



Climate-resilience and sustainability in the WHO European Region

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Climate change

Vulnerability

- Vulnerability factors**
- Demographic factors
 - Geographic factors
 - Biological factors & health status
 - Sociopolitical conditions
 - Socioeconomic factors

- Exposure pathways**
- Extreme weather events
 - Heat stress
 - Air quality
 - Water quality and quantity
 - Food security and safety
 - Vector distribution & ecology

- Health system capacity & resilience**
- Leadership & governance
 - Health workforce
 - Health information systems
 - Essential medical products & technologies
 - Service delivery
 - Financing

Climate-sensitive health risks

Health outcomes

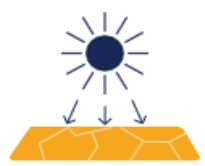
- Injury and mortality from extreme weather events
- Heat-related illness
- Respiratory illness
- Water-borne diseases and other water-related health impacts
- Zoonoses
- Vector-borne diseases
- Malnutrition and food-borne diseases
- Noncommunicable diseases (NCDs)
- Mental and psychosocial health

Health systems & facilities outcomes

- Impacts on healthcare facilities
- Effects on health systems



A rise of **1.94 – 1.99°C** has been seen in Europe's average temperature since preindustrial times.



> 61000 excess heat deaths were caused in the summer of 2022, the Region's hottest on record.



> 47 000-117 000 heat-attributable deaths per year are likely to be caused by high ambient temperatures between 2071 and 2099.

Climate actions by the health sector – leading by example

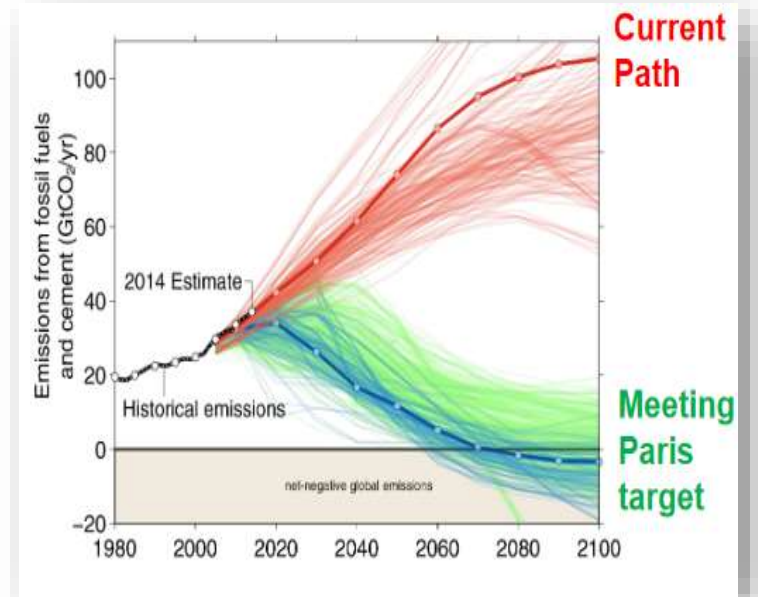
Protect health from full range of rising climate risks



Make healthcare facilities climate-resilient and environmentally sustainable



Reduce greenhouse gas emissions from health systems



Reduce carbon emissions to protect health (air quality)



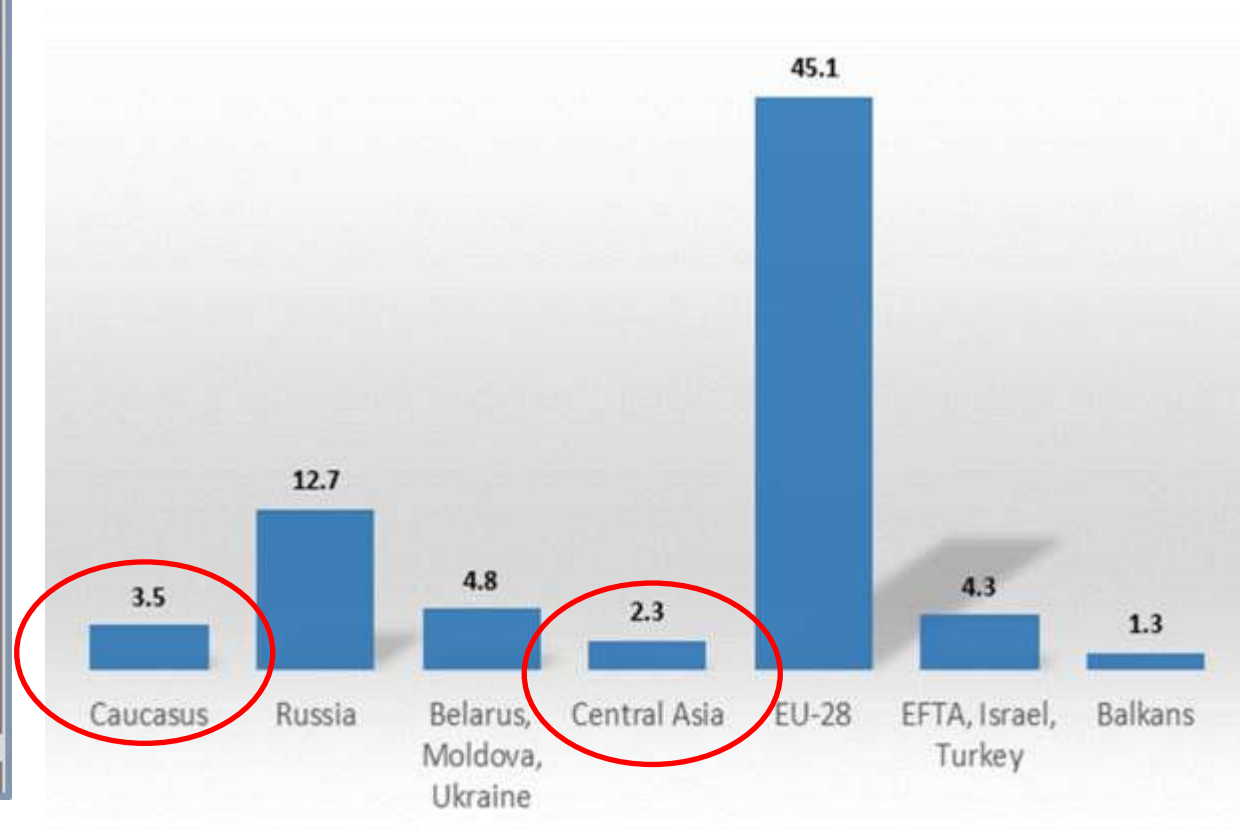
- Common drivers of climate change and air pollution
- A range of measures is available: reduced emissions, urban planning, behavioral change ...
- Exploring synergies for health co-benefits
- Up to date evidence of the health effects of air pollution is crucial to support action



Averted morbidity and mortality from reductions in PM2.5 ambient concentrations

Country/Region	Children		Adults Bronchitis	Labor force WLD	All ages		Mortality	
	Bronchitis	Asthma			RAD	HA	Deaths	YLL
Albania	600	2,658	78	30,131	127,080	56	97	1,126
Armenia	1,417	6,280	355	116,345	615,231	427	515	5,608
Azerbaijan	9,169	40,622	1,647	608,013	3,112,000	2,112	2,343	31,920
Belarus	3,864	17,120	536	202,115	859,603	623	1,052	9,959
Bosnia and Herzegovina	950	4,210	190	63,555	283,909	209	304	2,951
Georgia	1,788	7,920	419	135,744	735,936	506	661	6,562
Iceland	22	97	2	833	3,938	1	2	27
Israel	1,656	7,336	235	106,321	484,453	200	210	2,578
Kazakhstan	5,160	22,858	705	280,902	1,520,788	1,000	1,124	14,428
Kyrgyzstan	255	1,129	28	11,879	65,703	42	35	537
Montenegro	56	250	15	5,829	24,947	18	24	225
Norway	1,696	7,512	198	128,866	275,732	204	224	2,411
Republic of Moldova	1,670	7,396	237	89,704	381,098	276	436	4,566
Russian Federation	47,526	210,553	6,377	1,979,202	10,821,770	7,495	12,682	125,551
Serbia	1,218	5,397	345	128,960	561,165	406	635	5,421
Switzerland	2,833	17,569	446	140,239	699,328	294	497	5,127
Tajikistan	1,927	8,535	174	78,519	446,065	279	200	3,454
FYR of Macedonia	1,097	4,862	171	12,158	317,904	195	249	2,733
Turkey	37,381	165,606	3,542	585,958	7,336,563	3,735	3,406	57,273
Turkmenistan	690	3,058	100	40,983	208,919	140	148	2,390
Ukraine	11,027	48,852	1,551	222,413	2,840,115	1,799	3,331	30,680
Uzbekistan	4,184	18,536	588	240,962	1,245,480	829	803	12,649
EU-28	213,803	1,238,199	31,671	11,434,668	49,578,786	28,134	45,070	408,122
Total (thousands)	350	1,847	50	16,644	82,547	49	74	736

Averted annual mortality (prevented premature deaths) (thousands) from implementation of NDC pledges in the 53 Member States in 2030 for emission cuts



Source: CaRBohn tool , 2018
Updated, 2023

Abbreviations: WLD = work lost days; RAD = restricted activity days; HA = hospital admissions; YLL = years of life lost

Source: Output of CaRBonH software

In the regional and global policy space

CLIMATE-RESILIENT HEALTH SYSTEMS ...

- Conduct vulnerability and adaptation assessments
- Develop Health National Adaptation Plans

... SUSTAINABLE LOW-CARBON

- Deliver baseline assessment of GHG emissions of the health system
- Develop an action plan to develop a sustainable low carbon health system



Conclusions

- Climate change is **here and now**
- Its consequences become **more and more shrill**
- Health sector needs to walk the talk to become **climate-smart, climate-resilient and environmentally sustainable** while ensuring essential services
- This is not an additional burden – this brings **health co-benefits** and safeguards **quality of care**
- **Converging initiatives** in different policy domains: **“handshake”** is needed between healthcare/health system-oriented processes and climate/environment-oriented processes



Thank you

- More information at:
<https://www.who.int/europe>
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