ERA-ENVHEALTH

NEWSFLASH

2nd Semester 2021

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SAVE THE DATE

HERA Final Conference

18 March 2022, Paris

https://www.heraresearcheu.eu/

HBM4EU Final Conference

27-28 April 2022, Brussels

https://www.hbm4eu.eu/

More details on page 11

EDITORIAL

With much pleasure and some pride we present our next Newsflash! We hope this final Newsflash of 2021 finds you well! Another year that has been dominated by the COVID-19 virus and measures to reduce its spread. Again, this led us to have our annual Open Conference on-line this year. The ERA-ENVHEALTH network chose to look into this current “hot” topic with a focus on risk perception and policy advice and the impact on air quality and health. On October 8th we had the privilege to host 8 speakers from institutes all over Europe to present their research on the topic. The OC was visited by over 100 colleagues. In this issue you will find an account of their presentations and the discussions.

Please take also notice of the short article by Francesca Gorini, National Research Council Italy on 'Plastic use in time of COVID-19’. The pandemic has resulted in a dramatic increase in the use of plastics. Environmental groups warn that this material, while potentially life-saving, could overwhelm cities around the world where waste collection and recycling strategies have been short-circuited by lockdowns.

Also in this issue you will find a teaser on two upcoming events: one on the final conference of the HBM4EU project end of April 2022, in Brussels. The other is on the final conference of the HERA-project. This will be an on-line event in March 2022!

Finally if you are interested in joining us, do not forget to have a look the Newsflash's last page!

As we go into the next year we remain focused on the Environment-Health and Policy nexus. Best wishes and hope to see you next year!

2021 ERA-ENVHEALTH online Open Conference on COVID-19 Pandemic and Environment and Health

October 8th, 2021 (online event)

Ric van Poll, RIVM, The Netherlands

INTRODUCTION

Since COVID-19 appeared in 2020 and disrupted our lives, scientific knowledge and expertise at the interface between human and animal health in the spirit of "One Health" and environmental health is seen as the key tool to understand the impact of this pandemic and to guide the implementation of public policies.

Research on the links between the environment, human health and the Covid-19 pandemic has been central, not only to provide expertise for the prevention of COVID-19-related health risks and useful guidelines on how to organise daily life and protect health during this unprecedented period, but also to look into and understand the links between and effect of the Covid-19 pandemic on the environment and health and provide an integrated view of health determinants.

For this year's open conference, ERA-ENVHEALTH chose to look into this current "hot" topic with a focus on risk perception and policy advice and the impact on air quality and health.

Around 100 colleagues from all over Europe participated in the open conference. In three sessions, 8 presenters shared their insights on Covid-19 and communication and policy advice (session 1), air quality (and policy advice, session 2) and finally on transformation perspectives for a sustainable future (session 3).

The following pages include the abstracts of the presentations and some of the highlights of the questions-discussion after each session.

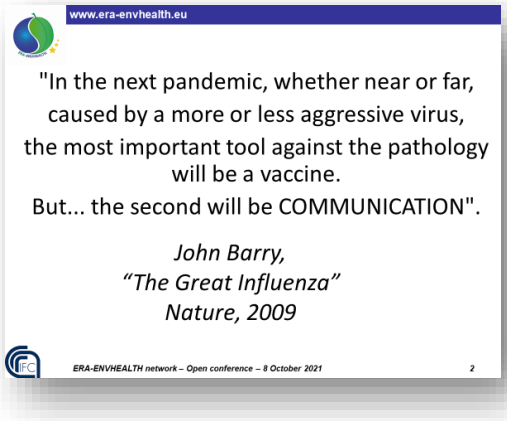
2021 ERA-ENVHEALTH online Open Conference

SESSION 1:
COVID-19 and environment and health: communication and policy advice

1.1 Fear and responsibility during the COVID-19 emergency in Italy

Liliana Cori, National Research Council, Italy

As a primary defence emotion, fear plays an important role in adopting preventive behaviours and is used or even abused as a lever in communication, as it is thought that it can increase the effectiveness of a message. Multiple factors linked to culture, economy, ethics, health systems and environmental conditions play a role in the evolution of the pandemic. Individual and social dynamics interact in shaping the coping capacity of each community, and knowledge of psychological reactions is crucial for understanding the impact of COVID-19. Along with the epidemic, fear has been spreading and growing. The global dimension of the present crisis is unprecedented, and the negative impact is strongly influenced by personal and social emotions and behaviours typical of the "global risk society". The elements that characterise the risk perception of infectious diseases and the differences with non-communicable diseases must be fully understood in order to effectively manage risk communication and governance during a public health crisis. The links between fear and risk perception are multiple and largely inextricable, depending on social, cultural and contextual factors.



1.2 Environmental health inequalities during the COVID-19 pandemic: Relevance and implications for future action

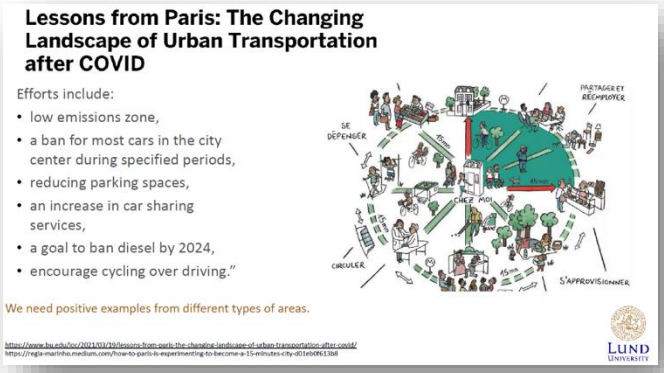
Gabriele Bolte, WHO Collaborating Centre for Environmental Health Inequalities, University of Bremen, Germany

Abstract not available

SESSION 1 (cont)

1.3 Environmental health burden and the Covid-19 pandemic: the past, the present and the future.

Anna Oudin, Lund University, Sweden.



Drastic measures have been adopted around the world to curb the spread of the SARS-CoV-2 virus. While important to curb the spread, these actions have had indirect effects on our behaviours, altered our routines and, oftentimes, limited social contacts. With our daily lives being changed in an unprecedented manner, I will reflect on how these new pandemic regulations have transformed various aspects of our lived environment and, consequently, our health. The focus of the presentation is to give an overview on the various effects that the covid-19 pandemic and its related preventative measures have had on environmental health in both the short- and long-term.

Questions-Discussion of Session 1

An important aspect of communication is trust. How to gain trust? What are important factors for trust? Dr. Cori replied: 'If you lose trust, it's difficult to regain it. It's important to understand the level of trust you have. Regaining trust needs time. Credibility is important, too: explain well. Actions are even more important than what you say and write. Concerning the power of knowledge: know the level of knowledge of the people you communicate to. Relative power of stakeholder: share the power (of knowledge) in a proper way and share responsibility, too'. The issue of disinformation – good information and its impact was also discussed. Liliana Cori added indeed that 'The worst kind of message is volunteering wrong information (disinformation). Communication needs to be linked to need and emotions. For example: Vaccination levels increased/changed after "trustful people" declared their positive feelings about vaccination. With some wrong communication, people want to "escape" from the problem.'

Professor Bolte discussed environmental health inequalities due to indoor crowding as a consequence of Covid-19 lock-downs. In the discussion there was emphasis on the difference between crowding and population density. The presentation provided objective data on persons in the same dwelling but impact on Covid-19 is always multi-factorial. Information on activities of the WHO Collaborating Centre for Environmental Health Inequalities can be found here: https://www.uni-bremen.de/en/who-collaborating-centre-for-environmental-health-inequalities.

2021 ERA-ENVHEALTH on-line Open Conference

SESSION 2: COVID-19 and air quality

2.1 Air quality: the bright side of COVID pandemic.

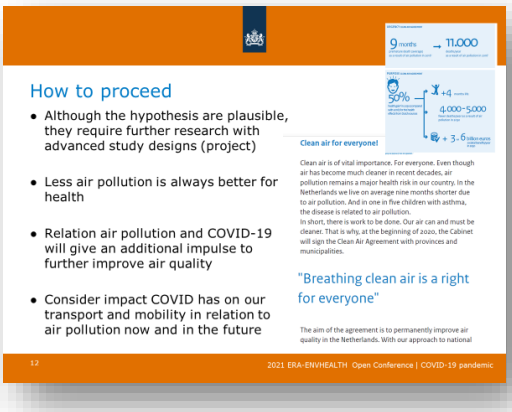
Alexandra Monteiro, University of Aveiro, Portugal.

The pandemic caused by coronavirus COVID-19, and its consequent lockdown, had a worldwide negative impact on health and several economic activities but with benefits in some environmental aspects like air pollution. This indirect effect produced by this pandemic was studied for Portugal region by comparison of air quality data collected during the COVID lockdown period with data from baseline conditions. Air quality data - in particular NO2 and PM10 hourly concentration - from more than 20 monitoring stations spread over mainland Portugal was used to perform this evaluation. The mean reduction observed on pollutant concentrations was higher for NO2 (41%) than for PM10 (18%). For NO2, mean reductions were more significant in traffic (reaching values higher than 60% in some monitoring stations) and background urban sites than in rural stations. A group of traffic sites, where exceedances to the annual limit value for health protection exist every year, registered for the first time the fulfilment of this standard.

2.2 Air Quality and COVID-19 in policy advise.

Miriam Gerlofs - Jose Jacobs, National Institute for Public Health and the Environment, Netherlands.

Several exploratory studies suggest a relationship between COVID-19 and air pollution. However most studies so far have used a so-called ecological design, which means that the results should be interpreted with caution as these studies are bases on aggregated data. The research programme ‘Air Quality, livestock and COVID-19’ aims to increase the insight in the relationships between exposure to short-term, long-term air pollution and the incidence and severity of COVID-19. Specific attention will be paid on different sources of air pollution (such as livestock, traffic and industry).

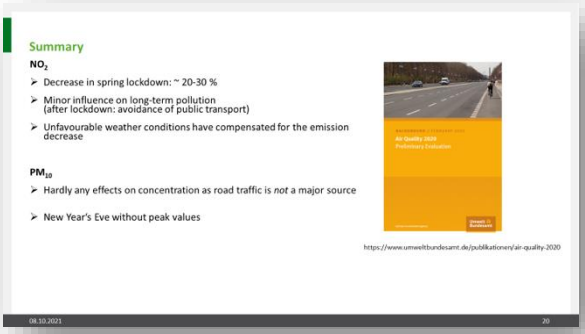


SESSION 2 (cont)

2.3 Air quality during the German lockdown in springtime 2020..

Susan Kessinger, German Environment Agency.

Air quality in cities and agglomerations is mainly affected by the pollutants nitrogen dioxide (NO2) and particulate matter (PM10). The measures to contain the COVID-19 pandemic in springtime 2020 led to a decrease of traffic in many places and therefore to decreased traffic-related emissions. NO2 concentrations measured close to traffic also decreased during the spring lockdown, but the decrease was limited by unfavourable atmospheric conditions for dilution. Mean reductions of approximately 20–30 percent were determined that were caused by the reduced traffic numbers and not by weather. Compared to other European countries, Germany showed NO2 reductions in the middle range, the stricter measures in Western Europe led to even higher reductions of the NO2 pollution. Due to the variety of PM10 sources the spring lockdown had only minor effects on the urban PM10 pollution.



Questions-Discussion of Session 2

Dr. Monteiro highlighted that the EU ClairCity project played a role in engaging people and informing them on air pollution problems. Two tasks are needed – inform people and engage them to take action to mitigate air pollution, citizens have a key role. Dr. Gerlofs highlighted that people can measure with sensors at their homes, and are aware that domestic heating and wood burning affects air quality as well as traffic, because they feel it outside their homes. Dr. Kessinger said that people in Germany are informed, they know where to find information. The German Environment Agency (UBA) provides an APP “Luftqualität” (German) for the public and a web-portal “Current air data” (English and German).

Weather conditions (especially windspeed, wind direction) had a serious impact. One question was about what if the weather condition before COVID-19 were as bad as during COVID-19. Dr Kessinger replied that this was fortunately not the case otherwise concentrations would have been worse.

Another question was about data on other pollutants, because PAH for example are emitted by wood burning and may have increased during the lockdowns. However, there was no other data to refer to.

Part of the discussion centred on why pollution has gone up again? It is not only because people are going back to work but also because they are using different modes of transportation (less public transportation) in doing so. Additionally, people have moved further away from work due to hybrid working (longer commute, lesser frequency). In the UK (London) businesses and people are moving outside London.

A presentation noted that bio-diesel affect health more than conventional fuels through higher effect on cytotoxicity.

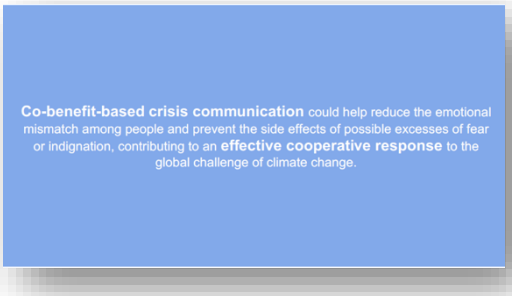
2021 ERA-ENVHEALTH on-line Open Conference

SESSION 3: Transformation perspectives for a sustainable future

3.1 The asymptomatics of the new global crisis.

Simona Re, Institute of Geosciences and Earth Resources, National Research Council, Italy.

In the face of a serious threat, the damage caused by institutional disbelief and ineffective risk communication can be as silent as it is shocking. In addition to delaying direct response to the crisis, these conditions undermine dialogue and understanding among people and with institutions, thereby hindering the alignment and coordination necessary for an effective cooperative response, in a tangle of cognition and knowledge as well as emotion. As with the Covid-19 pandemic and the climate crisis, people's response can be one of fear, indignation, and anxiety, but also denial and apathy. Many of us today are the asymptomatics of the new global crisis. Co-benefit-based crisis communication could help reduce the emotional mismatch among people and prevent the side effects of possible excesses of fear or indignation, contributing to an effective cooperative response to future environmental and health challenges.



3.2 HERA: Research needs on the interlinkages of the COVID-19 pandemic with Environment Climate and Health.

Kateřina Šebková, RECETOX, Masaryk University, Brno, Czech Republic.

Integrating Environment and Health Research: a Vision for the EU is an EU Horizon 2020 project that aims to build a European research agenda to support future research in the area of climate, environment and health. We started in 2019 with a thorough review of policies, strategies and plans at the EU and national levels in the fields of environment, climate change and health to identify the research needs, advances and gaps. We also carried out numerous stakeholder consultations, scientific surveys and regional workshops to be transparent, collaborative and inclusive. We identified six pillars that we will present and which form the European Health and Environment Agenda 2020 – 2030. It is expected that the presented Agenda will guide the EU's research priorities and funding and we also wish to collect your views of our work. We will also showcase opportunities for cooperation and synergies with newly established EU policies and initiatives. Further, wish also to describe our journey when experiencing the COVID 19 pandemic during 2020 and how it affected content of the Agenda.

SESSION 3 (cont)

Questions-Discussion of Session 3

Is there a need for specific risk communication for vulnerable people and what should be the focus of the communication next to paying attention to emotion of the people?

Dr. Re: yes there is a need. It is defined on a scientific basis, big paper published as a pre-paper in the lancet: survey of psychiatrists: are you observing climate anxiety among your patients ? And the answer is: yes, specifically amongst young people. They are giving explanations to the parents: it is normal to have these thoughts. It means the young person is becoming adult. Share it with them and do something nice to help like collecting rubbish… Little acts.

It is hypothised that apathy is part of how people deal with the climate crisis. Remark: never seen as much societal outrage regarding lockdown measures and vaccination, at least in the NL?

Dr. Re's reply: outrage; when I speak about the hypothesis, I'm always delicate. What will happen when we will be in the middle of the transition? Risk communication is fundamental even if we ignore it during the pandemic. If people are not worried – we need to alert them. We did not do this with the climate crisis. They are just hypothesis but they make sense. We cannot follow the order but cannot ignore the importance of precautional advocacy. Need to focus on co-benefits. The negative messages (we will have no icebergs, polar bears will die…) have a very strong impact on people. Co-benefit based communication is the best solution we have. Who can deny the benefit of better air quality, better quality of life in cities? What do stakeholders consultations add to what we learn? Or would the results be different than what we had if we hadn't consulted?

Dr Sebkova: Yes, in the field of risk communication and in the field of being understood. Geographically distributed consultations: senior people, government, commission but also all types of stakeholder groups, one of the prominent elements is not so much the topics but the importance the stakeholders put on the particular problem. So transparency and ownership in communication is important. Momentum and time gap between recognition of the info and action, but also a gap of the perception in the stakeholder communication, like climate crisis denial: in CZ: lot of plans and strategies and climate change was a priority but people didn't take it seriously until 2 to 3 years ago when experienced floods, tornadoes. Stakeholder and public perception is changing. So not only matter of communication but also experiencing the seriousness.

Additional information on the HERA project can be found here: https://www.heraresearcheu.eu. EU Research Agenda final draft is here: https://www.heraresearcheu.eu/hera-2030-agenda.

PLASTIC USE IN TIME OF COVID-19

Francesca Gorini, Istituto Fisiologia Clinica, Consiglio Nazionale delle Ricerche, Pisa, Italy

Plastics are among the most popular materials, being durable over time, relatively inexpensive to produce, and versatile enough to be used in a wide range of products. At the same time, plastic waste is a serious and growing environmental problem. Less than 10% of plastic is recycled and most is landfilled, incinerated, or simply abandoned (Geyer et al, 2017). Single-use plastics make up about half of all plastic waste, nearly all of it is initially disposed of on land, but much of it eventually enters aquatic ecosystems (Hale et al, 2020). While many of the plastics do not biodegrade rapidly in the environment, they can be sensitive to UV exposure and fragment into microplastics (<5 mm) and nanoplastics (<1 μm) by abrasion. Tiny particles can be ingested by biota at all levels of the food chain, resulting in damage to the associated ecosystem and human health (Hale et al, 2020).

The proliferation of plastic waste-and the resulting pollution of waterways around the world-was already a major concern for a growing share of the world's population before the recent pandemic, and while and international organizations such as the United Nations urged urgent action earlier this year, many nations promised to reduce plastic use. The pandemic has forced some to shelve those plans, and the World Bank warns that COVID-19, at least for now, "appears to be shifting the tide toward single-use plastics." While it will take time to know precisely how much additional plastic waste was generated during the pandemic crisis, the preliminary data is staggering. In China, the Ministry of Ecology and Environment estimates that hospitals in Wuhan generated more than 240 tons of waste per day at the height of the outbreak, compared to 40 tons usually generated. Based on this data, consulting firm Frost & Sullivan predicts that the United States could generate an entire year's worth of medical waste in just two months due to COVID-19.

A significant increase in waste generation has also been noted among ordinary citizens. In China, daily production of masks rose to 116 million in February 2020, 12 times the amount from the previous month. Hundreds of tons of discarded masks were collected daily from public dumpsters alone during the peak of the outbreak, and the amount of those disposed of in household waste systems is unknown. When Gary Stokes, the well-known environmental activist, visited a beach on Hong Kong's uninhabited Soko Islands in February 2020, he was surprised to find, among water bottles, shopping bags and the usual piles of plastic waste, a new kind of trash consisting of dozens and dozens of disposable masks, and that’s just weeks after Hong Kong registered its first case of coronavirus infection (https://www.latimes.com/world-nation/story/2020-06-13/coronavirus-pandemic-plastic-waste-recycling).

The pandemic has resulted in a dramatic increase in the use of plastics, the main component of masks, gloves, hand sanitizer bottles, protective medical suits, molecular test kits, take-out containers, delivery packaging and other items essential to our new hyper-hygienic lifestyle, but whose disposal is yet another troubling consequence of a devastating crisis. Environmental groups warn that this material, while potentially life-saving, could overwhelm cities around the world where waste collection and recycling strategies have been short-circuited by lockdowns. Most alarmingly, COVID-19 could reverse the momentum of a years-long global battle to reduce single-use plastic consumption (https://www.latimes.com/world-nation/story/2020-06-13/coronavirus-pandemic-plastic-waste-recycling).

Just think of what has happened United States that has no federal regulations limiting single-use plastics. Several states and numerous localities have nevertheless enacted restrictions but both the interests of plastic manufacturers and concerns related to the COVID-19 pandemic have led to a decrease in the use of reusable bags and disposable ones. For example, as part of the "Bag

the Ban" campaign (https://www.bagtheban.com) a letter from the Plastics Industry Association (PIA) to the U.S. Department of Health and Human Services (HHS) read: "Study after study has shown that reusable bags can carry viruses and bacteria, spread them to grocery stores, and live on surfaces for up to 3 days." PIA then requested that HHS "..."...rule against bans on these products (single-use plastics) as a public safety risk." In the wake of this campaign, a growing number of governments and state and local businesses have backed away from restrictions on single-use plastic packaging and banned the use of reusable beverage bags and containers.

An excess of new and disposable plastic is evident around the world, from California, where Governor Gavin Newsom temporarily lifted a ban on single-use shopping bags out of concern that the virus could be transmitted via reusable bags, to Asian cities that struggled even to manage their trash before the pandemic. Some retailers, including Starbucks, have also stopped allowing customers to bring reusable cups, containers or shopping bags, fearing they may be carriers of the coronavirus. In fast-growing Asian economies, where waste collection and recycling systems have failed to keep pace with increasing amounts of waste, used plastics are often dumped near waterways or incinerated, contaminating air, water and soil environmental matrices. Even Hong Kong, one of the world's richest cities, dumps 70 percent of its waste in landfills. Thailand, which banned disposable plastic bags in major stores in January 2020 and planned to dramatically reduce plastic waste at the end of the last year, now expects to see it increase by up to 30 percent. According to the Thailand Environment Institute, Bangkok alone consumed 62% more plastic in April than in the previous 12 months, most of it inside food packaging that is not easily recyclable (https://www.latimes.com/world-nation/story/2020-06-13/coronavirus-pandemic-plastic-waste-recycling).

In the UK, illegal waste disposal increased by 300% during the pandemic. In some countries, companies that are promoting innovative methods of recycling and reusing waste plastics report small amounts of plastic passing through waste streams, suggesting that an increasing volume of plastic is ending up in landfills or leaking into the environment (https://www.weforum.org/agenda/2020/07/plastic-waste-management-covid19-ppe/). In Bangladesh, it was estimated that the country generated nearly 16,000 tons of hazardous plastic waste during the first month of the pandemic-related lockdown periods. According to one survey, during an eight-week lock-down that eased on June 1, Singapore's 5.7 million residents generated an additional 1,470 tons of plastic waste from takeout packaging and home food delivery alone. Discarded masks are often spotted on sidewalks, a once unimaginable sight, where littering carries heavy penalties (https://www.latimes.com/world-nation/story/2020-06-13/coronavirus-pandemic-plastic-waste-recycling).

In the absence of well-designed recycling systems, many cities rely on informal networks to collect and sort waste. Millions of workers have been prevented from doing their jobs during lockdown periods, fuelling economic hardship as more plastic is sent to landfills and incinerators. "With plastic pollution, the problem needs to shift from the environment to an opportunity for economic development and reconstruction," said Rob Kaplan, head of Singapore-based Circulate Capital, an investment fund that recently announced it will spend $6 million to purchase two small-scale plastic recyclers in India and Indonesia. "Waste and recycling has been under-invested for 20 years. Now is an opportunity to get started."

References:

- Geyer R, Jambeck J R, Lavender Law K. Production, use, and fate of all plastics ever made. Science Advances 2017; 3: e170078210.1126/sciadv.1700782.
- Hale RC, Seeley ME, LaGuardia M, Mai L, Zeng EY. A global perspective on microplastics. J Geophys Res: Oceans 2020; 125: e2018JC01471910.1029/2018JC014719

UPCOMING EVENTS

HERA final Conference

When: 18/03/2022

Where: Paris / online

HERA is a European H2020 project coordinated by Inserm and co coordinated by ISGlobal; its objective is to propose a research agenda in environment, climate and health for the next 10 to 15 years. HERA will present its proposals at the end of 2021 and will disseminate them in early 2022. We are dedicating a day to the presentation of the research agenda under the patronage of the French Presidency of Europe the 18th of March, 2022.

The presentations will focus on: research to support the Green Deal implementation; climate change and health; urban and rural areas; research and expertise on the impact of chemicals; environment and pandemics; environmental burden of disease; mechanisms of societal and economic transformation. The event will be set up as few large conferences in which there will be room for interactivity.

The French presidency will embody the research effort to meet the challenges of the Green Deal and the presentation of the research agenda of the HERA program perfectly meets this objective. This will support European leadership in this field and in particularly in research and international expertise on chemicals, climate change, urbanization and the environment pandemic relationship.

More information on the event will be available at the HERA project website - https://www.heraresearcheu.eu/

HERA is a project funded by the European Union's Horizon 220 Research and Innovation Programme under the grant agreement no. 825417.

HBM4EU final conference

When: 27-28/04/2022

Where: Brussels

This conference will bring together European stakeholders with the HBM4EU consortium creating a unique opportunity to exchange knowledge, build synergies and advance on human biomonitoring in Europe as tool for chemical policy making.

The overall theme of the 2022 conference is 'Science and policy for a healthy future' highlighting the important role HBM4EU plays in linking science and health, environment and chemicals policy to protect human health more effectively.

During the two-day conference, a wide range of topics will be addressed from harmonisation of procedures and tools at EU level, to the first EU wide exposure data, the impact of exposure on health, to novel methods to identify human internal exposure to chemicals and the progress achieved in mixture risk assessment.

The focus will be laid on the transfer of scientific findings into policy recommendations as support for regulation and the Chemical Strategy for Sustainability.

As part of the programme, attendees will have the opportunity to visit a storytelling-style exhibition, giving an overview of the main 5 years project achievements. The key research findings from some of the 18 HBM4EU' priority substances will be displayed with a focus on the link between science and policy. Attendees will be invited to interact with a European map panel with graphs and figures – showcasing inter alia the HBM4EU indicators for selected substances – and our HBM4EU policy messages. A section on the societal concern will complete the exhibition together with screens featuring interviews with top-notch scientists, the HBM4EU's chemical group leaders.

Participation is free of charge and will be possible on-site or online. Registration details and further information on the full agenda will be announced in January on the HBM4EU website - https://www.hbm4eu.eu/.

The ERA-ENVHEALTH Network

What?

ERA-ENVHEALTH is an active transnational network which includes stakeholders in the Environment and Health field, stemming from a previous European-funded project which ended in 2012. It is a forum to discuss challenges, visions and emerging issues.

Why?

The main purposes for the network are to share and exchange information and promote networking and joint activities (such as the annual open conference on specific topics of interest).

Join us!

The structure of the network is based on "contributing and sharing"; each organisation participates on a voluntary basis.

CONTACTS

https://www.anses.fr/en/content/era-envhealth-network

Do not hesitate to get in touch with the network either through your national contact point and member of the network or by contacting:

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NETWORK MEMBERS

	Acronym	Name	Country
anses	**ANSES**	**French agency for food, environmental and occupational health & safety**	**France**
Centre Léon Bérard	**Centre Léon Bérard**	University Lyon 1	France
	CNR	Italian National Research Council	Italy
epa	**EPA**	Environmental Protection Agency	Ireland
service public fédéral SANTÉ PUBLIQUE, SÉCURITÉ DE LA CHAÎNE ALIMENTAIRE ET ENVIRONNEMENT	**FPS HFCSE**	Federal Public Service Health, Food Chain Safety and Environment	Belgium
Folkhälsomyndigheten	**PHAS**	Public Health Agency of Sweden	Sweden
	RIVM	National Institute for Public Health and the Environment	Netherlands
NATUR VÅRDS VERKET	**Swedish EPA**	Swedish Environmental Protection Agency	Sweden
MUNI | RECETOX	**RECETOX**	National Centre for Toxic Compounds	Czech Republic
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	UoWM	University of Western Macedonia	Greece