



This is a repository copy of *Time to treat the climate and nature crisis as one indivisible global health emergency*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/205981/>

Version: Published Version

Article:

Abbasi, K., Ali, P. orcid.org/0000-0002-7839-8130, Barbour, V. orcid.org/0000-0002-2358-2440 et al. (10 more authors) (2023) Time to treat the climate and nature crisis as one indivisible global health emergency. *International Journal of Older People Nursing*, 18 (6). e12583. ISSN 1748-3735

<https://doi.org/10.1111/opn.12583>

Reuse

This article is distributed under the terms of the Creative Commons Attribution (CC BY) licence. This licence allows you to distribute, remix, tweak, and build upon the work, even commercially, as long as you credit the authors for the original work. More information and the full terms of the licence here:

<https://creativecommons.org/licenses/>

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Time to treat the climate and nature crisis as one indivisible global health emergency

Over 200 health journals call on the United Nations, political leaders and health professionals to recognise that climate change and biodiversity loss are one indivisible crisis and must be tackled together to preserve health and avoid catastrophe. This overall environmental crisis is now so severe as to be a global health emergency.

The world is currently responding to the climate crisis and the nature crisis as if they were separate challenges. This is a dangerous mistake. The 28th Conference of the Parties (COP) on climate change is about to be held in Dubai while the 16th COP on biodiversity is due to be held in Turkey in 2024. The research communities that provide the evidence for the two COPs are unfortunately largely separate, but they were brought together for a workshop in 2020 when they concluded that: 'Only by considering climate and biodiversity as parts of the same complex problem...can solutions be developed that avoid maladaptation and maximize the beneficial outcomes'. (Otto-Portner et al., 2021).

As the health world has recognised with the development of the concept of planetary health, the natural world is made up of one overall interdependent system. Damage to one subsystem can create feedback that damages another—for example, drought, wildfires, floods and the other effects of rising global temperatures destroy plant life, and lead to soil erosion and so inhibit carbon storage, which means more global warming (Ripple et al., 2023). Climate change is set to overtake deforestation and other land-use change as the primary driver of nature loss (European Academies Science Advisory Council, 2021).

Nature has a remarkable power to restore. For example, deforested land can revert to forest through natural regeneration, and marine phytoplankton, which act as natural carbon stores, turn over 1 billion tonnes of photosynthesising biomass every 8 days (Falkowski, 2012). Indigenous land and sea management has a particularly important role to play in regeneration and continuing care (Dawson et al., 2021).

Restoring one subsystem can help another—for example, replenishing soil could help remove greenhouse gases from the atmosphere on a vast scale (Bossio et al., 2020). But actions that may benefit one

subsystem can harm another—for example, planting forests with one type of tree can remove carbon dioxide from the air but can damage the biodiversity that is fundamental to healthy ecosystems (Levia et al., 2020).

1 | THE IMPACTS ON HEALTH

Human health is damaged directly by both the climate crisis, as the journals have described in previous editorials (Atwoli et al., 2021, 2022) and by the nature crisis (WHO, UNEP, Convention on Biological D, 2015). This indivisible planetary crisis will have major effects on health as a result of the disruption of social and economic systems—shortages of land, shelter, food and water, exacerbating poverty, which in turn will lead to mass migration and conflict. Rising temperatures, extreme weather events, air pollution and the spread of infectious diseases are some of the major health threats exacerbated by climate change (Magnano San Lio et al., 2023). "Without nature, we have nothing," was UN Secretary-General António Guterres's blunt summary at the biodiversity COP in Montreal last year (Jelskov, 2022). Even if we could keep global warming below an increase of 1.5°C over pre-industrial levels, we could still cause catastrophic harm to health by destroying nature.

Access to clean water is fundamental to human health, and yet pollution has damaged water quality, causing a rise in water-borne diseases (World Health Organization, 2022). Contamination of water on land can also have far-reaching effects on distant ecosystems when that water runs off into the ocean (Comeros-Raynal et al., 2021). Good nutrition is underpinned by diversity in the variety of foods, but there has been a striking loss of genetic diversity in the food system. Globally, about a fifth of people rely on wild species for food and their livelihoods (IPBES, 2022). Declines in wildlife are a major challenge for these populations, particularly in low- and middle-income countries. Fish provide more than half of dietary protein in many African, South Asian and small island nations, but

[Correction added on 18th November 2023, after first online publication: The copyright line was changed.]

This comment is being published simultaneously in multiple journals. For the full list of journals, see: <https://www.bmj.com/content/full-list-authors-and-signatories-climate-nature-emergency-editorial-october-2023>.

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2023 The Authors. *International Journal of Older People Nursing* published by John Wiley & Sons Ltd.

ocean acidification has reduced the quality and quantity of seafood (Falkenberg et al., 2020).

Changes in land use have forced tens of thousands of species into closer contact, increasing the exchange of pathogens and the emergence of new diseases and pandemics (Dunne, 2022). People losing contact with the natural environment and the declining biodiversity have both been linked to increases in noncommunicable, autoimmune and inflammatory diseases and metabolic, allergic and neuropsychiatric disorders (Altveş et al., 2020; WHO, UNEP, Convention on Biological D, 2015). For Indigenous people, caring for and connecting with nature is especially important for their health (Schultz & Cairney, 2017). Nature has also been an important source of medicines, and thus, reduced diversity also constrains the discovery of new medicines.

Communities are healthier if they have access to high-quality green spaces that help filter air pollution, reduce air and ground temperatures and provide opportunities for physical activity (Macguire et al., 2022). Connection with nature reduces stress, loneliness and depression while promoting social interaction (Wong et al., 2018). These benefits are threatened by the continuing rise in urbanisation (Simkin et al., 2022).

Finally, the health impacts of climate change and biodiversity loss will be experienced unequally between and within countries, with the most vulnerable communities often bearing the highest burden (WHO, UNEP, Convention on Biological D, 2015). Linked to this, inequality is also arguably fuelling these environmental crises. Environmental challenges and social/health inequities are challenges that share drivers and there are potential co-benefits of addressing them (WHO, UNEP, Convention on Biological D, 2015).

2 | A GLOBAL HEALTH EMERGENCY

In December 2022, the biodiversity COP agreed on the effective conservation and management of at least 30% of the world's land, coastal areas and oceans by 2030 (Secretariat of the Convention on Biological Diversity, 2022). Industrialised countries agreed to mobilise \$30 billion per year to support developing nations to do so (Secretariat of the Convention on Biological Diversity, 2022). These agreements echo promises made at climate COPs.

Yet many commitments made at COPs have not been met. This has allowed ecosystems to be pushed further to the brink, greatly increasing the risk of arriving at 'tipping points', abrupt breakdowns in the functioning of nature (Armstrong McKay et al., 2022; Ripple et al., 2023). If these events were to occur, the impacts on health would be globally catastrophic.


This risk, combined with the severe impacts on health already occurring, means that the World Health Organization should declare the indivisible climate and nature crisis as a global health emergency. The three pre-conditions for the WHO to declare a situation to be a Public Health Emergency of International Concern (World Health Organization, 2005) are that it: (1) is serious, sudden, unusual or unexpected; (2) carries implications for public health beyond the affected State's national border; and (3)


may require immediate international action. Climate change would appear to fulfil all of those conditions. While the accelerating climate change and loss of biodiversity are not sudden or unexpected, they are certainly serious and unusual. Hence, we call for the WHO to make this declaration before or at the 77th World Health Assembly in May 2024.

Tackling this emergency requires the COP processes to be harmonised. As a first step, the respective conventions must push for better integration of national climate plans with biodiversity equivalents (European Academies Science Advisory Council, 2021). As the 2020 workshop that brought climate and nature scientists together concluded, 'Critical leverage points include exploring alternative visions of good quality of life, rethinking consumption and waste, shifting values related to the human-nature relationship, reducing inequalities, and promoting education and learning' (Otto-Portner et al., 2021). All of these would benefit health.


Health professionals must be powerful advocates for both restoring biodiversity and tackling climate change for the good of health. Political leaders must recognise both the severe threats to health from the planetary crisis as well as the benefits that can flow to health from tackling the crisis (Australian Government Department of Health, Care A, 2023). But first, we must recognise this crisis for what it is: a global health emergency.


Kamran Abbasi MD
Editor-in-Chief¹

Parveen Ali PhD, MScN, FFPH, SFHEA
Editor-in-Chief, Professor of Nursing & Gender Based Violence,
Lead^{2,3,4,5} 

Virginia Barbour MA Camb, MB BChir, DPhil, MRCP
Editor-in-Chief⁶ 

Thomas Benfield MD, DMSc
Editor-in-Chief⁷ 


Kirsten Bibbins-Domingo PhD, MD, MAS
Editor-in-Chief, Professor of Epidemiology & Biostatistics and
Professor of Medicine^{8,9} 

Stephen Hancocks OBE, MA, BDS, LDS, RCS (Eng)
Editor-in-Chief¹⁰ 


Richard Horton MB, ChB M
Editor-in-Chief¹¹ 

Laurie Laybourn-Langton BSc physics, MPhil economics
Editor-in-Chief^{12,13} 

Robert Mash MBChB, DRCOG, DCH, FCFP, FRCGP, PhD
Editor-in-Chief^{14,15} 

Peush Sahni MS, DNB, PhD
Editor-in-Chief, Professor and Head^{16,17} 

Wadeia Mohammad Sharief MSc in Healthcare Management, MSc
in Medical Education
Editor-in-Chief, Director, President^{18,19,20,21}

Paul Yonga MBChB, MSPH, FRCP, Edin
Editor-in-Chief^{22,23} 

Chris Zielinski BSc, MSc
Editor-in-Chief, Visiting Fellow, President-Elect^{24,25} 

- ¹British Medical Journal, London, UK
²International Nursing Review, Sheffield, UK
³Health Sciences School, University of Sheffield, Sheffield, UK
⁴Doncaster and Bassetlaw Teaching Hospitals, Sheffield, UK
⁵Sheffield University Interpersonal Violence Research Group,
 Sheffield, UK
⁶Medical Journal of Australia, Brisbane, Queensland, Australia
⁷Danish Medical Journal, Copenhagen, Denmark
⁸JAMA, San Francisco, California, USA
⁹University of California, San Francisco, California, USA
¹⁰British Dental Journal, London, UK
¹¹The Lancet, London, UK
¹²University of Exeter, London, UK
¹³Chatham House, London, UK
¹⁴African Journal of Primary Health Care and Family Medicine,
 Stellenbosch, South Africa
¹⁵Division of Family Medicine and Primary Care, Stellenbosch
 University, Stellenbosch, South Africa
¹⁶National Medical Journal of India, New Delhi, India
¹⁷MBBS, All India Institute of Medical Sciences [AIIMS], New
 Delhi, India
¹⁸Dubai Medical Journal, Dubai, UAE
¹⁹Medical Education & Research Department, Dubai Health
 Authority, Dubai, UAE
²⁰Emirates Family Medicine Society, Dubai, UAE
²¹Family Medicine Scientific Council, Arab Board of Health
 Specialization, Dubai, UAE
²²East African Medical Journal, Nairobi, Kenya
²³CA Medlynks Medical Centre and Laboratory, Nairobi, Kenya
²⁴University of Winchester, Winchester, UK
²⁵World Association of Medical Editors, Winchester, UK

Correspondence

Chris Zielinski, University of Winchester, Winchester, UK.
 Email: chris.zielinski@ukhealthalliance.org

ORCID

Parveen Ali  <https://orcid.org/0000-0002-7839-8130>
 Virginia Barbour  <https://orcid.org/0000-0002-2358-2440>
 Thomas Benfield  <https://orcid.org/0000-0003-0698-9385>
 Kirsten Bibbins-Domingo  <https://orcid.org/0000-0002-8962-0622>
 Stephen Hancocks  <https://orcid.org/0000-0002-5328-8509>
 Richard Horton  <https://orcid.org/0000-0003-1792-5408>
 Laurie Laybourn-Langton  <https://orcid.org/0000-0002-6605-0794>
 Robert Mash  <https://orcid.org/0000-0001-7373-0774>
 Peush Sahni  <https://orcid.org/0000-0002-6910-062X>
 Paul Yonga  <https://orcid.org/0000-0003-1991-9992>
 Chris Zielinski  <https://orcid.org/0000-0001-6596-698X>

REFERENCES

Altveş, S., Yildiz, H. K., & Vural, H. C. (2020). Interaction of the microbiota with the human body in health and diseases. *Bioscience*

- Microbiota Food Health*, 39, 23–32. <https://doi.org/10.12938/bmfh.19-023>
- Armstrong McKay, D. I., Staal, A., Abrams, J. F., Winkelmann, R., Sakschewski, B., Loriani, S., Fetzer, I., Cornell, S. E., Rockström, J., & Lenton, T. M. (2022). Exceeding 1.5°C global warming could trigger multiple climate tipping points. *Science*, 377, eabn7950. <https://doi.org/10.1126/science.abn7950>
- Atwoli, L., Baqui, A. H., Benfield, T., Bosurgi, R., Godlee, F., Hancocks, S., Horton, R., Laybourn-Langton, L., Monteiro, C. A., Norman, I., Patrick, K., Praities, N., Olde Rikkert, M. G. M., Rubin, E. J., Sahni, P., Smith, R., Talley, N. J., Turale, S., & Vázquez, D. (2021). Call for emergency action to limit global temperature increases, restore biodiversity, and protect health. *BMJ*, 374, n1734. <https://doi.org/10.1136/bmj.n1734>
- Atwoli, L., Erhabor, G. E., Gbakima, A. A., Haileamlak, A., Ntumba, J.-M. K., Kigera, J., Laybourn-Langton, L., Mash, B., Muhia, J., Mulaudzi, F. M., Ofori-Adjei, D., Okonofua, F., Rashidian, A., el-Adawy, M., Sidibé, S., Snouber, A., Tumwine, J., Yassien, M. S., Yonga, P., ... Zielinski, C. (2022). COP27 climate change conference: Urgent action needed for Africa and the world. *BMJ*, 379, o2459. <https://doi.org/10.1136/bmj.o2459>
- Australian Government Department of Health, Care A. (2023). *Consultation on Australia's first National Health and Climate Strategy*. Australian Government Department of Health and Aged Care. <https://www.health.gov.au/news/consultation-on-australias-first-national-health-and-climate-strategy>
- Bossio, D. A., Cook-Patton, S. C., Ellis, P. W., Fargione, J., Sanderman, J., Smith, P., Wood, S., Zomer, R. J., von Unger, M., Emmer, I. M., & Griscom, B. W. (2020). The role of soil carbon in natural climate solutions. *Nature Sustainability*, 3, 391–398. <https://doi.org/10.1038/s41893-020-0491-z>
- Comeros-Raynal, M. T., Brodie, J., Bainbridge, Z., Choat, J. H., Curtis, M., Lewis, S., Stevens, T., Shuler, C. K., Sudek, M., & Hoey, A. S. (2021). Catchment to sea connection: Impacts of terrestrial runoff on benthic ecosystems in American Samoa. *Marine Pollution Bulletin*, 169, 112530. <https://doi.org/10.1016/j.marpolbul.2021.112530>
- Dawson, N., Coolsaet, B., Sterling, E., Loveridge, R., Gross-Camp, N., Wongbusarakum, S., Sangha, K. K., Scherl, L. M., Phan, H. P., Zafra-Calvo, N., Lavey, W. G., Byakagaba, P., Idrobo, C. J., Chenet, A., Bennett, N. J., Mansourian, S., & Rosado-May, F. J. (2021). The role of indigenous peoples and local communities in effective and equitable conservation. *Ecology and Society*, 26, 19. <https://doi.org/10.5751/ES-12625-260319>
- Dunne, D. (2022). Climate change “already” raising risk of virus spread between mammals. <https://www.carbonbrief.org/climate-change-already-raising-risk-of-virus-spread-between-mammals/>
- European Academies Science Advisory Council. (2021). Key Messages from European Science Academies for UNFCCC COP26 and CBD COP15. <https://easac.eu/publications/details/key-messages-from-european-science-academies-for-unfccc-cop26-and-cbd-cop15>
- Falkenberg, L. J., Bellerby, R. G. J., Connell, S. D., Fleming, L. E., Maycock, B., Russell, B. D., Sullivan, F. J., & Dupont, S. (2020). Ocean acidification and human health. *International Journal of Environmental Research and Public Health*, 17. <https://doi.org/10.3390/ijerph17124563>
- Falkowski, P. (2012). *Ocean Science: The power of plankton*. Nature Publishing Group.
- IPBES. (2022). Assessment report on the sustainable use of wild species. <https://www.ipbes.net/sustainable-use-assessment>
- Jelskov, U. (2022). “Without nature, we have nothing”: UN chief sounds alarm at key UN biodiversity event. *UN News*. <https://news.un.org/en/story/2022/12/1131422>
- Levia, D. F., Creed, I. F., Hannah, D. M., Nanko, K., Boyer, E. W., Carlyle-Moses, D. E., van de Giesen, N., Grasso, D., Guswa, A. J., Hudson, J. E., Hudson, S. A., Iida, S., Jackson, R. B., Katul, G. G., Kumagai, T., Llorens, P., Ribeiro, F. L., Pataki, D. E., Peters, C. A.,

- ... Bruen, M. (2020). Homogenization of the terrestrial water cycle. *Nature Geoscience*, 13, 656–658. <https://doi.org/10.1038/s41561-020-0641-y>
- Macguire, F., Mulcahy, E., & Rossington, B. (2022). The lancet countdown on health and climate change – policy brief for the UK. https://s41874.pcdn.co/wp-content/uploads/Lancet-Countdown-2022-UK-Policy-Brief_EN.pdf
- Magnano San Lio, R., Favara, G., Maugeri, A., Barchitta, M., & Agodi, A. (2023). How antimicrobial resistance is linked to climate change: An overview of two intertwined global challenges. *International Journal of Environmental Research and Public Health*, 20, 1681. <https://doi.org/10.3390/ijerph20031681>
- Otto-Portner, H., Scholes, B., Agard, J., Archer, E., Arneth, A., Bai, X., Barnes, D., Burrows, M., Chan, L., Cheung, W. L., Diamond, S., Donatti, C., Duarte, C., Eisenhauer, N., Foden, W., Gasalla, M. A., Handa, C., Hickler, T., Hoegh-Guldberg, O., ... Ngo, H. T. (2021). *Scientific Outcome of the IPBES-IPCC co-Sponsored Workshop on Biodiversity and Climate Change*. Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.
- Ripple, W. J., Wolf, C., Lenton, T. M., Gregg, J. W., Natali, S. M., Duffy, P. B., Rockström, J., & Schellnhuber, H. J. (2023). Many risky feedback loops amplify the need for climate action. *One Earth*, 6, 86–91. <https://doi.org/10.1016/j.oneear.2023.01.004>
- Schultz, R., & Cairney, S. (2017). Caring for country and the health of aboriginal and Torres Strait islander Australians. *The Medical Journal of Australia*, 207, 8–10. <https://doi.org/10.5694/mja16.00687>
- Secretariat of the Convention on Biological Diversity. (2022). COP15: Nations Adopt Four Goals, 23 Targets for 2030 In Landmark UN Biodiversity Agreement. Convention on Biological Diversity. <https://www.cbd.int/article/cop15-cbd-press-release-final-19dec2022>
- Simkin, R. D., Seto, K. C., McDonald, R. I., & Jetz, W. (2022). Biodiversity impacts and conservation implications of urban land expansion projected to 2050. *Proceedings of the National Academy of Sciences of the United States of America*, 119, e2117297119. <https://doi.org/10.1073/pnas.2117297119>
- WHO, UNEP, Convention on Biological D. (2015). Connecting Global Priorities: Biodiversity and Human Health: A State of Knowledge Review. <https://www.cbd.int/health/SOK-biodiversity-en.pdf>
- Wong, F. Y., Yang, L., Yuen, J. W. M., Chang, K. K. P., & Wong, F. K. Y. (2018). Assessing quality of life using WHOQOL-BREF: A cross-sectional study on the association between quality of life and neighborhood environmental satisfaction, and the mediating effect of health-related behaviors. *BMC Public Health*, 18, 1113. <https://doi.org/10.1186/s12889-018-5942-3>
- World Health Organization. (2005). WHO guidance for the use of Annex 2 of the International Health Regulations. [https://www.who.int/publications/m/item/who-guidance-for-the-use-of-annex-2-of-the-international-health-regulations-\(2005\)](https://www.who.int/publications/m/item/who-guidance-for-the-use-of-annex-2-of-the-international-health-regulations-(2005))
- World Health Organization. (2022). *State of the world's drinking water: An urgent call to action to accelerate progress on ensuring safe drinking water for all*. World Health Organization. <https://www.who.int/publications/i/item/9789240060807>