



Task Force 10
Migration

Policy brief

ENVIRONMENT, MIGRATION AND URBANISATION: CHALLENGES AND SOLUTIONS FOR LOW- AND MIDDLE-INCOME COUNTRIES

SEPTEMBER 2021

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ABSTRACT

The environment is closely related to migration and urbanisation processes. Changing environmental and socioeconomic factors are driving migration from rural areas into cities, resulting in unprecedented urban growth. This in turn creates new environmental risks and vulnerabilities; but it also offers opportunities to design sustainable and inclusive urban living. Addressing this complex nexus requires a holistic approach that considers the connections between different systems and policy domains, while promoting just climate transitions. Climate mitigation and adaptation can minimise the impact of the environment on migration, while we also need to strengthen resilience, including frameworks for protection and inclusion in migrant origin areas and cities.



CHALLENGE

The nexus between the environment, migration and urbanisation poses major development challenges, particularly in low- and middle-income countries where both population growth and internal migration rates are high (Aerni, 2016). The impacts of climate change will lead to a worsening of environmental conditions in many regions in the form of extended heat episodes, more erratic rainfall, drought and flooding. These impacts particularly affect rural agrarian and pastoralist communities that heavily depend on the environment. With livelihoods being increasingly disrupted by climate change, it is highly likely that climate-driven migration will increase. According to the World Bank Groundswell report, Sub-Saharan Africa, South Asia and Latin America could see more than 140 million people move within their countries' borders by 2050, if no urgent global and national climate actions are taken (Rigaud et al., 2018)

A large share of these migrants will move to cities. In many countries, including in the G20, urbanisation processes are driven by rural-urban migration in response to rapid changes in production, especially manufacturing (Montgomery, 2008). Better labour market prospects in urban areas pull in young people (Zhao, 1999), while lack of social and economic opportunities as well as environmental drivers push people out of their rural origins to search for a better life in the urban centres. As a consequence, G20 countries like China, Indonesia and South Africa have seen major urban growth in the past decades.

The resulting increase in urban populations accelerates demand for housing and basic social and health services in the urban destination areas, putting pressure on already strained infrastructure and facilities. Some cities that already host several million people, such as Dar es Salaam in Tanzania, Kampala in Uganda or Ouagadougou in Burkina Faso are expected to double in size by 2035 (United Nations, 2019). By this time, more than 70 per cent of the global population will live in cities. This rapid urbanisation brings new opportunities and new challenges, including environmental risks.

Migration can increase climate risk and vulnerability in two ways. First, a larger population size and higher density due to migration in destination areas can increase the exposure to natural hazards. Loss and damage from hazards such as severe storms and flooding have been shown to have more severe impacts in cities than in rural settings due to a higher concentration of people and assets (Donner and Rodríguez, 2008; Gu, 2019) combined with mounting disaster losses, have brought about a more serious focus among scholars on how changing population patterns shape the vulnerability and resiliency of social systems. Recent disasters, such as the Indian Ocean Tsunami (2004). Second, poor urban planning coupled with lower socioeconomic status of migrants results in migrants disproportionately settling in informal neighbourhoods in urban and peri-urban areas that are often subject to unsuitable land uses such as landfills or hazard-prone locales such as marginal land outside urban areas, low-lying deltas or coastal zones prone to flooding (Bullard, 2000; Hunter, 2005). This further exacerbates climate risk in urban areas for migrant populations due to both higher exposure and social vulnerability.

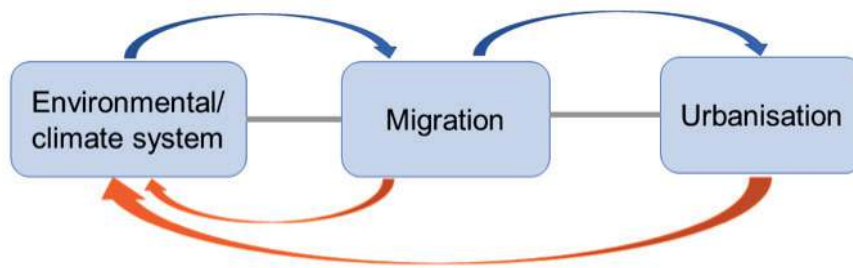


Figure 1: The complex relationships between environment, migration and urbanisation

At the same time, migration and urbanisation also affect the climate and environmental system through population and lifestyle changes (see Figure 1 for an illustration of the nexus). Large-scale migration can potentially add additional stress to regional environments of urban destination areas through increases in consumption, waste production and land-use changes (Garling, 1998). The evidence about the impact of the growth of the migrant population on the environment such as local air pollution and greenhouse gas emissions however is inconclusive (Liang et al., 2020; Ma and Hofmann, 2019; Qi and Li, 2020; Squalli, 2010; Squalli, 2021). At the same time, the increase in income level and access to goods, services, infrastructure and technology in the urban area can induce lifestyle changes for rural-to-urban migrants relating to energy consumption, means of transportation and other types of consumption (Zhang et al., 2016). However, consumption and lifestyle patterns of the migrants may not catch up with those of the original urban population because they are often poorer and perhaps more conservative consumers due to financial commitments to their family at the place of origin (Squalli, 2010). This highlights that for sustainable urban development, it is crucial to include migrants' perspectives into policy planning.



PROPOSAL

In order to address the environment-migration-urbanisation nexus, a holistic approach is required, which acknowledges the interconnectedness between different systems, considers challenges in both origin and destination areas and takes an inclusive perspective involving migrants and other stakeholders. Here, we propose six key policy recommendations that contribute to building resilient and sustainable communities and cities.

PROMOTE A JUST CLIMATE TRANSITION

Reducing environmental and climate risks requires both mitigation and adaptation. Limiting global warming will minimise the climate impacts on livelihoods ensuring that humans can still adapt to the changes. This requires upscaling the **transition towards net-zero greenhouse gas emissions** through changes in production and consumption via technological innovations and cooperation across public and private sectors including individual citizens. In particular, if efforts are made towards limiting the temperature increase to 1.5°C or below, the likelihood of extreme events will be reduced and consequently adverse impacts on agricultural production, food availability and economic loss will be minimised (Hoegh-Guldberg et al., 2018). Mitigating climate change through **reductions in greenhouse gas emissions thus indirectly scales down the environmental pressure to migrate** and consequently contributes to slowing down rapid population growth due to migration in the urban areas.

But such a transition must be socially fair and cost-efficient. With respect to the environment-migration-urbanisation nexus, a just transition needs to be ensured for migrants from the perspectives of both workers and consumers. A transition towards net-zero emissions implies that certain high-carbon economic sectors such as the energy sector, heavy industry, construction and livestock will be directly affected. As migrants in urban centres often engage in precarious low-skilled occupations (Meng, 2001; Manning and Pratomo, 2013), the right policies should help workers to acquire new skills through **training and education**, to ensure employment opportunities and decent working conditions. Training must include all types of worker, as evidence shows that low-educated, informal and part-time workers are often excluded from on-the-job training (González-Velosa et al., 2016). Likewise, public funding should be set aside to ensure adequate social protections and compensation (e.g., health care, pensions, payouts, retraining) in case welfare institutions are not available (Robins and Rydge, 2019). These schemes would help reduce the social vulnerability of migrants.

BUILD SUSTAINABLE AND EFFICIENT COMMUNITIES AND CITIES

Migration and increased urbanisation have important implications for the environment and ecological systems (see Figure 2 for urbanisation trends in different world regions). In the context of rapidly growing cities, the provision of sustainable infrastructures, housing and services is key to minimising potential negative environmental impacts of migration and urbanisation. In terms of consumption, the impact of migration on the environment can be



mitigated through **upscaling access to affordable, safer, reliable and sustainable modern energy and transport**. This requires anticipatory and sustainable urban development planning that accounts for potential future migration flows (Yigitcanlar and Teriman, 2015; NÆss, 2001; UNHABITAT, 2007).

In some low- and middle-income countries such as those in sub-Saharan Africa, South America or South Asia, a large number of migrants often settle in slums in peri-urban areas where energy access is limited (Butera et al., 2016). Unreliable (e.g., frequent outages and low voltage for electricity) and unaffordable energy services push migrants to use illegal connections for electricity and/or use unclean energy sources (e.g., dung, agricultural residues, kerosene and charcoal) for lighting, cooking and heating. While targeting subsidies of utility services could provide a short-term solution, participatory urban development planning which is inclusive and engages migrants in energy decision processes is key to a medium- to longer-term solution (Sovacool and Dworkin, 2015).

Although improving energy access for migrant populations may be seen as a driver exacerbating greenhouse gas emissions, ensuring energy efficiency and **a transition to cleaner and renewable energy sources can contribute to minimising the impact of increased energy consumption**. This is important not only from an energy justice and just transition point of view (Carley and Konisky, 2020), but also because of its potential contribution to reducing greenhouse gas emissions in a direct and indirect manner. A coordinated social assistance programme to tackle energy insecurity is key to improving general social welfare (Hernández and Bird, 2010). For instance, coordinated energy and housing assistance can improve the living conditions of migrants while reducing their environmental vulnerability and carbon footprint.

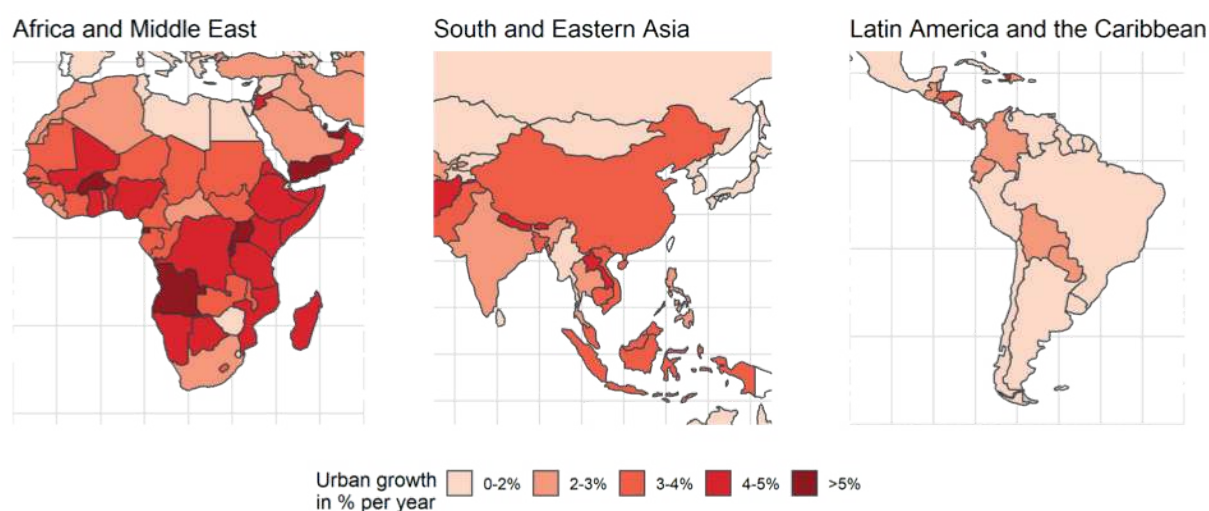


Figure 2: Urbanisation trends in Africa and the Middle East, South and Eastern Asia, and Latin America and the Caribbean.

Urban growth measured as average yearly urban growth rate from 2000 to 2019

Data: UN Department of Economic and Social Affairs (2019)



STRENGTHEN CLIMATE RESILIENCE AND ADAPTIVE CAPACITY IN ORIGIN AREAS

Even if the worst impacts of climate change can still be averted, it is important to **prepare for the climate impacts that are likely to occur in the future** given the current global warming trends and increasing levels of greenhouse gases in the atmosphere. Low- and middle-income countries are expected to be particularly affected by those impacts with risks and losses potentially rising to intolerable levels, beyond limits to adaptation (Dow et al., 2013; Xu et al., 2020). Even if the limits are not reached, increasing adverse climate impacts can reduce adaptation options, leaving migration as the only viable strategy to ensure survival (see Figure 3 for disaster displacement levels in different world regions).

More than 30 per cent of the global population in low- and middle-income countries rely for their livelihood on agriculture, which is highly dependent on environmental conditions. With climate change, yields of major cereal crops, such as wheat, maize and rice, are expected to fall. This is a great risk for food security and socio-political stability, and may contribute to increasing migration pressures in the affected regions (Arora, 2019; Schlenker and Roberts, 2009).

Local agricultural adaptation strategies are key to avoiding such impacts. Effective strategies include improved water and soil management, climate-resistant crop varieties and crop diversification, changing seasonal cropping patterns, and afforestation (Belay et al., 2017; Limantol et al., 2016; Kurukulasuriya and Rosenthal, 2003). Yet, with more severe climate impacts, the effectiveness of agricultural *in situ* adaptation strategies will be limited, making more systematic changes in public resource allocation and spending necessary to allow local communities to diversify income sources and livelihoods.

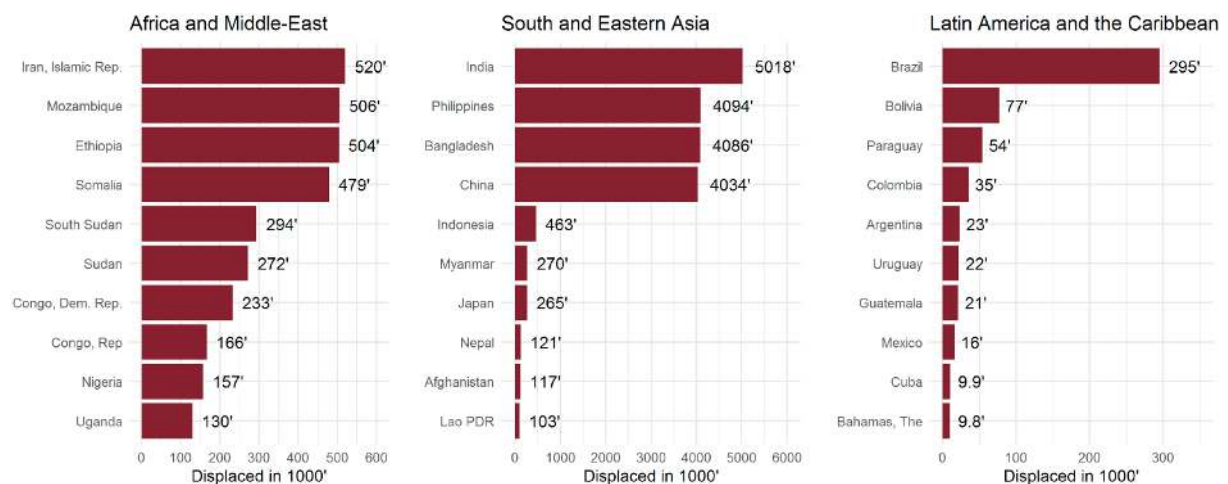


Figure 3: Disaster displacement in Africa and the Middle East, South and Eastern Asia, and Latin America and the Caribbean.

The bars show the number of total new disaster displacements in the year 2019 for the ten most affected countries in each region. Disasters refer to environmental disasters, including weather-related (e.g., floods, storms, droughts and wild fires) and geophysical disasters (e.g., earthquakes and volcanic eruptions)

Data: Internal Displacement Monitoring Centre (2020)



Building climate resilience is crucial. This means planning ahead with proactive measures that reduce climate risks, accelerate development and strengthen adaptive capacity – the ability to adjust and respond to climatic changes. **Climate resilience is deeply embedded in issues of inclusive development.** Poorer and disadvantaged population groups often lack access to basic services and resources, including adequate infrastructure, financial markets and social protection, making them particularly vulnerable to climate change (Hallegatte et al., 2020). Building resilience requires a holistic approach that encompasses cutting poverty, promoting universal education and ensuring decent living standards. It also requires supporting households and communities to overcome adaptation obstacles, including behavioural biases, gaps in information and knowledge, and limited access to markets and financial resources (Grothmann and Patt, 2005; Lutz et al., 2014).

IMPROVE RESILIENCE IN CITIES AND ADDRESS URBAN ECOLOGICAL HAZARDS

Climate change is expected to hit cities hard, particularly in low- and middle-income countries, where urban areas are growing rapidly and their populations can be highly vulnerable to changing climatic conditions and natural disasters. Urban floods are a particular challenge. In 2020, floods affected several hundred thousand people and led to severe damage and displacement (Centre for Research on the Epidemiology of Disasters, 2020).

Building resilience in this context involves measures at different levels, from infrastructure and housing development to inclusive social and economic policies, effective dissemination of information and communication of risks, and improving household disaster preparedness (Abunyewah et al., 2020; Hoffmann and Muttarak, 2017). With limited financial and social capital, migrants are particularly vulnerable to extreme climate events in cities, so effective policy needs to identify who they are and where they live.

Existing initiatives can serve as best practice cases, offering lessons for **collaborative climate adaption and resilience building in cities**. UN-Habitat's Cities and Climate Change Initiative seeks to enhance the preparedness and mitigation activities of cities in developing countries, building on innovative and inclusive solutions for climate resilience and sustainable urban living. The Asian Cities Climate Change Resilience Network (ACCCRN), implemented by the Rockefeller Foundation, aims at improving local climate change adaptation planning and implementation measures across medium to large cities in Asia (Tyler & Moench, 2012). Similar inter-city collaboration networks exist for other regions, such as the ICLEI Africa Resilient City Project and the Inter-American Development Bank Emerging and Sustainable Cities initiative in South America.¹

STRENGTHEN THE PROTECTION AND INCLUSION OF MIGRANTS

While migration can bring opportunities for both origin and destination areas and improve the welfare of migrants and their families, it comes with substantial risks. Many migrants entering cities from rural areas have limited financial and social resources and are highly vul-



nerable. They may end up in deprived and marginalised neighbourhoods with poor access to water, sanitation, public services and labour markets. Having potentially fled from environmental threats in their origin regions, the migrants may find themselves exposed to new hazards in their urban destinations. Many informal settlements are located on marginal land in hazard-prone areas. Due to low-quality construction materials, inadequate infrastructure and high population densities, disasters can have fatal consequences.

Better protection and support of migrants is needed at all stages of the migration cycle.

This includes legal protection of migrant workers and enforcement of labour rights, as well as social protection and welfare benefits. Furthermore, a full integration and inclusion of migrants in urban destinations requires adequate access to land, infrastructure and services, and labour markets (Kogan, 2016; Kuhlman, 1991).

Education and training are particularly important, as they can enable effective integration of migrants into local labour markets, which typically require specialised skill sets. In low- and middle-income countries most internal migrants work in informal sectors (Bhattacharya, 2002), but education and training can make them more employable in the formal sector, which is likely to be less precarious and to offer better social protection. On-the-job training and professional education initiatives are effective ways to improve inclusion and employment opportunities, especially for young people and women (see for example the activities of the UNIDO Learning and Knowledge Development Facility, <https://lkdfacility.org/>). All these opportunities should extend to rural areas, the main locations of origin for internal migrants.

Likewise, **at the international level, enhanced protection and support of migrants is required.** The G20 has affirmed its commitment to strengthen and promote orderly, safe and regular migration, including protection schemes and the support of destination areas in preparing for increased levels of internal migration in the future. For this, legislative and policy frameworks need to be further strengthened to ensure migrant rights' protection and support. Existing initiatives are pointing the way. A recent global policy effort is the Global Compact on Safe and Orderly Migration or the Global Compact on Refugees. Regional initiatives, such as MERCOSUR in South America and the West African ECOWAS, are promoting systems for orderly and protected regional migration (Dick et al., 2018). Taking these efforts further, at international, national and local levels, could ensure better protection for migrants, including those migrating internally within the borders of their countries.

TAKE A HOLISTIC APPROACH THAT BUILDS ON SYNERGIES BETWEEN POLICY DOMAINS

The complex relationships between the environment, migration and urbanisation – as well as several associated challenges – **necessitate a systemic view and holistic approach**, which considers the connections between different systems, deals with challenges in both origin and destination areas, and includes the perspectives of migrants and other stakeholders. Given that the environment, migration and urbanisation have positive and negative influences on one another, a just policy design needs to foster resilience and sustainability in both rural communities and in cities.



This requires policy makers to look beyond the boundaries of their ministries or usual remits, to incorporate insights and perspectives from other domains and actively collaborate with other departments and organisations. **Multi-stakeholder partnerships and participatory approaches**, involving actors from the public and private sector, can serve as catalysts to develop climate-compatible policy. By bridging different policy domains – ranging from climate action to migration policy and urban planning – policy makers can effectively address the different environmental, economic and social challenges of increased migration and urbanisation, to assuage risks and take advantage of the opportunities for migrants and local populations alike.



NOTES

¹ An overview of such initiatives can be found at <https://www4.unfccc.int/sites/nwpstaging/Pages/HS-summary-report-1.aspx>.



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