Impeded Migration as Adaptation: COVID-19 and Its Implications for Translocal Strategies of Environmental Risk Management¹

Gunnar Stange^{a,b}* , Raffaella Pagogna^a, Harald Sterly^a, Patrick Sakdapolrak^a, Marion Borderon^a, Benjamin Schraven^c & Diogo Andreola Serraglio^d

^aUniversity of Vienna ^bPrivate University College of Education Burgenland, Austria ^cGerman Institute of Development and Sustainability (IDOS), Germany ^dPotsdam Institute for Climate Impact Research (PIK), Germany

*corresponding author: gunnar.stange@univie.ac.at

Received: 15 May 2023 / Accepted: 16 June 2023 / Published: 28 June 2023

Stange, G., Pagogna, R., Sterly, H., Sakdapolrak, P., Borderon, M., Schraven, B., & Serraglio, D. A. (2023). Impeded migration as adaptation: COVID-19 and its implications for translocal strategies of environmental risk management. *Advances in Southeast Asian Studies*, 16(1), 157-169.

In the debates over environmental impacts on migration, migration as adaptation has been acknowledged as a potential risk management strategy based on risk spreading and mutual insurance of people living spatially apart: Migrants and family members that are left behind stay connected through a combination of financial and social remittances, joint decision-making, and mutual commitment. Conceptualizing migration as adaptation through the lens of translocal livelihood systems enables us to identify the differentiated vulnerabilities of households and communities. COVID-19 and the restrictions on public life and mobility imposed by governments worldwide constituted a complex set of challenges for translocal systems and strategies, especially in the Global South. Focusing on examples, we highlight two points: First, the COVID-19 crisis shows the limits of migration and translocal livelihoods for coping with, and adapting to, climate and environmental risks. Second, as these restrictions hit on a systemic level and affect places of destination as well as origin, the crisis reveals specific vulnerabilities of the translocal livelihood systems themselves. Based on the translocal livelihoods approach, we formulate insights and recommendations for policies that move beyond the narrow, short-term focus on the support of migrant populations alone and address the longer-term root causes of the vulnerabilities in translocal livelihoods systems.

Keywords: COVID-19; Environmental Risk Management; Immobility; Migration; Translocal Livelihoods

¹ This article is an updated and revised version of a blog contribution to the International Organization for Migration's (IOM) Environmental Migration Portal (https://environmentalmigration.iom.int/blogs/impeded-migration-adaptation-covid-19-and-its-implications-translocal-strategies-environmental-risk-management).

INTRODUCTION: UNDERSTANDING "MIGRATION AS ADAPTATION" AGAINST ENVIRONMENTAL RISKS THROUGH THE LENS OF TRANSLOCAL RESILIENCE

In recent years, many migrants and their household members in places of origin have been exposed to a double crisis: the ongoing climate emergency and the COVID-19 pandemic. These two crises are interrelated in several ways and can pose significant challenges to the well-being, livelihoods and resilience of these households and their communities. To better understand these interconnections and their implications for policy, we propose a translocal social resilience perspective. While (forced) migration can be the result of in-situ adaptation failure, in many cases migration might be an active strategy (McLeman & Smit, 2006; Vinke et al., 2020) adopted by individuals and households to decrease vulnerability and to better deal with environmental and climate risks (Black et al., 2011). Migrants who live and work away from home stay connected with households and communities in their place of origin through various means, such as sending financial and social remittances, engaging in joint decision-making and strategizing, or social networking. This translocal connectedness (Peth et al., 2018; Peth & Sakdapolrak, 2020; Porst & Sakdapolrak, 2020) enables households and communities to spread risks across different locations and sectors: Remittances from tourism, industry or service sectors from migrants' places of destination can, for example, counter the environmentally induced failure of harvests in rural areas. As such, translocal connectedness has the potential to enhance the ability of households and communities to respond to climatic risks and sustain their livelihoods and wellbeing. As they heavily impeded this connectedness, the effects of the COVID-19 pandemic and the respective containment and mitigation measures were systemic and felt by global, national, and local systems alike. And they became manifest simultaneously in migrants' places of origin and destination, stretching strategies of migration as adaptation to their limits (Sakdapolrak et al., 2023).

We propose to investigate the mechanisms of this process and the implications of the COVID-19 crisis on migration as adaptation through a translocal social resilience perspective. We will begin by introducing the conceptual framework of translocal social resilience, which highlights the interplay between migration and social resilience in different locations. Drawing on news media reports, we will then present examples South, East, and Southeast Asia of how the pandemic and related mitigation measures have affected translocal livelihood systems, and how this has impacted households' ability to cope with environmental and climate risks. Finally, we will discuss the policy implications of our findings, arguing that a translocal social resilience perspective can provide a valuable framework for designing effective and equitable policies to support vulnerable populations in times of crisis.

CONCEPTUALISING TRANSLOCAL SOCIAL RESILIENCE, AND UNDERSTANDING THE EFFECTS OF THE COVID-19 CRISIS

A translocal social resilience approach shifts the focus away from single-sided views of either migrants or households in the place origin, of either rural or urban places and issues: Instead, migrants (households) in places of destination and family or household members in the place of origin are understood as a single, functional social unit (Greiner & Sakdapolrak, 2013). The concept of translocality emphasizes the multi-dimensional and continuing links and connections between migrants and their places of origin and the resulting socio-spatial interdependencies (Etzold & Sakdapolrak, 2016; see Figure 1).

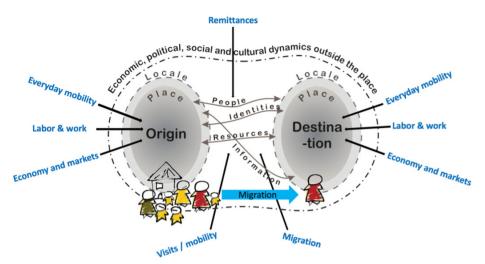


Figure 1. Translocal livelihoods. (figure by the authors, based on: Greiner & Sakdapolrak, 2013).

It is important to understand that migration (and, from a functional perspective, translocal livelihoods) is one out of several possible strategies of households to deal with a broad range of risks. However, as environmental and climate risks such as floods or droughts often affect whole communities or regions, strategies such as migration that allow for the spreading of risks and livelihood opportunities across locations and sectors are especially important when dealing with such risks (Burnham & Ma, 2016; Wiederkehr et al., 2018).

A translocal perspective provides us with a comprehensive understanding of the mechanisms through which migration can serve as an adaptive strategy. This includes an examination of how individual capabilities and aspirations influence the decision to migrate (Porst & Sakdapolrak, 2018), as well as an exploration of the legal, employment, and housing conditions in the destination country and how these factors relate to remittance sending. Furthermore, this perspective considers the ability of households in the places of origin to transform financial and social remittances into adaptive and transformative actions in response to environmental, economic, social, and political changes. Additionally, it explores the capacity of both migrants and their family members in the places of origin to engage in self-organization and collective action at the community level and beyond.

The COVID-19 crisis influences the core mechanisms for translocal resilience building in at least two ways: First, the COVID-19 pandemic has impacted the maintenance of livelihoods in both the places of origin and destination due to several factors, including the illness of migrants due to exposure, mobility restrictions, and the resulting economic downturn. These factors severely undermine the ability of households to diversify risks through translocal embeddedness and access to livelihood opportunities, especially in the informal economies of the Global South (Suhardiman et al., 2021). Second, the COVID-19 pandemic has severely weakened and disrupted translocal connectedness, which encompasses the transfer of both tangible and intangible resources between migrants and their households, as well as translocal mobilities. The pandemic has had wide-ranging impacts on various aspects of translocal connectedness, including the ability to send and receive remittances, maintain translocal ties through visits, and utilize migration, including seasonal migration, as a coping or adaptation strategy for environmental risks (Phillips et al., 2020).

To comprehensively analyze the impeded potential of migration as adaptation, it is essential to focus initially on the vulnerability of translocal livelihood systems, which comprises migrants residing in places of destination and their household and family members in places of origin. Consequently, in the following section we will examine three critical aspects that render translocal livelihood systems vulnerable to the adverse impacts of the COVID-19 pandemic: i) their exposure to external stressors; ii) their sensitivity; and iii) the adaptive strategies of the actors involved.

With regard to the (i) exposure, we need to acknowledge the multiple stresses and perturbations that especially migrants, including refugees and internally displaced persons (IDPs), but also their households and family members in places of origin, face. This includes the following non-exhaustive list: a) COVID-19 infection; b) mobility restrictions and forced immobility; c) forced mobility; d) quarantine; e) business closure and economic downturn; f) criminalization and stigmatization; g) violence and conflict; h) media portrayal and defamation; i) legal and social discrimination.

Furthermore, we need to consider the full range of characteristics that shape the (ii) sensitivity of translocal livelihoods, and thus of migrants and their household members in places of origin: a) health status; b) livelihoods, poverty and food insecurity; c) housing and shelter; d) social embedding and status; e) legal rights and welfare provision; f) mobility and immobility; g) (insecure) legal status; h) unsafe work/housing conditions.

Moreover, (iii) there needs to be an understanding of how the actors within the translocal livelihood systems, migrants and their household members in places of origin, are actively coping and adapting to the effects of the COVID-19 pandemic, from whom they get support (government, non-governmental organizations, international organizations, private sector, civil society, family and friends), and in which areas (basic needs, financial, legal, social-psychological).

Lastly, the effects of the COVID-19 pandemic also extend beyond the household level: Migrants' places of destination are affected, for example, by lack of labor, as returned migrants are missing or cannot fill seasonal jobs due to border closures, and the communities in places of origin are affected by decreased remittance flows, competition over resources, or social and political tensions arising from the return of large numbers of migrants.

THE IMPACT OF COVID-19 ON TRANSLOCAL LIVELIHOODS, AND THE ENSUING DECREASED RESILIENCE AGAINST ENVIRONMENTAL RISKS

In order to better understand the multidimensional ways in which COVID-19 mitigation measures affect translocal livelihoods, a database² has been set up at the University of Vienna. The database collects and systematizes global online media coverage regarding the impacts of COVID-19 and the related containment and mitigation measures on migrants and their translocal livelihood systems. It is searchable in the categories outlined in the previous section and thus allows a global as well as country-specific understanding of ongoing processes. As of March 2022, the database includes 5779 news headlines from 224 countries and territories. The following examples provide an overview of different thematic areas derived from the cases collected in the database (see Figure 2):

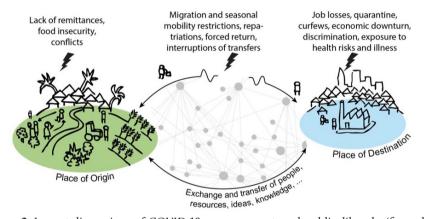


Figure 2. Impact dimensions of COVID-19 measures on translocal livelihoods. (figure by the authors).

Impact of Mobility Restrictions on Translocal Livelihoods

The restriction of everyday mobility and access to public spaces is a widely applied COVID-19 containment measure. However, these measures have had significant impacts on the livelihoods of migrants and small-scale entrepreneurs, who were unable to reach their places of work (e.g., factories) or conduct self-employment activities (e.g., selling goods in public spaces). These impacts were felt in migrants' places of origin and destination, thereby simultaneously stressing both sides of the translocal livelihoods systems. Two examples highlight these impacts:

Foremost, a hat manufacturer and retailer in Nantong, China, was only able to resume production at 80% capacity in February 2020 after the government-ordered factory closure. This was because hundreds of Foremost's (migrant) employees, who lived outside Nantong (but not in their home villages), were unable to return to work due to travel restrictions (Lee, 2020). This resulted in de facto joblessness, making it impossible for these migrant workers to remit money home.

² See https://covid-migration.univie.ac.at/

Impeded Migration as Adaptation

In the Indian state of Madhya Pradesh, mobility restrictions severely impacted the lives of rural populations in places of origin. The "Janta Curfew" in April 2020 (Vishwakarma, 2020) prevented farmers, laborers, and small-time traders from attending to their work, leading to food and supply shortages and price increases. Farmers also experienced labor shortages, as most farm laborers are migrant workers from other states who were unable to move due to the curfew.

Economic Downturn, Market Disruptions, Return Migration, and Conflicts

The COVID-19 crisis has had severe economic impacts, causing market disruptions, unemployment, and food price hikes, particularly affecting migrant workers. The United Nations' Food and Agriculture Organization (FAO) warned of a "looming food crisis" in early April 2020 (Cremer, 2020). Evidence for the intertwined stressors for migrants can be observed in the case of India: Tens of thousands of internal migrant workers tried to return to their places of origin as they lost their jobs due to factory closures (Vishwakarma, 2020), and the (public) transportation system ceased to operate. In several cases, people walked thousands of kilometers to make it back home to their families, many of them dving on their way (Pandey, 2020). In many cases, migrant workers did not have the choice to wait out the end of curfews, because not only joblessness but also food price hikes up to 50 percent made survival in Delhi impossible for migrants from Uttar Pradesh, Bihar, and Jharkhand. Although the government provided food and shelter in schools to stranded migrant workers, the report finds that public assistance did not meet the high demand of support caused by the multiple crises. Returning migrant workers have increased the supply of labor and demand for resources in their localities of origin and might lead to fierce competition over scarce jobs, which has on occasions resulted in property disputes triggered in their home villages (Sharma & Jain, 2020).

Drying Up of Financial Remittances

As early as April 2020, the World Bank estimated an overall decline of remittance flows to low- and middle-income countries by around 20% for 2020 (USD 445 billion) as compared to 2019 (USD 554 billion). However, analyses from 2021 show that the overall decline was only 1.6% in 2020 (KNOMAD, 2021, p. X). The causes for this include the shift from informal to formal channels for money transfer, the influence of exchange rates, as well as the use of savings and the restriction of personal consumption. Despite this overall stability, the official and aggregated data only provide a partial view since informal flows and domestic transfers are not accounted for, and regional differences are obscured. The ability to transfer money is affected by residency status, gender, and access to social security systems at the destination. For example, studies reveal that while working migrants in Singapore with secure employment can continue to remit money home, irregular foreign workers in Thailand who lack income security due to job loss are unable to transfer remittances and often have to return to their home countries (Suhardiman et al., 2021). The Philippines is particularly vulnerable to the decline in remittances, as financial remittances sent to the country represent nearly 10% of its GDP. As of May 2020, nearly 90,000 overseas migrant workers in the Philippines were either displaced or had no income due to COVID-19 containment and mitigation measures, severely affecting the livelihoods of hundreds of thousands of people who depend on these remittances.

Disruption of (Mutual) Visits and Mobility

Migrant workers involved in translocal livelihood systems often spend extended periods away from home in their places of destination (Peth et al., 2018), making periodic visits to their families vital for maintaining social relations and promoting mental health. Visits mostly take place on the occasions of important religious feasts such as the end of Ramadan. With the world's largest Muslim population, Indonesia had been grappling with one of the most severe COVID-19 outbreaks in Southeast Asia. During the Ramadan period in May 2020, the Indonesian government imposed a ban on all holiday travel as part of its COVID-19 mitigation strategy (Jamaluddin et al., 2020). Consequently, the government advised tens of thousands of migrant workers in Singapore and Malaysia to avoid traveling home to Indonesia to celebrate Idul Fitri, the end of Ramadan, with their families (Pinandita, 2020).

Impacts on Migration

Translocal livelihood systems are not only well-established worldwide but are being established every day. However, since the outbreak of COVID-19 the world experienced unprecedented global travel bans, immigration restrictions and business closures. These measures had far-reaching implications, especially for individuals who had planned to work outside their places of origin. For example, Nepalese migrant workers were among those impacted, with many experiencing wage losses along with the loss in investments already made on work permits, travel documents and tickets due to restrictions on leaving for their work destinations (Coronavirus Travel Bans Hit, 2020). As of mid-March 2020, Nepalese overseas recruitment agencies stopped issuing labor permits in response to immigration bans implemented by most countries of destination. Prior to the ban, an average of 1,500 Nepali migrant workers left for the Middle East, Malaysia, and South Korea to work as domestic workers and in the construction industry. Unfortunately, for most of the affected migrant workers, there were no alternative job opportunities available in Nepal.

Understanding these mechanisms of translocal social resilience (and its potential failure) is important to understand the reasons why, to what degree, and in which circumstances the COVID-19 pandemic is bringing migration as adaptation to its limits. In Bangladesh, for example, even modest amounts of remittances from domestic migration form an important part of many rural households' livelihood strategies to cope with environmental risks. In 2020, the combination of exceptionally intense flooding with the lack of income due to closed garment factories made the situation especially dire for many domestic migrants and their rural households (Kelly, 2020). In Nepal, the lack of remittances from international migrants, many of whom were forced to return to their home villages due to visa cancellations, made it difficult for households and communities to cope with landslides caused by intense rainfalls (Tsering, 2020). And in the Horn of Africa, the decline of remittances in combination

with the locust invasion has driven food prices and threatened food security, especially of children in poor rural households (Save the Children, 2020). These situations pose different threats and stresses to translocal social livelihoods, they prompt different strategies by the migrants and their (rural) households in places of origin, and thus require different forms of political action for support or relief.

IMPLICATIONS FOR POLICY MAKING

The COVID-19 pandemic has resulted – at least temporarily – in more restrictive immigration processes, disrupted translocality, and related hardships. These consequences actually should have required a multi-level policy response with short-term measures aimed at establishing social protection programs addressing income and food insecurity and improving access to health services, sanitary measures and primary care – in particular for migrants, refugees, internally displaced persons, 'trapped' populations, and those who are highly vulnerable to environmental risks. However, there is little to suggest that national governments' short- and medium-term responses to the COVID-19 pandemic have had a particular focus on these groups. One of the few exceptions is the accelerated disbursement of unemployment insurance and extension to migrant workers by the Chinese government (IMF, 2021).

Nonetheless, we still need a better understanding of the lessons learned so far; systematic surveys and evaluations of impacts but also good practices are necessary to help prepare for future pandemics. Importantly, long-term impacts of COVID-19 policy responses on migration as adaptation to environmental change in different country contexts need to be further examined to inform social security interventions in anticipation of future global crises. Moreover, further trust in, and capacity building of, local authorities, implementing agencies, and disease surveillance systems is certainly needed. However, one important future lesson is obvious: Long-term oriented, broadened, and integrated social, economic, and environmental policies aimed at translocal resilience of livelihoods are needed. Specifically, in locations with both high migration flows and exposure to environmental hazards, policy responses need to be better targeted in terms of social and health protection mechanisms, labor market interventions, or rural and urban development programs. Translocal livelihoods could be supported through direct employment in public sector projects aimed at conservation and restoration of degrading land and forest ecosystems (in both areas of origin and destination), hence delivering a "triple dividend" by contributing to local social, economic, and ecological resilience.

These policies should be interlocked with several community-based measures such as capacity building workshops to raise awareness about migration and environmental risks to translocal livelihoods among (local) decision makers. Such initiatives could also help to identify how migrants and their families can best be supported through policy interventions or practical measures. Financial training measures for households and individuals might enable migrants and households to make the most of financial remittances by promoting financial literacy and strengthening financial planning and risk management skills. Establishing local migration funds could enhance the potential benefits among community members. Strengthening capacities of return migrants by supporting communities in accessing finance services and adopting climate-smart agricultural or non-farm business models may strengthen community resilience to the adverse effects of environmental and climate change. Preparation and mentoring for future migrants and their relatives give the latter the opportunity to reflect on potential migration-related challenges and goals.

A major policy challenge is related to priorities and attitude: The positive news here is that migration in the context of climate change and environmental degradation is fully back on the agenda – even if COVID-19 has led to disrupted processes and a lower priority for issues of migration and displacement by governments, international organizations, and development cooperation agencies. To date, a heterogeneous and polycentric policy landscape addressing various issues of climate change and human mobility has emerged. Numerous actors, such as the International Organization for Migration (IOM), the UN Refugee Agency (UNHCR), regional organizations such as the European Union (EU) or the East African Intergovernmental Authority on Development (IGAD), the Platform on Disaster Displacement (PDD), the UN Climate Secretariat UNFCCC, and development cooperation institutions are just a few of the central "elements" of this landscape. Related activities cut across different policy and action fields ranging from climate change, environmental degradation, migration, forced displacement, disaster risk reduction, development, and human rights, to conflict resolution and peacebuilding.

This diversity of policy fields involved is important because the starting point for more integrated and "pro-translocality" related policy actions, as described above, would at least raise awareness of, and at best create a joint attitude on, migration at all levels and in different relevant policy fields – not only in the specific context of the discourse on the migration-climate change nexus. An ideal-type policy makers' attitude should be characterized by the willingness to overcome a sedentary bias, which is still very influential in many policy fields, and to foster a policy approach that seeks to promote the potential of translocal livelihood systems. However, such a joint attitude does not yet exist. Furthermore, the focus of activities targeting the climate mobility nexus so far is rather more on data generation/empirical evidence, awareness raising, and fostering policy dialogues than on "concrete action on the ground".

The COVID-19 pandemic has probably increased the acceptance of radical changes. So, there might be a chance to prioritize the human mobility, climate change, and health nexus in the future. As climate change is expected to result in a higher frequency of climate-related disasters and increasing livelihoods risks, it is expected that population movements will continue to rise. Instead of curtailing mobility even further through nationalism, enhanced collaboration among international actors would allow for continued advancement measures to deal with human mobility in the context of environmental changes (see also, Paoletti & Vinke, 2020).

CONCLUSION

The COVID-19 pandemic and the measures to contain it hit migrants especially hard; however, the impact goes far beyond the migrants themselves, also including their household and family members in places of origin. These effects are multidimensional, including the domains of health, economics, mobility, legal status, discrimination, housing, and others. A translocal social resilience perspective can help to understand

the mechanisms of these impacts: migrants and their family or household members in places of origin are thereby seen as a single functional and social unit, yet with distinct characteristics and vulnerabilities. Such a perspective enables us to disentangle the multiple social and spatial dimensions and scales through which these translocal livelihood systems are affected.

A number of conclusions can be drawn from this, and from the insights of emerging field and media reports. First, the impacts of COVID-19 and related containment measures on translocal livelihoods are systemic, area-wide, and happen simultaneously across places: whereas migration and translocal livelihoods can well-enhance resilience against (environmental, market, health, etc.) risks at either origin or destination, the pandemic affects both origins and destinations, often disrupting the very mechanisms connecting places. Thus, COVID-19 brings the resilience of translocal livelihood systems to its limits. Second, the translocal social resilience perspective also allows for a closer look at the mechanisms of impacts, which are often specific and not evenly distributed for all countries, sectors, migration types, or social groups. Such a perspective can thus also help to guide more specific and targeted policies to alleviate the impacts of COVID-19 on migrants and their translocal households, and to maintain their resilience against environmental risks. Third, there is still little detailed empirical knowledge about the different ways in which the pandemic affects translocal social livelihood systems around the world, albeit there is growing evidence that it does so. A combined effort would be needed to gather relevant information and turn the resulting insights into political action to provide targeted and timely support to those who are in the direst need of it.

\sim

REFERENCES

- Black, R., Bennett, S. R., Thomas, S. M., & Beddington, J. R. (2011). Migration as adaptation. *Nature*, 478(7370), 447-449.
- Burnham, M., & Ma, Z. (2016). Linking smallholder farmer climate change adaptation decisions to development. *Climate and Development*, *8*(4), 289-311.
- Coronavirus travel bans hit South Asia migrant workers. (2020, March 20). *Aljazeera*. https://www. aljazeera.com/news/2020/3/20/coronavirus-travel-bans-hit-south-asia-migrant-workers
- Cremer, J. (2020). Coronavirus presents looming food crisis, FAO warns. Alliance for Science. https://allianceforscience.org/blog/2020/04/coronavirus-presents-looming-food-crisis-fao-warns/
- Etzold, B., & Sakdapolrak, P. (2016). Socio-spatialities of vulnerability: towards a polymorphic perspective in vulnerability research. *Die Erde*, *147*(4), 234-251.
- Greiner, C., & Sakdapolrak, P. (2013). Translocality. Concepts, Applications and Emerging Research Perspectives. *Geography Compass*, 7(5), 373-384.
- International Monetary Fund. (2021). Policy responses to COVID-19. https://www.imf.org/en/Topics/imfand-covid19/Policy-Responses-to-COVID-19
- Jamaluddin, M., Sidhu, S., & Regan, H. (2020, April 24). Indonesia has the world's biggest Muslim population. It just banned holiday travel over Ramadan. *CNN*. https://edition.cnn.com/2020/04/24/ asia/indonesia-coronavirus-travel-ban-ramadan-intl-hnk/index.html
- Kelly, A. (2020, March 19). Garment workers face destitution as Covid-19 closes factories. *The Guardian*. https://www.theguardian.com/global-development/2020/mar/19/garment-workers-face-destitutionas-covid-19-closes-factories

- Lee, A. (2020, February 14). Coronavirus hitting China's manufacturing sector worse than Sars as Covid-19 slows production. *South China Morning Post*. https://www.scmp.com/economy/china-economy/ article/3050687/coronavirus-hitting-chinas-manufacturing-sector-worse-sars?module=perpetual_scr oll_0&pgtype=article&campaign=3050687
- McLeman, R., & Smit, B. (2006). Migration as an adaptation to climate change. Climatic Change, 76, 31-53.
- Pandey, V. (2020, May 20). Coronavirus lockdown: The Indian migrants dying to get home. BBC News. https://www.bbc.com/news/world-asia-india-52672764
- Paoletti, E., & Vinke, K. (2020). Developing a risk framework to address the nexus between climate change, migration and COVID-19. International Organization for Migration. https://environmentalmigration. iom.int/blogs/developing-risk-framework-address-nexus-between-climate-change-migration-andcovid-19
- Peth, S. A., & Sakdapolrak, P. (2020). When the origin becomes the destination: Lost remittances and social resilience of return labour migrants in Thailand. *Area, 52*(3), 547-557.
- Peth, S. A., Sterly, H., & Sakdapolrak, P. (2018). Between the village and the global city: the production and decay of translocal spaces of Thai migrant workers in Singapore. *Mobilities*, *13*(4), 455-472.
- Phillips, C. A., Caldas, A., Cleetus, R., Dahl, K. A., Declet-Barreto, J., Licker, R., Merner, L. D., Ortiz-Partida, J. P., Phelan, A. L., Spanger- Siegfried, E., Talati, S., Trisos, C. H., & Carlson, C. J. (2020). Compound climate risks in the COVID-19 pandemic. *Nature Climate Change*, 10(7), 586-588.
- Pinandita, A. (2020, April 8). COVID-19: Indonesian workers in Singapore, Malaysia urged to postpone 'mudik'. The Jakarta Post. https://www.thejakartapost.com/news/2020/04/07/covid-19-indonesianworkers-in-singapore-malaysia-urged-to-postpone-mudik.html
- Porst, L., & Sakdapolrak, P. (2018). Advancing adaptation or producing precarity? The role of rural-urban migration and translocal embeddedness in navigating household resilience in Thailand. *Geoforum*, 97, 35-45.
- Sakdapolrak, P., Borderon, M., & Sterly, H. (2023). The limits of migration as adaptation. A conceptual approach towards the role of immobility, disconnectedness and simultaneous exposure in translocal livelihoods systems. *Climate and Development*, 1-10. https://doi.org/10.1080/17565529.2023.2180318
- Save the Children (2020). Locusts, floods and COVID-19: A potentially deadly combination for malnourished children across the Horn of Africa. https://www.savethechildren.net/news/locusts-floods-andcovid-19-potentially-deadly-combination-malnourished-children-across-horn
- Sharma, S., & Jain, R. (2020). India's mass exodus from cities triggers village property disputes. *Reuters*. https://www.reuters.com/article/us-health-coronavirus-india-dispute/indias-mass-exodus-fromcities-triggers-village-property-disputes-idUSKBN23B250
- Suhardiman, D., Rigg, J., Bandur, M., Marschke, M., Miller, M. A., Pheuangsavanh, N., Sayatham, M., & Taylor, D. (2021). On the Coattails of globalization: migration, migrants and COVID-19 in Asia. *Journal* of Ethnic and Migration Studies, 47(1), 88-109.
- The Global Knowledge Partnership on Migration and Development (KNOMAD). (2021). *Resilience. Covid-19 crisis through a migration lens*. Migration and Development Brief 34 May 2021. The World Bank. https://www.knomad.org/sites/default/files/2021-05/Migration%20and%20Development%20 Brief%2034_1.pdf
- Tsering, N. G. (2020, August 6). Stuck at home after losing job to pandemic. Nepali migrants from districts where monsoon has wreaked havoc face a difficult road to recovery. *The Kathmandu Post*. https://kathmandupost.com/national/2020/08/06/stuck-at-home-after-losing-job-to-pandemic-nepalimigrants-from-districts-where-monsoon-has-wreaked-havoc-face-a-difficult-road-to-recovery
- Vinke, K., Bergmann, J., Blocher, J., Upadhyay, H., & Hoffmann, R. (2020). Migration as adaptation? *Migration Studies*, 8(4), 626-634.
- Vishwakarma, M. (2020). COVID-19 lockdown: How villages in Madhya Pradesh are suffering. *The Week*. https://www.theweek.in/news/india/2020/04/08/covid-19-lockdown-how-villages-in-madhya-pradesh-are-suffering.html
- Wiederkehr, C., Beckmann, M., & Hermans, K. (2018). Environmental change, adaptation strategies and the relevance of migration in Sub-Saharan drylands. *Environmental Research Letters*, *13*(11), 113003.

ABOUT THE AUTHORS

Gunnar Stange is a lecturer and researcher at the Department of Geography and Regional Research at the University of Vienna and at the Private University College of Education Burgenland, Austria. In his work, he focuses on migration, development, and conflict transformation themes, mainly in Southeast Asia. Outside of academia, he is also a psychosocial counselor working with refugees.

▶ Contact: gunnar.stange@univie.ac.at

Raffaella Pagogna is a PhD student and lecturer at the Population Geography and Demography Working Group in the Department of Geography and Regional Research at the University of Vienna, Austria. Her research primarily centers around migration infrastructures, governance, and decision-making processes. With a keen interest in comprehending the spatial and social implications of migration, she has conducted fieldwork in Ethiopia and Thailand.

▶ Contact: raffaella.pagogna@univie.ac.at

Harald Sterly is a research associate at the Population Geography and Demography Working Group in the Department of Geography and Regional Research, University of Vienna, Austria. He focuses on the spatial and social aspects of migration, urbanization, and technological change, with a specific interest on how the use of information and communication technology (ICT) changes vulnerable groups' scope for agency and their vulnerability and resilience.

▶ Contact: harald.sterly@univie.ac.at

Patrick Sakdapolrak is professor of Population Geography and Demography at the Department of Geography and Regional Research, University of Vienna, Austria. His research field is at the interface of population dynamics, environmental change, and development processes, with a focus on the topics of migration and displacement as well as health and disease, mainly in South- and Southeast Asia and East Africa.

▶ Contact: patrick.sakdapolrak@univie.ac.at

Marion Borderon is assistant professor of geography in the Population Geography and Demography Working Group at the Department of Geography and Regional Research, University of Vienna, Austria. Her research interests concern population and development studies. Much of her work focuses on contributing to the development of concepts and methods for the spatial assessment of vulnerability and risk in the context of environmental change in Sub-Saharan Africa.

▶ Contact: marion.borderon@univie.ac.at

Benjamin Schraven is an associate research fellow at the German Institute of Development and Sustainability (IDOS). His work focuses mainly on the relationship between environmental change and human mobility and potential policies addressing "climate migration". Furthermore, he also works on migration governance (with a particular focus on West Africa) and the discourse on migration and development.

▶ Contact: benj.schraven@gmail.com

Diogo Andreola Serraglio is a researcher at the Potsdam Institute for Climate Impact Research (PIK). His research concentrates mainly on the legal aspects of human mobility in the context of climate change, with a particular focus on Latin America and the Caribbean.

▶ Contact: diogo.serraglio@pik-potsdam.de

DISCLOSURE

The authors declare no conflict of interest.