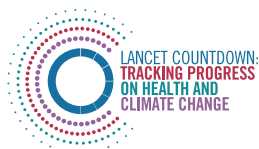


The Lancet Countdown on Health and Climate Change

Policy brief for Norway

2021



UNIVERSITY
OF OSLO



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Introduction

Code red has been declared for planet Earth. Life as we know it is threatened due to overexploitation of natural resources and emission of greenhouse gases. The Intergovernmental Panel on Climate Change (IPCC) sixth assessment report (2021) clearly emphasizes what is at stake.¹ The COVID-19 pandemic has further demonstrated the urgency in understanding and addressing the complexity of Planetary Health.

The European Commission states in their mission report, “A Climate Resilient Europe”²,: “The COVID-19 pandemic has taught a lesson about how closely environmental, societal and human health are connected. What we have lived through and still will is a mild foretaste of the shocks that climate change may and will cause in the future”. Europe must prepare for stormy weather and must do this by activating a range of societal means. The complexity and interconnectedness of climate change due to human activity as one of the greatest threats to human health are comprehensively laid out in the annual Lancet Countdown report.³

Since the 1987 Brundtland report⁴, Norway is the self-appointed leader in the fight against climate change and nature loss. With a high level of population trust in authorities, strong social institutions, and a high level of education and wealth, the nation should be ideal for this role.

These traits, however, may have led to a degree of inertia. This was indicated in the surprising outcomes of a recent poll⁵ where Norway ranked third among the *least* climate concerned people, just behind Saudi Arabia and the United States. Despite the publication in 2019 of a Norwegian Directorate for Civil Protection report ranking a pandemic and lack of access to critical medicines as the two most threatening scenarios (with climate change as third), this did not lead to political action, causing major challenges and criticisms when the impacts of COVID-19 manifested themselves.⁶

Norway is already experiencing threats to health caused by a changing climate. To prepare for related extreme events and their bearings on health, issues like those below must be lifted and addressed on the political and societal agenda.

Recommendations

1

Develop public risk analyses for physical and mental health coupled to climate change

National health authorities must, in collaboration with the Water Resources and Energy Directorate and The Norwegian Directorate for Civil Protection, provide regional and local health risk assessments for future scenarios related to flood and climate-induced hazards.

2

Health emergency preparedness and response plans must consider events caused by climate change and disruption of ecosystems

Potential public health threats caused by a changing climate and destruction of nature must advance on the political agenda and should be coordinated by the Ministry of Health.

3

Media is encouraged to convey climate change as a public health threat

The health profession can play an important advocacy role by communicating threats, risks and opportunities to the media, public and policy makers.

Focus topics

1. Floods and drought

The Climate and Health document by The Norwegian Environmental Agency states: “The Norwegian population in general have good health status, and as such is geared to cope with the impacts of climate change. Still, increased precipitation, heatwaves and droughts will have health implications”.⁷ The document ranks floods and avalanches at the top, followed by heatwaves, new diseases, food supply disruption, allergy increase and air quality aggravation, release of toxic compounds, increased demands for biocides and finally, mental health consequences.

In Norway, indirect and direct effects of floods impact community life and health. Future scenarios list flooding as severe⁸ notably along the coast (Fig. 1), where infrastructure is most vulnerable. Recent extreme events blocked roads for extended periods, affected houses, telecommunication, food supply, electricity and access to hospitals and other medical aids. More than a quarter of the public roads in Norway are vulnerable to avalanches and rockslides.⁹ Given the altitudinal extension, the long coastline and harsh climate of Norway, the anxiety and perception of vulnerability to an increasing number of extreme events not only affect the health of people in coastal and rural areas,^{9,10} but also the urban population. A recent study of Bergen argued that over the past 15 years, the city’s identity has been shifting from a “weather city” to a “climate city”.¹¹ Droughts have caused crop failure, exemplified by the summer of 2018, which resulted in massive slaughtering of food-producing animals and urgent need for import of roughage from countries with higher endemic levels of infectious diseases.

These emerging threats place a heavy toll on everyday life, and a climate induced escalation of the conditions is alarming.⁹ This implies a commonly vocalized flood-and-hazard anxiety among the rural population, notably in coastal regions, adding to the prevalent, general climate anxiety among a large segment of the population.¹²

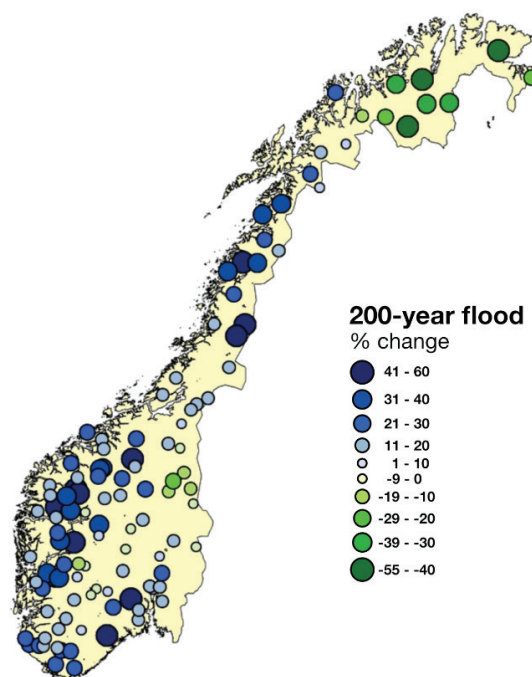


Fig. 1 Predicted changes in incidences of “200-year flood” in the 30-year period 2071 – 2100 relative to the reference period 1971 -2000, based on the RCP 8.5 scenario (high BAU emissions scenario). Figure from the Norwegian Water Resources and Energy Directorate, NVE Report 81-2016.

2. Detection, preparedness, and response to health emergencies

Norway has since 2018 reported high scores in the International Health Regulations (IHR (2005)) State Party Self-Assessment Annual Reporting Tool (SPAR), which indicate a low, national perception of vulnerability. IHR SPAR captures perceived capacities to prevent, detect and respond to public health risks and emergencies of concern. There are, however, some limitations considering the IHR core capacities, and most importantly, the IHR monitoring questionnaire responses are self-reported. It is notable that the recent Norwegian Coronavirus Commission report concluded that the country was inadequately prepared for the COVID-19 pandemic despite scoring high in relevant IHR capacities.⁶

Successful preparedness and response to health emergencies rely on implementation of agile systems, sustained investment, responsible

leadership and engaged citizens with trust in authorities.¹³ During an emergency, decisions made by responsible leaders must be grounded on science, evidence and best practice, as accountable and credible information is needed to ensure engaged and responsible citizens (Fig. 2). Several of these factors characterize the recent national situation and are, together with a high level of trust, possibly reasons why Norway, despite shortcomings, is a country that has been little impacted by the COVID-19 pandemic through life expectancy losses.¹⁴

With the cumulative threats of climate change and disruption of the ecosystems, it is vital to apply lessons gained from the COVID-19 pandemic when developing a robust system for preparedness, detection, and response to any forthcoming climate-related health emergency.

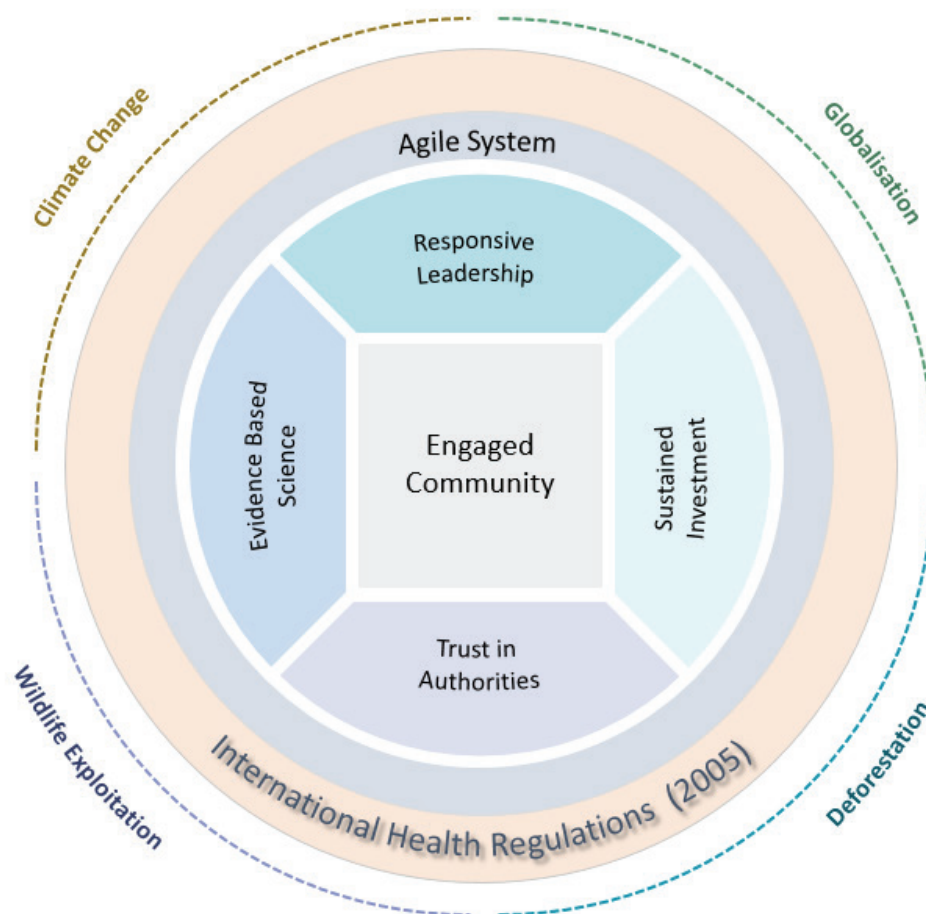


Fig. 2 Engaged citizens are a vital component of a resilient system towards emerging health challenges. Norway is in an ideal position for continued community involvement which relies on agile systems and leaders making decisions grounded on science, evidence and best practise. Figure by M. Gawad.

3. Media coverage of health and climate change

In contrast to regions and nations that suffer more directly from climate-related health issues, the links between climate and health risks are inadequately and infrequently expressed in Norwegian media. While there is some coverage related to health risks abroad, there is little coverage of domestic risks. This neglect might reflect an ignorance of local climate risks. One exception, linked with increasing temperatures, is the spread of ticks infested with the *Borrelia* bacterium causing Lyme-disease, which has received significant local media attention.

As the first Nordic participant providing a policy brief alongside the global *Lancet* Countdown report, we analyzed intersecting trends in coverage of climate change and health combined using the Retriever media monitoring database.¹¹ National newspapers were included in the search, from January 2007 through December 2020. The search strategy was adopted from the 2021 global *Lancet* Countdown report and translated into Norwegian.³

There was no upward trend in combined coverage of health and climate change between 2007 and 2018 (Fig. 3), approximately 300 records per year for the combination. In 2019 there was a 65% increase

as compared to 2018, reaching a total of 477 articles. In 2020, 435 articles touched on both health and climate change, still well above the trend over the past decade. Understandably references to COVID-19 constituted a large proportion of the 2020 articles (45%).

In Norway, how human health is impacted by climate change and human-caused disruptions of the planet's ecosystems, has received too little attention. Hopefully the COVID-19 pandemic will enhance focus on societal risks, not only related to pandemics, but also to direct and indirect climate effects and human overexploitation of natural resources as an overall driver of threats to public health. The pandemic, on top of alarming climate coverage in the media, also seems to have strengthened the understanding of the grand challenges all of humanity, including Norway, is facing. An increased, political and societal focus on Planetary Health will hopefully be evident in future media coverage of the complexity of climate change.

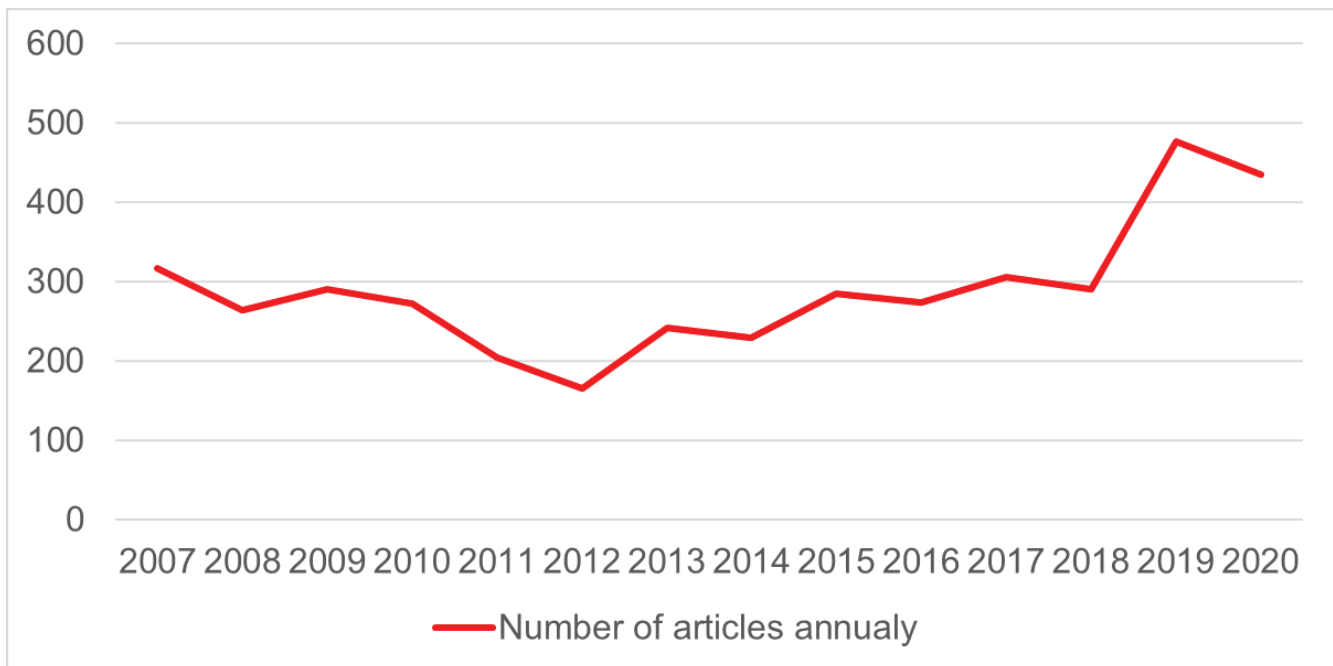


Fig. 3 Norwegian national newspaper coverage of the link between climate change and health from 2007-2020.

References

1. IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.J. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press.
2. Hedegaard C, Mysiak J, Lera St. Clair A, et al. Proposed Mission: A Climate Resilient Europe. Brussels: European Commission, 2020.
3. Romanello M, McGushin A, DiNapoli C et al. The 2021 report of the Lancet Countdown on health and climate change. *Lancet* 2021.
4. World Commission on Environment and Development. Our Common Future. Oxford: Oxford University Press, 1987.
5. Smith M. International poll: most expect to feel impact of climate change, many think it will make us extinct. 2019. <https://yougov.co.uk/topics/science/articles-reports/2019/09/15/international-poll-most-expect-feel-impact-climate>. Accessed September 2021.
6. Kvinnsland S, Matsen E, Aas-Hansen A, et al. Myndighetenes håndtering av koronapandemien. The Departments Organization for Security and Services (DSS), 2021.
7. Agency TNE. Climate change and health. 2019. <https://www.miljodirektoratet.no/ansvarsomrader/klima/for-myndigheter/klimatilpasning/klimatilpasning-i-sektorer/helse/>. Accessed September 2021.
8. Hanssen-Bauer I, Førland E, Haddeland I, et al. Climate in Norway 2100; 2017.
9. Jacobsen JKS, Leiren MD, Saarinen J. Natural hazard experiences and adaptations: A study of winter climate-induced road closures in Norway. *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography* 2016; 70(5): 292-305. doi:10.1080/00291951.2016.1238847
10. O'Brien K, Sygna L, Haugen JE. Vulnerable or Resilient? A Multi-Scale Assessment of Climate Impacts and Vulnerability in Norway. *Climatic Change* 2004; 64(1): 193-225. doi: 10.1023/B:CLIM.0000024668.70143.80
11. Bremer S, Johnson E, Fløttum K, Kverndokk K, Wardekker A, Krauß W. Portrait of a climate city: How climate change is emerging as a risk in Bergen, Norway. *Climate Risk Management* 2020; 29. doi: 10.1016/j.crm.2020.100236
12. Aasen M, Klemetsen ME, Reed EU, Vatn A. Folk og klima: Nordmenns holdninger til klimaendringer, klimapolitikk og eget ansvar. CICERO, 2019.
13. GPMB. A world in disorder: Global Preparedness Monitoring Board annual report 2020. Geneva: World Health Organization, 2020.
14. Aburto JM, Schöley J, Kashnitsky I, et al. Quantifying impacts of the COVID-19 pandemic through life-expectancy losses: a population-level study of 29 countries. *International Journal of Epidemiology* 2021. doi: 10.1093/ije/dyab207

Organisations and acknowledgements

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Contributions and review on behalf of the Lancet Countdown were provided by Dr. Alice McGushin, MBBS MSc and Dr. Frances MacGuire, PhD MPH.

THE LANCET COUNTDOWN

The Lancet Countdown: Tracking Progress on Health and Climate Change is a multi-disciplinary collaboration monitoring the links between health and climate change. It brings together lead researchers from 43 academic institutions and UN agencies in every continent, publishing annual updates of its findings to provide decision-makers with high-quality evidence-based recommendations. For its 2021 assessment, visit www.lancetcountdown.org/2021-report/

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