World Health Organization

Strengthening health systems to improve the health of displaced and migrant populations in the context of climate change

Evidence brief

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Contents

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The nexus of health, climate change, migration and displacement

One in every eight people worldwide is a migrant, refugee or displaced person *(1)*.

This number is projected to rise further, with climate change affecting population movement both directly and indirectly *(2)*.

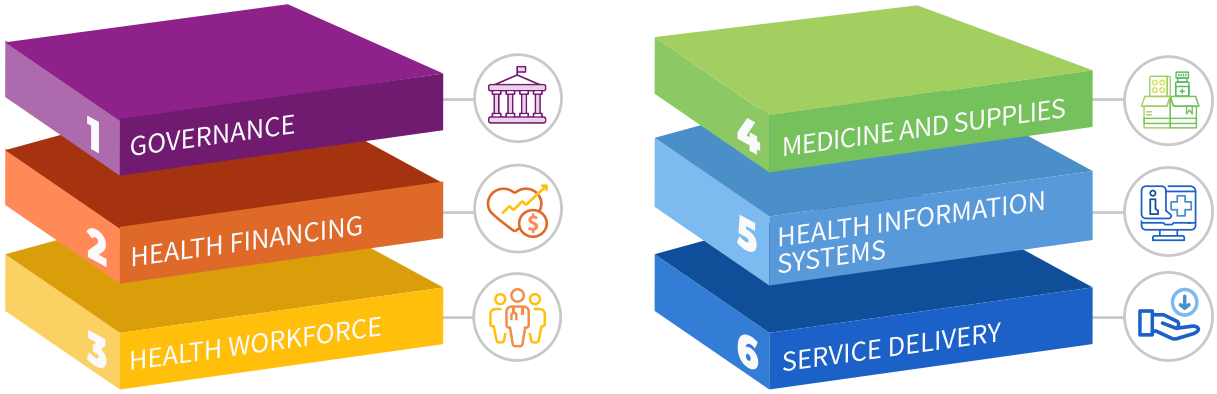
The WHO Global research agenda on health, migration and displacement identified the health of displaced and migrant populations in the context of climate change as one of the most pressing, yet under-researched, topics *(3)*.

Migration and displacement due to climate change are expected to present new health challenges, for example by worsening long-standing disease burdens, introducing novel health risks and causing health system disruption *(4)*. Furthermore, it can be anticipated that the health of various migrant groups – including those who did not move because of climate change – will be similarly affected. As examples, internally displaced and migrant populations in urban slums experience food insecurity that is worsened by climate change and threatens their nutritional status *(5)*; migrant workers are increasingly exposed to severe heat stress at their workplaces *(6)*; and refugees are affected by weather risks that increase their exposure to waterborne disease outbreaks *(7)*. Millions of people live in temporary settlements after disasters, with the average stay lasting over a decade *(8)*.

Illustrative examples of health system interventions

With these emerging challenges at the nexus of health, climate change, migration and displacement, it is imperative for Member States, and their ministries of health, to proactively plan how their health systems can better address the evolving health needs of migrants and populations who are displaced in the context of a changing climate.

According to the WHO framework for strengthening health systems, health systems are composed of six building blocks *(9)*.



The WHO *Operational framework for building climate resilient and low carbon health systems* was developed from these building blocks to protect and improve the health of communities in an unstable and changing climate *(10)*.

Concrete interventions across the building blocks that incorporate migration considerations are essential to address the evolving health needs of displaced and migrant populations affected by climate change. Fig. 1 provides illustrative examples of such interventions that have been documented in the current body of global evidence.[1]

[1] This evidence brief is part of the WHO Global Evidence Review on Health and Migration series, produced by WHO Health and Migration, WHO HQ. It is based on a rapid review of English-language studies using peer-reviewed literature databases, grey literature search engines and a collection of relevant case studies. A full description of methodology, including strengths and limitations, is detailed in the corresponding report in the series.

Fig. 1. Illustrative examples of interventions that aim to strengthen health systems for displaced and migrant populations in the context of climate change

Governance

Interventions

- Including the needs of climate-affected migrants in **climate and health policies and plans**
- **Enhancing the coordination of services** across agencies in responding to the health needs of climate-affected migrants
- **Involving displaced and/or relocated communities** in the planning and implementation of health interventions

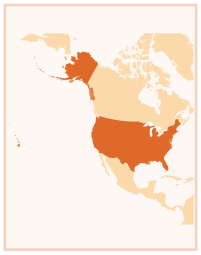
Vanuatu

The Government and its partners created the *National policy on climate change and disaster-induced displacement (11)*. The policy's strategic area 7 covers health, nutrition and psychosocial well-being; the main objective is to provide equal access to health care for all climate-displaced populations

Health financing

Interventions

- **Allocating an additional budget** to improve health services and infrastructure for climate-affected migrants
- **Improving the breadth of health insurance coverage** to include climate-affected migrants



United States of America

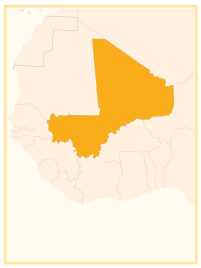
After Hurricane Katrina hit in 2005, the Government implemented the Section 1115 Medicaid emergency waivers, which allowed individual States to expedite Medicaid coverage to displaced individuals by streamlining documentation and income requirements. The Texas waiver programme (TexKat) was the largest programme; it included an urgent medical care delivery phase for the first month and a health care coverage phase for the next 5 months *(12)*

Fig. 1 contd

Health workforce

Interventions

- **Training health workers** and building their competencies to meet the health needs of climate-affected migrants
- **Expanding health workforce capacity** in response to climate-related events and emergencies



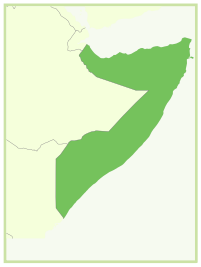
Mali

In **Mali**, where climate change is one of the leading drivers of conflict and displacement in the Sahel region, the Government expanded health workforce availability by incentivizing health workers to be assigned to areas of dire need *(13)*. Cash incentives vary depending on local ministries and external assistance

Medicine and supplies

Interventions

- Ensuring the **availability of medical supplies** for climate-affected migrants and displaced people



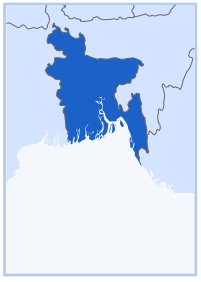
Somalia

Between May 2023 and May 2024, the International Organization for Migration provided menstrual hygiene kits and sanitary pads to flood-displaced women and girls in Danyar Refugee Camp *(14)*

Health information systems

Interventions

- **Establishing integrated surveillance systems** for monitoring climate-sensitive health conditions among displaced populations



Bangladesh

In 2021 the International Centre for Diarrhoeal Disease Research implemented a waste-water surveillance programme in a refugee camp to detect climate-sensitive pathogens such as *Vibrio cholerae and Salmonella typhi (15)*. The programme has been expanded in two cities through a joint effort involving the Government and multilateral organizations

Fig. 1 contd

Service delivery

Interventions

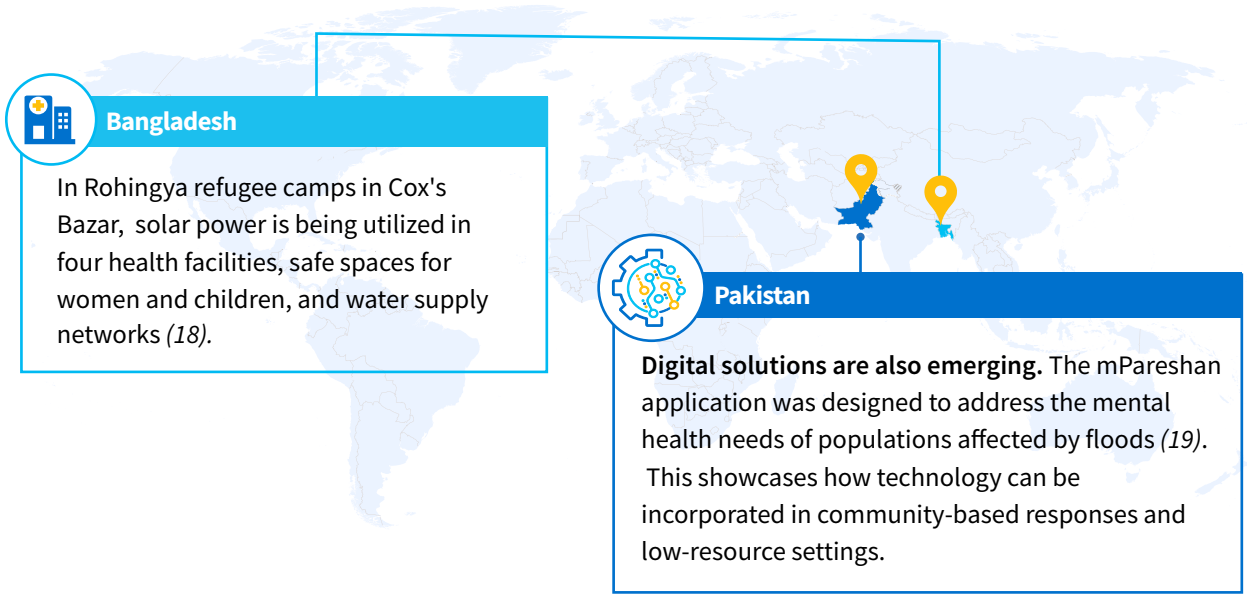
- **Providing humanitarian response** and health services during climate-related emergencies
- Ensuring access to **health services to displaced populations** in protracted climate-affected crises
- Providing **mental health interventions** for climate-affected migrants
- **Improving water, sanitation and hygiene services** for climate-affected displaced populations
- **Ensuring access to WHO Essential Programme on Immunization vaccines** *(17)* for climate-affected displaced populations
- Including climate-displaced populations in the **health systems of receiving countries**

Honduras

The Honduran Red Cross activated Humanitarian Service Points at the point of departure and along the route of migrating caravans that are vulnerable to climate hazards *(16)*. These provided migrants with water, face masks, pre-hospital care and information about safety, security and coronavirus disease (COVID-19) prevention

Key findings on building migrant-inclusive health systems in the context of climate change

Innovation has an important role in addressing the health needs of climate-affected displaced and migrant populations. Health systems are beginning to adopt innovative solutions that integrate climate-related considerations into their operations.



Bangladesh

In Rohingya refugee camps in Cox's Bazar, solar power is being utilized in four health facilities, safe spaces for women and children, and water supply networks *(18)*.

Pakistan

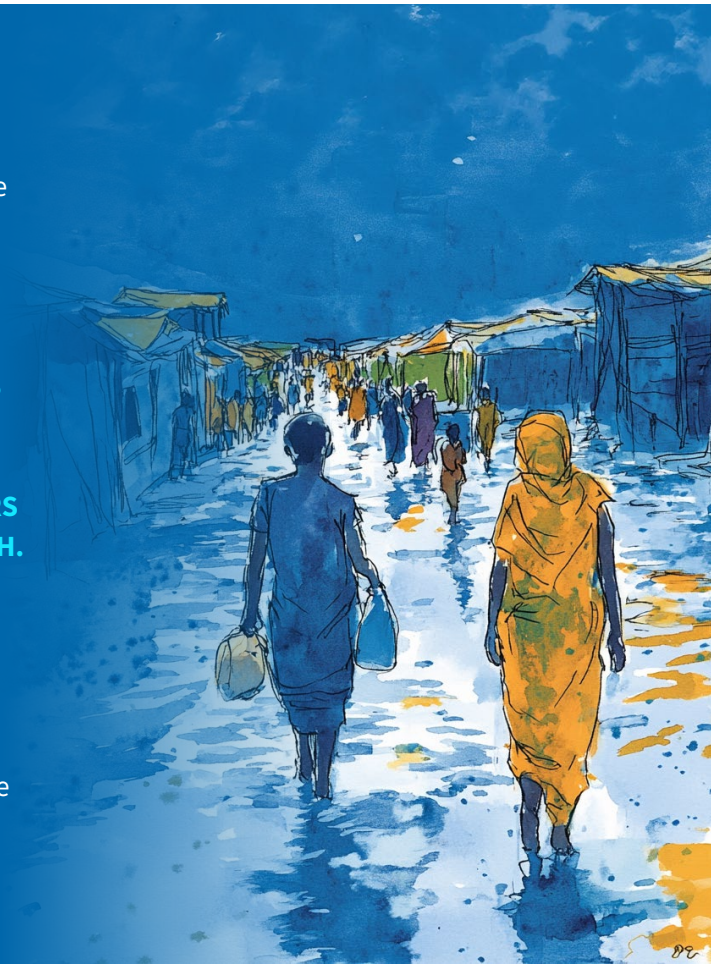
Digital solutions are also emerging. The mPareshan application was designed to address the mental health needs of populations affected by floods *(19)*. This showcases how technology can be incorporated in community-based responses and low-resource settings.

However, well-established health system strengthening interventions are still applicable to displaced and migrant populations affected by climate change. For example, in 2016 Save the Children in collaboration with the Ministry of Health of Somalia conducted a Helping Babies Survive training programme for health care professionals to support the neonatal and maternal health of people displaced by conflict and climate shocks in the city of Bossaso *(20)*. Other commonly used interventions include creating mobile health units *(21)* and conducting mass vaccination campaigns *(22)*.

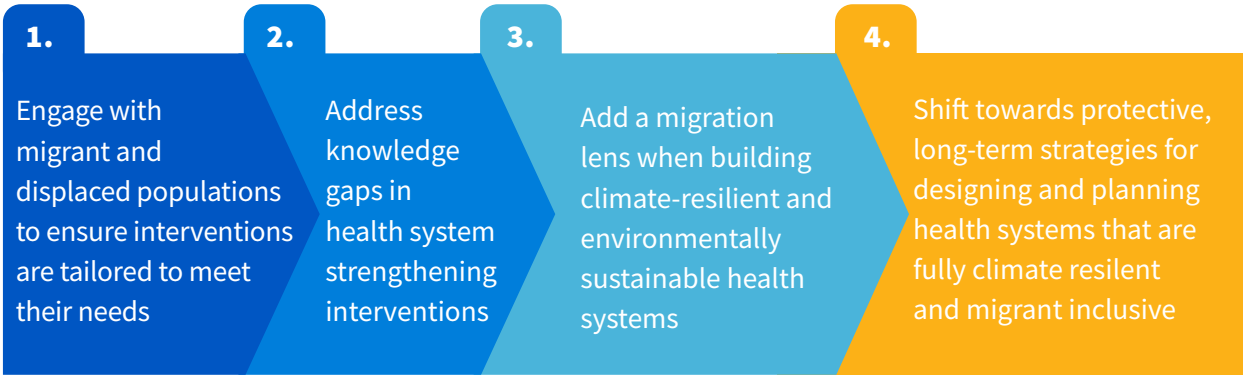
A combination of innovative and well-established interventions will help to prepare health systems to address the emerging health needs of climate-affected migrants. Importantly, **displaced and migrant populations themselves should be meaningfully engaged to ensure that interventions are tailored to their own needs and context.** Interventions should be designed, implemented and evaluated with these communities and include a sustainable, intersectional long-term plan.

Climate action within health systems has two dimensions: climate mitigation, which pertains to reducing greenhouse gas emissions to slow its progression, and climate adaptation, which relates to responses for addressing and reducing its health impacts. Currently, most health system strengthening interventions for displaced and migrant populations focus more on adaptation than mitigation. Health system adaptation should be tailored to diverse climate hazards and health effects, which vary across regions, countries and subnational jurisdictions. It is also important to integrate climate mitigation into health system interventions because the health sector is responsible for around 5% of the world's total greenhouse gas emissions *(23)*.

Ultimately, establishing migrant-inclusive health systems in the context of climate change will require **CLOSE COLLABORATION BETWEEN MINISTRIES, GOVERNMENTS, OPERATIONAL AND CIVIL SOCIETY ACTORS, RESEARCHERS, THE PRIVATE SECTOR, UNITED NATIONS AGENCIES AND CLIMATE-AFFECTED COMMUNITIES, WORKING IN INNOVATIVE WAYS ACROSS SECTORS IN A WHOLE-OF-SOCIETY APPROACH.** This kind of collaboration has been demonstrated in Cox's Bazar in Bangladesh, where cross-sectoral partnerships were established to create a disease surveillance system in the waste-water systems of refugee camps to monitor climate-sensitive infectious diseases *(15)*.



Key opportunities for action towards migrant-inclusive health systems in the context of climate change



1. Incorporating inputs from displaced populations is essential to ensuring that health interventions designed for these groups are tailored to their needs. Integrating community perceptions to support the design and implementation of interventions should be a hallmark feature of governments and organizations that address the health needs of climate-displaced populations.

2. There is a need to address knowledge gaps in health system strengthening in the context of migration and climate change. This will require transdisciplinary research to explore the climate–migration–health nexus to build the evidence needed for health system strengthening frameworks and interventions that are effective and sustainable. Implementation research should build on existing good practices as well as embracing innovation to design new interventions. Critical to this research area is to ensure context-specific adaptation and localization, as well as dissemination and scale-up in diverse settings.

3. There is the need for synergy across policies, guidance and monitoring frameworks at the national, regional and global levels to ensure that all play a role in supporting the implementation of appropriate and accessible health services. This will require including a migration lens when building climate-resilient and environmentally sustainable health systems and including a climate lens to efforts addressing the health needs of displaced and migrant populations in emergency and development settings.

4. It is crucial to move beyond short-term, reactive responses to the health needs of climate-affected migrants and displaced populations. Instead, the focus should shift towards proactive, long-term strategies for designing and planning health systems that are climate resilient and migrant inclusive. So far, most health system strengthening interventions are reactive, that is, implemented in response to specific climate hazards or health emergencies. Although such immediate, short-term actions are necessary, they also need to be designed with sustainability and scalability in mind. Interventions that are built to last and expanded effectively can contribute to long-term improvements in health systems and better health for all.

References[2]

1. World report on the health of refugees and migrants. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/360404).
2. McAuliffe M, Oucho LA, editors. World migration report 2024. Geneva: International Organization for Migration; 2024 (https://worldmigrationreport.iom.int/msite/wmr-2024-interactive/#:~:text=The%20World%20Migration%20Report%202024,on%20highly%20topical%20migration%20issues).
3. Global research agenda on health, migration and displacement: strengthening research and translating research priorities into policy and practice. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373659).
4. McMichael C. Climatic and environmental change, migration, and health. Annu Rev Public Health. 2023;44:171–91 (https://doi.org/10.1146/annurev-publhealth-071421-045148).
5. Nayna Schwerdtle P, Baernighausen K, Karim S, Raihan TS, Selim S, Baernighausen T et al. A risk exchange: health and mobility in the context of climate and environmental change in Bangladesh: a qualitative study. Int J Environ Res Public Health. 2021;18(5):2629 (https://doi.org/10.3390/ijerph18052629).
6. Lundgren-Kownacki K, Kjellberg SM, Gooch P, Dabaieh M, Anandh L, Venugopal V. Climate change-induced heat risks for migrant populations working at brick kilns in India: a transdisciplinary approach. Int J Biometeorol. 2018;62(3):347–58 (https://doi.org/10.1007/s00484-017-1476-0).
7. Fransen S, Werntges A, Hunns A, Sirenko M, Comes T. Refugee settlements are highly exposed to extreme weather conditions. Proc Natl Acad Sci USA. 2023;120(0):e2206189120 (https://doi.org/10.1073/pnas.2206189120).
8. Albadra D, Coley D, Hart J. Toward healthy housing for the displaced. J Archit. 2018;23(1):115–36 (https://doi.org/10.1080/13602365.2018.1424227).
9. Everybody's business: strengthening health systems to improve health outcomes: WHO's framework for action. Geneva: World Health Organization; 2007 (https://iris.who.int/handle/10665/43918).
10. Operational framework for building climate resilient and low carbon health systems. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373837).
11. Vanuatu: national policy on climate change and disaster-induced displacement. Vanuatu: Vanuatu National Disaster Management Office; 2018 (https://www.refworld.org/policy/strategy/natlegbod/2018/en/121425?prevDestination=search&prevPath=/search?fulltext=true&keywords=climate%2C+%22health+system%22&order=desc&sm_languages%5B%5D=English&sort=score&page=3&result=result-121425-en).

[2] All references were accessed on 16 September 2024.

12. Quast T. Healthcare utilization by children with asthma displaced by Hurricane Katrina. J Asthma. 2018;55(4):416–23 (https://doi.org/10.1080/02770903.2017.1339244).

13. Forced displacement of and potential solutions for IDPS and refugees in the Sahel: Burkina Faso, Chad, Mali, Mauritania and Niger. Washington, DC: World Bank Group; 2014 (https://documents.worldbank.org/en/publication/documents-reports/documentdetail/229401467990086793/burkina-faso-chad-mali-mauritania-and-niger-forced-displacement-of-and-potential-solutions-for-idps-and-refugees-in-the-sahel).

14. Menstrual hygiene support for women and girls in Somalia [website]. International Organization for Migration; 2024 (https://storyteller.iom.int/stories/menstrual-hygiene-support-women-and-girls-somalia).

15. Detection of climate-sensitive pathogens via wastewater surveillance in refugee camps in Bangladesh [website]. ClimaHealth; 2024 (https://climahealth.info/resource-library/detection-of-climate-sensitive-pathogens-via-wastewater-surveillance-in-refugee-camps-in-bangladesh/).

16. Displacement in a changing climate. Geneva: International Federation of Red Cross and Red Crescent Societies; 2021 (https://www.ifrc.org/document/displacement-in-a-changing-climate).

17. Essential programme on immunization [website]. World Health Organization; 2024 (https://www.who.int/teams/immunization-vaccines-and-biologicals/essential-programme-on-immunization#:~:text=Essential%20Programme%20on%20Immunization&text=The%20Essential%20Programme%20on%20Immunization,populations%20across%20the%20life%20course).

18. Human mobility and health in the context of climate change, environmental degradation and disasters. Geneva: International Organization for Migration; 2024 (https://www.iom.int/sites/g/files/tmzbdl486/files/documents/2024-01/iom-health_climate-change_position-paper_21.12.2023.pdf).

19. Rabbani F, Siddiqui A, Merali Z. Responding to mental health challenges of flood-affected communities through technology-driven local solutions in Pakistan: the mPareshan Project [website]. Connecting Climate Minds; 2024 (https://hub.connectingclimateminds.org/research-and-action/case-studies/14).

20. Amsalu R, Schulte-Hillen C, Garcia DM, Lafferty N, Morris CN, Gee S et al. Lessons learned from helping babies survive in humanitarian settings. Pediatrics. 2020;146(suppl 2):S208–17 (https://doi.org/10.1542/peds.2020-016915L).

21. Lien C, Raimo J, Abramowitz J, Khanijo S, Kritharis A, Mason C et al. Community healthcare delivery post-Hurricane Sandy: lessons from a mobile health unit. J Community Health. 2014;39(3):599–605 (https://doi.org/10.1007/s10900-013-9805-7).

22. Phiri Msyamboza K, M'bang'ombe M, Hausi H, Chijuwa A, Nkukumila V, Wenji Kubwalo H et al. Feasibility and acceptability of oral cholera vaccine mass vaccination campaign in response to an outbreak and floods in Malawi. Pan Afr Med J. 2016;23:203 (https://doi.org/10.11604/pamj.2016.23.203.8346).

23. Pichler P-P, Jaccard IS Weisz U, Weisz H. International comparison of health care carbon footprints. Environ Res Lett. 2019;14:064004 (https://doi.org/10.1088/1748-9326/ab19e1).

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