

# SESSION 2: CLIMATE CHANGE - VARIED CHALLENGES ACROSS THE REGION - WHAT SHOULD THE NPHIS DO NOW?

Moderated by Prof. Enver Roshi Lecturer of Public  
Health, National Focal Point, Institute of Public  
Health, Albania



Prof. Duncan Selbie,  
IANPHI President

# INTRODUCTORY SPEECH



Dr. Liz Green, FFPH, ACIEH, Consultant in Public Health, Policy and International Health and Program Director for Health Impact Assessment, Public Health Wales, United Kingdom



# THE HEALTH IMPACT OF CLIMATE CHANGE IN WALES: A HEALTH IMPACT ASSESSMENT





# ANNUAL MEETING

APRIL 18-19, 2024 | BUDVA, MONTENEGRO

## Who by and how...

- Initiated by Public Health Wales (PHW) – NPHI for Wales
- Aim - to identify the potential health and well-being impacts of climate change in Wales
- Focus on the impacts on the **social determinants of health, population groups affected and inequalities**
- Scope - Wales only; comprehensive / complex; **participatory**; assesses potential and actual impact. Disrupted due to pandemic
- **Negative and positive impacts / opportunities identified**
- **Evidence based**: Literature review; interviews, 2 stakeholder workshops; case studies
- **Strategic Advisory Group** established including Welsh Government, public bodies; environmental agencies; academia



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## Aims of the Climate Change HIA

To identify the potential health and well-being impacts of climate change in Wales - whether physical, mental or social

- To identify how climate change will affect people's lives where they live, work and play, what does it mean?
- Focus on impacts on the social determinants of health, population groups affected and inequalities
- Provide an evidence base to inform adaptation the integration of health and wellbeing into adaptation planning and policy
- To support organisations and decision makers in Wales and inform plans, policies and programmes
- Published – 18<sup>th</sup> July 2023



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## Main Findings

All of the Social Determinants of Health are affected

### Food Security and Nutrition

#### Behaviours affecting health

- Alcohol and substance misuse
- Physical and outdoor activity

#### Social and community factors

- Community resilience
- Population Displacement, mobility and migration

### Mental health and wellbeing

#### Economic conditions

- Working conditions
- Economic development and skills

#### Access and quality of services

- Health and social care services quality and access
- Education and skills

### Living environment

- Housing
- Landslides and coal tips
- Water quality and supply
- Air quality
- Wildfires
- Flooding
- Heat
- Vector borne disease
- Biodiversity and Green infrastructure

### Macro-economic, policy and sustainability

- Infrastructure
- Sustainable development
- Transport / active travel



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Population Groups  
affected – important to  
consider cumulative  
impacts and  
intersectionality

- Whole population
- Babies, children and young people
- Older adults
- Pregnant women
- People with disabilities and Long-Term Conditions
- Low-income groups
- Occupational groups: outdoor workers; manufacturing; health/emergency services, transport
- Geographical areas: rural communities/coastal/urban/coastal/flood risk areas/former industrial/mining areas
- Homeless people
- People who are displaced and refugees and asylum seekers
- People who are new to an area – students, recently arrived nationals, refugee and asylum seekers – areas with temporary populations



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Other findings in the HIA: Key contextual factors that influence health and wellbeing impacts

- Democracy, decision making and community engagement
- Psychosocial and behavioural factors
- Social media and communications (incl. risk communication)
- Sustainable development and decarbonisation

## Key learning points:

- Good governance
- Building relationships and trust
- Recognising mental health impacts
- Clarity of roles and responsibilities
- Communications
- Effective engagement



## Health and wellbeing impacts of climate change

Climate change means that extreme weather, flooding and heatwave events are likely to occur more often in Wales

Climate change affects all parts of Wales. Some examples of health impacts for specific groups are shown below



### By the 2050s in Wales:

Annual temperatures are projected to rise by 1.2°C



Summer rainfall is expected to decrease by around 15%



Winter rainfall is projected to rise by 6%



Sea level is projected to rise by 22 cm



### Climate change is happening in Wales

### Climate change affects us all

#### Children and young people

- Extreme weather and flooding**
  - Disruption to education, outdoor sport and play
  - Displacement from their homes, friends and community
  - Stress and anxiety for themselves and their families
- Increased heat**
  - Higher risk of heat related illness
- Mental wellbeing**
  - Anxiety about how climate change will impact their future
- Air quality**
  - More susceptible to poor air quality and wildfire smoke
- Positives**
  - Have a positive role in reducing carbon emissions and adaptation to climate change
  - Can be positive agents of change
  - Practical and creative ideas to help communities recover from disasters

#### Older adults

- Extreme weather and flooding**
  - Disruption to access to health, social care and support services
  - Displacement from their home and support networks
  - More vulnerable in emergency situations such as flooding
  - Increase in mental distress
- Increased heat**
  - Higher risk of heat related illness and mortality
  - Social isolation may increase during heat waves
- Air quality**
  - Older adults are more susceptible to poor air quality and wildfire smoke
- Positives**
  - Warmer winters are projected to decrease cold related deaths

#### People on low income

- Extreme weather and flooding**
  - Less resources to prepare, respond and recover from floods or other extreme weather
  - Less likely to be fully insured
- Air quality**
  - Air pollutant concentrations are currently higher in areas of socioeconomic disadvantage
- Food and nutrition**
  - Potential for increase in food costs
- Positives**
  - Potential in the long term for reduced heating costs

#### People with disabilities and long-term health conditions

- Extreme weather and flooding**
  - Disruption to access to health, social care and support services
  - Increase in mental distress
  - More vulnerable in emergency situations such as flooding
- Increased heat**
  - Negative impacts on some conditions such as mental health problems, cardiovascular and respiratory disease, and diabetes
  - Some medications can increase vulnerability to heat related illness
  - Social isolation
  - Sleep disturbance
- Air quality**
  - Those with respiratory conditions are more susceptible to poor air quality and wildfire smoke

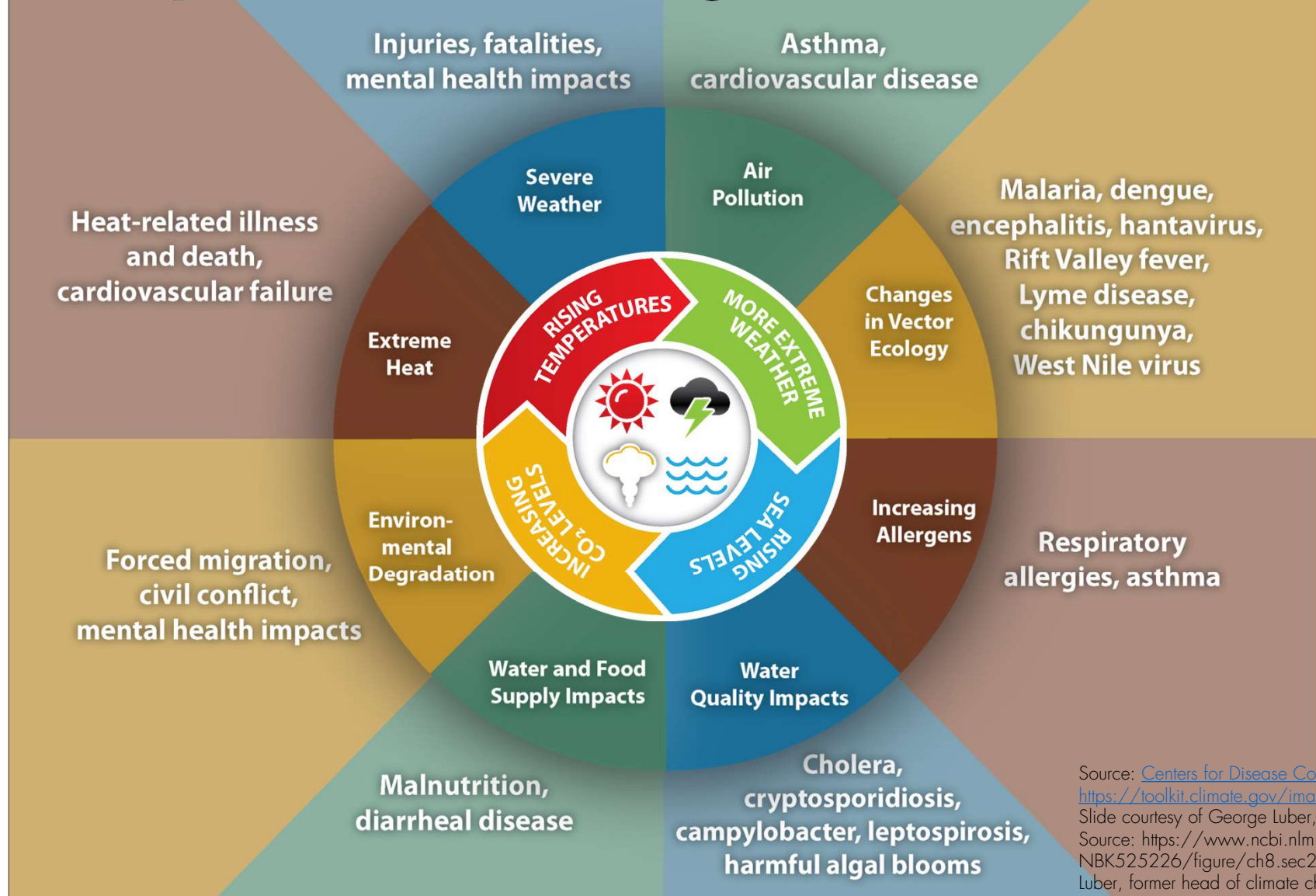
• Planning and preparing for climate change needs to include action across sectors to promote and protect the health and wellbeing of different population groups and places in Wales.



Prof. Dragan Laušević,  
Director, Institute of Public  
Health of Montenegro  
(IJZCG), Montenegro

# MANIFESTATIONS OF CLIMATE CHANGE IMPACTS ON HEALTH AND ADAPTATION AND MITIGATION STRATEGIES IN MONTENEGRO

# Impact of Climate Change on Human Health



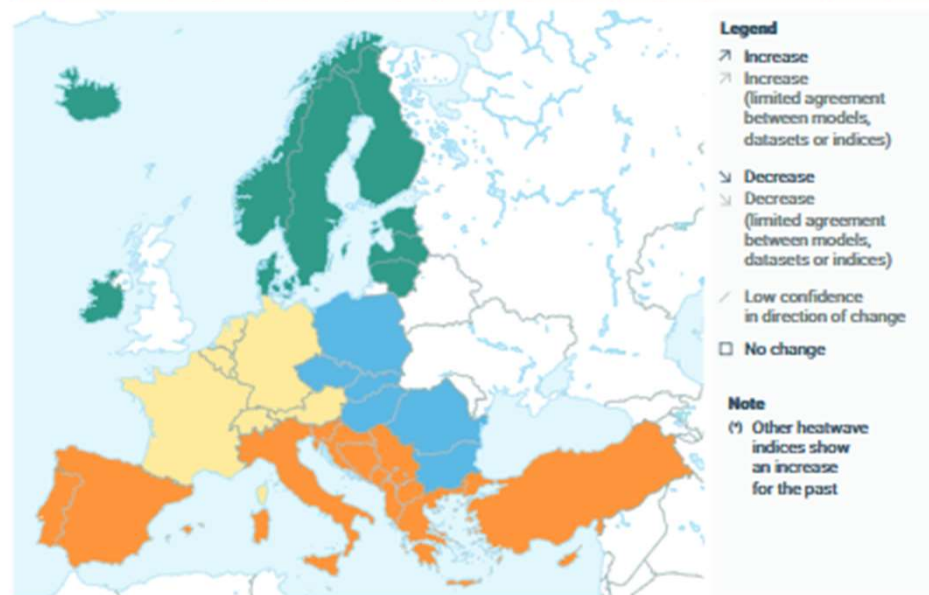
Source: [Centers for Disease Control and Prevention](https://toolkit.climate.gov/image/505)  
<https://toolkit.climate.gov/image/505>  
Slide courtesy of George Luber, CDC.  
Source: <https://www.ncbi.nlm.nih.gov/books/NBK525226/figure/ch8.sec2.fig1/> Courtesy George Luber, former head of climate change dept in the US CDC





Figure ES.1 Observed and projected trends in key climatic risk drivers in different European regions

Land regions	Northern Europe			Western Europe			Central-eastern Europe			Southern Europe			European regional seas	Past	Future
	Past	Future		Past	Future		Past	Future		Past	Future				
		Low	High		Low	High		Low	High		Low	High			
Mean temperature	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗
Heatwave days	☐(*)	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗
Total precipitation	↗	↗	↗	↗	↘	↘	↗	↗	↗	↘	↘	↘	↗	↗	↗
Heavy precipitation	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗
Drought	↗	↘	↘	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗



Notes: Underlying climate variables are: heatwaves (days with maximum temperatures above 35°C), heavy precipitation (maximum 1-day precipitation), and drought (using a standardised precipitation evapotranspiration index over 6 months (SPEI-6, Hargreaves' method)). Time periods and scenarios are past (1952-2021); future until the end of the century (2081-2100 relative to 1995-2014); low scenario (SSP1-2.6); and high scenario (SSP3-7.0).

Source: Copernicus Climate Change Service (C3S).

Courtesy of Mirjana Ivanov, master meteorology, Institute for hydro-meteorology and seismology of MNE - [www.hmz.gov.me](http://www.hmz.gov.me); [office@meteo.co.me](mailto:office@meteo.co.me)  
 Seminar: "Green Agenda for Western Balkan and Montenegro: Achieving UN SDG in the context of European Integration Process" 31/05/2023.  
 Petrovac

**Figure ES.1 Observed and projected trends in key climatic risk drivers in different European regions**

Land regions	Northern Europe		Western Europe			Central-eastern Europe			Southern Europe		European regional seas	Past	Future		
	Past	Future		Past	Future		Past	Future		Past				Future	
		Low	High		Low	High		Low	High					Low	High
Mean temperature	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗		
Heatwave days	⊠(M)	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗		
Total precipitation	↗	↗	↗	↗	/	↘	↗	↗	/	↘	↘	↗	↗		
Heavy precipitation	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗		
Drought	↗	↘	↘	↗	/	↗	↗	/	↗	↗	↗	↗	↗		

Courtesy of Mirjana Ivanov, master meteorology, Institute for hydro-meteorology and seismology of MNE - [www.hmz.gov.me](http://www.hmz.gov.me); [office@meteo.co.me](mailto:office@meteo.co.me)  
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EU Sector Policies



Country Profiles



Case Studies



Adaptation Support Tool

European Climate Risk Assessment (EUCRA)

EU Mission on Adaptation

European Climate and Health Observatory

European Climate Data Explorer



## European Climate Risk Assessment

Europe is the fastest warming continent in the world, and climate risks are threatening its energy and food security, ecosystems, infrastructure, water resources, financial stability, and people's health. According to the first ever European Climate Risk Assessment (EUCRA) published by the EEA, many of these risks have already reached critical levels and can become catastrophic without urgent and decisive action.

[Go to the EUCRA](#)



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New  
Features

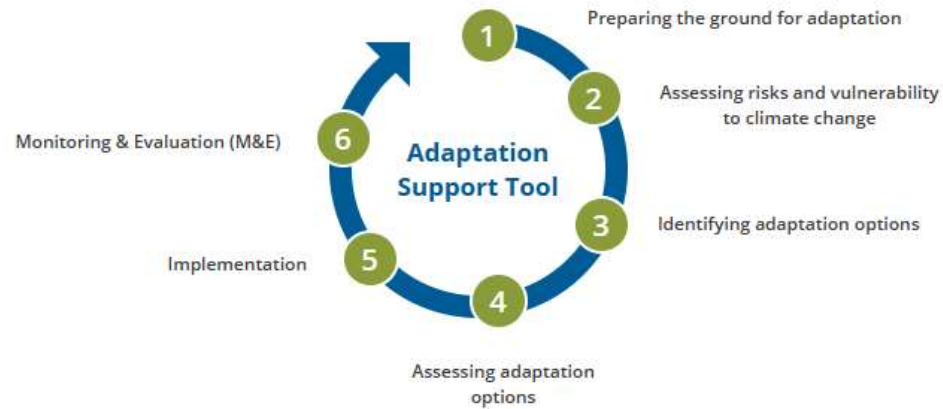
  
Search the  
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Policies

  
Country  
Profiles

  
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Adaptation  
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For more informations visit:  
» [Adaptation support tool](#)

  
For urban areas guidance visit:  
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# Key actors for data - examples and recommendations

- Institute for Hydrometeorology and seismology of Montenegro
- Environmental Protection Agency of Montenegro
- Institute of Geology of Montenegro
- Institut for Public Health of Montenegro
- Institute for the Protection of Cultural Heritage of Montenegro
- Works related to adaptation must be included in the systematization of these and other institutions





"Climate atlas of Montenegro"

Courtesy of Luka Mitrovic, master meteorology, Institute for hydro-meteorology and seismology of MNE - [www.hmz.gov.me](http://www.hmz.gov.me); [office@meteo.co.me](mailto:office@meteo.co.me)

Round table: "Round table on climate change" - Environmental Protection Agency Podgorica, 04/05/2024.





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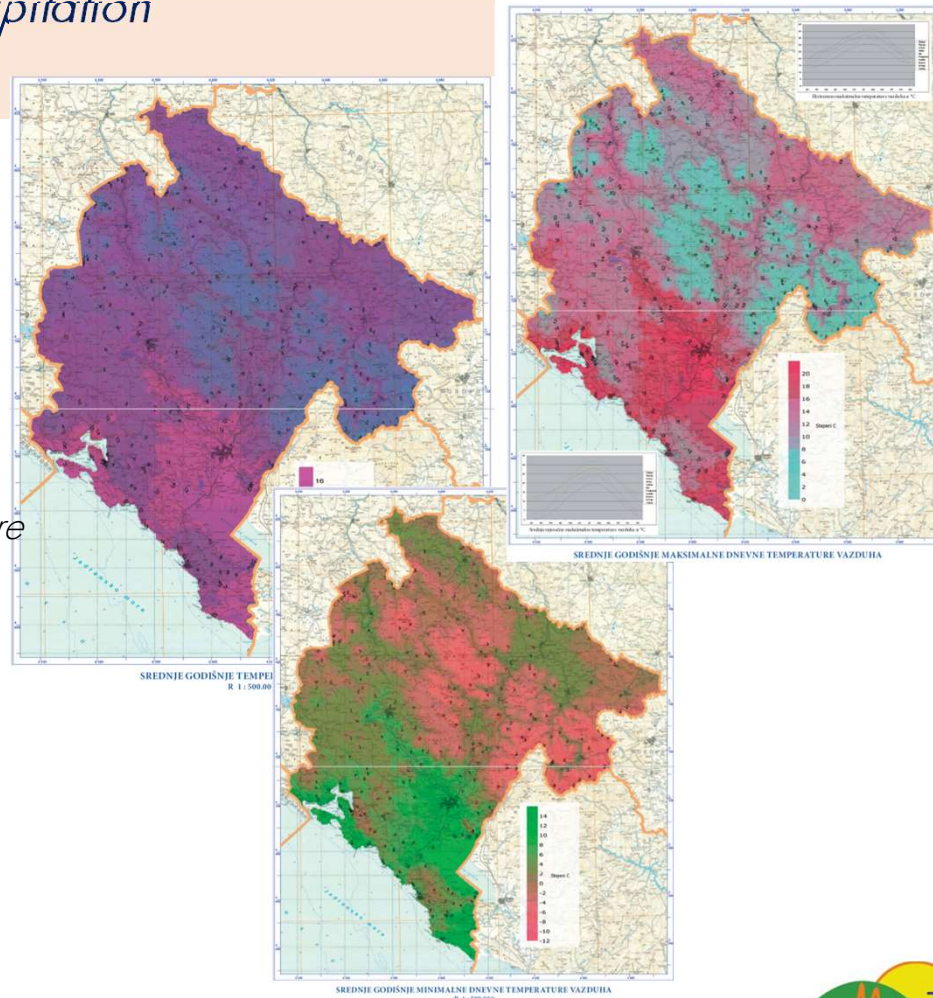
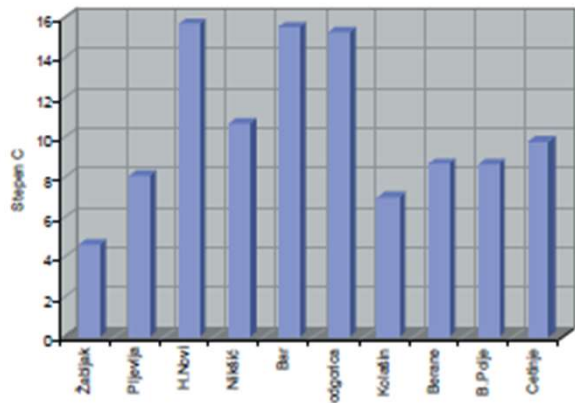
Round table: "Round table on climate change" - Environmental Protection Agency Podgorica, 04/05/2024.

# Air temperature and precipitation 1961-1990

10.4°C

North region	7.4
Central region	11.9
South region	15.6

Mean (the average) annual air temperature



[www.meteo.co.me](http://www.meteo.co.me); [office@meteo.co.me](mailto:office@meteo.co.me)



Courtesy of Luka Mitrovic, master meteorology, Institute for hydro-meteorology and seismology of MNE - [www.hmz.gov.me](http://www.hmz.gov.me); [office@meteo.co.me](mailto:office@meteo.co.me)  
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# Air temperature and precipitation

## 1991-2020

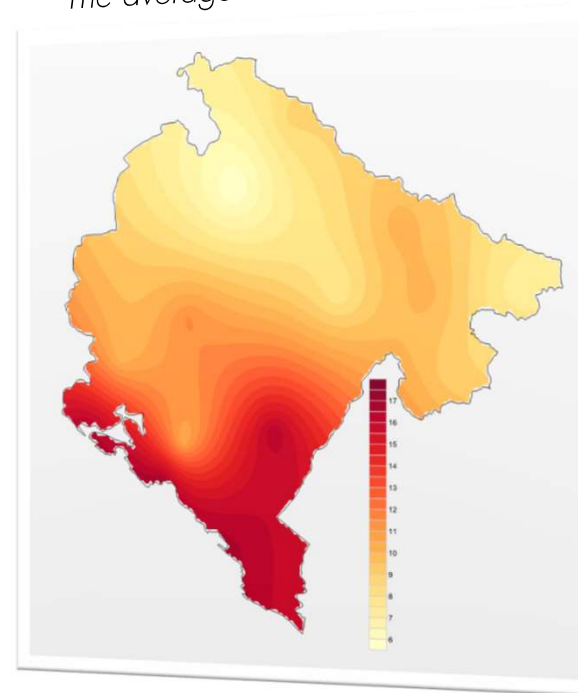
11.5 °C

<i>North region</i>	8.7
<i>Central region</i>	12.9
<i>South region</i>	16.6

Station	Climate period 1961-1990.	Climate period 1991-2020.	Deviation
Žabljak	4.6	5.9	1.3
Pljevlja	8.1	9.1	1.0
H.Novi	15.7	16.5	0.8
Nikšić	10.7	11.6	0.9
Bar	15.5	16.7	1.2
Podgorica	15.3	16.4	1.1
Kolašin	7.0	8.1	1.1
Berane	8.7	10.2	1.5
B.Polje	8.7	10.3	1.6
Cetinje	9.8	10.6	0.8

		winter	spring	summer	autumn
<i>North region</i>	1961-1990	-1.4	7.2	15.8	8.1
	1991-2020	0.1	8.6	18.2	10.0
<i>Central region</i>	1961-1990	3.2	11.1	20.9	12.5
	1991-2020	5.0	12.7	23.2	14.3
<i>South region</i>	1961-1990	8.9	14.1	22.9	16.6
	1991-2020	9.4	15.2	24.9	18.0

The average annual air temperature



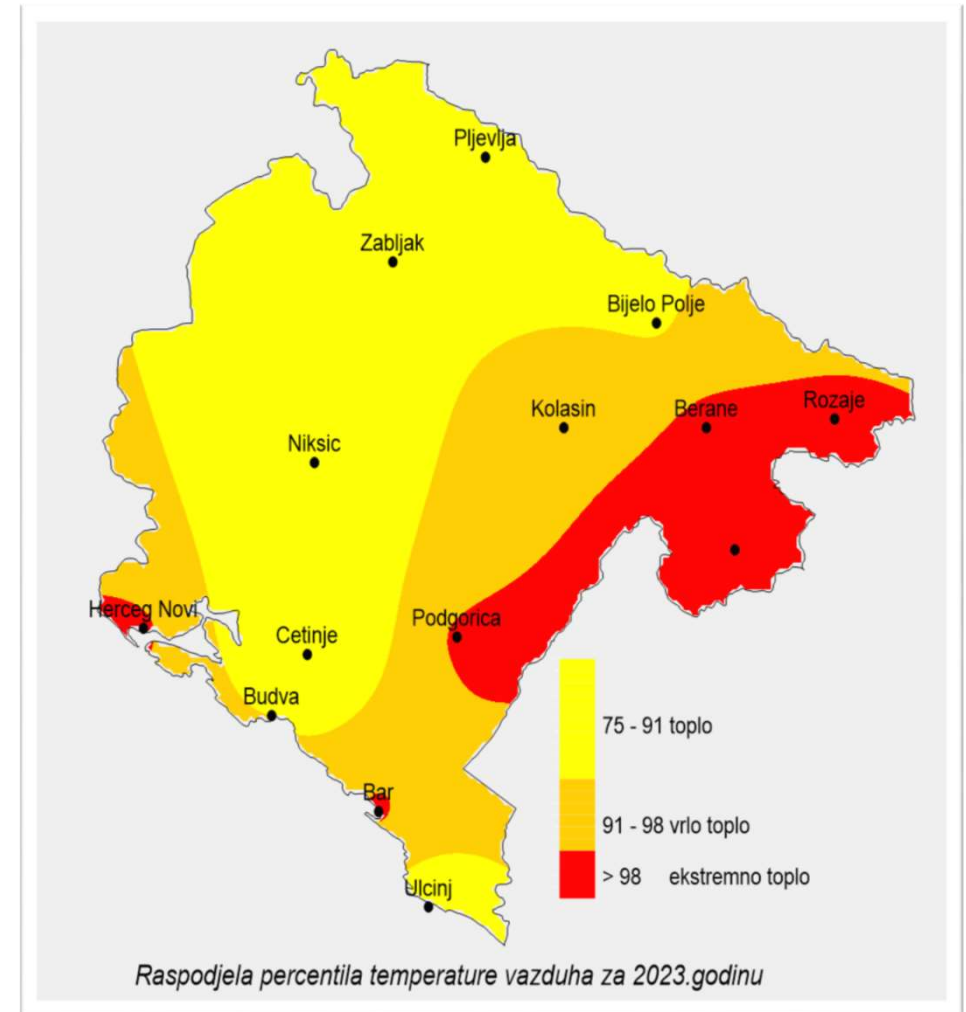
Deviation between 1991-2020 and 1961-1990

	winter	spring	summer	autumn
<i>North region</i>	1.5	1.5	2.4	2.0
<i>Central region</i>	1.7	1.6	2.3	1.8
<i>South region</i>	0.6	1.1	2.0	1.3



## Montenegro - characteristics of 2023.

- The warmest year since measurements exist.
- Compared to 2022, last year (2023) was warmer in all cities, by 0.9 °C in H. Novi to 2.2 °C in Bijelo Polje (North region), and in Podgorica by 1.2 °C.
- This fits in with WMO's announcement that 2023 is the warmest year on the planet.
- In July and August, the maximum temperature reached **over 40 °C**, in Podgorica and Bjelopavlička Ravnica and in Ulcinj.





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# Montenegro in the first quarter of 2024

- No winter – no ski season
- Plants bloomed at the end of February this year
- Everything was green at the beginning of March
- in the first half of April the temperature was often around 30°C and practically summer and last couple of days is around 15°C
- Quite unusual not to say upside down

Heavy rainfalls and Floods,  
North of Montenegro,  
28.11.2007. - Tara river





Flood, MNE,  
2010.





Flood, Danilovgrad, December 2010.



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The Debeli Namet  
Glacier,  
Durmitor, MNE

*"How it used to be"*



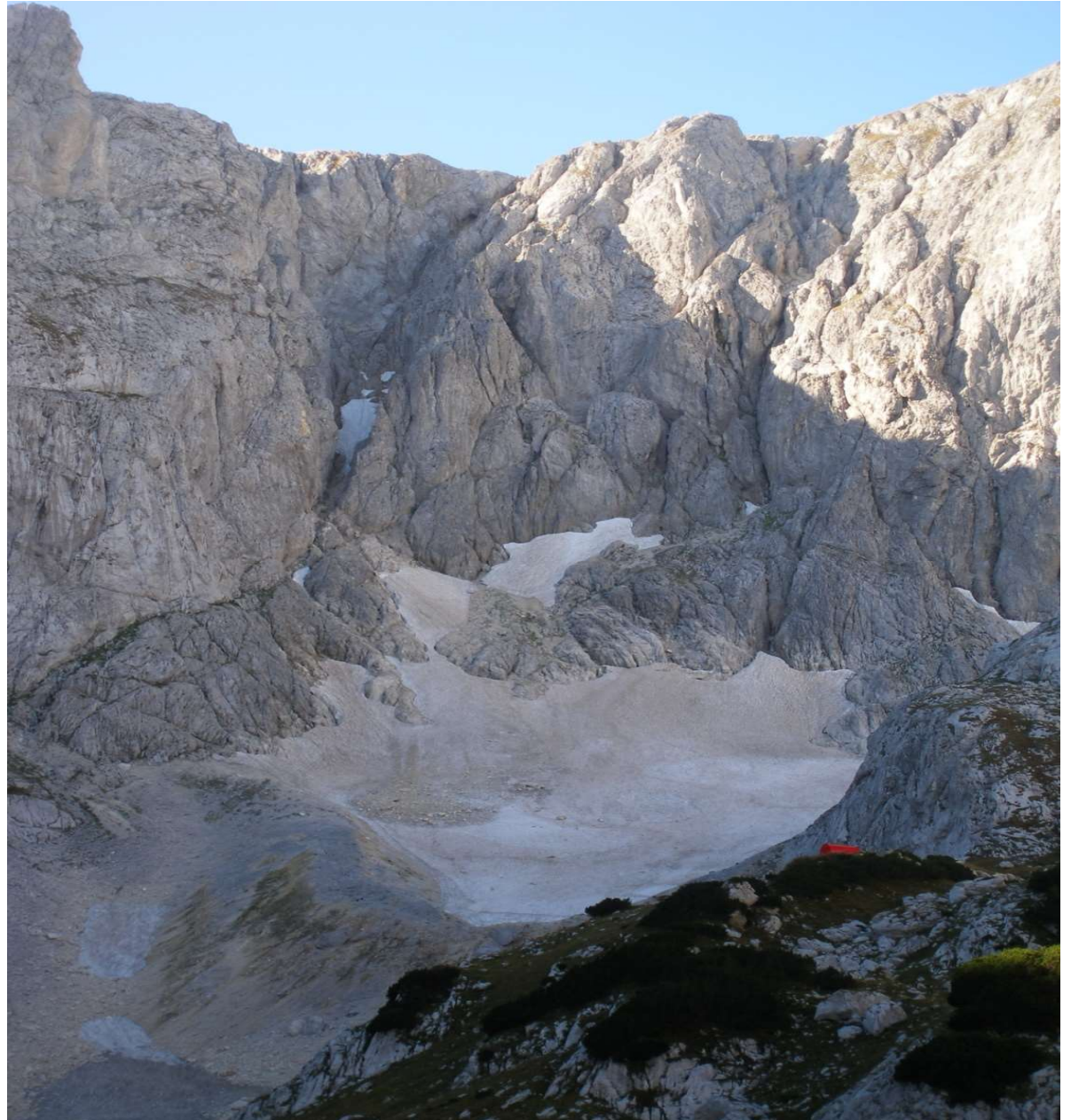




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The Debeli Namet Glacier,  
Durmitor, MNE  
2022







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Debeli Namet Glacier,  
Durmitor, MNE  
2023







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Ice Cave, DURMITOR,  
MNE







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Ice Cave, DURMITOR,  
MNE, 2023



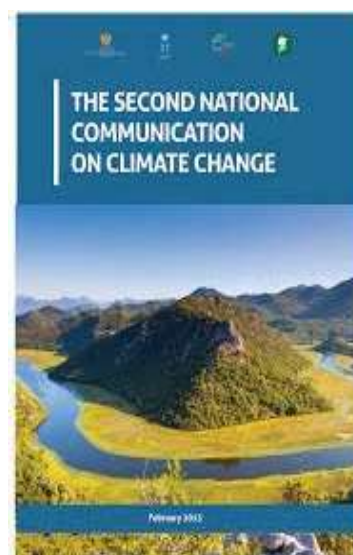
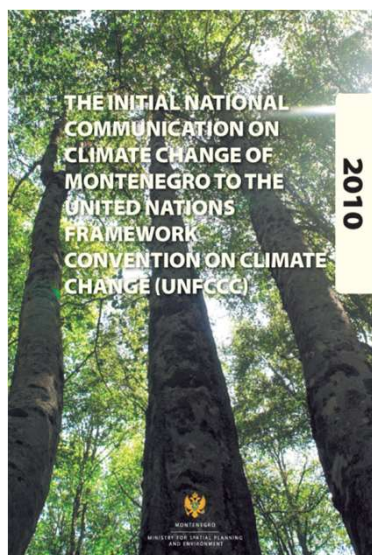
# Adaptation and mitigation strategies in Montenegro

	Entry into force	Status (07/2019)	Montenegro	
			Signature	Ratification
United Nations Framework Convention on Climate Change (UNFCCC)	21 March 1994	197 Parties		23 October <b>2006</b>
Kyoto Protocol to the UNFCCC (First commitment period 2008–2012)	16 February 2005	192 Parties	-	4 June <b>2007</b>
Doha Amendment to the Kyoto Protocol (Second commitment period 2013–2020)		130 Parties		26 December <b>2018</b>
Paris Agreement to the UNFCCC	4 November 2016	189 Parties	22 April <b>2016</b>	20 December <b>2017</b>

- Montenegro is one of the 197 member states of the United Nations Framework Convention on Climate Change, since 2006 (UNFCCC);
- Ratified the Kyoto Protocol on March 27, 2007;
- By ratifying the UNFCCC and the Kyoto Protocol, Montenegro joined the countries that take an active role in international efforts to solve climate change issues;
- Also, Montenegro is a signatory to the Paris Agreement (2016), by which it committed itself to contribute to the global reduction of greenhouse gas (GHG) emissions;

## National reports

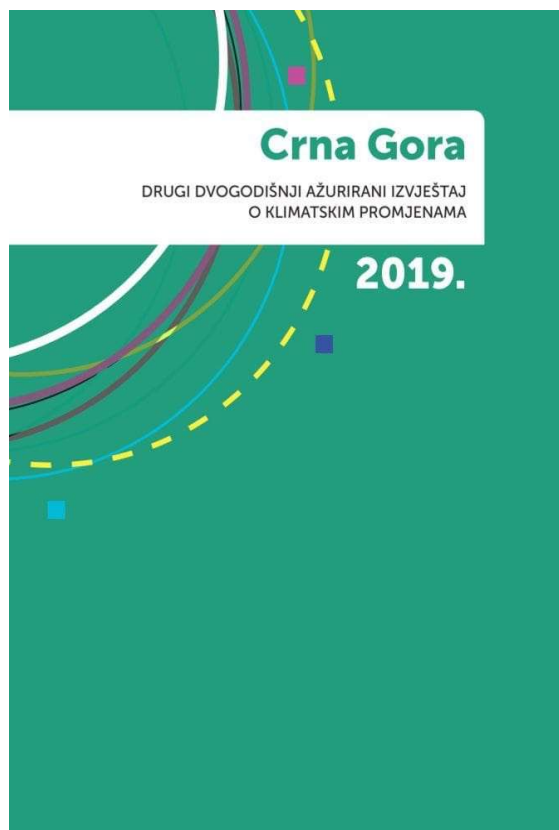
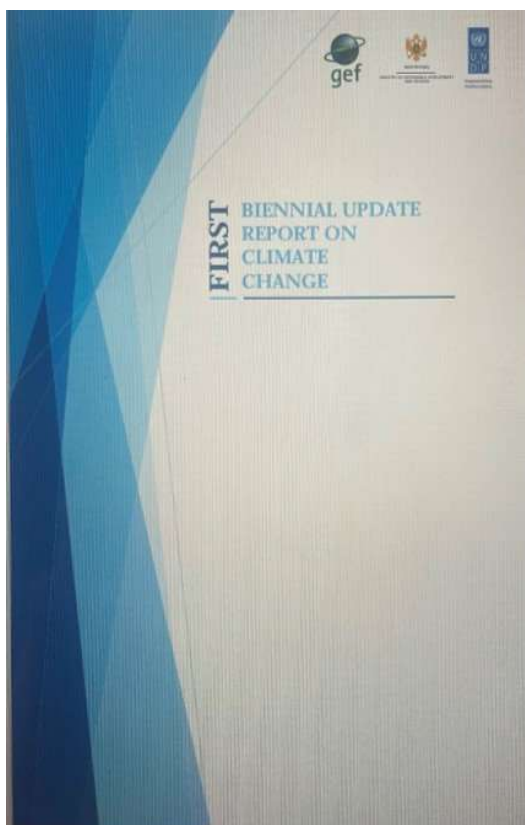
- Montenegro, as a member of the United Nations Framework Convention on Climate Change (UNFCCC) outside of Annex I, undertook to submit a National Report on implementation, in accordance with Article 12, paragraph 1 of the Convention;
- The Third National Report was submitted in 2020;
- The information described in this Report provides a concise overview of the efforts that Montenegro has invested in the climate change management plan;



Milena Marković, Ministry of Tourism, Ecology, Sustainable Development and Northern Development - Steps on the way to reducing gas emissions with the glass garden effect and achieving the same - Round table: "Round table on climate change" - Environmental Protection Agency Podgorica, 04/05/2024.



## Montenegro also worked on its Biennial Update Reports (BUR)



TREĆI DVOGODIŠNJI AŽURIRANI  
IZVJEŠTAJ CRNE GORE  
PREMA KONVENCIJI UJEDINJENIH NACIJA O  
KLIMATSKIM PROMJENAMA



Ministarstvo ekologije, prostornog planiranja i  
urbanizma



Program Ujedinjenih nacija za razvoj – Kancelarija  
za Crnu Goru

Podgorica, 2021.

1

Milena Marković, Ministry of Tourism, Ecology, Sustainable Development and Northern Development - Steps on the way to reducing gas emissions with the glass garden effect and achieving the same. Round table: "Round table on climate change" - Environmental Protection Agency Podgorica, 04/05/2024.

## Climate Law

- "Draft Law on Protection from the Negative Effects of Climate Change and Protection of the Ozone Layer"
- The law is in the final stage, and its adoption is planned for September 2024.

## National strategy in the field of climate change

- In 2015, the Government of Montenegro adopted the National Strategy in the field of climate change until 2030 (a 30% reduction in greenhouse gases is planned);
- Key policy instrument for climate change management;

*Legislative and strategic framework in the field of climate change*



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# Next steps

- Adoption of the new Law on Protection from the Negative Impacts of Climate Change and Protection of the Ozone Layer;
- Preparation of the Low Carbon Development Strategy;
- Finalization of NAP; "Strengthening of the Montenegrin National Determined Contribution (NDC) and adjustment activities within the framework of transparency" through the initiative for capacity building for transparency - CBIT;
- Biennial Report and Fourth National Report of Montenegro on Climate Change (FNC);
- Analysis of carbon prices in Montenegro - supported by the World Bank

# Health sector

- The heat waves, floods, drought, and forest fires pose a moderate to high risk to the health of the Montenegrin population
- Program for Adapting the health system to Climate Change in Montenegro for the period 2020-2022, in the baseline climate change scenario, estimated annual high-temperature mortality at 55 deaths
- Starting in 2013, IPH MNE regularly publishing brochures and posters for the general population and vulnerable groups (children, pregnant women, elderly, chronically ill) to improve the knowledge of the general population about the effect of high temperatures on human health and ways to protect themselves



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# Health sector

- Project “Enhancing Montenegro’s capacity to integrate climate change risks into planning”, started in 2023 and implemented by the UNDP Office in Montenegro with the support of the Green Climate Fund will focus on:
  - Improving the preparedness of staff, facilities and systems for climate hazards, through training, climate risk assessments and specific interventions;
  - Including and defining health sector’s role in hazard preparedness and response in the national and local level plans;
  - Early warning system to prepare the health sector for appropriate response during weather extremes, supported by training programmes to enhance knowledge and skills of the workforce in the health care facilities;
  - Development and promotion of education, awareness raising, guidelines and support of facilities for the population during heat waves and other extremes.



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# Note to consider

- Europe is engaged in various strategies to tackle global environmental and climate challenges such as the Green Deal and the Biodiversity Strategy 2030.
- Positive effects linked to urban greening have been reported on human health regarding respiratory diseases, cardiovascular diseases and mental health.
- Greening cities, however, could also be conducive to the emergence of vector-borne disease (VBD), such as West Nile fever, leishmaniosis, malaria, dengue, and tick-borne diseases.
- To ensure the viability of current and future urban greening initiatives, it is necessary to proactively identify and monitor how greening affects the risk of VBD, and to anticipate nature-based management solutions for tomorrow's cities.



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# Conclusions

- Climate change is one of the most complex global challenges of our time
- A quality and timely response includes recognition and management of potential hydro-meteorological risks, and a better understanding of how climate change will affect certain parts of our country now and in the future
- As a small developing country, Montenegro is extremely vulnerable to the effects of climate change;
- Montenegro actively implements climate change policy, both at the national and international level;



Ms. Cristina Abreu Santos,  
Member of the Executive  
Board, National Institute of  
Health Doutor Ricardo Jorge  
(INSA), Portugal

# MANIFESTATIONS OF CLIMATE CHANGE IMPACTS ON HEALTH AND ADAPTATION AND MITIGATION STRATEGIES IN PORTUGAL





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# IANPHI RECOGNIZES CLIMATE CHANGE AS A MAJOR THREAT TO THE HEALTH AND WELL-BEING OF THE WORLD POPULATION

“NPHIs should play a central role in the joint actions that are urgently needed to mitigate climate change, restore nature, and adapt to new risks.”

Source: Pascal M, Phalkey R, Rigal L, Zoonekyndt A, Mathieu A, Gillingham EL, Denys S, Oliver I, Chêne G, Selbie D. Public health institutes and the fight against climate change. *Lancet Public Health*. 2022 Mar;7(3):e209. doi: 10.1016/S2468-2667(22)00032-9. PMID: 35247351; PMCID: PMC8890770.



Source: IANPHI ROADMAP FOR ACTION ON HEALTH AND CLIMATE CHANGE ENGAGING AND SUPPORTING NATIONAL PUBLIC HEALTH INSTITUTES AS KEY CLIMATE ACTORS. November 2021



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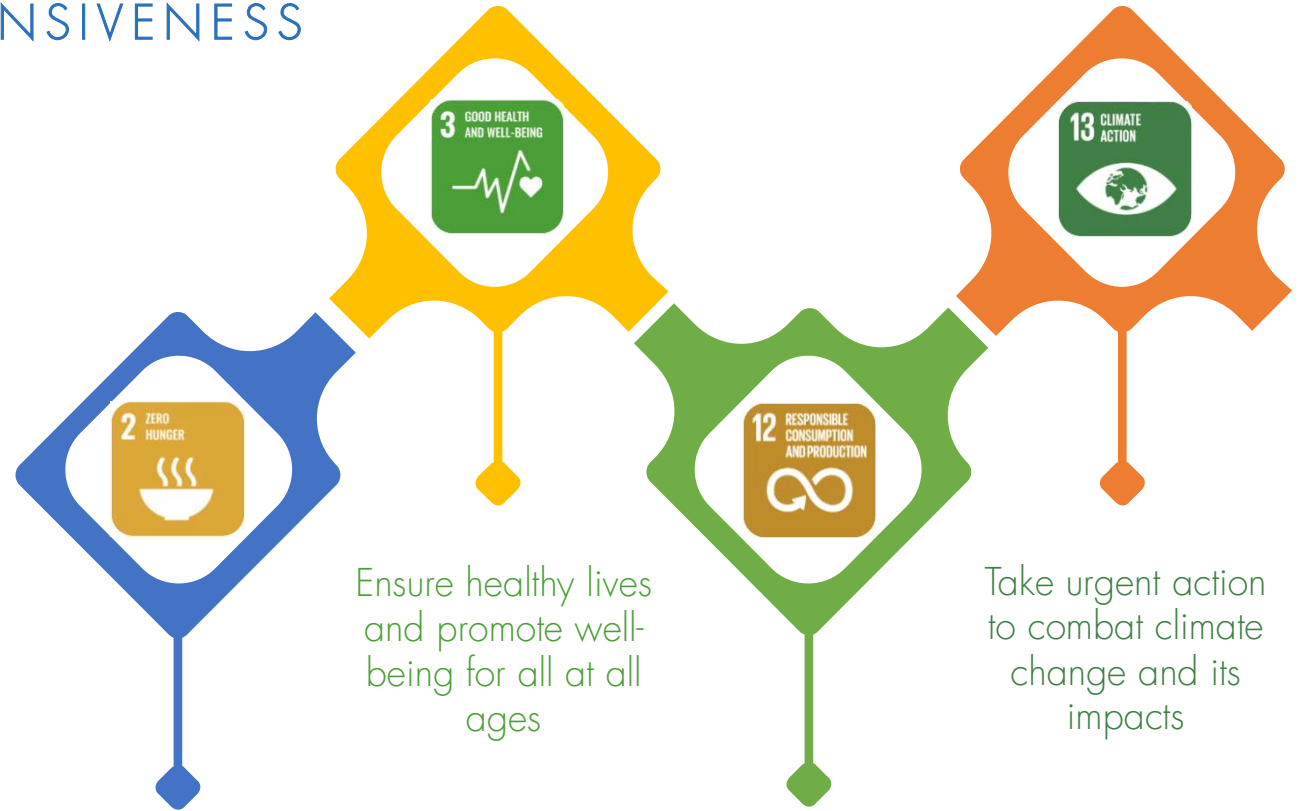
## REDUCE NEGATIVE EFFECTS AND INCREASE RESPONSIVENESS

2030 Agenda for Sustainable Development (2015)

17 Sustainable Development Goals

Call for action by all countries - developed and developing - in a global partnership

Ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.



End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Ensure healthy lives and promote well-being for all at all ages

Ensure sustainable consumption and production pattern

Take urgent action to combat climate change and its impacts



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## WHAT DOES INSA DO?

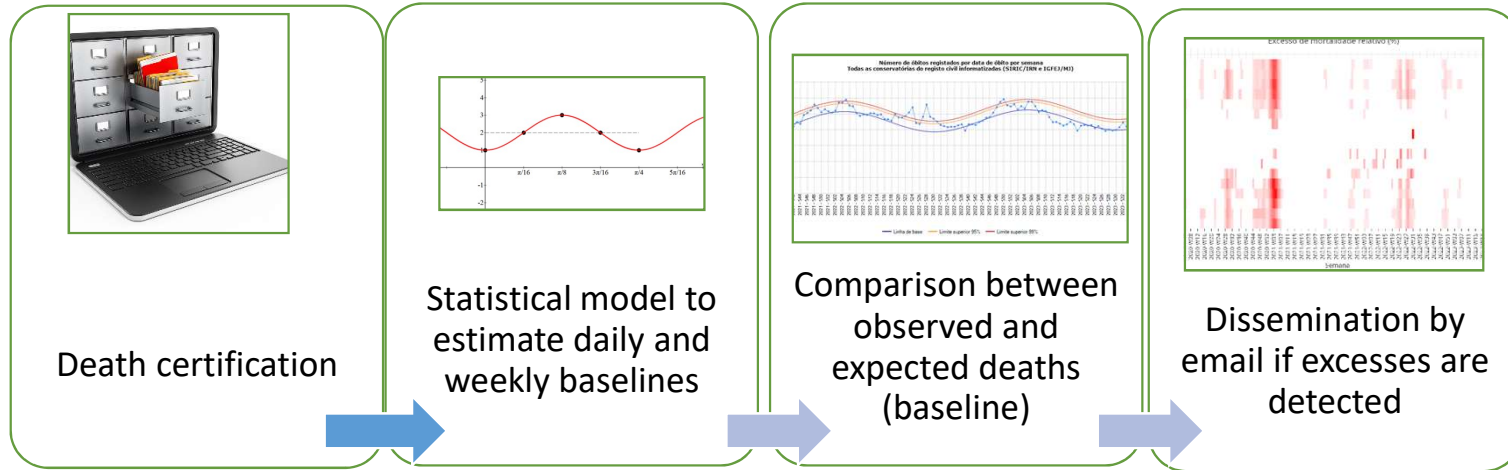
OUR ACTIONS TO FIGHT  
AGAINST CLIMATE CHANGE

National Institute of Health Doutor Ricardo Jorge (INSA)  
Portugal



SOME EXAMPLES...

## Mortality monitoring (since 2003...)



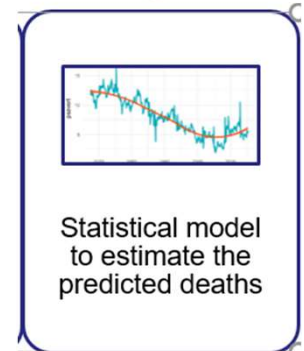
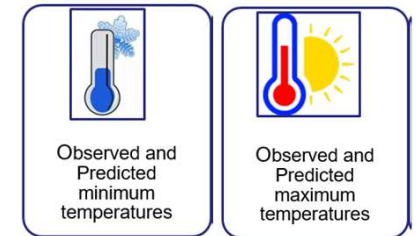
- All country
- Death certification
- Since 2014 electronic death certification (SICO) is mandatory

- For each strata
  - National
  - Mainland
  - Health regions and Autonomous regions
  - Age groups

- Rules to detect periods of excess mortality
  - 1 week/day above 99% CI of baseline
  - 2 consecutive week/day above 95% CI of baseline

- Ministry of health
- Directorate-General for Health
- Public health departments

## Early Warning Systems













## Nowcast / Forecasting

### Objective

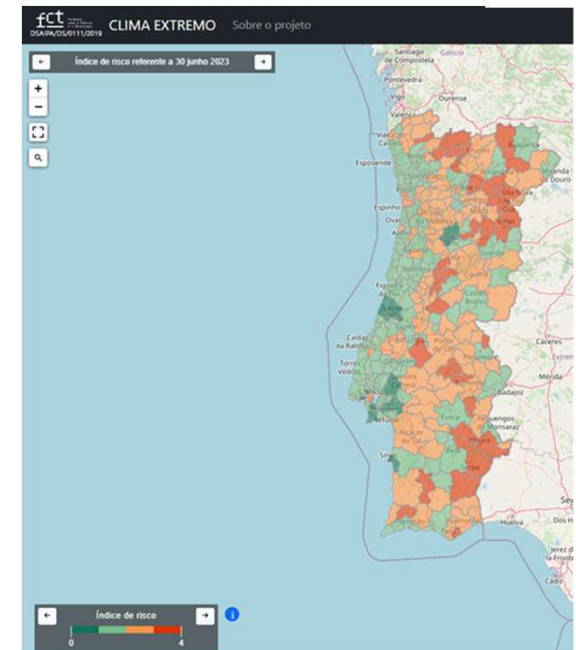
- Develop a public geographic dashboard with real time information and high spatial resolution on the buildings occupants' health risk during extreme weather events (EWE) - heat and cold waves.

### Methodology

## Risk Assessment

	<b>Analyse historical information of health indicators and develop new models</b>	
	<b>Weather forecast with high spatial resolution</b>	
	<b>Update socio-demographic information (last source: Census2011)</b>	
	<b>Analyse Energy Performance Certificate (EPC) of buildings and develop thermal Comfort models</b>	
	<b>Develop a webpage dashboard and real time API</b>	

<http://climaextremo.vps.tecnico.ulisboa.pt/>





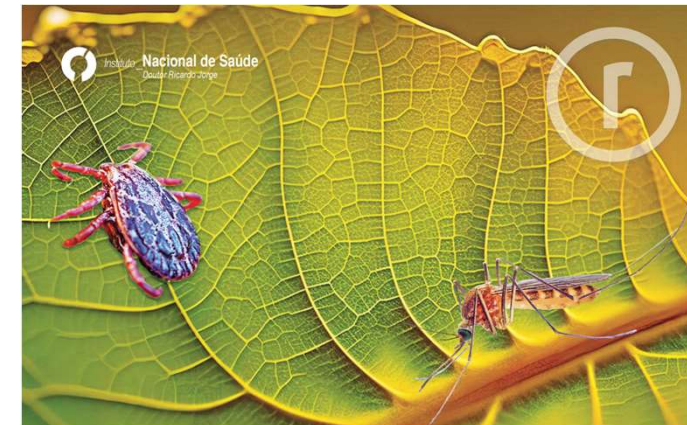
## Coordination of the National Vector Surveillance Network

Climate change with the potential:

- to increase the distribution and abundance of animal or arthropods reservoirs
- to prolong the cycle of transmission of those vectors
- increase the importation of vectors and their reservoirs
- increase the risk of zoonotic diseases



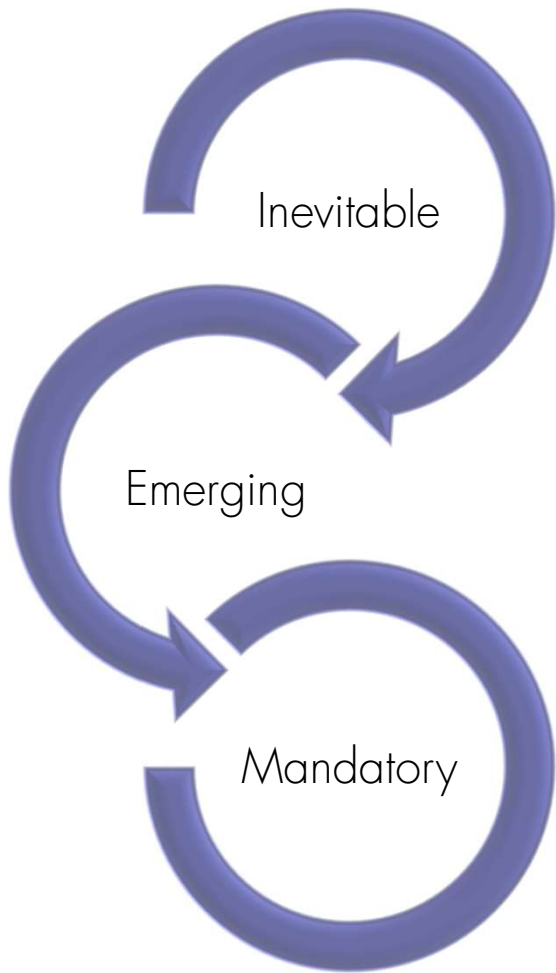
Collaborative  
surveillance systems



Citizen science to investigate  
and control disease-carrying  
mosquitoes

<https://www.mosquitoalert.com/en/>

# CLIMATE CHANGE HAS AFFECTED FOOD PRODUCTION



Rising temperatures are reducing the production of cereals (corn, rice, wheat) and crops around the world



The price of wheat has risen by around 90% due to bad weather conditions in the main producing countries

Water scarcity as a result of global warming is seriously compromising food production



The Earth is losing biodiversity at an unprecedented rate

# FOOD SUSTAINABILITY AND ALTERNATIVE FOOD SOURCES

Alternative protein sources in the European diets Integrating health risk-benefit and sustainability

TRICAFÉ

ALTERNATIVA

Gorongosa café - sustainable coffee production in the Gorongosa National Park in an integrated agroforestry system in the context of deforestation, climate change and food security

Edible insects: From sustainable food production to a food safety concern

ENTOSAFE

Stored grain contamination by insect pests and fungi

SafeGrain

Valorisation of fruit by-products as multi functional food ingredients and functional foods for diabetics

Food4DIAB



## HUMAN BIOMONITORING & RISK ASSESSMENT

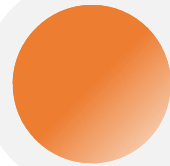
Which is the risk of exposure of the European population to chemicals? Main gaps and needs?

**HBM4EU**  
European Human Biomonitoring Initiative



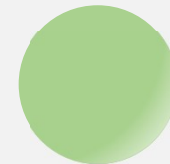
Are pregnant women and infants until six months exposed to mycotoxins? Is this exposure a health threat?  
Which is the burden derived from the exposure to mycotoxins?

**EarlyMYCO**  
Early-life exposure to MYCOtoxins and its impact on health



Is there a road map to the routine implementation of human health risk assessments regarding aggregate, dietary and non-dietary exposure to chemicals ?

**ExpoAdvance**  
Development for a roadmap for action for advancing aggregate exposure to chemicals in the EU



## OTHER INITIATIVES

INSA supports the development of regional strategies in the health sector, namely regarding indoor air quality and vector-borne diseases

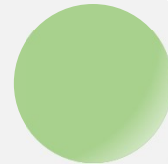
ENAAC 2020  
National Strategy for Climate  
Change Adaptation



Water quality



Energy Certification of Buildings  
and Indoor Air Quality



INSA collaborated with technical-scientific advice related to indoor air quality in the preparation of legal diplomas, that establish the requirements and the methodology to be followed in the assessment

Development of research studies, evaluating the resistance to biocides of various environmental microorganisms such as Legionella.

Monitoring of the introduction of emerging and re-emerging pathogens with wastewater surveillance



Thank you! Obrigada!

[cristina.abreusantos@insa.min-saude.pt](mailto:cristina.abreusantos@insa.min-saude.pt)



Prof. Dr. Mika Salminen,  
Director General, Finnish  
Institute for Health and Welfare  
(THL), Finland

# MANIFESTATIONS OF CLIMATE CHANGE IMPACTS ON HEALTH AND ADAPTATION AND MITIGATION STRATEGIES IN FINLAND



Manifestations of  
Climate Change  
Impacts on Health  
and Adaptation and  
Mitigation  
Strategies in Finland

Mika Salminen

Finnish Institute for  
Health and Welfare

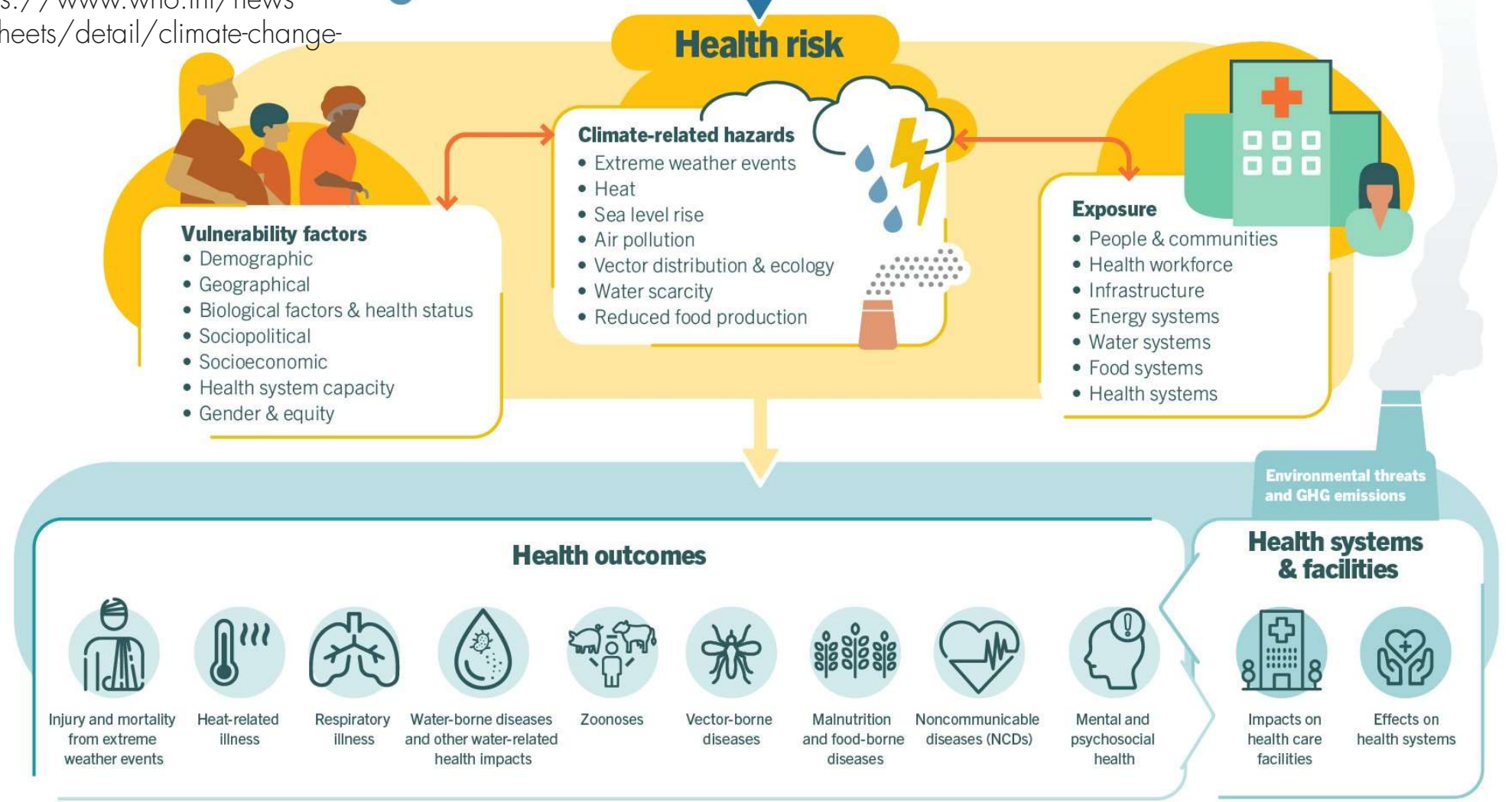
24/06/2024



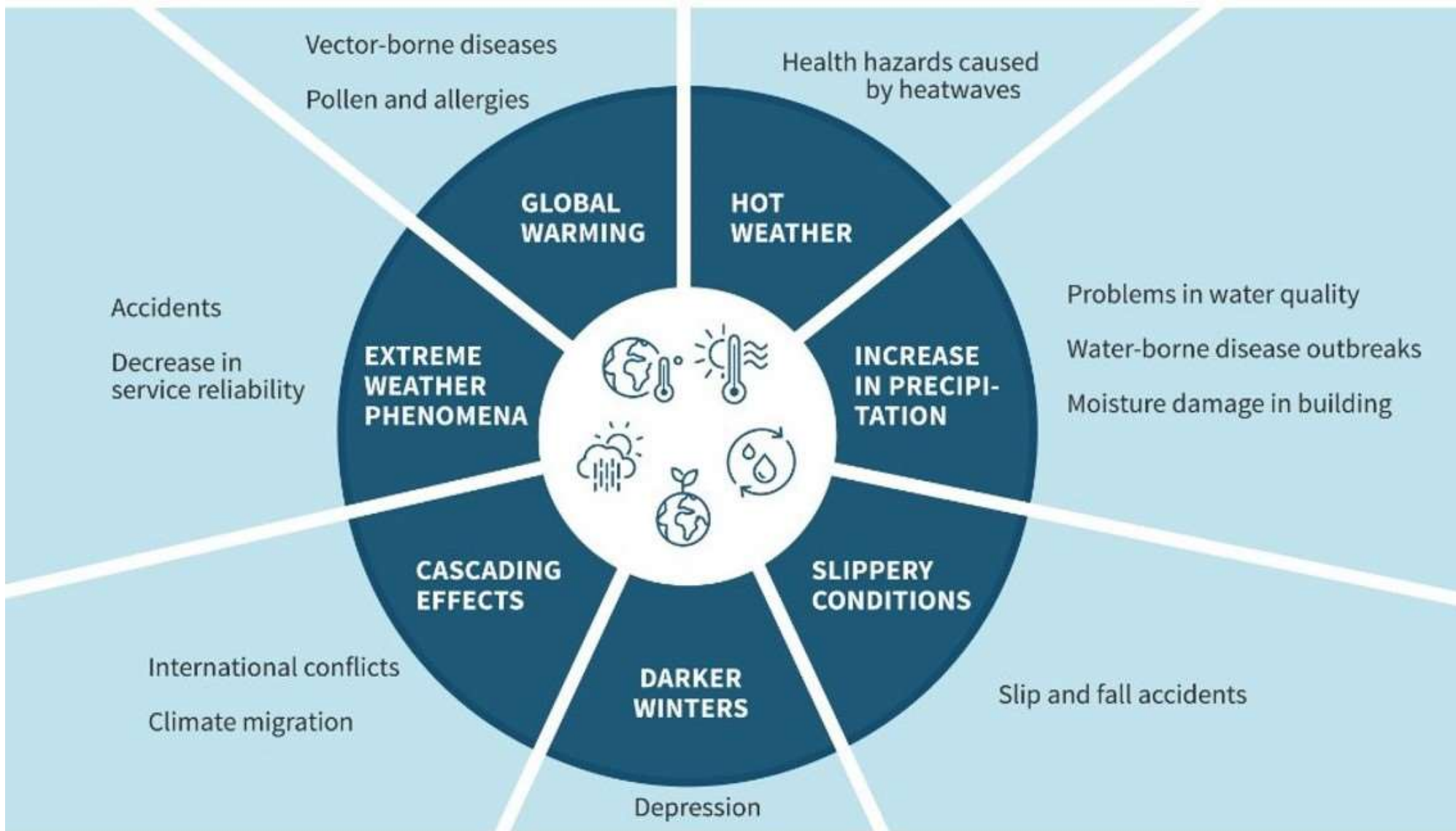


# Climate change

Source: <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>





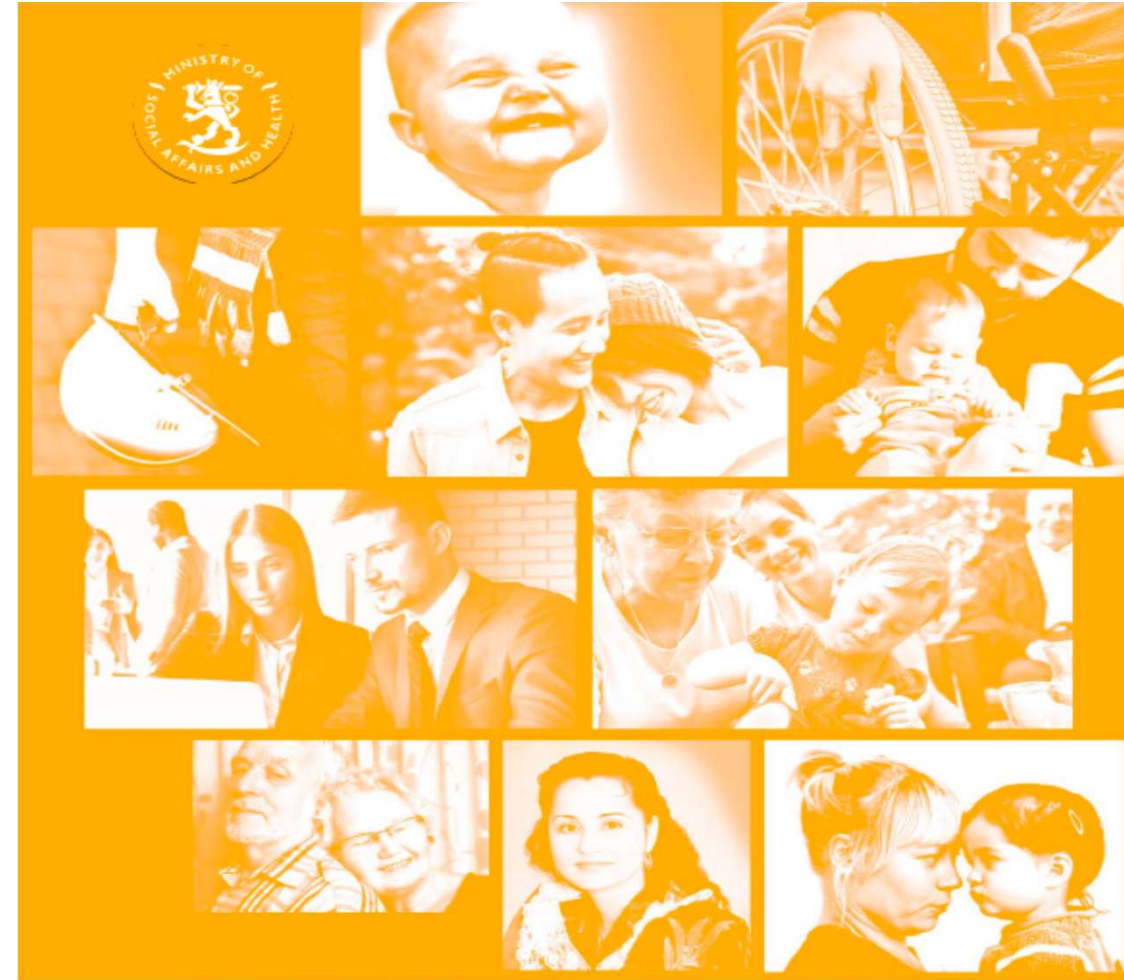


## Climate change adaptation plan of Ministry of Social Affairs and Health (2021–2031)

- Determine the current state of adaptation and the structures supporting it,
- identify existing and new adaptation actions in the area of health and welfare,
- concretise and clarify the actions set out in the national adaptation strategy within the responsibility area of the administrative branch of the Ministry of Social Affairs and Health,
- deploy the adaptation plan for social welfare and health care actors, and
- mainstream adaptation to climate change by increasing risk awareness.



Plan includes 92 action points

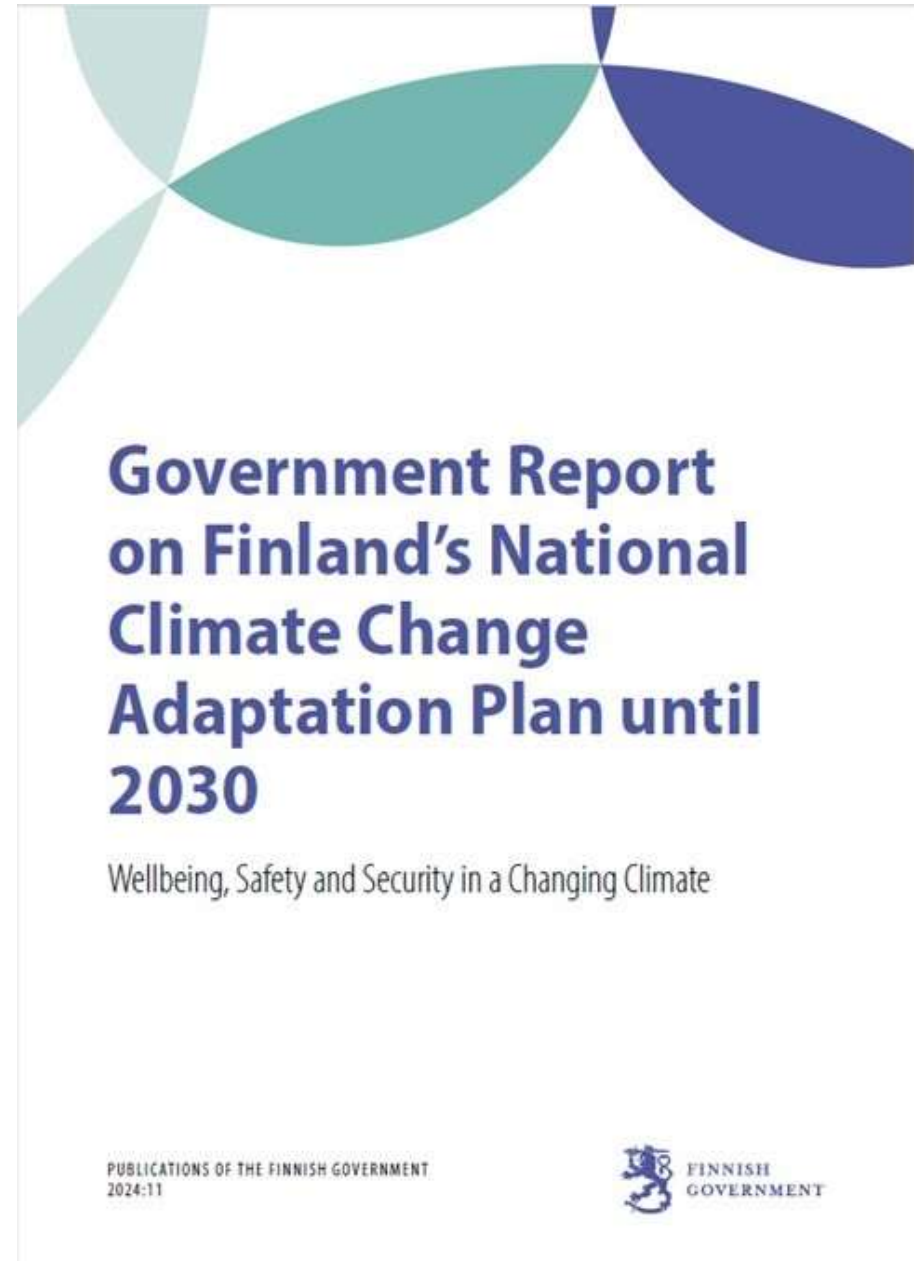


**Climate change in the social and health sector**

Climate change adaptation plan of  
Ministry of Social Affairs and Health  
(2021–2031)

## Government Report on Finland's National Climate Change Adaptation Plan until 2030

- Action 14.1 Drawing up a **national action plan** for the prevention of negative health impacts from heat
- Action 14.2 Launching heatwave preparedness and adaptation measures on the basis of the national action plan
- Action 14.3 Setting up a monitoring mechanism for heat-related mortality, to monitor heat-related deaths on a weekly basis during the summer period
- Action 14.4 Updating the action levels for temperature conditions of the Housing Health Decree



# Current stage of implementation



Emission of health and social care sector estimated for Finland  
([Ekosote –project](#), MSAH actions 77, 83)



Drawing up national action plan to prevent health impacts on heat 2024-2025 (MSAH action 1, National action plan 14.1)



Development of climate change adaptation tool for water security 2024-2025 (MSAH action 20)



Monitoring tools and indicators for the plans are being developed (MSAH actions 89, 92)



# Current stage of implementation

We are compiling existing strategies and implementation plans from wellbeing services counties regarding (Isohoito -project)

- 1) adaptation to and mitigation of climate change,
- 2) preparedness and adaptation to heat risks, and good practices related to climate change mitigation, as well as barriers and contributing factors to their implementation.
- Measuring data to support updating the action thresholds for safe indoor temperatures during summer (National action plan 14.2 and 14.4, MSAH actions 5, 62, 64, 70)

Interim reviews of the adaptation plans in 2026 (MSAH action 92)

Implementation of adaptation actions in LIFE SIP proposal (National action plan 14.2, 14.3, MSAH several actions)





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# Developments and challenges

- The general awareness has strengthened
- The need to plan adaptation measures has been identified
- Regional analyses have become more common
- The adaptive capacity has strengthened
- Some ongoing R&D activities



- Only few obligations or concrete goals
- Responsibilities are multi-dimensional
- The development is largely been based on projects
- The lack of regional and local climate data
- Lack of information about the costs and benefits
- Systematic monitoring missing





Prof. Enver Roshi Lecturer of  
Public Health, National Focal  
Point, Institute of Public Health,  
Albania

# PRESENTATION OF THE WORK OF THE IANPHI COMMITTEE ON CLIMATE CHANGE AND PUBLIC HEALTH



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Climate change is a major public health threat.

IANPHI recognizes climate action as a critical global public health intervention

- Limiting the increase in global average temperature to **1.5°C** and **protecting biodiversity** are essential to the health and well-being of current and future generations
- Recovery from the COVID-19 pandemic offers an **unparalleled opportunity**
- Health in all climate policies and climate in all health policies!
- Climate and health benefit from actions on: food systems and diets, limiting air pollution, access to clean water, sanitation and hygiene, transport, protection of natural ecosystems...

<https://ianphi.sharepoint.com/sites/IANPHICommittees/>



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## "ENGAGING AND SUPPORTING NATIONAL PUBLIC HEALTH INSTITUTES AS KEY CLIMATE ACTORS"

- The IANPHI Secretariat hosted on **9 October 2020** a webinar entitled "Public Health and Climate Change Challenges: Mobilizing National Public Health Institutes into multi-sectoral alliances"
- Following this webinar, the IANPHI members expressed their interest in participating in a working group on public health and climate change.
- **In 2020**, IANPHI established a working group on public health and climate change and the Climate Change and Health Committee with the objectives *of promoting international collaboration between NPHIs* and *other stakeholders and highlighting NPHIs'* roles in climate change adaptation and mitigation policies. The committee brought together 28 member NPHIs to work on climate and health issues.
  - **In 2021**, the committee drafted the [IANPHI Climate Roadmap](#), which highlights and advocates for the key role of NPHIs in climate adaptation and mitigation.
- Engaging and supporting national public health institutes as key climate actors
- To strengthen the world's national public health institutes as key climate actors
- To support NPHIs in their development as key climate actors, IANPHI commits to the following initiatives responding to five priorities
  - **In 2022**, the committee created Subgroups to tackle specific areas under climate change and health:
    - Climate indicators
    - One Health
    - Adaptation
    - Risk assessment

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5 priorities of actions  
defined in the Roadmap  
by IANPHI Climate  
Change and Public Health  
Committee

IANPHI Climate Change and Public Health Committee  
2024-2025 Work plan

- Advocacy for strengthening the capacity of NPHIs to contribute to climate and biodiversity research, policies and action
- Enhance capacity, competence and training through peer-to-peer support and knowledge sharing between NPHIs
- Increase collaboration with international and regional organizations active in the fields of public health and climate change
- Support the greening of public health services
- Monitor progress in the NPHIs' involvement in climate change through key indicators

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## Objectives and scope of Climate Change and Public health Committee

- ❑ To promote international collaboration between NPHIs and other stakeholders, particularly international organisations, and show NPHIs' roles in climate change adaptation and mitigation policies including to identify common goals, based on evidence, of what should be done for the benefit of public health regarding climate change, risk assessment
- ❑ The working group's objectives and activities are motivated by the need to identify common goals, based on evidence, of what should be done for the benefit of public health regarding climate change
- ❑ The working group aims to not only relay the information, but also build a reflection on how could behaviors and policies change, and what role the NPHIs would play in these changes.

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## WORKPLAN

### ➤ KEY DELIVERABLES FOR 2024-2025

- Develop and disseminate resources and knowledge
- Engage external partners in dialogue, collaboration, partnership initiatives
- Scope and identify key opportunities for collaborative work aligned with external priorities
- Submit proposal(s) for external funding

### ➤ COMMITTEE STRENGTHENING

- Organize Thematic Committee meetings
- Continue Thematic Sub-Groups
- Establish a Committee with diverse membership and clear commitments
- Include mindfully under-represented groups e.g., women leaders
- Recruit new members

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## WHAT DO NPHIs DO?

NPHIs all provide [core public health functions](#) that improve their countries' efforts to address public health challenges both within and beyond their borders.

- National public health institutes are the cornerstone of public health practice in most countries
- NPHIs are evidence-based trusted advisors for health protection, prevention and improvement guidance to decision-makers and the general public
- NPHIs are already mapping, monitoring and addressing the physical and mental health impacts of climate change

Benefits:

- Improved delivery of public health services
- More efficient use of funds
- Ability to generate and share knowledge, data, and evidence to inform public health decisions and policies

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# WHAT DO NPHIs DO?

National public health institutes (NPHIs)\*, should play a **central role in the joint actions** that are urgently needed to mitigate climate change, restore nature, and adapt to new risks.

Their main functions include, but are not limited to,

- surveillance and control of health risks,
- early warning systems,
- emergency management,
- regulation,
- prevention and health promotion,
- community engagement,
- social mobilization for health, and research.
- integrated analysis of the overlapping and cascading effects of climate change
- development of common indicators to support adaptation and mitigation policies
- evaluation of current adaptation strategies, evaluation of the health promotion tools that could support mitigation strategies, and actionable translation of the concepts of One Health and Planetary Health.
- NPHIs should be more involved in research on climate change and health to harness their key roles in translating science into policy and practice.