



with



July 2022

Authors: Johannes Herbeck, Wiwandari Handayani, & Shahnour Hasan

Policy Briefing Note Nr. 3: Infrastructures and vulnerabilities - their relation with migration

Networking Unit
"Paradigm Shift"
(NUPS)

Working group 3
"Climate change
– impact on
migration"



© J. Herbeck, 2022

Challenge

The development of grey, green and blue infrastructures and technologies for 'resilience' and climate adaptation interrelates with migration in various ways - be it directly through resettlement or displacement of people during and after the construction of infrastructures or more indirectly through processes of placemaking. There should be more attention to this.

At discursive levels, a hegemony of globalized norms around the very technicalities of protective infrastructures, as well as of their political and financial modalities is underpinning the expansion of such material infrastructures related to (or justified by) climate change adaptation.

In recent years, this global hydro-hegemony further justifies the infrastructures by (loosely) aligning the archaic structural forms with concepts of bioengineering or nature-based solutions.

Despite their global standardization, blueprints of such climate-related infrastructures and respective policies undergo complex trajectories of translation and contribute to what is summarized by scholars as "epistemic mobility", i.e., the transfer of knowledge from one meaning-making system into another. Today, in many places around the world coastal adaptation processes are characterized by

Background

Climate change and infrastructures are closely intertwined. Due to the increasing probability of extreme weather events, (critical) infrastructures are exposed to growing risks. At the same time, protective infrastructures such as dams, sea defences and other technologies of environmental control are increasingly being built or expanded as part of adaptation programs and processes, often also in a way that disregards their well-documented unanticipated long-term impacts.

such epistemic mobilities, and the translocal transforming of adaptation policies and practices has become part of SDGs and green future agendas.

Infrastructures themselves are thereby no 'neutral' or apolitical technologies, but potentially impact on people, communities and environments in sometimes unexpected ways. They can be part of wider infrastructural processes towards local placemaking and regional economic development, potentially triggering real-estate development or industrial expansion in areas that can be considered as highly fragile and risky. In this way, infrastructures can also contribute to keeping people in place and in some cases even attract migration that in hindsight influences (re-)constructions of social relations and identities of people and places.

Responding to the challenge

In recent years, coastlines worldwide have been turned into interventionist spaces for hydro-engineering experimentation and, also, into new profit frontiers. These developments are frequently nurtured by visions such as 'blue urbanism' as an answer to predicted sea-level rise, extreme weather events, coastal erosion, salinization, and land subsidence. Often, the adopted planning perspectives imply a flattening of prevalent socio-cultural differentiation in land-ocean urban imaginaries and ignore local knowledge(s) and livelihood needs.

In consequence, integrated spatial planning and promotion of nature-based solutions should get more in the focus when it comes to the challenges of climate adaptation strategies and their respective feedback loops on communities and migratory patterns. For designing sustainable adaptive strategies that go beyond technical fixes of current adaptation discourses and mechanisms more interdisciplinary approaches are needed.

To reach this goal of more sustainable infrastructural development that goes along with policies that consider migration as a social reality, there is a need to engage with local knowledge(s). 'Cultures' of land-sea interactions as well as with prevalent de-centralized adaptation practices should become part of planning approaches and should be

related to the implementation of the SDGs. Further, engaging participatory processes and people-centered strategies should get more attention by policy-makers as they seem to be key to address effectively existing and predictable climate-related vulnerabilities. In a similar vein, shared learning between the Global South and Global North should be practised more actively.

Foregrounding decentralization and mutual learning help to emphasize that policy direction and interventions should not be focused on infrastructure development/physical construction alone - without further comprehensive consideration on the environmental and social implications on livelihoods and life-worlds affected, as well as potential repercussions on migration.

Suggested further readings

Handayani, W., Rudiarto, I., Setyono, J. S., Chigbu, U. E., & Sukmawati, A. M. A. (2017). Vulnerability assessment: A comparison of three different city sizes in the coastal area of Central Java, Indonesia. *Advances in Climate Change Research*, 8(4), 286-296.

Hasan, S., Evers, J., & Zwarteveen, M. (2022). The Work That Goes Into Policy Transfer: Making the Dutch Delta Approach Travel. *Water Alternatives*, 15(1), 56-72.

Hasan, S., Evers, J., Verzijl, A., & Zwarteveen, M. (2021). Deltas in dialogue: Imagining policy transfer from the Netherlands to Vietnam and Bangladesh as a symmetrical conversation. *Wiley Interdisciplinary Reviews: Water*, 8(6), e1559.

Herbeck, J., & Flitner, M. (2019). Infrastructuring coastal futures: Key trajectories in Southeast Asian megacities. *DIE ERDE—Journal of the Geographical Society of Berlin*, 150(3), 118-130.

Hillmann, F., Handayani, W. und B. Septiarani (2020): Featuring local urban mutations through regeneration – the case of resilient Semarang. In: TOPOS magazine for landscape architecture and Urban Design, Georg-Verlag, München, 2020, S. 58 - 63.

Hornidge, A. K., J. Herbeck, R. Siriwardane-de Zoysa und M. Flitner (2020): Epistemic Mobilities: Following Sea-Level Change Adaptation Practices in Southeast Asian Cities. In: *American Behavioral Scientist*, 2020, Vol. 64(10) 1497–1511.

Laeni, N., Ovink, H., Busscher, T., Handayani, W., & Brink, M. V. D. (2021). A transformative process for urban climate resilience: The case of Water as Leverage Resilient Cities Asia in Semarang, Indonesia. In *Climate Resilient Urban Areas* (pp. 155-173). Palgrave Macmillan, Cham. 7

The views presented here express the opinion of the authors, responsible in the sense of the law is the Networking Unit Paradigm Shift at TU Berlin.



Fördernetzwerk
Interdisziplinäre
Sozialpolitikforschung



Gefördert durch:
Bundesministerium
für Arbeit und Soziales