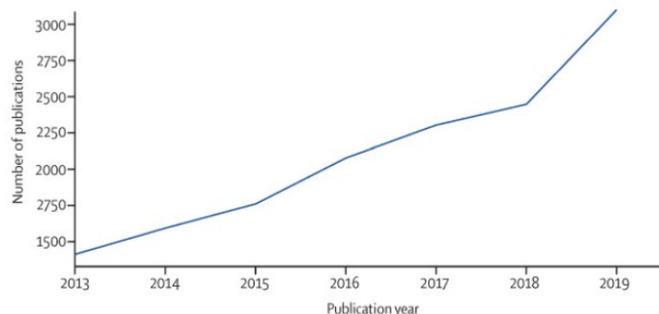


Figure 1. Literature on climate and health. (1)

Nonetheless, studies on the health effects of climate change adaptation and mitigation strategies are still lacking (figure 2), which limits the ability of governments to design evidence-based policies and apply them to action, especially when resources are limited and public health challenges are proliferating every day.

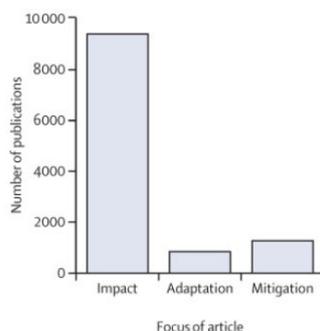


Figure 2. Number of publications by impact, adaptation, and mitigation categories. (1)

The “ENBEL project: Enhancing Belmont Research Action to support EU policy-making on climate change and health” focused exactly on this problem not only in Europe but also with African partners, aiming to provide a synthesis of the science that will be disseminated through networking, engaging directly with decision makers and mainstream communication (2). Thereby recognizing that the impact measure of interventions is hard to evaluate, as we lack gold standard indicators in public health because our units of intervention are populations and all populations are different. In order to solve this problem, adapted Evidence to Decision Frameworks that include resource requirements, health equity, the level of acceptance for stakeholders and the feasibility to implement, may be necessary.

The outcomes of air pollution

Air pollution is the number one environmental health risk. The goals from the EU Zero Pollution Ambition¹ are not ambitious enough. Air quality has especially impacted on health, crops and climate in the Western Balkans, and as mentioned by Claudio A. Belis, Senior Scientist at the European Commission, Joint Research Centre: *"Considering the transboundary nature of climate change and pollution, the involvement of the Western Balkans is important to achieve the Zero Pollution of the EU Green Deal"*. However, no new policies have been added after 2018 and there is no further control in current energy policies. Lack of action would lead to a 20% to 21% (PM_{2.5}) and 8% to 17% (O₃) in 2050(3).

"We cannot change mindsets without proper education process and we can't achieve a goal without better education process" - Francesca de'Donato (4).

All public health professionals need to understand the basics, be able to communicate knowledgeably, and form multidisciplinary teams with experts in the field of climate and health. Therefore, interprofessional, interdisciplinary, and transformation skills are required, instead of only problem-solving skills. To work in the field of climate and health also system thinking, change and implementation strategies are needed. At the same time, future public health professionals are current younger generation and education should be implemented from an early age on, so it leads towards a more sustainable future (5).

The EU clean air standard is more than double than what the World Health Organization (WHO) recommended. The new WHO recommendations are very relevant for the EU Green Deal because it not only sets to make the EU the first neutral climate continent, but it also sets measures in several sectors in achieving a zero pollution Europe. Public health professionals should insist on health in Western Balkans Green Agenda priorities, use them to reduce externalities, activate citizens to contribute through individual and non-health related decisions and invest in the health of the future generations (6).

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0400>

| Risk factors & health impacts of climate change

Acute heat-related illness increases the risk of death, acute kidney failure and the procurement for health services decreases productivity in the workplace and has a significant social impact. Unfortunately, this reality is much more common in manual outdoor work in hot climates, overlapping with communities from low socioeconomic backgrounds and migrant workers that face many additional social challenges. Active surveillance and workplace regulations are essential to protect workers, as made obvious by the International Labour Organization (ILO) report "*Working on a Warmer Planet – The Impact of Heat Stress on Labour Productivity and Decent Work*" (7).

The relationship between green spaces and physical and mental health was thoroughly discussed during the conference. Several studies reported positive associations between quality green spaces located near to the populations and depression prevention (8). Increasing the walkability of cities was also shown to have significant public health impacts (9). With cities being seen as living and changing organisms, public health experts should have a say in the urbanization process and design urban health strategies. Examples of vertical greening infrastructures and community-based gardens (on the floor on roofs) were given for city centres.

| COVID-19 and climate change: pandemics that could learn from each other

Clear communication of uncertainty from institutions, either in the COVID-19 pandemic or the climate change impact and policy measures, has been severely lacking, which is contributing to the current infodemic. Even when the science behind it is complex, messages regarding climate change must be clear, simple and honest, but also translatable into practical tools for the population. In order to find out how to actually communicate science in an efficient way, the [CONCISE Project](#) was created and is being implemented in five European countries.

The paradox of too much information leading to disinformation and misinformation was obvious with the COVID-19 pandemic, and it can become a reality for the fight against climate change if we do not apply what we have learnt so far regarding behavioural and social sciences.

Communication, education and motivation regarding impacts and adaptation resources for climate change are key, but the lack of opportunity has been regarded as the main challenge for behaviour change (10). As shown in the current pandemic, we need to provide financial support and tangible non-financial support (e.g. easy access to health services or climatized spaces during a heat wave, accessible electric cars and other non-pollutant alternatives) in order to gain adherence to new climate goals.

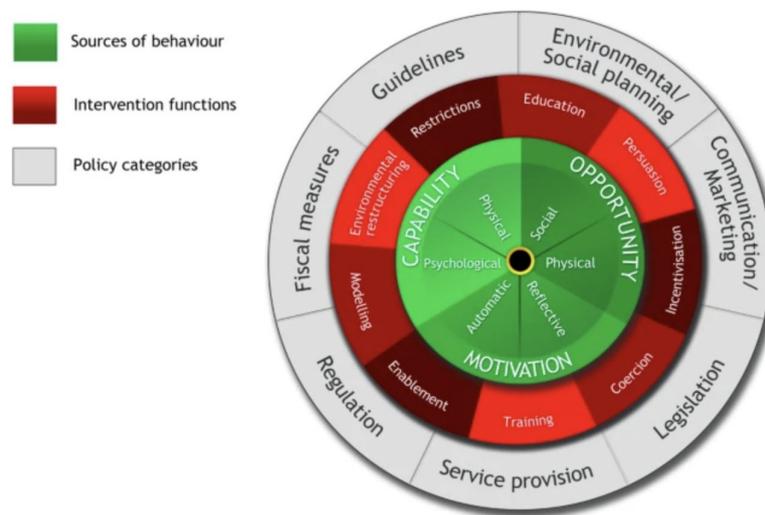


Figure 3. The behaviour change wheel. (10)

With this in mind, and knowing that COVID-19 accelerated the ongoing processes of public and urban health due to the link with disease spread, doors were also opened to rethink cities. A new “future proof” salutogenic approach, with infectious diseases and climate change at the centre of the conversation, was presented by Prof Stefano Capolongo (9).

During the pandemic, however, there has been a lack of transparency. Public health agencies were advising governments, reaching out to the general public to provide information and guidance, and countering misinformation through setting up websites with FAQs and social media. Even though public health agencies played an important role in the surveillance, testing and tracing and vaccination, in most European countries they did not lead the response, and in countries such as England, Poland or Ukraine it was not transparent whether the advice of national public health agencies was acted upon. Other scientists and advisers played vital roles, but lacked a public health perspective.

On top of that, our world has profoundly changed in the past two years, and there is an increase in chronic diseases, inequities and antimicrobial resistance, amongst others. Thus, public health has to be leveraged so that we benefit and improve the health of populations (11).

| Green governance & the Climate Pact and Green Deal

The European Climate Pact and Green Deal aim to create the first climate-neutral continent, including adaptation strategies, biodiversity conservation, a new circular economy action plan, zero pollution, animal welfare with the farm to fork strategy and much more. The Green Deal is also an opportunity to develop a roadmap in the next 10 years for the green digital revolution of health, applying green technologies, telemedicine services and Artificial Intelligence approaches to reduce CO2 emissions from the healthcare systems.

At the end of the day, stakes are very high for this new Deal. It must uphold the society's expectations and necessities to find new economic models that are less damaging to the environment and to biodiversity, that apply circular economy principles and that promote a less consumerist and more active population. Currently, the need for horizontal and vertical coordination in all levels of society seems the key to start answering most climate challenges and for the implementation of this Green Deal. Public health professionals should put an emphasis on the health implications by taking advantage of them to reduce externalities, by involving citizens to contribute through individual and non-health-related decisions and by promoting investments in the health sector. On the basis of the analysis presented in this study we conclude that the processes associated with the Green Deal and the Climate Pact will be of benefit for both individual and public health in the EU (6).

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| One Health cannot be left behind

During the EPH conference, researchers presented worrying data for the health impact of air pollution, especially when it comes to particulate matter and ozone. In Europe, 38% of chemicals are not properly being regulated, which impacts disease burden. Carla Viegas reminded us that *"agriculture constitutes one of the most sensitive sectors that could be affected by climate change"*, because it promotes foodborne disease agents and contamination by fungi and mycotoxins in cereal crops, having a significant impact on human and animal health and also nutrition security.

Insects also made conversation: the oak processionary moth is an increasingly important public health problem in Europe because of rising temperatures. Its effects on human and animal health are significant, but the use of pesticides may not be an option, so we may need stronger and more resilient ecosystems.

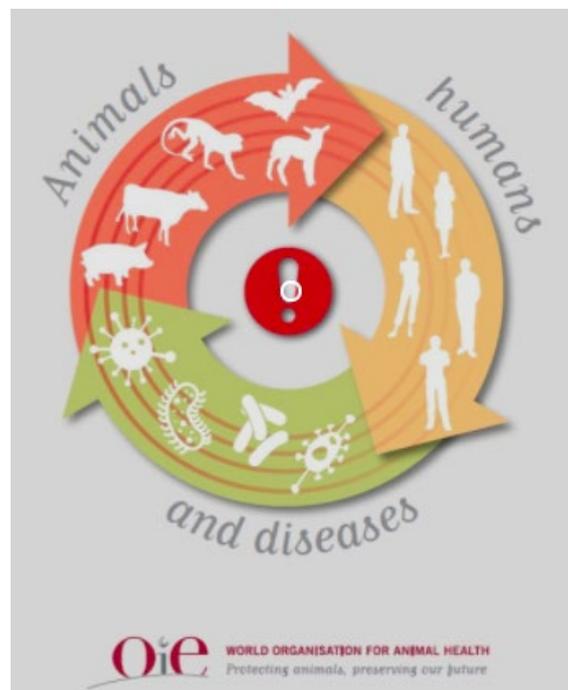


Figure 4. Domestic animals, wildlife and humans face similar threats. (17)

Data from WHO's Working Group on Health in Climate Change showed that 90% of EU deaths are attributed to the environment: non-communicable diseases. The first cause would be cancers, followed by ischaemic disease, chronic obstructive pulmonary would be third, and after that stroke, mental behavioural and neurological conditions, diabetes mellitus, chronic

kidney disease, other circulatory diseases and cardiovascular diseases, hypertensive heart diseases and in the 10th position asthma. The exposure to air pollutants is however unequal, where Central and Eastern European countries have the most impact and urban centres are more exposed. The impact is bigger on children, pregnant women and the elderly. The One Health approach aims therefore to bring a transdisciplinary approach - humans, animals, environment - to the fight against climate change.

| Hope in the new generations

Climate change is happening now and it has an impact on people's health and health systems, both directly and indirectly. Action is needed now. Around the globe there are examples of children missing school and going on 'strike' to demonstrate for climate action now. Children are more exposed than adults, they are sensitive to pollution, they are dependent on the help of the adults, they are learning through touching, etc. (12)

"Children have shown that they care more for our planet and its people than previous generations, we should listen" - Sonia Saxena, President of EUPHA-CAPH (13).

We are being affected by climate changes in different ways: behaviours affecting health, food and nutrition, mental wellbeing, social and community factors, access to health and care services, living environment, economy and education and macro, such as transport, infrastructure and inequalities. Climate change and extreme weather events can promote stress and children's mental wellbeing and health can be more vulnerable to it. Risk factors are intertwined, interactive and cumulative-interacting with and exacerbating existing conditions, human rights and social conditions-driven by political, economic and social factors (14).

| Responsibility lies in the public too

The substantial benefits of the green economy have to be shared. We need to look closely at practice of evidence as the making of healthcare decisions based on the best evidence is widely accepted through clinical practice. As Dr. Denni Stanistreet reassured: *"At the bottom of the pyramid there's ideas, opinions... and on the top randomised control trials and specific reviews"*. The problem often is that high cost interventions are less attractive and behind the policies

there are different interests. Thus, public engagement is key and that everyone is on board in order for policy implementation to succeed (15).

What to do on a personal note

A way to start promoting the role of environment and health is to organise a [public health week](#) in your country, region or continent. This is the message that Thomas Dorner conveyed: "*It is an opportunity to make noise*" (16). Organising such events can include outdoor stretch sessions, nights at the museum (an online tour when needed), showing what influences health in the cities of the attendees through pictures, walking to clean sea coastlines, amongst others. Other tips given where to be active online, as this can have an impact too, arranging big social media campaigns and analysing the impact, and it can even work when we start small, by organising just one event.

| Conclusion

Climate change is happening now and we are being affected in different ways. It is a human rights crisis and therefore, it is a responsibility of states and also of corporations. What we do today has an impact on future generations. Thus, we need to secure the future for the next generation and it is important to achieve the Zero Pollution of the EU Green Deal, due to the transboundary nature of climate change and pollution. The importance and necessity of activities in engaging key decision makers involved in climate change and health adaptation across Europe is *sine qua non* and understanding interlinkages and identifying areas for actions to promote climate policies that enhance health benefits is essential. Strategically, the European recovery plan should be aligned with the European Green Deal. Using digitalisation is the win-win solution, not only in healthcare but also in public health and communities at large.

Summary box

In an era of multiple pandemics, from the COVID-19, to the infodemic, or the non-communicable diseases, enhancing the role of health in its diverse perspectives, hand in hand with the climate change and environment, is more salient than ever. The sessions at the 14th European Public Health Conference demonstrated that the impact of climate change on health is already having devastating consequences and will continue to do so if the policy makers and the public continue to ignore this vital issue of public health.

The benefits that may emerge from a multidisciplinary approach will help shape the health systems and telemedicine of the future. Through discourse and scientific efforts, the [EUPHA Environment and health section](#) and [EUPHAnxt](#) will help address the challenges raised in this conference and the possible future challenges it will encounter.

Poverty and energy issues such as environmental and health challenges in Sustainable Development Goals (SDGs) are also linked to climate change. These challenges could be seen not only through SDG 1 and SDG 7, but also through SDG 8, SDG 11 and SDG 3.

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Annex - List of the sessions at the EPH2021 attended by the fellows

Pre-conference: Connecting health and climate change

EPH mentorship session with Peter Allebeck

Opening Ceremony: Public health futures in a changing world

Plenary 1: Public health practice, training and workforces for the future - Lessons from the pandemic

EPH mentorship session with Iveta Nagyova

Workshop: Public health, climate change and strategic litigation

Workshop: Addressing vulnerability within climate change related health impacts

Workshop: Health in Green Deal and Climate Pact

Workshop: The Role of Digital Public Health in the European Climate Pact and Green deal

Plenary 2: Communication and public health

Workshop: Climate change influence in the exposure to several risk factors: One Health approach as a solution?

Round table: Preparing the climate and health workforce in Europe

EUPHANxt Join the network

Skills building seminar: How to organise and benefit from a public health week in your country, region or continent

Round table: Governance and diplomacy of climate health adaptation: roles for public health community

Plenary 3: Learning from the pandemic and getting ready for the next one

Skills building seminar: (Re)Forming cities due to the COVID challenge: Urban, Environmental & Public Mental Health outcomes

Workshop: One health approach to gain Youth engagement toward environmental issues

Plenary 4: Capturing the breadth and depth of the digital health era – beyond the COVID-19 pandemic

Workshop: The contribution of Environmental Impact Assessments to better health

EPH mentorship session with Natasha Azzopardi Muscat

Environment and health: Join the network

Workshop: SDGs as a roadmap for Citizens, Environment and Public Health

Round table: Climate change, justice and public health: recommendations for action

Plenary 5: Climate change, justice and public health

Closing Ceremony of the 14th European Public Health Conference



The European Public Health Association, or EUPHA in short, is an umbrella organisation for public health associations in Europe. Our network of national associations of public health represents around 20'000 public health professionals. Our mission is to facilitate and activate a strong voice of the public health network by enhancing visibility of the evidence and by strengthening the capacity of public health professionals. EUPHA contributes to the preservation and improvement of public health in the European region through capacity and knowledge building. We are committed to creating a more inclusive Europe, narrowing all health inequalities among Europeans, by facilitating, activating, and disseminating strong evidence-based voices from the public health community and by strengthening the capacity of public health professionals to achieve evidence-based change.



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