

# Analysing Extended Urbanisation

Today, urban research is increasingly confronted with urbanisation processes that are unfolding far beyond the realm of agglomerations, urban regions and even mega-city regions. Urbanisation has got a planetary reach: Novel patterns of urbanisation are crystallising in various environments—in agricultural areas, in the space of seeming wilderness and in the oceans—challenging inherited conceptions of the urban as a bounded zone and a dense settlement type. This process of extended urbanisation includes the formation of complex and multiscale centre-periphery relationships, the blurring and rearticulation of the urban fabric, the production of a functionalised logistical space, and the progressive enclosure and operationalisation of landscapes around the world to fuel the rapid intensification of metropolitan growth.

These observations suggest a radical rethinking of inherited cartographies of the urban, at all spatial scales, encompassing both built and unbuilt spaces. This novel topic in urban research urgently needs further empirical as well as theoretical foundational work. The 'Territories of Extended Urbanisation' research project (see note) explores, analyses and compares a selection of very different case studies across the globe in order to better understand the basic mechanisms and dynamics of contemporary urbanisation. The core of the project is the development and application of an integrated theoretical and methodological framework that allows for the analysis of extended urbanisation, and for the generation of new concepts and urban design proposals.

In order to understand the widespread occupation of the Earth's surface through extended forms of urbanisation, we have first to address the question of what urbanisation actually means. Ever since Catalan architect Ildefonso Cerdá introduced the term '*urbanización*' into the debate in 1867 (see Adams 2014), many theories and approaches have been developed to grasp and define urbanisation processes. Urbanisation is often equated with the population growth of cities. But this is a highly limited view that relies on just one criterion—population numbers—and focuses exclusively on the growth of urban centres and agglomerations (Angelo and Wachsmuth 2015; Brenner and Schmid 2014; Cairns forthcoming). In contrast to such simplifying and reifying definitions, a different tradition understands urbanisation as a polymorphic and multidimensional process of transformation. This includes the material structures and practices of the production of urban space as well as the various regulations of the use and transformation of the territory and the modalities of everyday interactions (Harvey 1982; Lefebvre 1991 [1974]; Schmid 2015).

The currently widely debated concept of planetary urbanisation has further put into question many of the entrenched understandings of the urban (see Brenner and Schmid 2015; Merrifield 2013). It starts from the observation that urbanisation has had a planetary reach in recent decades, and it puts forward the basic idea that urbanisation entails not only concentration, but also extension. Any form of urbanisation not only generates the concentration of people, means of production, goods and information that leads to *concentrated urbanisation*, but also inevitably and simultaneously causes a proliferation and expansion of the urban fabric, thus resulting in *extended urbanisation*. Food, water, energy and raw materials must be brought to urban centres, requiring an entire logistical system that ranges from transport to information networks. Conversely, areas that are characterised by extended urbanisation can also evolve into new centralities and urban concentrations. Thus concentrated and extended forms of urbanisation exist in a dialectical relationship to each other and can, at times, seamlessly merge (Brenner and Schmid 2015).

## A Territorial Approach to the Analysis of Extended Urbanisation

How to research the phenomenon of extended urbanisation? Within traditional forms of urban analysis, extended urbanisation is not visible. The analysis of extended urbanisation therefore requires, first of all, a fundamental shift in perspective: Urbanisation can no longer be understood as a spatially bounded phenomenon; it must instead be examined as a comprehensive and extended process that increasingly moulds more regions and repeatedly overwrites them.

This new perspective ushers in a whole range of consequences. The focus shifts away from the typical questions that have long been central to urban studies, such as to define the borders of urban regions or to determine how urban areas are delimited from non-urban areas. Instead, it is necessary to examine the diversity of urban manifestations that are inscribing themselves onto the territories and turning them into urban landscapes. This means decentering the focus of analysis, looking from an ex-centric position, one that looks from the periphery and asks where to find 'the urban'. Such a planetary orientation enables a researcher to detect a wide variety of expressions of the urban that have traditionally been excluded from analytical consideration because they are located outside large agglomerations and metropolitan regions and their immediate hinterlands (see Schmid 2016, forthcoming).

In order to examine these extensive and comprehensive urban constellations, it is not possible anymore to apply the existing set of concepts and methods. New pathways of inquiry are needed, along with modes of analysis and mapping that are capable of portraying the multidimensional nature and plural determination of urban territories. The project *Switzerland: An Urban Portrait* (Diener et al. 2006) played a pioneering role for such studies. Working with a newly developed method of mapping and a specific combination of qualitative fieldwork, this project didn't analyse individual cities or urban regions, but the entire territory, including seemingly rural areas that it deciphered as specific urbanised landscapes.

Even peripheral, agricultural or tourism-oriented areas located far away from the catchment areas of urban regions are nevertheless shaped by urbanisation processes in many respects, as they

are embedded in diverse urban networks and settings, linked in many ways to urban centres and, of course, connected to electronic networks. Everyday life in these areas is characterised by a high degree of mobility, whilst consumption patterns, lifestyles and architecture differ only slightly from those in urban centres, rather than fundamentally, as was once the case (see Meili 2014; Schmid 2014).

This analysis paved the way for the development of a specific territorial approach to the analysis of urbanisation, based on a transdisciplinary and transductive research procedure. The term 'territory' assumes a specific meaning in this context: It can be understood as a socially produced material support for activities and interactions. This definition prepares the ground for a new type of examination, leading to an analysis that tries to capture the entire context of urbanisation. This means reversing the dominant perspective. In other words, the main goal is no longer to examine various forms of settlement space, spheres of influence or the catchment areas of large urban centres, but to take a comprehensive look at the urban transformation of the entire territory (Schmid 2015, 2016). For a similar approach, see Paba et al. 2017.

ETH Studio Basel developed this approach further with the project *Territory: On the Development of Landscape and City* (Diener et al. 2016). Applying a comparative method, it analysed segments of the Earth's surface that stretched across several hundred kilometres. Each segment was characterised by very different urban conditions: urban centres, peripheral and sparsely populated areas as well as areas dominated by agriculture. The six selected territories analysed in this project show that the urban fabric is considerably more densely woven and the urban imprint much more widespread and advanced than might have been assumed (Schmid 2016).

In the analysed segment of Florida, even the areas beyond the settlements have been radically changed as a result of, among other things, widespread mining of phosphate for use as fertiliser in agriculture. The landscape in the desert area around Muscat has also undergone drastic change: Massive earth movements have moulded the landscape in such a way that the original topography is no longer identifiable in some places. In a similar way, in the desert area embracing the Nile Valley, a parallel urban structure is being built in order to

escape the natural boundaries of the linear oasis along the Nile.

In other cases, the transformations remain more discrete. A telling example is given by the extended environs of Hanoi, where, in the densely populated and small-scale areas of rice cultivation, narrow corridors of settlement are developing along local access roads, with urban forms of land use and new building typologies that are replacing the traditional rural structure. The studies also pay attention to the inconspicuous manifestations that demonstrate, for example, how differences can emerge from a supposedly rural situation. They document the gradual, initially almost unnoticeable, changes that are generated by the everyday mobility of local inhabitants.

In a similar and related project, Milica Topalovic and her team examined the urbanisation of Singapore's hinterland. In the most radical move of decentering the analytical perspective, they engaged the metaphor of the 'eclipse' by masking the entire territory of the city-state in order to make visible all those areas that were concealed so far by the 'bright lights' of this global city. In an amazing analysis, the team showed how a densely woven urban fabric came into existence around Singapore, forming an extended urban region. But beyond this still relatively compact regional urbanisation, an even larger region emerges, comprising large parts of Southeast Asia, to supply water, food and sand for the various landfills, as well as cheap and heavily controlled (and gendered) labour. Finally, the planet emerges as hinterland, supplying all sorts of raw materials as well as highly qualified labour (Topalovic forthcoming; Topalovic et al. 2015).

Meanwhile, there is a wide range of studies that are engaged in researching, examining and revealing various aspects and territories of extended urbanisation (see Balducci et al. 2017; Brenner 2014; Horn et al. 2018; McGee 1991; Monte-Mór 2004, 2014).

### Territories of Extended Urbanisation

Our current research on territories of extended urbanisation is based on a comparison of very different urban constellations, offering an exploration of the various conditions and characteristics of extended urbanisation: the world's largest copper

mine in the centre of the Brazilian Amazon; the fully operationalised agricultural belt in the North American Midwest; the North Sea, as a complex urbanised space of logistics and energy production; the thickening and thinning of the Lagos-Abidjan Corridor in West Africa; the extended urbanised zone outside of Kolkata; the rapidly developing industrial zone in Dongguan between Guangzhou and Shenzhen; and the peripheralised region of Arcadia in Greece.

In order to analyse extended urbanisation, a range of aspects have to be considered (Diener et al. 2015; Schmid 2015). First, urbanisation is a material process of transformation of the territory. Thus, the entire area has to be systematically scrutinised, and the manifold traces of urbanisation carefully sought in the terrain. This begins with the appropriation of the territory through human activities, which initially remain ephemeral but over time increasingly condense and solidify. In this way, a society gradually inscribes itself into a territory and produces an *urban fabric* that spreads out across the landscape (Brenner forthcoming). Every new round of urbanisation adds an additional layer, and thus the land is repeatedly worked and reworked, continually being overwritten with a new urban fabric until it resembles a palimpsest—an old, perforated and worn parchment (Corboz 1983). As a result of extended urbanisation, the urban fabric spreads to cover increasingly remote places, be they desert zones, rainforests or ocean spaces (Couling 2017; Katsikis 2016; Urban Theory Lab 2015).

The production of the urban fabric supports and enables urban practices, which are connecting people and places. This necessitates the analysis of all kinds of *movements of people* that crisscross the territory and, at the same time, bind it together and define it. While commuting is important to an understanding of the reach of agglomerations, and thus of concentrated urbanisation, territories of extended urbanisation are usually characterised by longer, more sporadic and varied forms of mobility. This includes various forms of circular or temporary migration, where people only migrate for a certain time or follow a recurrent pattern, returning regularly to their places of departure. Concomitantly, there are also movements of people searching for all sorts of opportunities, trying to do small businesses, crossing borders to take advantage of small fluctuations in prices and currency exchange rates, connecting widely ramified social networks

and maintaining extended family ties. With these movements and related activities, people create a multiscalar social reality and produce large and extended urban territories that transgress all kinds of borders (Bertuzzo 2018).

The superimposition and interpenetration of borders in such territories represent a 'grid of power' (Raffestin 1980) that is incorporated into the territory. Borders mark and identify a territory and constitute the basis for *territorial regulation* (Schmid 2015). They are accompanied by orders and rules, from traffic ordinances right up to complex planning systems. At the same time, however, they are continually challenged by the process of urbanisation itself, because it follows the inherent tendency to transcend borders and to undermine boundaries, thus disbanding existing territorial entities and redefining them. In this process, borders are overwritten but still remain effective—often hidden below the surface—and are thus able to gain new meaning. An urban territory is therefore ultimately an area in which borders are transformed and rendered permeable, and become part of new and complex power constellations.

In this sense, territories of extended urbanisation are strongly shaped and enforced by a wide range of specific *state strategies* that are preparing the ground for urbanisation in many different ways: homogenising the legal framework for urbanisation, opening up a territory for capital accumulation and creating the conditions of further urban expansion (Brenner 2004). Of special importance in this context are strategic infrastructural projects, such as large-scale, high-speed train and highway systems, and complex infrastructural initiatives that impose an overarching logic on the territory. The latter include the Plan Puebla Panamá, a cross-border infrastructure project for southern Mexico and Central America that was ultimately abandoned (Wilson 2014), and more recently China's huge One Belt, One Road project (Sidaway and Woon 2017).

A crucial question of extended urbanisation is related to its effect on everyday life: What is the urban under the conditions of extended urbanisation? Following the urban theory of Henri Lefebvre (2003 [1970]), urban space can be understood as a *differential space*, in which differences come to light and interact with each other. It is a space in which separations and space-time distances are replaced by oppositions, contrasts, superimpositions and the

juxtaposition of disparate realities. Urban space can thus be defined as a place where differences discern, recognise and explore each other.

Differences can be defined twofold. On the one hand, they characterise the totality of actions, material elements and relationships that come together in a specific space, and especially the different people, with their social wealth, history, knowledge, abilities and needs. On the other hand, differences can also be generated by various networks that link up different territories. Urbanisation in this sense means the connection and articulation of different places (near and far) and situations, thus enabling and facilitating different urban experiences (Merrifield 2013; Schmid 2005, 2015).

Another crucial question, then, is precisely how such urban experiences unfold and develop, and how people adapt to or resist processes of extended urbanisation. This question has already been studied by analysing the effects (or non-effects) of: urbanisation in the outskirts of Kolkata (Roy 2016); indigenous and allied resistance in the province of Alberta to the construction of pipelines across Canada connecting a tar-sand extraction site to global markets (Kipfer forthcoming); the urbanisation of the Brazilian Amazon (Castriota and Tonucci forthcoming; Kanai 2014; Monte-Mór 2004); the emergence of agro-industrial hinterlands of palm oil production (Topalovic 2017); and the struggle of a small agricultural village at the edge of the Atacama Desert in northern Chile against massive new infrastructure investments and in support of the nearby mining industry (Arboleda 2016).

What then are the specific characteristics of extended urbanisation? As our first explorations clearly show, extended urbanisation is very dynamic and variegated. In proceeding with the Territories of Extended Urbanisation project, we have already identified several phenomena and processes of extended urbanisation in our case studies (see also Brenner and Schmid 2012, 2015). One of the most important processes is the formation of 'complex and multiscalar centre-periphery relationships'. New centralities are emerging in very diverse places, not only in erstwhile suburbanised spaces and hinterlands (Soja 2000), but also in peri-urban and exurban areas, in the surroundings of small- and medium-sized towns and along major transportation corridors, generating polycentric territorial structures with varied and overlapping catchment areas.

This restructuring of centre-periphery relationships goes hand in hand with the *blurring and rearticulation of the urban fabric*, leading to the juxtaposition of disjointed urban elements and the disintegration of hinterlands. As a result, very different urban fragments might be located side by side without being functionally linked; instead, they are oriented towards different nodes and centralities. One of the main drivers of this deterritorialisation and reterritorialisation is the production of a *functionalised logistical space* that leads to a complex and multilayered system of hubs and spokes (Veltz 1996). In this process, a whole range of infrastructure arrangements are produced in order to connect various parts of the planet, generating a logistical space that forms the physical support of activities and is thus strongly structuring urban space. Typical effects are the well-known urban corridors evolving along major axes of transportation.

A similar phenomenon is the *operationalisation of landscapes* (Brenner and Schmid 2015). This term designates the subsumption of entire landscapes under the logic of capital accumulation for the production of raw material and agricultural products. This process goes hand in hand with massive rationalisation and automation, dramatically reducing the necessary labour power for the production process. Operationalisation of landscapes applies not only to the large-scale automation of resource extraction (such as tar sands or huge mining complexes), but also to agriculture and to places for waste disposal.

At the same time, a wide range of territories are bypassed, left behind or have become depleted and abandoned as a result of the ongoing urbanisation process. Such places are affected by *various processes of peripheralisation*, including the loss and relocation of economic activities, strong and lasting emigration (which is often highly selective) and the weakening of social activities, facilities and networks. These processes occur on the large as well as the small scale and result in 'meshes' in the urban fabric: the emergence of 'in-between spaces' and pockets of poverty, brownfield sites and entire 'rust belts', 'fallow lands' (Diener et al. 2006) and double (or multiple) peripheries that are increasingly decoupled from centralities and from access to the urban.

Today, a multitude of processes of extended urbanisation are transforming urban territories in unprecedented and unpredictable ways at the same time, often positioning dynamic and depleting areas side by side. Territories of extended urbanisation are thus much more variegated and complex than might be expected, and they are growing quickly. It is urgent to get a more comprehensive picture and a more systematic understanding of these processes.

## Note

The Territories of Extended Urbanisation research project is based at FCL and led by Milica Topalovic and Christian Schmid. The research team includes Elisa Bertuzzo, Rodrigo Castriota, Nancy Couling, Alice Hertzog-Fraser, Hans Horig, Nikos Katsikis, Markaki Metaxia, Philippe Rekacewicz, AbdouMalik Simone and Tammy Kit Ping Wong. This chapter is inspired by several workshops and discussions involving the entire team. I thank all members of the team for their valuable suggestions and critiques.

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## Scenes of extended urbanisation: Excerpts from a photographic diary

These photographs were taken during field trips in the context of several research projects. I would like to thank Nitin Bathla, Alice Hertzog-Fraser, Hans Hortig, Miya Irawati, Zheng Wang and Tammy Kit Ping Wong for sharing their research experiences with me.

Christian Schmid

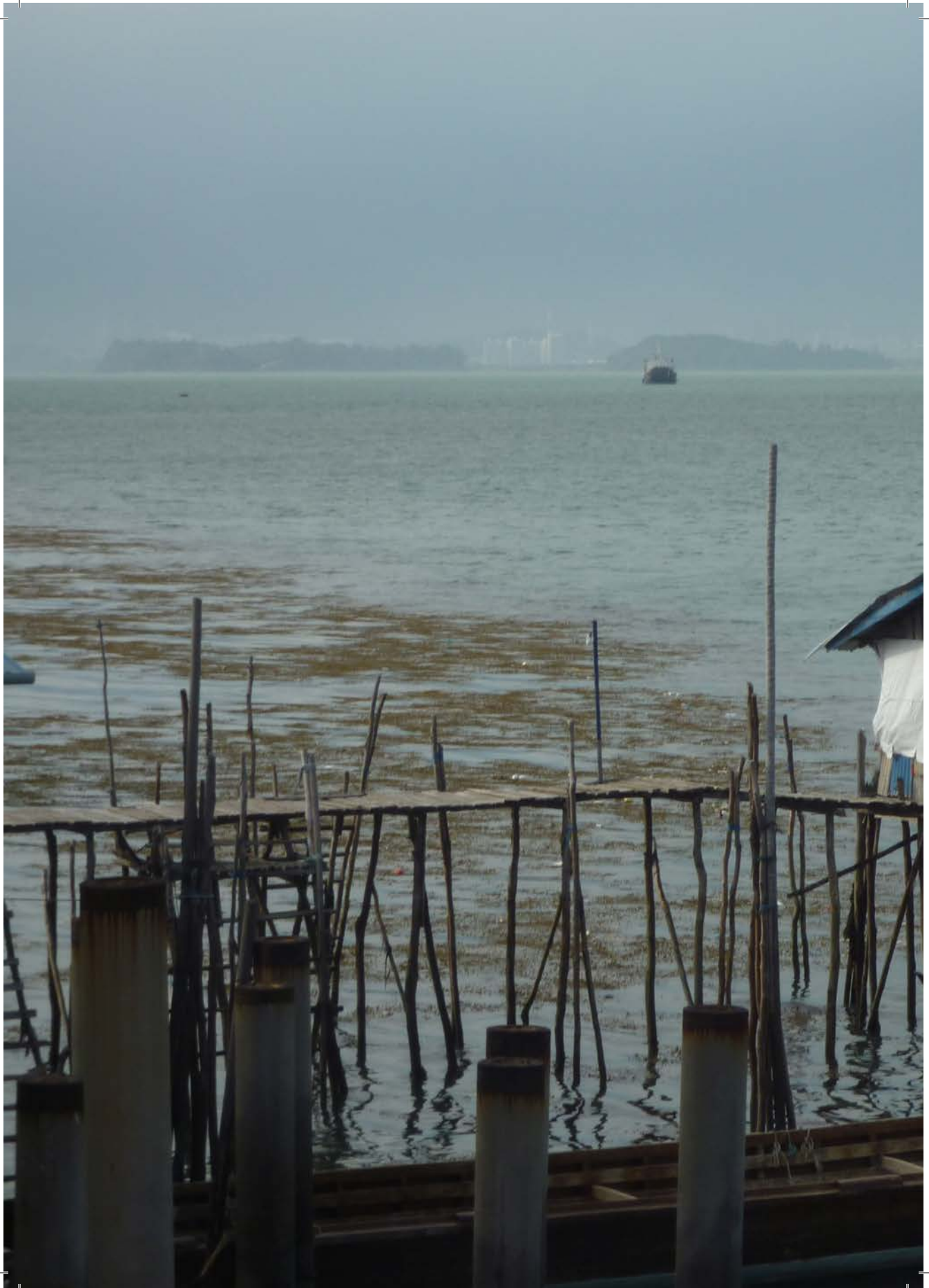


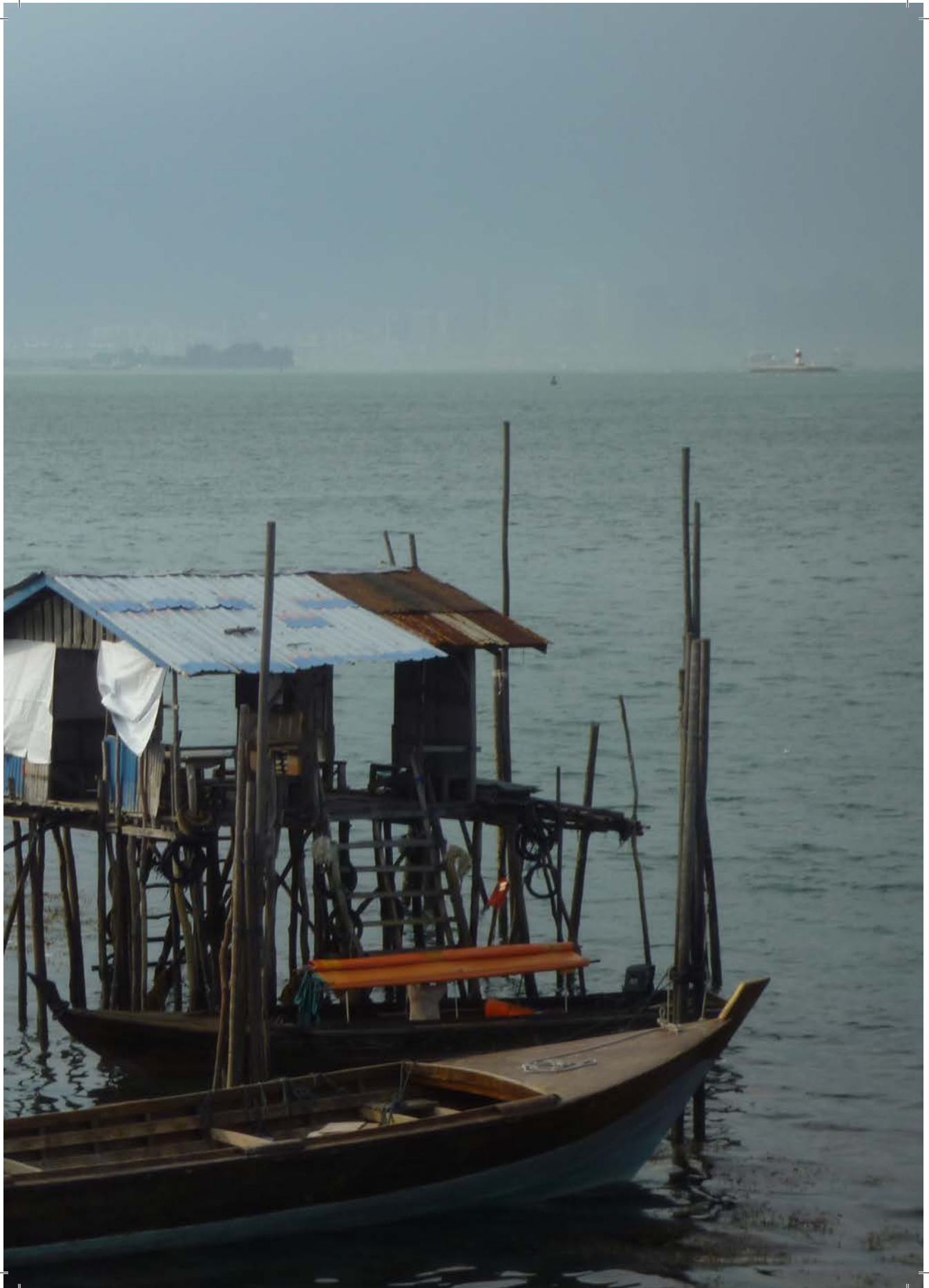




































Sand for sale at the beach, Togo



Construction site Route des Pêches  
(coastal bypass), near Cotonou



Pulau Belakangpadang, Singapore Strait



Migrant labourers returning from work,  
Kasan (Manesar), south of Delhi



Desakota landscape, near Jakarta



Xiaoyang Island, Yangshan deep-water port,  
south of Shanghai



Extended industrial urbanization,  
Shenzhen



Eco Park construction site,  
Dongguan