People and politics: Urban climate resilience in Phnom Penh, Cambodia

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The rapid growth Cambodia has experienced over the past two decades has resulted in a dramatic transformation of its built environment, in particular, its largest city, Phnom Penh. The shape this urban development has taken echoes that of many developing countries whose urban landscape features gleaming skyscrapers, apartment buildings, and edge-city projects spread across a rapidly expanding urban area. Such a pattern of urbanization is occurring in Phnom Penh while the city faces increased flooding, lack of adequate urban infrastructure, and vulnerability to impacts of climate change. At the same time, embedded within national policy discourses of climate change and social/economic planning, and backed by international donors, are calls for strengthening or developing resilience. Yet, in the city there are signs of land dispossession, marginalization, inequality, and exacerbated poverty. In parallel to high-level discourses of urban resilience, on the ground there have been "everyday forms of resilience" that show how people enact and build resilience through collective action and advocacy for the rights of the urban poor. In reconciling this dichotomy, we argue that the continued reproduction of a technocratic-focused discourse on resilience in Cambodia by national and international actors overshadows the everyday contestations, strategies and resilience-making practices of people in urban areas. Through three examples, we showcase the varying ways in which these contestations and strategies occur in, and despite, an environment of suppression, and how they are challenging the status quo. In doing so, we shed light not only on the politics of resilience but, more importantly, the implications of the political agendas that ultimately contribute to exacerbating vulnerabilities of urban residents, even as calls continue for increased urban "resilience."

KEYWORDS

urban climate resilience, Phnom Penh, politics, Cambodia, urbanization, political and social transformations, urban resilience

Introduction

Cambodia's rapid economic growth over the past 20 years is visible across a variety of landscapes, from the macro (GDP and GNI per capita) to the micro (upward social mobility and people's wallets). One of the most visible symbols has arguably taken place in the urban landscape, particularly in the capital, Phnom Penh. At the same time, the country's growth has been geographically unequal wherein most of the wealth has been

concentrated in urban areas with rural areas seeing far less development.[1] This urban concentration of wealth started around the mid-2000s when Phnom Penh ushered in a construction boom that has resulted in the wholesale transformation of its skyline which is now dotted with towers of shimmering glass and steel. In the past decade alone, over 600 high-rises have been built (Nam, 2017a). While this pattern is more correlation than causation, especially in light of the government's role in real estate speculation and the (over)reliance on private investment (Paling, 2012; Nam, 2017a), it mirrors the kind of urban development that is occurring in other urban areas of developing countries.

Alongside the rapid urbanization of Phnom Penh are the policies put in place that promote a vision of urban development seemingly in line with ideas of "urban resilience." While no universal definition of urban resilience exists, the term/concept is understood as the processes that enhance the capacity of a city's urban systems to resist a range of shocks and stressors and maintain or quickly return to their desired functions (Davoudi et al., 2012; Meerow et al., 2016). This notion is captured in Phnom Penh's Sustainable City Plan 2018–2030 whose overall vision is "[b]y 2030, Phnom Penh will become a clean, green and competitive city offering a safe and quality lifestyle to its residents" and one of the four overall goals is to "[p]rovide urban resilience for all citizens to natural, climatic and other risks" (Phnom Penh Capital Hall, 2018, pp. 3–4). Related to this last point, there is also the Climate Change Strategy Plan 2014–2023 which includes, among its eight objectives, promoting "climate resilience through improving food, water and energy security" (p. 13); "ensure climate resilience of critical ecosystems (Tonle Sap lake, Mekong river, coastal ecosystems, highlands, etc.)" (p. 15); and "promote low-carbon planning and technologies" (p. 15) (RGC, 2013). Further, guiding the actual urban development of the capital is the Phnom Penh Master Plan (officially termed "Phnom Penh Land Use for 2035"), a 330-page document whose development was funded by the French Embassy—however access to the master plan is only possible by submitting a formal permission request to the governor (Halim, 2016). Visions of urban resilience are also reflected at the international and inter-governmental levels, e.g., United Nations' Sustainable Development Goal 11 "Make cities inclusive, safe, resilient, and sustainable" and UN Habitat's New Urban Agenda stating a vision for "resilient and sustainable cities and human settlements to foster prosperity and quality of life for all" (UN Habitat, 2016, p. 5). However, the question remains: to what extent are the goals of "urban resilience" and "climate resilience" being achieved in Phnom Penh?

On the ground, what can be observed is that urban vulnerability is compounded for city and peri-urban residents because of regular incidents of flooding, pollution, poor waste management, river bank erosion, and storm damage (Sasin and Sokha, 2015). On top of this, since the urban poor are shut out from the formal property market, they are tacitly forced to live in the parts of the city that are most vulnerable to climate change-related impacts (e.g., increased severity of flooding, erosion, etc.) such as near river banks and lakes. These areas where many of the urban poor live are also becoming increasingly vulnerable from the effects of urban development. A recent report highlighted how the development of ING City, a satellite city near Phnom Penh, is slated to fill in over 1,500 hectares of wetlands and put over 1 million people (roughly half the population of the city) at risk of disastrous floods and water pollution (Handley, 2020; STT, 2020). Studies of vulnerability to climate change have identified "hot spots" in countries around the world, including Cambodia which is listed as among those most vulnerable (151 out of 182 countries on the 2019 Global Adaptation Index) to the impacts of climate change given its low adaptive capacity (Notre Dame Global Adaptation Initiative, 2022). Put another way, Cambodia is the 36th most vulnerable country to impacts from climate change and the 33rd least ready country to face such challenges.

In attempting to reconcile the dynamics of the so-called "resilience agenda" (Leitner et al., 2018; Webber et al., 2021) at the national level with the visible lack of progress on improving urban resilience in Cambodia's capital, we argue that the continued reproduction of a technocratic-oriented narrative on resilience overlooks the ways in which this dominant discourse is being contested. By highlighting examples within civil society where people and organizations are continuing to engage in research and contribute to knowledge on urban vulnerability and the needs and actions of urban citizens, we show how these practices not only give hope to the possibility of improving the lives of the city's citizens but also provide a stark contrast to the official urban resilience agenda in Cambodia.

The paper will start by providing a brief overview of the focus of this paper, Phnom Penh, giving the reader a history of its rise as the mecca of urbanization in the country. The next section will zero in on urban (climate) resilience with a focus on its manifestation in Cambodia, showcasing the perceptions and paradoxes of the narrative. From here, we will cover select examples of individuals/organizations that are contributing to providing an alternative to the high-level resilience agendas and narratives through their work in research and advocacy. We end by discussing how those working within the civil society space are forging activities and strategies, within a culture of repression, that elevates people and politics within urban resilience and in doing so, shine light on the more normative aspects of the resilience agenda.

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1   About 18 percent of the population was identified as poor in 2019, with the lowest poverty rates being in Phnom Penh (4.2%) and other urban areas (12.6%), and the highest in rural areas (22.8%) (Sodeth, 2021).

The rise of Phnom Penh as an urbanizing space

During the French colonial period, the urban planning of Phnom Penh followed the model of the colonizers, which meant that the city had big streets and green spaces (Sharda, 2019).[2] The city was again transformed in 1950 when the rulers developed the first masterplan to re-zone areas for industrialization and to build more houses. Yet, the plan was delayed when Cambodia gained independence in 1953. The size of Phnom Penh doubled between 1956 and 1970, which saw a rise in buildings featuring Khmer architecture such as the National Olympic Stadium. This positive development was disrupted by the Khmer Rouge who took power in 1975 and ruled Cambodia until 1979.

When the country transitioned to peace and a new government in 1998, Cambodia started to prioritize urban development from scratch since many of the city's plans and documents had been destroyed during the Khmer Rouge period. During the 2010s, attention to and investment in urban growth from the government and development partners substantially increased (ADB, 2012; World Bank, 2017; WFP, 2019). Phnom Penh enacted a new Land Use Masterplan in 2015[3] and, with support from the Japan International Cooperation Agency (JICA), started to devise an Urban Transport Masterplan. Since then, many initiatives to make the metropolis inclusive and resilient along its development have emerged.

Urbanization in Phnom Penh has been driven by both rapid economic growth and population increase. The city houses three-quarters of the country's industrial investment and a similar proportion of its transportation network (Sharda, 2019). Its population increased from 1.36 million in 2010 to 1.95 million in 2017 (NIS, 2013, 2018) and is projected to double by 2030 (World Bank, 2017). In-migration has been a key driver of population growth in Phnom Penh. According to the 2008 census (NIS, 2009), 28% of the migrant population had engaged in rural-to-urban migration, the bulk of which had migrated to Phnom Penh. It is estimated that rural-urban and urban-urban migrants account for up to 4.1 million people per year, with women outnumbering men (e.g., comprising 57% of migrants to Phnom Penh) (Diepart and Ngin, 2020; Olsen and Vorn, 2020).[4] Although the majority of this migration is short-term, temporary, and circular, the large number shows the importance

of Phnom Penh as a destination. Migrants to Phnom Penh are mainly young adults seeking education and employment opportunities (Asif, 2020; NIS, 2012).

As a result of rapid urbanization and development, Phnom Penh has expanded its spatial boundaries to encompass surrounding suburban areas (World Bank, 2017; Thoun, 2021). Mainly, the spatial expansion of Phnom Penh has replaced the natural environment (particularly lakes) with the built environment (especially houses and associated infrastructure) to cater to the housing needs of middle and high classes of the population. Specifically, the urbanizing space has been extended into urban lakes and peri-urban wetlands along river systems, which is a central strategy of developers of gated communities and satellite cities (STT, 2019; Thoun, 2021). This spatial change represents a massive transformation for Phnom Penh: from a city with gravel roads, low buildings, and historical villas with private gardens in the early 1990s to a metropolis filled with skyscrapers and encircled by satellite cities or gated communities (Mund et al., 2020). As of January 2022, Phnom Penh had 61 completed buildings at least 100 m high and 60 more were under construction or approved (Clark, 2022). While evidence for the building boom is obvious, what is less obvious is how many of these buildings will be occupied by tenants (either commercial or residential). Even with some of the buildings already completed, vacancy rates remain low, leading some to conclude that this kind of pattern represents speculation and is not truly sustainable, inclusive urban development (Roughneen, 2016; Nam, 2017b). Meanwhile, the number of gated communities in the city rose from 77 in 2011 to 128 in 2014 (Meng, 2014) and then to 140 in 2021 (Smith, 2021). Here too, however, the reality is that gated communities are for the upper class of Cambodian society since the majority cannot afford the $120,000 to $850,000 price tag of a home (Strangio, 2014b).

This type of urban growth has been at the expense of low income residents living in informal or squatter settlements. By 2011, of 516 urban poor communities in Phnom Penh (Phnom Penh Municipality, 2012), about 30,000 families (or around 150,000 people) were displaced either through planned relocations or forced eviction (STT, 2011; Brickell, 2014). In 2013, at least 36 communities received eviction notices (STT, 2013). The relocation of these communities often occurred with little compensation or support (McGinn, 2015). Relocated sites lacked proper housing, basic utilities and infrastructure, education and health services (STT, 2012), and sanitation (STT, 2016, 2018). Further, residents lost sources of income since the new places offered few economic opportunities, making them return to and resettle in their former area or other informal settlements in the city and thus become vulnerable to new evictions (STT, 2013, 2018). Hence, the urban space for the rising socioeconomic needs of the middle and upper classes has been produced with forceful displacement and deprivation of the urban poor.

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2   However, these areas were largely occupied by those within the colonial administration and could not be enjoyed by most Cambodian residents.

3   Since the full details of the Master Plan have never been made public, it remains unclear to what extent it is being used and implemented (e.g., Halim, 2016).

4   This number is an estimate given that a large portion of the temporary migrants do not necessarily appear in official statistics.

Methods

This paper draws on field work conducted in relation to two PhD projects during 2017 (FA) and 2018 (LB). The first was that of the lead author (FA) whose PhD work was connected to the Urban Climate Resilience in Southeast Asia (UCRSEA) project which involved conducting half a dozen interviews with respondents from government and civil society in relation to urban planning and development in the context of climate change vulnerabilities. The second was that of a co-author (LB) whose Ph.D. worked involved 80 interviews with urban poor communities as well as government and civil society stakeholders. Interviews with vulnerable residents explored the risks they face due to environmental changes and urban growth as well as the strategies they employ to improve their own resilience.

We have also included an analysis of secondary research covering a mix of academic literature and media coverage of public protest and other initiatives to re-define urban futures in Phnom Penh. The former involved a literature search *via* Google Scholar using relevant keywords (Phnom Penh AND urban resilience; Phnom Penh AND politics AND urban resilience; Phnom Penh AND urbanization; Phnom Penh AND climate resilience). The latter involved canvassing important English-language media outlets in Cambodia such as *Khmer Times*, *Phnom Penh Post*, *VOD*, *Cambodian Journalists Alliance Association* and others covering affairs in Asia such as *BBC News*, *Nikkei Asia*, and *The Guardian*. In addition, reports from civil society organizations such as LICADHO and Sahmakum Teang Tnaut (STT) provided critical and foundational knowledge gained through their empirical research in Phnom Penh, the urban poor, and impact of urbanization on residents and their vulnerability.

Urban climate resilience in Cambodia: Perceptions and paradoxes

Over the past 20 years, there has been an upswell of rhetoric, programs, projects, and policies related to urban sustainability and cemented into official development narratives through forums such as the UN's New Urban Agenda (UN Habitat, 2016). This rising tide has evolved to include a combination of words: sustainability, smart cities, and resilience (Devuyst et al., 2001; Desouza and Flanery, 2013; Silva et al., 2018; Li and Yi, 2020). Out of this, one term that has gained popularity—both in academic literature and policy initiatives—is 'urban resilience'. The combination of these two terms, urban and resilience, merges two conceptual domains that are equally contested and debated in their meanings and strengths. In particular, resilience has been critiqued as a "vague boundary object" with calls for a more clear, descriptive concept (Brand and Jax, 2007) but also

lauded as a "bridging concept" within interdisciplinary research (Beichler et al., 2014; Baggio et al., 2015).

Following this notion, the concept of urban resilience has brought together separate agendas, such as climate change adaptation (Leichenko, 2011; Kim and Lim, 2016; Cobbinah, 2021) and disaster risk reduction (Etinay et al., 2018; Cariolet et al., 2019). Despite this, in the rush to deploy the concept of urban resilience, important questions risk being overlooked: "who benefits from urban resilience?" and "urban resilience for whom, what, when, where, and why?" (Meerow and Newell, 2019). In other words, analyzing the politics of resilient cities raises the question: "whose resilience and whose city?" (Vale, 2014).

As outlined by several scholars (Hill and Larner, 2017; Webber et al., 2021), far from being organic, the popularity of urban resilience (among other related terms) has been manufactured, orchestrated, and promoted by a network of organizations ranging from global development institutions (e.g., the UN, the World Bank), private sector actors, and non-profit sector organizations. Moreover, the explicit imbedding of the private sector within urban development planning and its increasingly integral role has resulted in the commodification of urban resilience and the creation of a "neoliberal governance agenda in resilience clothing" (Leitner et al., 2018, p. 1277).

Arguably, one of the countries where this kind of agenda has emerged is Cambodia. Influenced by priorities imported by Western donors, Cambodia has produced multiple written policies related to climate change and resilience, such as the Cambodia Climate Change Strategic Plan (2014–2023) (RGC, 2013) and, at the international level, the Nationally Determined Contribution (NDC) related to the Paris Agreement (Ministry of Environment, 2020). However, Cambodia has historically had a complicated relationship with international aid in the post-Khmer Rouge period. Historically, Western donors have tried to influence policy directions to push for governance reforms while Cambodia officials have sought ways to appear to acquiesce to donor demands without substantially changing any of their actual priorities (Un, 2005). This pattern was evident in the annual donor funding conferences in the post-UNTAC period until Hun Sen ultimately decided to cancel them (Strangio, 2014a). Currently, a resilience agenda has been introduced as a priority for multiple donors including, European bi-lateral agencies and multi-lateral agencies such as the World Bank and Asian Development Bank (ADB). Yet this agenda has also been taken and transformed by national actors who have adopted resilience within policy at the national (e.g., Climate Change Strategic Plan) and, indirectly, at the municipal level (e.g., Phnom Penh).

As with the international actors promoting the "resilience agenda," the way in which resilience is being operationalized in Cambodia, for example, "resilience building" (for climate change) and "urban resilience" (for urban development challenges), has been to focus on institutional capacity building, coordination and investing in infrastructure development

(Bigger and Webber, 2020; Beckwith, 2022). While these are important and worthwhile initiatives, they do not reduce (climate-related) risks for many urban residents because they do not minimize vulnerabilities nor address the poor conditions which unpin vulnerability in poor urban communities (e.g., ineffective waste management exacerbates effects of floods by preventing water from draining efficiently) (Nop and Thornton, 2019). Overall, efforts to build resilience in Cambodia have yet to embrace many of the nuances that have evolved in the academic literature to show how striving for resilience can go beyond "bouncing back" and instead foster transformative change (Pelling and Manuel-Navarrete, 2011; Li et al., 2018; Elmqvist et al., 2019; Normandin et al., 2019).

In Cambodia, there is currently no policy either at the municipal level in Phnom Penh or at the national level that explicitly commits to the pursuit of urban resilience (Beckwith, 2022). Instead, a suite of policies at both levels establish the importance of many aspects of policy development and urban planning in line with a resilience agenda. For example, at the municipal level, Phnom Penh has published the Sustainable City Plan (2018–2030), which aims to support the city's ambitions for economic growth alongside addressing climate risks. The plan presents projects that can, alongside the city's Master Plan, help to achieve environmentally-sound urban growth. Yet, at no point in the Plan is the term urban resilience defined. Such an oversight (whether intentional or not) is emblematic of the incongruence between the stated visions of such high-level policy documents that are ostensibly created to guide urban development on the one hand, and the reality on the ground, on the other hand. Despite formal approval of Phnom Penh's Sustainable City Plan, the lived reality of urban residents and their vulnerability, especially of the urban poor, has not dramatically improved (STT, 2018). The most recent studies of the urban poor in Phnom Penh have shown that not only are urban poor communities *increasing* in number (driven by rural-to-urban migration caused by climate change, indebtedness, and COVID-19) but they also face threats of eviction (STT, 2022). In turn, these factors act as barriers for individuals and households to attain the "safe and quality lifestyle" envisioned by the Sustainable City Plan. At the national level, the Cambodia Climate Change Strategic Plan (2014–2023) identifies climate resilience as a priority but its primary area of interest is rural areas, rather than cities.

Despite these policy commitments, the ways that urban development is happening is not in line with principles typically associated with resilience in the academic and gray literature. For example, urban expansion in Phnom Penh has come at the direct expense of the lakes and wetlands that previously characterized the area. This landscape has been providing crucial ecosystem services by acting both as a natural flood defense and wastewater treatment (APUR, 2019). However, these lakes have gradually been filled in to create new land for urban development. Between 2000 and 2015, an average of 1,000 ha of built up area was added to the city every year, much

of it through in-filling (Mialhe et al., 2019). A study by the NGO Sahmakum Teang Tnaut (STT) of 25 lakes and canals in Phnom Penh's inner districts found that by 2015, 15 had been filled completely and 9 had been partially filled (STT, 2015). The impacts of this loss of urban ecosystems are far reaching because the lakes play a critical role in the city's wastewater management, sewage treatment, flood protection and food security (World Bank, 2017). In effect, these decisions and actions by the government have *reduced* the urban resilience of Phnom Penh by eliminating these natural flood defense systems. In their study on how climate-related hazards impact urban livelihoods in Phnom Penh, Nop and Thornton (2019) conclude "our key findings revealed limited local government attention to improving infrastructure and a lack of commitment to assist vulnerable urban poor communities to build resilience to natural shocks." Furthermore, decision-making processes related to urban planning lack transparency with key documents such as the city's complete Master Plan never having been released and details of land transfers to private sector actors shrouded in secrecy (Paling, 2012).

By focusing on so-called "capacity building" and using vague, undefined goals for the capital city in its plans, both discourse and policy related to urban resilience is devoid of political debates, which leaves little opportunity to identify differing inequalities and vulnerabilities. This is due in part to the development of client-patron structures set up over the past decades post-Khmer Rouge that have transformed the political organization of Cambodia to one where satisfying the relationships of patronage supersede meeting the needs of the people (Strangio, 2014a; Eng, 2016). Ultimately, the way in which urban resilience, and the resilience agenda more broadly, manifests in Cambodia in the context of patronage actively undermines any notion of urban resilience that puts people's wellbeing at its center.

This approach results in a "paradox of resilience" where policies that would improve urban resilience are developed, thereby shaping the perception that the government and its partners are "doing something," but the actual decisions made, such as compromising the critical role of the wetland ecosystem surrounding Phnom Penh by infilling the city's largest remaining lakes, undermine long term urban resilience and strategies to reduce vulnerability for people living in the capital (STT, 2019). In the above example, the response by the government has been to deflect instead of engage with criticism of these actions. Prime Minster Hun Sen has alleged that critics of the decision to infill the lakes are simply "jealous" while trying to make the case that they are being hypocritical for singling out Cambodia when other countries (e.g., Singapore) "pump [sand into] the sea" to create land (Sopheap, 2021).

Given this wholesale dismissal of any criticism leveled against the current approach to urban development, it is not surprising that little vocal contestation and disagreement about the depoliticized approach to urban resilience is happening among actors within the country. However, the next section will

outline the ways in which this form of urban development is being contested in subtle, yet differing ways.

Challenging the urban resilience status quo: Examples from civil society

There is a substantial body of literature that has documented the active resistance to land grabs in rural areas in Cambodia, including women's participation (see for example Beban and Work, 2014; Lamb et al., 2017; Park, 2018). However, in contemporary Cambodia, there is less overt resistance to the current model of urban development, even by those directly affected, many of whom prefer to avoid confrontation with the government (Beckwith, 2020). Prime Minister Hun Sen and the Cambodian People's Party (CPP) have secured virtual hegemony by eliminating any political opposition, culminating in the dissolution of the only viable opposition party in November 2017 (Morgenbesser, 2019). This has occurred alongside tight restrictions on civil society organizing and public protest. For example, during the controversial evictions of urban settlements that accompanied the in-filling of Boeung (Lake) Kak in central Phnom Penh, women from the community who stepped forward to lead the protests were repeatedly arrested for their actions (Brickell, 2014, 2020). Moreover, for these women who are evicted from their homes, the destruction of the marital home is a strategy used to deter women from challenging actions by the state (Brickell, 2020). Several local human rights NGOs have also been blacklisted for accusations of collaborating with foreign powers to undermine the government (Sokhean, 2017; Kijewski and Chheng, 2018). The result is a climate of fear and uncertainty which makes many Cambodians reluctant to engage in activities that might draw negative attention (Schoenberger and Beban, 2018). Targeted assassinations of high profile political and environmental activists have silenced much political activism (Wright, 2021).

Despite the crackdown on the various forms of resistance and protestation by individuals and civil society, some groups and organizations are managing to resist the dominant model of urban development and keep the conversation about the future of the city alive. The strategies used by these groups are numerous but in this article, we highlight three main types: 1) small examples of (still heavily repressed) public protest; 2) community-led resilience building and; 3) strategic knowledge creation and the production of publications for research and advocacy.

Public protests: Boeung tamok and mother nature

The decision to begin in-filling Phnom Penh's largest and last remaining lake, Boeung Tamok, has provoked public protest. The dispute began in 2018 when the government announced plans to in-fill a small portion of the lake to be used as a fruit and vegetable market. This decision has been followed by further parcels of land being allocated to Phnom Penh Capital, the Ministry of Rural Development and other government and non-government agencies and private companies, including 300 ha to the Ministry of National Defense to use for the construction of a new Armed Forces General Command (Orm, 2020). Civil society representatives from multiple Phnom Penh-based NGOs have spoken out against the development, citing the risks of flooding if another important wastewater catchment is lost (RFA, 2020). Government spokespersons insist that the impacts on society and the environment are always taken into account but because reports like the legally mandated Environmental Impact Assessments are not publicly published there is little recourse to challenge these decisions.

The example of Boeung Tamok has been regularly mentioned in the local media (e.g., Mech, 2022a; Moeun, 2021) and has caught the attention of environmental activists at Mother Nature, an environmental NGO established by Spanish citizen Alejandro Gonzalez-Davidson alongside two Cambodian co-founders, Thomacheat and Sok Chantra. The organization campaigns to raise awareness of environmental degradation in Cambodia, gaining notoriety for its work on raising awareness of the negative impacts of sand mining in southwest province of Koh Kong. A feature of the organization's campaigns include critiquing and questioning government policies and decisions, resulting in an antagonistic relationship with the Cambodian government (Strangio, 2014a). This kind of relationship has resulted in the targeting and constant harassment by authorities not only of the two Cambodian co-founders but also arrest of the group's volunteer activists (Flynn and Phoung, 2021). Such suppression and persecution eventually led to NGO co-founder Alejandro Gonzalez-Davidson requesting that it be removed from the Interior Ministry's registry of NGOs (Dara and Baliga, 2017; Flynn and Phoung, 2021). At the same time, this has not much impact on the functioning of the group as it continues to function informally as a "movement of concerned citizens," according to Mr. Gonzalez-Davidson (Dara and Baliga, 2017).

In September 2020, three Cambodian activists (Long Kunthea, Phuon Keoreaksmey, and Thon Ratha) were arrested for posting information about a planned protest which would have seen Long Kunthea perform a solo walk to the Prime Minister's house to draw attention to the in-filling of Boeung Tamok (Khy, 2021). The three were imprisoned in May 2021 with charges including "plotting and insulting the King" but have since been released (LICADHO, 2021).

The severity of the response to the planned one-person protest is indicative of how little civil society space exists within which to challenge the current model of urban development in Phnom Penh. Public criticism of the government, even when framed as support for environmental protection, is met with harsh penalties which deters resistance to these practices. This is evident in the case of the Mother Nature activists who carried

the stigma of being dissidents with them even after they were released. For example, Long reported that her prison sentence has led to her family being treated as outcasts from their community as their friends and neighbors fear reprisals just for being associated with her (Flynn and Phoung, 2021). The example above shows how the harsh response to public protest or vocal criticism serves to silence any dissenting voices that might challenge the prevailing practices of urban growth and visions of the urban future of Phnom Penh. At the same time, the example of Boeung Tamok and Mother Nature also shows how there exists a certain level of resilience within members of civil society to engage in activities that draw attention to decisions made by the government despite an overall climate of suppressing actions that so much as resemble dissent or critique. Despite this oppressive context, young activists like Phuon Keoreaksmey embody a kind of boldness, resilience, and conviction in their work, captured in an interview where say says:

> "It's better for Cambodian youths to join us and show they're worried about what the government is doing, yes they can take us back to jail whenever they want, but they can't jail everyone who cares about the environment... We're an example to the youth, we've shown that even a 19-year-old girl can stand up and defend nature from the government." (Flynn and Phoung, 2021)

Through the attention received by actions and young activists such as Keorasmey, Kunthea and Ratha combined with rising levels of education and means of communication, Cambodians across the country are becoming increasingly conscious of the kinds of repression and abuse of power the government is exerting. As such, while the acts of public protests may be quelled by government suppression, the "spirit of resilience" among groups like the young environmental activists, continues to live on. It's important to note here that these public vocalizations contesting government actions and policies are premised on "defending nature," i.e., protecting the environment, which is inherently apolitical. At the same time, the actions by young activists whose zeal rests upon protecting the environment are keeping a space, however small, alive where contestations against the government can be kept alive.

Community-led resilience building: Boeung tompun and boeung cheung Ek

As the space for public protest shrinks, communities in Phnom Penh find other avenues through which to express their visions of an urban future. In southern Phnom Penh, the extensive lake system of Boeung Tompun and Boeung Cheung Ek is at a more advanced stage of in-filling than Boeung Tamok. These lakes and their surrounding wetlands previously absorbed more than 70% of the city's wastewater but have been

gradually filled in to make way for the construction of vast gated communities and high end shopping malls (APUR, 2019). The vast wetlands area is surrounded by low income settlements where many families make their living farming morning glory and other aquatic vegetables on the lake's surface (STT, 2020). This urban agriculture was performing an important role in treating the city's wastewater before it returned to local river systems as Phnom Penh lacks a central sewage treatment system (Sovann et al., 2015).[5] As the lakes are filled in, the water circulation is compromised resulting in rapidly deteriorating water quality as the sewage entering untreated from the city is no longer diluted and flushed out and instead builds up, exceeding the capacity of the wetland to treat it and causing pollution and serious health risks for farmers and other local residents, including those downstream. For example, flood waters contaminated with sewage can remain for up to 8 months in certain parts of Phnom Penh, leading to outbreaks of waterborne diseases (Fortnam and Flower, 2015).

Despite the serious repercussions, public protest against the in-filling of these lakes has been minimal. Instead, farmers in the area have been leading their own resilience-making initiatives. In one village on the lake, residents had long wished for a road that would withstand the annual floods which made their homes inaccessible during the rainy season except by boat. In 2017, a local NGO that had been active in supporting the community on housing rights came up with a scheme to link the village to the city year-round. An agreement was reached whereby trucks from the local construction industry would come to deliver dirt and debris that were waste from construction sites to be used to build up the land around the stilted houses. Each household in the village paid $25 USD for this "facilitation fee" and trucks appeared brimming with the rubble of construction sites. Overtime, these truckloads of construction-related waste built up the level of the land around the houses. When the money ran out before the new road could reach the end of the village, the villagers paid again, another $25 USD to ensure access all the way to the end. In addition to support with the coordination of this endeavor, the local NGO put in $2000 USD to cover the road with soil.[6]

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5   While there are preliminary plans, submitted to the Phnom Penh City Hall by the Japanese International Cooperation Agency for a wastewater treatment plant to be built, the first stage will only be able to treat 5,000 m³ of water per day, well shy of the 370,000 m³ per day of wastewater and rainwater entering the wetlands. Put another way, the wastewater treatment plant will capture only 2% of the total wastewater entering the Tompoun/Cheung Ek wetlands. Meanwhile, funding remains unsecured (the total cost for all four stages is estimated at $1 billion) with no official indication or approval that the citywide wastewater management plan will go ahead (Robertson, 2017).

6   Interview by LB with NGO representative, September 29, 2018.

Though rough and bumpy, not to mention a potential source of pollutants, the trash road was a lifeline for the villagers. While water laps at the edge of the road during the seasonal flood, so far it has remained just above the surface. This makeshift bridge has transformed the fortunes of the village. Homes are now connected to the city all year round, allowing farmers to transport their crops to market without delay and families to send their children to school without fear. The road has even opened up a new livelihood opportunity for some, who scour the debris for bits of metal and other valuable waste. The road is an example of the collective resourcefulness of the community. Pooling their finances and with the organizational support of a local NGO, the construction of the road shows the benefit not only of access to resources but the will to envision a future for their community and bring it into being collectively. This is a promising indicator of the potential for resilience building within the community, given that the ability to leverage social capital in order to act collectively is fundamental to building adaptive and transformative capacity (Elmqvist et al., 2019).

In addition to its functional role, the road is intended to fulfill a symbolic role, supporting the claims that the villagers have to the land that they occupy by showing their willingness to invest in the development of their community. By building communal infrastructure, the villagers can argue that they are not squatters on public land but custodians who are taking responsibility for their village. In this case, the efforts of community members and their supporters to kickstart local resilience building has been successful with the government following through on their promise to grant hard land title to residents with appropriate documentation as well as paving the road and installing drainage for the community.[7]

This example of a community taking matters into their own hands to improve urban infrastructure also highlights how an erosion of trust between urban communities, like the one's that surround Boeung Tompun and Boeung Cheung Ek lakes, and authorities has evolved over time, catalyzed by a history of evictions in urban poor settlements (see McGinn, 2015). To be sure, the example of Boeung Tompun and Boeung Cheung Ek and the threat of eviction of people who live in its surroundings is not new. As Connell and Grimsditch (2016) outline in their coverage of forced relocation in Cambodia, 20,000 people living in the Boeung Kak Lake area in Phnom Penh were displaced as developers began filling the lake and residents were flooded out of their homes. While this case was made more complex due to the interaction between a multi-donor land-titling program financed by the World Bank program and a 99-year lease granted to a private developer, the role of civil society organizations was critical in using established complaints structures to advocate for greater accountability. Similarly, in the above example of Boeung Tompun and Boeung Cheung Ek, the organizational support provided by the local NGO to

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7   Interview by LB with local residents, March 27, 2022.

residents of the area proved instrumental. However, a critical difference is that due to shrinking civil society space and lack of formal complaint mechanisms, much of the work is being done with less vocal/formal contestation and protest toward the government. Instead, community-led urban development, driven by creative action (i.e., using construction refuse to build a road) and pooling of resources has increased the legitimacy of the community and claims to their right to remain on the land.

As of July 2022, about 80 families living around Choeung Ek commune are still waiting land titles that were promised to them in 2020 by the Land Ministry. One such resident who is now fearful of being evicted from the land she has lived on since 1982 is Chek Soknai. She lives on a plot of approximately 6 meters where she, like others in the community, grow vegetables and catch fish in the waters that surround their village (others work in construction or as factory workers). In speaking about her situation, she says "When we have our land title we will feel comfortable about living. But when we don't have one, we fear living there. We fear forced evictions, losing our livelihoods. In this place we have everything to make a living" (Sokun, 2022).

Therefore, while it remains to be seen when, and whether, all of the households are able to obtain hard land titles, the example of some communities within the Boeung Tompun and Boeung Cheung Ek area highlights how some marginalized urban communities are attempting to be resilient and claim their space despite living in a city whose machinations of urbanization have led to exclusion and involuntary settlement "as a radicalized mode of urban production rooted deeply in the urban history of the city and sustained by the legal apparatus" (Astolfo, 2021, p. 220).

Strategic knowledge creation: Sahmakum Teang Tnaut

Increasing knowledge and awareness on aspects of urban climate resilience (e.g., disaster management and preparedness, flood response and prevention, etc.) is especially important for urban residents. This point is underscored by findings of a recent study by Khan (2019) on urban flooding in Phnom Penh which found that residents of Phnom Penh receive little information on disaster preparation/management and health measures to employ during flooding. Moreover, from the 300 respondents surveyed across three *sangkats* in Toul Kork, the study found that citizens of the city did not perceive the intensity of flooding to be caused by the loss of urban wetlands. Such a lack of knowledge of the relationships between changes to the physical environment and flooding underlines the important role that knowledge creation and dissemination play in mobilizing citizens to hold decision makers accountable. Within Phnom Penh, one group that is helping to fill this role is civil society organizations.

In addition to supporting community-led resilience building, civil society organizations in Phnom Penh have

also kept open a dialogue on alternative approaches to urban planning and expansion through the production and publication of research reports on various aspects of Phnom Penh's development. Notably, local housing rights NGO Sahmakum Teang Tnaut (STT) has published an array of research about urban issues such as informal settlements, access to public space and the aforementioned report on the in-filling of the city's lakes and wetlands. These reports have typically been published in both Khmer and English and are available for free online. The reason we call this "strategic" is that these types of knowledge creation activities allows the organization to continue to engage with low income communities, staying aware of, and promoting, their needs without directly challenging government bodies in a way that would put their organization or staff members at risk of reprisals. By focusing on the core issues that directly negatively impact urban residents (instead of criticizing the government per say) and increase their vulnerability to losing land tenure rights (including eviction), flooding, health impacts from pollution, among other consequences, STT keep the focus on the need to for government action to ameliorate these issues and respond to the needs of residents. Instead of activism or advocacy, the information garnered from community engagement and qualitative/quantitative research is presented in a more neutral tone which aims to inform rather than provoke.

This is noticeable in the recent report from a collection of human rights NGOs about the implications of the in-filling of Boeung Tompun and the surrounding area. The report, *Smoke on the Water: A social and human rights impact assessment of the destruction of the Tompoun/Cheung Ek Wetlands* was produced by STT, Equitable Cambodia, LICADHO, and the Cambodia Youth Network and aims to shed light on the negative impacts of the way the area is being developed. Importantly, the report keeps silent on the political connections of the people who were given ownership of the land presumably to avoid engaging in allegations of corruption that would provoke a response from the government. While response to the report was subdued in Cambodia, it was picked up and highlighted in the foreign press (Handley, 2020; Knaus, 2020). It is noteworthy that although many of the environmental impacts of in-filling are mentioned in the report, they are not taken as priority issues on their own but rather seen through the lens of their impact on people.

The clear avoidance by STT as an NGO in pointing blame or criticism directly at the government is intentional and for good reason given how the government has in the past blacklisted NGOs by accusing them for inciting a "color revolution" as a means of overthrowing the government—a charge often touted by government officials (Sokhorn, 2019; Sony and Keeton-Olsen, 2021). However, a recent government press conference may be a glimpse of change from such adversarial sentiments toward civil society. On June 29, 2022; the Justice Ministry held a press conference which included invitations to, and attendance

by, human rights NGOs Adhoc and LICADHO[8] with the aim of starting a "culture of dialogue" according to a government spokesman (Mech, 2022b). In his remarks discussing the new press conference format, Justice Ministry spokesman Malin said "And this [press conference] is the start of a culture of dialogue between the civil society and spokespersons of the government. It is good that we sit and talk with each other and exchange views." (Ibid). Such an explicit statement of open dialogue and consultation with members of civil society by a government official offers a glimmer of hope to not only more inclusive urban development policies but also validates the effort and approach of strategic knowledge creation by civil society organizations like STT.

Discussion

Scholars have pointed out how the evolution of the relationship between people and politics has been enacted in a systematic and particular way by the Cambodia government (e.g., dissolution of opposition party) (Un, 2005; Hughes and Eng, 2019; Morgenbesser, 2019). This approach has ushered in an climate of suppression of civil society and collective action, including environmental activists and activities raising the voices of the urban and rural poor (Schoenberger and Beban, 2018; Beban et al., 2019). Almost in parallel and in a complementary fashion, the nature of urbanization has been transformed in the image of this contemporary political landscape. For example, the in-filling of Boeung Tamok lake to make way for a fruit and vegetable markets under the guise of "beautification"[9] is, in reality, a trojan horse for gentrification which represents a transformation and remaking of class within the urban landscape (Lees, 2012)—a process associated with the Global North (Smith, 1996). However, unlike how the process has unfolded in the Global North,[10] the way it is occurring in Cambodia (and other parts of Southeast Asia) is different insofar as the leaders of urban (re)development are largely state-backed/state-affiliated private actors producing megaprojects (e.g., gated communities) for the elite. In that vein, the question arises: who is the city built for and whose lives and whose freedoms are being negatively impacted?

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8   The Cambodian Center for Human Rights (CCHR) and Sahmakum Teang Tnaut (STT) were absent from the meeting. According to CCHR director Chak Sopheap, she received an outdated invitation (Mech, 2022b).

9   For example, Vision 1 of the Phnom Penh City Development Strategy 2005–2015 states "Phnom Penh is a city with […] well managed and splendid beauty" (STT, 2012).

10   It's important here to note that we do not imply that the process 'originates' in the Global North and is 'imported' to the Global South. Rather, as Lees (2012) argues, gentrification is multi-centered and has likely existed for decades in (South)east Asia.

An illustrative case looking at the social consequences of urbanization in Phnom Penh can be seen from the work of Brickell et al. (2018) who connect climate change impacts felt by rural households to the brick kilns outside of Phnom Penh. The authors reveal how crop losses, exacerbated by climate change, have driven families into increasing debt which, in turn, has forced families to migrate from their village to find wage labor. For some, this means they end up at these brick kilns. Once there, families (including children) end up being trapped in debt bondage with slim chances of escaping such a fate. On top of this, the actual process of brick making produces noxious fumes and contributes to local air pollution through the burning of pre-consumer garment waste. Taken together, their work highlights the interconnections between climate change, people's vulnerabilities, modern slavery, and urbanization. Similar to the case of migrant families trapped in bonded labor across the brick kiln sites outside Phnom Penh, the lives and freedoms of the urban poor are also negatively impacted by wider processes of climate change and its consequences (e.g., flooding) which compel some to migrate elsewhere, often to areas that are highly vulnerable to climate change-related impacts, i.e., low-land areas (Astolfo, 2021). Often these sites are far from places of their employment which increases both costs (e.g., transportation) and livelihood precarity (Fortnam and Flower, 2015). Moreover, the fundamental process of urbanization involves large amounts of energy. In Cambodia, over 50% of total energy use is provided by fossil fuels (coal, oil, natural gas) (IEA, 2022). In the case of coal-fired power plants, not only do they contribute to increased carbon emissions but also exacerbate local air pollution—much like the brick kilns of Phnom Penh. As a fundamental and literal building block in urbanization, concrete is an essential component, but, at the same time, its production has significant carbon emissions (Barcelo et al., 2014). In this context, the form of urbanization taking place in Phnom Penh becomes paradoxical to the notion of urban climate resilience and stands in strong contrast to the dominant narrative that is part of the resilience agenda in the country. Collectively, the way urbanization is occurring in Phnom Penh, and being sanctioned by state and private interests, is undermining efforts toward true urban climate resilience and instead, is negatively impacting urban poor people's lives and freedoms.

Despite this, our three examples (public protest, community-led resilience building, and strategic knowledge creation) highlight the varying ways people and organizations are challenging the prevailing model of urban development and how activism and advocacy related to urbanization and the needs of urban citizens has shifted partly in response to this socio-political context. In doing so, we show how people, communities, and civil society have evolved and adapted the way in which they challenge the status quo and unilateral policies/actions by the government. The tactics used by organizations like STT echo what Lawreniuk (2021) observes

in the case of the iconic "White Building" in Phnom Penh and its (and the community therein) struggle for survival where "covert opposition counters repression of overt contestation" (p. 647). Most importantly, the three examples show that alternative perspectives and challenges to the status quo on urban development have not disappeared entirely but have changed form through the use of alternative, nonsubversive tactics that are able to operate within an environment that supresses dissenting voices.

Some of these tactics are part of an broader movement such as the example of community-led resilience that we highlighted. This kind of response by residents within Phnom Penh is certainly not an exception, rather, it is part of an increasing trend of communities using collective action to protect the areas they live from urban disaster risks. For example, in their report on vulnerability of the urban poor in Cambodia to flooding and other hazards, Fortnam and Flower (2015) highlight various community-level adaptations among residents of Phnom Penh involving locally-engineered solutions. In the Sangkat of Chamrouen, for instance, the community has constructed a dyke to protect the community against river flash floods, and in 2014 the Sangkat authorities—in partnership with local NGOs and the community—raised the height of the road by 1.4 m to have the area be more resilient to floods. At the household level, residents have managed to make adaptations to their homes such as constructing stilts to raise their house above the floodwaters and build concrete foundations. For many households, these kind of local-level resilience-building strategies have been enabled by loans from microfinance institutions (MFIs). Although these loans have been critical in providing cash during moments of acute need such as during the rainy season and have increased household-level resilience, they come at a cost of exacerbating household debt. In the long-term, as the pressure of debt repayment squeezes household's finances, this strategy may hinder future coping and adaptation and potentially increase their vulnerability (Fortnam and Flower, 2015).

The example above, and the others highlighted in this article, bring to the surface the politics of resilient cities (and urban resilience in general): in practice, cities are developed and organized in a way that (re)produces and reflects socio-economic inequalities. Environmental impacts are experienced differently across a city, depending on multiple factors including socio-economic vulnerability, which often correlates with the spaces within a city that are physically and environmentally vulnerable. The work of STT in particular has highlighted this correlation with respect to the urban poor and their (in)ability to respond and adapt to changes in their environment (STT, 2012, 2018). This opens up the likelihood of creating "uneven resilience" (Vale, 2014) whereby certain areas of the city are more resilient to environmental impacts (e.g., flooding) than others. As Vale (2014) elaborates: "uneven resilience threatens the ability of cities as a whole to function economically, socially

and politically. Resilience can only remain useful as a concept and as progressive practice if it is explicitly associated with the need to improve the life prospects of disadvantaged groups" (p. 191). In certain cases, such as the infilling of the lakes around Phnom Penh, the consequences are felt across socio-economic groups with both poor and wealthy neighborhoods impacted by flooding. The crucial difference between these two groups, however, is their ability to draw upon resources (social ties, capital, labor) to respond, adapt, and cope with these impacts. For example, the ability to stay home and work in the case of an office job, driving large SUVs that are able to navigate flood waters, and living higher up (i.e., above street level). Geography plays an important role too. Wealthy households not only live higher up but many are also located in areas of the city that may be less prone to flood risk (e.g., due to better supporting infrastructure such as drainage), compared to, peri-urban areas where a high concentration of the urban poor live, and where land use change has been the most rapid. As a result, these peri-urban areas are where development-induced flooding is the most severe (Fortnam and Flower, 2015).

The examples also show the contrast between the orthodoxy of urban development in Phnom Penh and the way in which others within civil society view how urban resilience "should be" realized through their actions, not only from a climate or socio-economic perspective but also in terms of a social justice and political perspective. This involves asking questions such as *who* is this kind of urbanization for? *Who* is involved in making *decisions*? *Who* does it *include*? *Who* does it *exclude*? Asking these kinds of questions in the context of urban (climate) resilience adds an important, though oft-overlooked, dimension in conversations around urbanization processes and climate change impacts in cities like Phnom Penh. For cities to become resilient to risks faced by climate change-related impacts, they need to accumulate the social, political, financial, and institutional structures in a way that supports addressing these risks (Satterthwaite, 2013). Given the current socio-political climate in Cambodia and the dominance of a top-down resilience agenda, we believe that such developments are most likely to happen through community-led resilience building efforts. Alternatively, they can occur with cooperation between government, civil society, and urban communities. As our examples show, efforts by individuals and organizations that represent the marginalized voices are of paramount importance in efforts to achieve urban resilience that takes into account the rights of all urban residents. While the likelihood of this occurring in Phnom Penh is difficult to predict, at the very least, our examples show that there is still an active and strategic effort by actors within civil society to keep such a space "alive" and present. Indeed, such "bottom up" push from urban citizens and civil society on both city and national governments will be important to reduce urban vulnerabilities from climate change-related risks and support well-being of all urban residents, regardless of socioeconomic class, wealth, and status.

Conclusion

The actions taken by the actors highlighted in this article are (indirectly) responding to, and contesting, the answer to the question posed by Meerow and Newell (2019) of "resilience for whom?" and Vale (2014) question "resilience for whom and against what?." Specifically, whose vision of a resilient future counts, and ultimately, prevails. Likewise, who benefits and who loses as a consequence of the policies and actions adopted? Addressing these questions collectively, this paper draws upon three examples to show that even if the urban environment is not being designed to be resilient—the urban citizens and civil society certainly are by protesting against resilience-reducing policies, collectively organizing for resilience-building activities, and engaging in strategic knowledge creation and dissemination.

In Phnom Penh, it is clear that the city is following a path of privatized urbanization wherein the private sector and actors therein have significant influence and power in shaping the future of the urban space (Percival, 2016). Yet, despite this overarching context, the examples we have highlighted show how communities are using collective action to advocate for their versions of urban resilience and the different approaches taken to showcase their critique and resistance. The initiatives such as those by STT center on conveying of information in a more neutral way, but importantly focusing on the impact on everyday Cambodians instead of weaving in politics and "pointing fingers," shows promise as a new way of engaging and contesting the status quo of urban development in Phnom Penh. The kind of resilience shown by urban citizens (a large portion of which are among the urban poor) should be reflected within the policy and programs of urban planning in Phnom Penh if policymakers and the leaders of the city/country want a capital that is well-adapted, sustainable, liveable, and prosperous in the twenty-first century.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

Author contributions

FA and LB led the core development and framing of the article with support from CN. FA led the writing of the manuscript with LB contributing to the case studies and CN

to the Phnom Penh section. All authors contributed equally to revising the full manuscript.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

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