Between peripherality and resilience Reflections on peripheral urbanization and urban resilience interventions in South-East Asia

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Against the backdrop of an unfolding "urbanization of risk", this article looks at the linkage between resilience and the periphery. In mainstream planning risks and vulnerabilities – and, consequently, the urgency for "urban resilience" – appear to concentrate mainly in the world's rapidly expanding metropolitan "peripheries". Across the purportedly overpopulated, under-infrastructured, dysfunctional "Southern" megacities – peripheral urban centres that have long been at the margins of urban theory (Simone, 2010, in Roy, 2011) – risk appears to concentrate in those peripheral spaces, developing on the margins of formality and legality, which often harbour much of the city's population: low-income informal settlements, makeshift slums or unauthorized squatter neighbourhoods, which "[. . .] generally suffer the impacts of climate change and natural disasters disproportionately as compared to other settlements" (UN Habitat, 2020). It is primarily in these "peripheries within the periphery" – framed in terms of underservicing, vulnerability, exclusion, and lack – that the prospect of social unrest, environmental disaster, or infrastructural breakdown becomes especially concrete.

Consequentially, rendering the Southern megacity resilient is largely implemented by tackling its peripheral settlements, often discursively constructed as spaces of risk (Diwakar, 2019) rather than neighbourhoods where disasters overlap with multiple pre-existing vulnerabilities. Despite the recommendations for inclusivity, community-based preparedness and a multi-hazard approach contained in official policy papers,[1] in practice the narrative on climate change adaptation often ends up reproducing conditions of peripherality and risk, creating new vulnerabilities, imposing hidden costs, or just relocating hazard – and often all of them together.

Yet, these urban peripheries also constitute a "terrain of habitation, livelihood, self-organization" (Roy, 2011), developing around human and material infrastructures of care and maintenance (Simone, 2015). "Peripheral" urbanization may indeed be defined as a specific modality of spatial production, primarily driven by residents themselves, which "unfolds transversally in relation to dominant logics and amidst political contestations" (Caldeira, 2018), developing incrementally into "seemingly spontaneous and makeshift settlements" (Schmid et al., 2017) with a great capacity of adaptation to their inhabitant's needs.

My aim here is not to deny the vulnerability of informal settlements where populations eke out a precarious life, nor to advocate for bottom-up solutions as sufficient to fix structural issues of underservicing and macro-scale imbalances. Rather, I intend to focus on how the narrative on resilience contributes to the discursive construction of peripherality, thus feeding into the logic of a "telescopic urbanism" (Amin, 2013) which selectively focuses on specific parts of the city as disjoined fragments

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1 See, for instance, the Sendai Framework 2015-2030 (UN, 2015).

rather than an organic whole, erasing from view other spaces and forms of urbanism, and ignoring the interconnections.

This article reviews some disaster risk management (DRM) urban policies impacting low-income informal settlements in three flood-prone South East Asian megacities (Jakarta, Manila and Bangkok), discussing how the construction of urban resilience is operationalized and contested by both governmental actors, civil society, and local communities.

Jakarta, Manila, Bangkok: flooding and the politics of disaster risk management in three sinking megacities

With high regional rates of urbanization[2] and widespread exposure to climate hazards, South-East Asia constitutes an interesting standpoint for studying the relationships between DRM and the politics of urban development. In Jakarta, Manila and Bangkok, among the most populated urban areas in the region,[3] fast-paced urbanization coupled with the manipulability (or outright lack) of planning produced sprawling urban areas, encroaching on environmental ecosystems (Zoleta Nantes, 2000). The mismatch between low-cost housing supply and the growing demand, furthermore, resulted into the emergence of informal settlements as a "spontaneous" housing solution for the urban poor.[4] Since the 70s, under both democratically elected and undemocratic regimes, the drive to restructure urban space to serve the logic of globalizing economies put growing pressure on low-income informal settlements (Kolovou Kouri et al., 2021). This often resulted in eviction and displacement, in particular for those located on central, more valuable land.

The three capital cities are located on coastal river plains and naturally subject to flooding, with man-made factors considerably amplifying the risk. The depletion of natural flood-preventing ecosystems and unconstrained concretization of land are increasing the speed and intensity of water flow, making floods more unpredictable and sudden. These cities have all been categorized as "sinking cities": urban areas in which excessive groundwater extraction coupled with the pressure of the built mass causes marked subsidence (Kramer, 2018). Many low-income informal settlements are located alongside waterways, thus on the flooding frontline (CODI, n.d.; Dovey et al., 2018; Alvarez and Cardenas, 2019).

These overlapping factors make flooding a periodic and intensifying occurrence, disproportionately affecting informal settlements and figuring prominently on local urban development agendas. In this context the discourse over resilience, far from being a technical issue, intertwines with political questions of socio-spatial justice. Resilience is articulated in selective and biased ways, privileging some solutions over others, condemning some practices but overlooking others, preserving and protecting specific spaces and populations while attempting at erasing and relocating others. It often provides a ground to justify the displacement of the urban poor. At the same time, examples of community-based practices contest this narrative and indicate other possible routes towards urban resilience.

About 40% of Jakarta lies below sea level, and the city is sinking at a pace of 8-12cm per year (Dovey et al., 2018). The system of canals and dams built by the Dutch to manage the flood-prone city is largely in disrepair, and during the 2007 floods, 45% of the city was underwater (Dovey et al., 2018). "River normalization" has become a catchphrase to flood-proof Jakarta by erecting concrete retention

2 Urbanization rates in the 2015-2020 timespan stand at 1.73% for Thailand, 2.27% for Indonesia and 1.99% for the Philippines – only to mention the countries treated in this paper (UN Habitat, 2020).

3 Jabodetabek (or Greater Jakarta) counts 31,652,751 inhabitants, Greater Manila 13,984,656, and Bangkok's metropolitan area 14,626,225 (Kolovou Kouri et al., 2021). Each city is the largest in its respective country and the political and economic centre.

4 It is estimated that 35.8% of the population lives in informal settlements in Bangkok, about 20-25% in Jakarta (plus 4-5% of riverside dwellers) and 37% in Metro Manila (Kolovou Kouri et al., 2021).

walls along the city's water streams. This entails the demolition of thousands of buildings in the city's *kampungs* (Indonesian for "village"), the historical low-income neighbourhoods hosting much of the city's underclasses.

In the past decade, contention over riverside *kampung* clearance has thus become a central debate for Jakarta's urban development. *Kampung* residents associations, civil society organizations, and activist networks (such as Ciliwung Merdeka and Urban Poor Consortium) have been advocating against the normalization, for the residents' right to stay, and for the need to devise alternative solutions. They called for "soft" risk management strategies, building on the adaptive practices developed by residents, for which flooding is a regular occurrence. For instance, in case of high water, dwellers empty ground floors and set up a system of elevated gang planks connecting the houses on upper floors and dry areas (Shepherd, 2014). In *Kampung* Pulo and Bukit Duri, two historical *kampungs* located on opposite banks of the Ciliwung river, communities produced a concept design for a "stacked *kampung*", a vertical upgrading which, while respecting some of the government guidelines, combined amphibious spaces (leaving the ground-floors open to let water flow) with vertical densification, to ensure that the inhabitants could remain in place (Shepherd, 2014; Dovey et al., 2018; Padawangi, 2019). Their discourse found sound political back-up,[5] however evictions and demolitions moved forward.[6] Riverside buildings have been razed and a concrete embankment built along the shore, equipped with an "inspection road" on top (Dovey et al., 2018). Eligible families were relocated to high-rise government-built social housing, and some received compensation, but many were left to their own devices (Kolovou Kouri et al., 2020).

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In Tongkol, located on the riverbank near the Old Town, an organized local community, allied with sympathetic professionals and NGOs, managed to avert relocation. Here, a 5m-strip of land had to be cleared on the water edge to comply with governmental standards (CAN, 2015), but in response, a community-led neighbourhood restoration and renewal was carried out, including the self-demolition of structures too close to the water edge and the construction of a three-storey community house prototype (Dovey et al., 2018). Physical upgrading was complemented by a broader communication campaign, celebrating the value of the *kampung* as a traditional settlement, and highlighting the role of riverside communities in cleaning the river. Until now, residents of Tongkol avoided eviction, which seems to be the main threat to their livelihoods, definitely greater than the yearly flooding.

With a population density among the largest in the world, Manila lies between the Ocean and the Laguna de Bay (a natural lake and impoundment basin for the city), and is transected by numerous rivers. The city is often battered by floods,[7] the last major one in 2020 (Manila Times, 2020). In their poignant critique of DRM urban policies in Manila after the catastrophic cyclone Ondoy,[8] Alvarez and Cardenas (2019) remark how the designation of "risk area", and the consequent interventions, were selective and politically charged. While low-income settlements on waterways were targeted as sites

5 Joko Widodo, who went on to become president of Indonesia, was elected governor of Jakarta in 2012 with an anti-eviction programme (Shepherd, 2014). His credentials were based on pro-poor urban policies he previously implemented as mayor of Surakarta.

6 In 2015-16 alone, about 13,800 families got their homes destroyed around Jakarta aspart of the normalization plan (Sofian, 2018).

7 UAs an archipelago in the Pacific Ocean, the Philippines consistently rank among the hardest-hit countries by climate change-inducede extreme weather events.

8 Ondoy hit the Philippines in 2009, causing the death of 241 people and the destruction of 14,836 homes in Manila alone.

of danger and consequentially cleared, the government turned a blind eye on the high-end property developers' illegal practices – ranging from natural drainage infill to waterway course alteration, from the construction of security walls to the widespread concreting of land – which impact on flooding on a metropolitan scale.

For instance, residents of Samasa, an informal community situated on a drainage canal in Manila's Valenzuela district, reported how the construction of perimetral walls in the surrounding middle-class properties not only hindered water outflow in case of heavy rainfall, but also prevented slum residents from escaping (Informal talk, 2013). This small scale example points to systemic dynamics impacting on the city metabolism, spreading risk unevenly among its inhabitants. However, the narrative underpinning urban resilience schemes portrayed slum-dwellers as endangering not only themselves, but the rest of the city too, providing a justification for the eviction of at least 1,286 families living in waterside informal settlements which were marked as blockages hindering water flow with their built structures, sewage and waste (Alvarez and Cardenas, 2019).

This asymmetry is contested by urban poor organizations, such as the Alliance of Peoples' Organizations Along Manggahan Floodway (APOAMF), which brings together communities living on the artificial floodway linking the Marikina river to Laguna lake, founded in the aftermath of typhoon Ondoy to avoid forced relocation (Chorover and Arriens, 2020). They denounce how government-led flood-prevention plans are carried out with no consultation and how forced resettlements negatively affect their lives, for many reasons – among others, poor housing inadequate to their livelihoods, far-flung locations, and the dissolution of community networks. Their concerted efforts resulted in the drafting of so-called "People's Plans", community-based proposals for flood-resilient communities which incorporate "flood measures, evacuation plans, zero casualty, and mitigation concepts" (Perreras, 2017) learned first-hand by people that have been living in flood-prone neighbourhoods for decades. In some cases these proposals developed further, as in Pasig City, where slum-dwellers successfully campaigned to get multi-story social housing where many families (that would otherwise have been relocated up to 95km away), were able to continue living close to their jobs and social networks (Chorover and Arriens, 2020).

Built on the estuary of the river Chao Praya, Thailand's main water conduit, Bangkok developed historically on a web of canals (known as klongs), many of which have been covered and turned into roads (Lei Win, 2017). There are 1,161 such canals in Bangkok, many lined with informal settlements, sheltering about 24,500 families (CODI, n.d.). In 2011, major floods exposed both the inadequacy of Bangkok's antiquated infrastructures and the uneven socio-spatial distribution of risk, driven also by political choices: inner districts were protected at the expenses of more peripheral areas, and low-income neighbourhoods disproportionately affected (Archer et al., 2020).[9] Following the disaster the government implemented a large-scale DRM plan, which has been criticized for privileging visible hard infrastructure interventions (such as dykes and dams) over less noticeable actions such as urban development management, wetlands restoration, coping capacity building (Marks, 2015).

However, there are significant examples offering a perspective in which low-income communities living on the canal side are an active component of urban resilience rather than an impediment to it. Thailand has a progressive and successful housing scheme, called *Baan Mankong* ("Secure Housing"), which channels public funds to low-income communities in the form of collective soft loans and subsidies for land acquisition, housing upgrading, and infrastructural improvements (CODI, 2012). In 2004, with funding and expertise from the programme, a network of canal side communities living on klong Bang Bua started an ambitious project of on-site upgrading, convincing the authorities to

9 It has been calculated that 21% of Bangkok's metropolitan population was affected by the floods, but among the low-income population the rate is 73% (UN Escap 2012, in Archer et al., 2020).

grant them a long-term land lease (ACHR, 2008). The redevelopment included physical improvements (comprising a canal-side walkway that became a popular public space), activities for canal cleaning and pollution reduction (with low-cost technologies like effective microorganism (EM) and grease traps), and grants for setting up water-related livelihood activities (like fisheries and aquaculture). The aim, thus, was also to reshape the image of waterside slums from "illegal squatters" and "polluters" to that of legitimate citizens and a partner in the maintenance and revitalization of canals and flood prevention (CODI, 2012). Bang Bua upgrading gained widespread visibility, and the process of collaborative canal-side upgrading spread to other communities along the *klong*, and also to other major canals in Bangkok: in 2016, the government funded projects for the Lad Phrao canal, now at an advanced stage, and subsequently for Prem Prachakorn canal (CODI, n.d.).

Complexifying the relation between peripherality and resilience

This concise review illustrates how the resilience discourse has been controversially operationalized across three fast-growing and risk-prone South-East Asian megacities, in particular with regards to flood risk mitigation and waterside informal settlements.

We may observe a reversal between stated aims and the means deployed: while the eviction of informal communities is depicted as a necessary measure to attain flood risk mitigation – in the interest of both informal dwellers themselves and the city as a whole – flood-proofing is actually deployed instrumentally, as an argument for slum clearance. Despite the lack of scientific evidence linking waterside settlements and flooding (Dovey et al., 2018; Alvarez and Cardenas, 2019), deep-rooted representations of the slums as sites of unsafety, poverty and precariousness are mobilized to unilaterally recast these informal settlements as spaces of risk. At the same time, the impact of real estate development, upper-class lifestyles, industrial and agricultural activities on urban ecology and the metabolic flows are hardly taken into account. Far from being a depoliticized evidence-based planning matter, the production of *hazardscapes*, or landscapes of risk (Saguin, 2017) thus emerges as a contentious socio-spatial dynamic, producing differentiated territorial effects and compounding pre-existing socio-spatial inequalities.

However, the successful efforts and concrete examples of low-income "peripheral" communities suggest an alternative approach, in which resilience is not dismissed, but rather it is mobilized, contested and re-framed. By highlighting how flooding is one among different factors contributing to their everyday uncertainty (and not necessarily the most pressing one) they do not dispute the need for effective disaster risk management, but reclaim a stake in shaping it. Peripheral urban settlements recast themselves as elements that actually increase the resilience of urban systems, rather than the cause, or a symptom, of urban vulnerability. In order to concretize this narrative and scale up their action, they often rely on broader social alliances, external support and collaborative planning – from city-wide horizontal networks to activist solidarity, from NGO technical assistance to state-managed public funding. By advocating for their right to be considered a legitimate part of the city and to play an active role in its socio-ecological system, these communities question and complexify both mainstream understandings of "resilience" and "peripherality".

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