Scarcity and Contention in Cities in the Global South:

Evidence from Karachi and Manila

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As more people move to cities, they do so at a time when concerns of resource scarcity, especially of water, abound. By 2050, at least 6 out of 10 people will be living in cities (UN-ESA 2014), increasing the demand for water by 50-70 percent (Lundqvist, Appasamy & Nelliyat 2003). Although these concerns are not new, they have gained an urgency in a time of environmental stresses and water crises; one fourth of cities in the world already face water shortages (McDonald et al. 2014). For some cities in the Global South where criminal and political violence and service provision through multiple players shapes daily experiences, these questions become doubly important. How will depleting water interact with dynamics of governance and politics? Will it lead to political instability, or worse, conflict?

Seemingly straightforward, these questions cut across thematic boundaries.

Firstly, within urban contexts where armed criminal and political players have a history of employing violence as a regulatory mechanism, attributing conflict to resource scarcity alone is a challenging enterprise. On the other hand, unrest in the form of organized protests by social and political groups, residents expressing outrage as they experience limited water availability, or competition over political and economic resources including access to water among political players, merit equal attention. In some instances, these phenomena may be the intervening stages before a city experiences political instability.

Secondly, scarcity of resources (water, in this case) needs to be analyzed in light of preexisting structural inequities in a society. Not dismissing the very real danger of climate-induced scarcity driving societies into contention, inequitable distribution of water in a society may mimic conditions produced by resource scarcity, thereby making it difficult for scholars to untangle the "real" cause of unrest. Scarcity, then, is not only about places running out of water but a complex phenomenon in itself that contains seeds of a city's history of social and power structures, governance, and socio-ecological processes.

Thirdly, this paper contends that the problem of environmental stresses and resource scarcity needs to be studied within the backdrop of a state's ability (or, lack of it thereof) to provide services to its residents. Particularly, the dysfunction associated with failure of some places to correspond to ideal types of governance ought to be revisited. This may create space for ground realities—in many cities, multiple players, connected with state actors at varying levels, are engaged in service provision. Water supply, then, is not always within the domain of formal governments. These players and practices do not exist in isolation nor are they peripheral to a system—being associated with local political players, government officials, civil society organizations and local communities. How service provision, especially to poor populations, and relationships among these dynamics interact with depleting water resources

is useful in understanding ground realities. Studying the effects of depleting water in such complex environments, then, is no easy task.

Attribution of contention to resource scarcity, especially traceable to climate change, poses a confounding question of importance (Salehyan 2008, Selby et al. 2017, Solow 2013). This paper makes the case for acknowledging the complexity and dynamism of these emergent challenges. In other words, if a city experiences instability including intensity in violence, is it because of water shortages, poor governance, breakdown of rule of law, or mismanagement of resources? Moreover, scarcity is as much about depleting water resources (Hofste, et. al. 2019) and increasing demand as it is about broader contexts shaping access and control over water (Swyngedouw, Kaika, & Castro 2002; Swyngedouw 2009). In some cities, increasing urban populations add to the mix, raising concerns about the potential of competition over limited resources. Thus, it is not far from the realm of possibility that a city experiencing water shortages may experience instability.

Studying the issue of resource scarcity and violence in a delimited manner is not only limiting, it may lead to flawed analysis and policies. Provision and access to water is imbricated in governance and politics; being attentive to political implications as well as governance challenges of water shortages is important. Developing a deeper understanding of this complex issue is possible only if we open the black box that currently abstracts away the inner workings of scarcity-contention problem. To this end, this paper presents a framework.

This framework is premised on three key assumptions. One, to study effects of depleting resources (water) on political (in)stability of any city, understanding scarcity not only in terms of finite resources but also how social, political and economic relations may determine who gets access to water. Two, making sense of the dynamics of informal water provision and its interaction with local politics and state officials at varying levels allows for tracing the workings of power as experienced, performed, and organized in a city. This understanding of informality is political, with the assumption that how these dynamics interact with the stressor of depleting resources may contribute to political expression. Three, delinking the scarcity-conflict equation in cities in terms of body counts and insurgents fighting against the state. This extricates the conversation from civil war territory to include a spectrum of political expression against actual and (or) perceived injustices such as, contention over resources among political players, tenuous equilibria in a society that may mask unrest including exacerbating of previous and new grievances, and civil conflict. By no measure the only scenarios, this suggested spectrum is an effort to broaden the possibilities to pay attention to, as they relate to depleting water in volatile and complex contexts that may differ from one city to the next.

I explore this hypothesized framework in the case studies of Karachi, Pakistan and Manila, Philippines in a work-in-progress research effort. Analysis is based on previous and ongoing field work. Data sources include semi structured interviews in both cities supplemented by secondary sources including local newspapers, reports by local NGOs, and previous scholarship. Process tracing (George & Bennett 2004; Blatter & Haverland 2012) helped in identifying patterns evolving over time. This paper's methodological approach is situated in critical realism—a lens that allows for understanding complexity and emergence in the world (Sayer 2000). The remaining paper discusses these themes in more detail.

I-   Building Blocks

In April 2018, fears of Cape Town running out of water loomed on the horizon. Queues of people standing in line to collect water presented a dystopian future that had suddenly become real. The day came and passed—the city eking past the infamous Day Zero. Earlier this year, stories made rounds for Chennai as it experienced water scarcity and increased water prices, including for medical services, forcing doctors to buy water for surgery. In a similar vein, São Paulo has long been preparing for the collapse of its water supplies as continuous droughts limit water availability—the army has already war gamed scenarios such as the takeover of a utility station in the central part of the city (Cohen 2016).

These events seem to signal a new normal. Experts suggest that with changes in environment and land usage, even river basins with substantial reserves of freshwater have experienced droughts over the past years (Desbureaux & Rodella 2018). These water crises are taking place during the age of urbanization, contributing to an increasing demand for water for personal consumption as well as for economic activities (McDonald et al. 2014).

In cities in the Global South, where dynamics of crime, violence and informality shape politics and governance by multiple players (Arias & Goldstein 2010; LeBas 2013; Müller 2018), concerns of water running out are implicit with the potential of instability. What may crises in these places look like?

One way forward is to open the black boxes of resource scarcity, conflict, and political processes in a city. To that end, I identify water scarcity, informality in relation to politics and governance (since these processes do not correspond to ideal types), and conflict in cities as the building blocks of this paper.

a. Scarcity does not fall from the sky

Although recent water shortages in cities are generating rich conversations,[1] the topic of water scarcity itself has been under study for some time. In these discussions, some link scarcity to increasing demand resulting from growing populations and degradation of resources (Malthus 1798, 1998; Hardin 1968). More recently, scarcity of renewable natural resources has been linked with established theories of deprivation and civil conflict, with some scholars arguing that it may 'stimulate ethnic clashes, urban unrest, and insurgencies' (Homer-Dixon 1996:359; Kahl 2006). Others, questioning the straight line connection between scarcity and conflict base their claims on Sen's entitlement argument (Sen 1982)—that, it is not only scarcity but preexisting structural inequities in a society that may be at the root of unrest and possible contention (Adger & Kelly 1999; Ribot 2010).

Both of these arguments, albeit profound and equally compelling in their respective logics, abstract scarcity from contextual realities of cities in which scarcity is produced and experienced by different sections of population. Even the entitlement argument, as adopted by scholars of political ecology, is static in its framing of the problem. Present-day concerns of depleting water in cities leading to "water wars" and "Day Zeros" are premised on these arguments. They are an example of simplifying complex processes to the detriment of their

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[1] See for instance, the special issue of International Journal of Urban and Regional Research, titled 'Parched Cities, Parched Citizens', 2018. The issue covered research on water crises in cities in Africa, Latin America, and the United States.

own cause—water wars suggest an imaginary of people fighting in the streets over water in poor shanties in cities associated with poverty, corrupt governments, and roving bands of crime groups and militia fighters. This leads to a zero sum but intuitive binary of scarcity leading to conflict, pitting proponents and opponents of the argument in opposite camps.

The conceptualization of scarcity proposed in this research is closest in logic to arguments put forward by political ecologists. Instead of looking at structural inequities from a static lens, however, I propose adopting a dynamic view of cities. Cities, as we have come to know now, are living organisms, always shaping and reshaping their structural features and entitlements architecture. In developing such an understanding, it is critical to incorporate politics that surrounds distribution of resources. As cities grow to unprecedented sizes and overwhelm states' capacities of resource distribution and service provision, the political landscape in cities is in a flux. Emergence of new actors, both in formal and informal realms, appears to be on the rise, each with a huge (political) base relying on them for service provision and resource availability. Depending on the lines a society is fragmented (ethnic, religious, political, social) upon, these actors may take different forms, introducing even more complexity and emergence in the system, thereby justifying the need to revisit the conceptualization of resource scarcity anew.

I follow the lead of others before me in arguing that scarcity is not only a natural development of resources running out. It can result in times of abundance for some groups through 'unequal gender, social and power relations that legitimize skewed access to and control over finite and limited resources' (Mehta 2010: 3). In other words, scarcity is not entirely an economically neutral and inevitable phenomenon that can be addressed through managerial and technical solutions (Kaika 2003); it is equally, if not more so, constructed relationally (Jairath 2010). This cautions against accepting scarcity in terms of finitude and quantity alone while overlooking what scarcity is, and for whom (Mehta 2010). For instance, poor populations in a city may be experiencing it while affluent sections of population consume water in abundance (Jairath 2010).

While some cities are making headlines for experiencing water crises, many people face water shortages even in times of abundance on a daily basis. For instance, in Accra, Ghana, residents, especially in informal settlements, do not get water through centralized access (Peloso, Morinville & Harris 2018). Infrastructure is in disrepair and residents access water by a variety of ways including through water tankers, packaged water or sachets, water rationing etc. (Dapaah 2014; Morinville 2017; Stoler 2017). Inequality of access is not the story of one city either but a universal phenomenon.

In effect, access to infrastructure and basic amenities is not entirely a bureaucratic or technical enterprise as much as also deeply political (Kooy & Bakker 2008; Sultana & Loftus 2012; Ranganathan 2014; Von Schnitzler 2016). This understanding of social and environmental changes situates them within historical, social, political, cultural and economic contexts (Swyngedouw, Kaika, & Castro 2002). Thus, social and environmental changes are not neutral—they may privilege some, but not all. Social power relations are central in making sense of socio-environmental processes (Swyngedouw, Kaika, & Castro 2002). Questions of environmental sustainability, in other words, are inevitably political questions. For example, in Delhi, where water shortages are attributed to lack of water by city officials, desalination programs are introduced; yet, high water consumption by rich neighborhoods or water losses from pipelines are not factored in this assessment (Zimmer 2010).

Viewed through this lens, cities are 'dynamic hybrids, constantly (re) produced by humans and nonhumans alike' (Zimmer 2010: 349). This approach allows for understanding the nature of inequality in cities (Heynen 2016). It also problematizes discussions of environmental challenges that cannot be met primarily through technical and science-based efforts by highlighting the intrinsic role played by power and politics in shaping the world (Ernston & Swyngedouw 2019).

The understanding of power and politics varies in scholarship. For many, it is based on how capitalist processes shape power through capital accumulation processes over time (Zimmer 2010). This focus has been critiqued by others who advocate for adding empirical and contextualized works based in postcolonial, indigenous and antiracist discourses (Heynen 2016). Thus, instead of viewing power primarily through class relations, scholars suggest widening the 'understanding of power to include, besides class, other forms of identity (such as race and gender), discursive power and knowledge claims, and to reformulate our understanding of power as relationally constructed and enacted' (Lawhon, Ernston & Silver 2014: 508).

This intervention allows for developing explanations steeped in local contexts that can expand theory. It resonates with many scholars working on Africa, Asia and Latin America who bring in accounts of everyday interactions, local histories, and topics of study (Roy 2009) to contribute to a rich theoretical agenda that is 'able to inspire relevant and innovative ways of thinking about what to do in cities that face monumental developmental challenges' (Robinson & Parnell 2011: 522).

It is within this latter turn of scholarship that this paper bases its approach. Understanding the nature of power and politics within specific contexts enables tracing how scarcity is produced and experienced in light of empirical data. Important questions, such as, how power is organized and experienced, and how processes, institutions including formal, informal or continually in the making (Lund 2006) evolve over time, help understand the seeming chaos of places experiencing violence, crime, and informality. These works are attentive to fluidity of social and political processes (Simone & Abouhani 2005).

This approach creates space for studying emergent scenarios when scarcity of water could be experienced in finitude as well. As recent reports from around the world indicate, those futures are not distant.

b. *Informality and politics in cities*

Informality in relation to politics in cities in the Global South is the second building block of my argument. Cities in the Global South have long inspired visions of squalor, under development, violence and lawlessness. These understandings are based on normative theories developed within Western contexts. In non-Western countries, however, state formation did not follow a similar path; transplanting these ideas lends limited insights in how these places work (Gupta 1995; Yurchak 2002; Johnston 2005; Chakrabarty 2007).

How does one make sense of such complexity? Informality presents a path forward. Although it has generated wide ranging literature, informality as studied within political science, urban theory, and postcolonial studies is useful.

Within political science, the informal tends to be studied in relation to the formal (Tsai 2007: 38; Radnitz 2011: 352). There seems to be a consensus that focusing on formal institutions alone is not enough in studying how politics work in a society. For instance, scholars identify informal institutions as norms shaping behavior that lead to social action (Lauth 2007: 23). Or, that informal constraints along with formal rules constitute rules of the game (North 1990: 1). Helmke and Levitsky's work (2006) on informal institutions further problematized this debate by delineating the boundaries of informal institutions that are important to understand political change in Latin America. Thus, mapping political change only through formal institutions misses important parts of the story.

Although there is well-deserved interest in informal institutions and processes, these conversations rest on clear boundaries between informal and formal realms. This dichotomy is premised on the understanding that informal rules are conceived, disseminated, and enforced through unofficial channels, as opposed to formal rules. This duality and associated binaries, including public-private and state-society, are based on trajectories of processes and institutions that developed over time in Western societies.

Postcolonial accounts help by situating formal-informal and state-society dichotomies within historical contexts to investigate these themes. Some questions include, how colonial rule developed, which standards of rule applied to colonized societies (Sen 2002)—those of 'civilized world' or native norms (Hansen & Stepputat 2006: 303)? These questions are at the heart of experiences regarding the role of authority, state, social contract and citizenship in different sections of colonized populations.

Although there is variation in colonial experiences across time and space, one consistency seems to be how colonial authorities ruled through reliance on native rulers and strongmen while focusing on 'performative' aspects of sovereignty established through excessive violence and by maintaining superiority of race and civilization (Hansen & Stepputat 2005: 4). These experiments in statecraft led to varying notions of citizenship and the social contract in colonial and postcolonial states. For instance, during colonial rule in South Asia, native populations did not enjoy full citizenship rights. Instead, they were subjects at the receiving end of 'classification, description and enumeration of population groups as the objects of policy' (Chatterjee 2004: 36). These techniques of statecraft carried through postcolonial times and shaped developmental and administrative policies and relationship of populations with the state (Chatterjee 2004; Ekeh 1975). Viewed through these lens, the formal-informal debates become further complicated and informality a multifaceted and dynamic phenomenon, much beyond the concerns of legality and illegality.

Within urban theory, multiple approaches problematize the concept. Some argue that the state plays a primary role in determining what is informal, based on its political and economic calculus. Thus, informality is not lack of regulation, but purposeful de-regulation (Roy 2009; Yiftachel 2009). Through this lens, informality could be deemed as an organizing logic (Roy 2005:148). While this role of the state in determining what is informal and thus, "illegal" resonates across cities, others have suggested that in some places, the gaps left by legal institutions in addressing the needs of the growing urban population are filled by local institutions and grassroots organizations (Kreibich 2012:156). Evidence supports both these conceptualizations; both also suggest political ramifications of the state ceding space to other players as well as selectively regulating activities in light of its interests.

Informality also needs to be understood in relation to economic liberalization that restructures a city. Understanding processes of informality provides a means to understanding neoliberal interventions and how they lead to disadvantageously placing populations (Acuto, Dinardi & Marx 2019). This narrative is as true of cities in the Global South as much as in the North (Dovey 2012). Informality thus provides a register for tracing how space is produced; what is deemed formal or informal is about production of profit (Roy & AlSayyad 2004; Roy 2007).

Informality is also viewed as continually being negotiated. It is in every day struggles that the informal plays out in connection to the formal (McFarlane and Waibel 2012; Gandhi 2012). In this view, formal and informal are blurred (Ley 2012). There is also the 'quiet encroachment' of the ordinary against privileged few in their efforts to subsist and improve their lives (Bayat 2000). Although not an organized movement, it is in the small things ordinary people do that shows resilience in negotiating a decent chance at life. These ordinary people, the migrants, the squatters, the unemployed, challenge the ideas of order, modernity, and governance as espoused by politicians (ibid, p.546). These logics of organization also illustrate a key point; cities have multiple sovereignties where residents negotiate their way towards a daily existence, coming across not one 'monolithic and singular realm of rule, but rather as a fragmented domain of multiple and competing sovereignties' (AlSayyad and Roy 2006:12). This is especially characterized by competitions among different players, including the state, religious organizations, international development organizations or NGOs, representing 'a hardening of ever-fragmenting fundamentalisms and parochialisms- the politics of fiefdoms negotiated through modes of visible and invisible regulations' (ibid:12).

Similar to nuanced discussions within political science on informality, scholars point out differences within experiences in different contexts (Varley 2013). Recent works emphasize the need for multidisciplinary approaches to 'transcend' formal-informal binary and linking of informality with neoliberalism, housing and labor markets to include other aspects (Acuto, Dinardi & Marx 2019).

These discussions of informality illustrate that it is a rich terrain to study struggles of citizenship, statecraft, governance and infrastructure as they play out over time and continue to evolve. To that end, informality presents a dynamic lens to explore emergent challenges.

c. *Conflict in cities: not necessarily a binary*

If there is one take away from the vast literatures discussed previously, it is that urban environments and the processes within and without, are complex. As resources become depleted the world over, including in cities, it is this complexity of terrain including players, practices, patterns and particular contexts that they refract through, in turn shaping economic, political, and social outcomes. How multiple forms of authority, logics of governance, modes of resistance or negotiation by residents interact with depleting resources or the perception of it, may determine the nature of contention. What may be conceded is that as cities experience increasing populations and depleting resources, some form of contention is bound to take place. These concerns, if implicit, are generally absent in discussions of conflict in an urban context.

Instead, in discussions on conflict in cities, two themes claim center stage. One, the argument that conflict in its traditional sense, is about battle-related deaths in cases where non-state actors challenge the state for territory, change in government or particular demands.

Viewed through this lens, cities, even those where violence levels are comparable to war zones, for instance, in Latin America, are not experiencing conflict as violence is perpetrated by criminal actors that do not wish to remove governments (Kaylvas 2015). This reasoning is countered by some who suggest that in cities in Latin America experiencing intense criminal violence, transnational drug trade has configured local political economies. This could be deemed a 'criminal insurgency' (Sullivan & Elkus, 2010; Grillo, 2012; Schedler, 2013) that delegitimizes state institutions through intense criminal violence perpetrated in service of economic control and autonomy over territory. No-go zones, violent competition among crime groups, violence against policing efforts of state actors and spiraling of violence, may lead to implosion of the state. Thus even though armed actors do not challenge state authority, they hold the 'potential to erode the state's monopoly over the means of coercion' leading to 'citizen dissatisfaction…fueling vicious cycle of security privatization and government de-legitimization,' laying the 'groundwork for challenging the traditional functions, legitimacy, coercive capacities, and territorial logic of the nation-state' (Davis, 2010: 398-399). To that extent, even though the motives of actors are not political, the result is (Beall et al. 2013). These arguments, while insightful, limit discussions to body counts.

Second, scholarship, especially in development and strategic spheres, bases notions of governance and state on ideal types, considering deviations, for instance, as 'feral' (Norton 2003) or 'fragile' (Muggah 2014). While forward looking in anticipating breakdown of rule of law and grievances resulting in shifting of the social contract between state and citizens to citizens and subversive actors, this reasoning paints with broad strokes. A powerful argument, it continues to inform conversations regarding cities and unrest. For instance, military strategists identify megacities in developing countries as battlegrounds for future conflicts. What such conflict may look like is uncertain. Except that, cities with high levels of violence, crime and poor governance sustain the imaginary of dysfunctional places where guerrilla warfare may embroil national or international militaries. For instance, a scholar writes (Kilcullen 2013: 232-237),

> …one face of the new complex of urban problems is playing out in Syria today…rebels are fighting from house to house and block to block in several cities …at the same time…we can see another face of the new normal, in the world's fastest-growing megacity—Dhaka …. Like Daraa and Benghazi, where the Syrian and Libyan civil wars began, Dhaka is an urban ecosystem under extreme stress, operating right at the edge of its capacity…across the world the sun is rising through the smoke haze over La Rocinha, in the South Zone of Rio de Janeiro…Patrols roam the narrow streets on foot and by motorcycle….in an operational pattern that looks a lot like a police-led urban counterinsurgency, Baghdad style….On the other side of the Atlantic from Rio, it's midday on Africa's west coast….Built on a swamp, Lagos is fighting for survival. Ceaseless migration is strangling it… As well as occurring simultaneously in different cities, these problems—from poverty and social unrest to gang warfare, organized crime, insurgency, terrorism, and even out-and-out civil war—can coexist in one city at the same time. Feral cities are emerging in some countries, and feral districts have arisen in many cities.…. The periurban world is also, as we've seen, highly connected….and problems in one place can rapidly escalate and spread to others.

While important, these discussions on potential conflict in cities frame the conversation between occurrence of traditional conflict (or not) and non-traditional warfare engaging subversive players. These scenarios although not uncommon, are not frequent occurrences. They also abstract conflict from local struggles and micro dynamics (Kalyvas 2003) that may precede civil conflict.

And yet, political unrest in cities is not an unfair concern. As much of the world moves to cities, it raises the potential of cities becoming sites where potential conflict, whatever form it takes, may unfold. In cities in the Global South, where governments often lack capacities, these risks become doubly important.

However, instead of narrowly focusing on the onset of conflict or urban warfare, a more useful approach may be that of viewing conflict as a spectrum, with non-violent expressions of unrest on the one hand, and full-blown violent forms of contention on the other. McAdam et al. (1996: 27) argue that there are 'continuities between movements . . . and revolutions' and that what path actors take is a matter of choosing 'the most appropriate response to their resources, their opportunities, and their constraints.' Goldstone (1998: 128) points out that varied forms of contention such as social movements, rebellions, revolutions, civil conflict, etc. originate from similar processes, but, depending upon interaction with the state, evolve to different outcomes.

McAdam et al. (2001:4) provide a framework to analyze such a wide range of expressions of unrest:

> [D]ifferent forms of contention – social movements, revolutions, strike waves, nationalism, democratization, and more – result from similar mechanisms and processes. . . . [W]e can learn more about all of them by comparing their dynamics than by looking at each on its own.

As rapid urbanization and environmental scarcity in countries around the world interact with varied urban contexts, expecting a uniform outcome (conflict) may be simplistic. Social unrest introduced in to the system in this manner may initially be in the form of non-violent protests and strikes. Contingent on specific contexts of a city, violent collective action may (or may not) follow as pre-existing fault lines are sharpened and (or) new ones created.

II-   Proposed Framework

Summing up the debates from the previous section, I summarize below the salient features of my proposal framework. They are threefold:

One, the need to understand scarcity of water not only in terms of quantity but also how it is produced and experienced by different sections of population. Within the latter may lie insights about 'power geometries that choreograph access to and exclusion from water' (Swyngedouw 2009: 59). Adopting this approach allows for paying attention to pre-existing inequality in a society as well as how power is experienced and organized in a political system. In a city, this power may be viewed not only through divisions along class relations but also through race, ethnicity or gender (Lawhon, Ernston & Silver 2014: 508).

Two, tracing the evolution of patterns related to governance, everyday politics and authority as shaped by specific contexts. This entails paying attention to informality as it relates to water provision in relation to political players and government functionaries. By everyday politics, I mean interactions among bureaucrats, politicians and others engaged in service provision or enforcing authority that shape the 'stuff made out of which meanings of the state are constituted' (Gupta 2005:28).

My understanding of informality is that it is a fluid concept (McFarlane & Waibel 2012). From the top-down, the state has the power to deregulate forms and aspects (Roy 2009). From the bottom-up, residents may negotiate with multiple forms of authority in an uncertain urban environment for daily needs (Bayat 2000). Then there are intermediaries, players who may be linked to communities as well as bureaucrats, civil society groups and political players. These players, at times performing functions attributed to the state such as enforcing through violent means or providing a basic amenity traverse through porous formal and informal realms (Hansen & Stepputat 2001; Gupta 2005; Ranganatan 2014; Lund & Eilenberg 2017)—spheres that present material facts but at the same time, are sites of negotiations, interactions and understandings of players involved. Thus, who gets water, and who provides, is not only a matter of functionality, illegality, or corruption but indicative of how power is experienced, performed, and organized.

This understanding of informality is political with the assumption that, how these dynamics interact with the stressor of depleting resources may contribute to political expression. Figure 1 attempts to simplify this complexity by separating: dynamics of local politics shaped by specific contexts of a society and city, as illustrated by, key players and their actions; and, informal water provision understood through types of players and their actions. Since informal water provision operates in relation to power brokers, government functionaries, and communities, it has a bearing on political expression, premised on players making claims on behalf of social and political groups. They may differ from city to city and even within a city. Although not exhaustive, I suggest for instance, community organizations, political players, NGOs as some of these players.
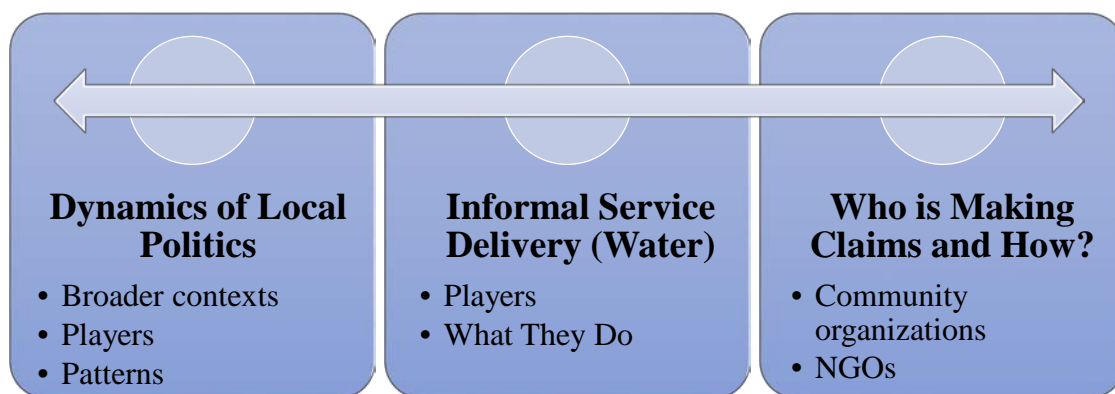

Dynamics of Local Politics
- Broader contexts
- Players
- Patterns

Informal Service Delivery (Water)
- Players
- What They Do

Who is Making Claims and How?
- Community organizations
- NGOs

Figure 1

Three, this framework suggests delinking scarcity with conflict by taking in account varying forms of political expression that may, or may not, culminate into conflict. As scholars of conflict, social movements and revolutions point out, these are not frequent occurrences and fester over a period of time before turning into violent contention (McAdam et al. 1996). Depleting water resources are not adequate on their own to mobilize social and political groups along a society's fault lines. This approach broadens the spectrum of contention to include contentious competition over resources (Paller 2017), tenuous equilibria in a society that may mask unrest, including exacerbating of previous and new grievances (Hussain 2016), or even conflict. By no means, the only possibilities, this premise widens the terrain to include violent and nonviolent forms of political expression that may destabilize a political system. Figure 2 presents a diagrammatic representation.
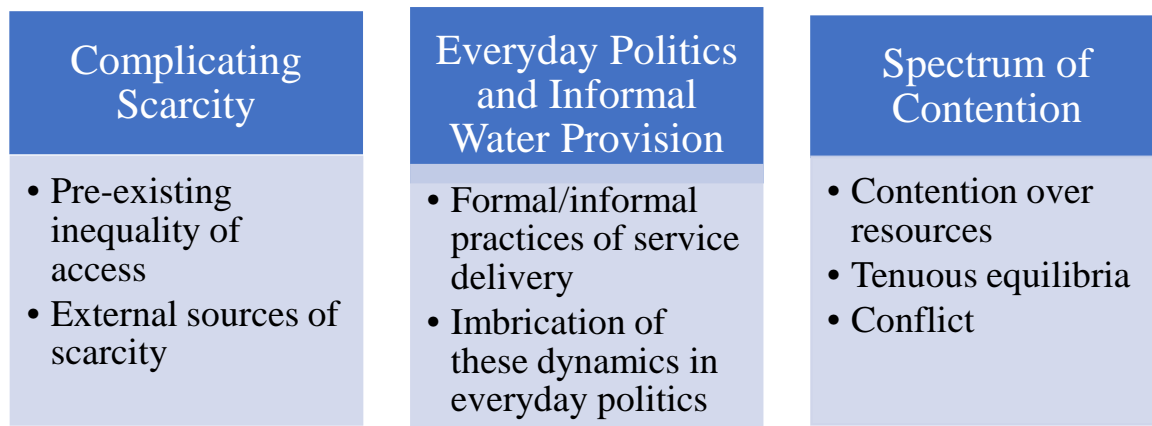
Complicating Scarcity	Everyday Politics and Informal Water Provision	Spectrum of Contention
• Pre-existing inequality of access • External sources of scarcity	• Formal/informal practices of service delivery • Imbrication of these dynamics in everyday politics	• Contention over resources • Tenuous equilibria • Conflict

Figure 2

III- Scarcity and Contention in Karachi and Manila

I explore this framework in Karachi, Pakistan and Manila, Philippines. Both typify cities in the Global South—dynamics of informality, criminal and political violence, and organized crime are at play shaped by specific contexts of each city. In other words, despite broad similarities, each city has its own nuanced details. For instance, while ethnicity factors significantly in framing of political expression in Karachi, class plays a key role in society and politics in Manila. Both cities, however, face significant water stresses.

This research draws on previous fieldwork in Karachi and ongoing fieldwork in Manila. Although data collection in both cases is an ongoing effort, extant evidence and analysis lend credence to the framework proposed in this paper. More fieldwork is needed to gather data on informal water provision in Karachi. Fieldwork was carried out in February-March 2019 in Manila to understand the nature of informal water provision in relation to local politics followed by another round of data collection in October 2019. Data sources include semi-structured interviews and secondary sources (previous scholarship, local newspapers, NGO reports, official documents). Process tracing has served as an appropriate method of analysis as it allows shifting the focus from *does it (X) matter* to *how is this (Y) possible* (Blatter & Haverland, 2012).

For the first case study, fieldwork carried out in the summer of 2013 in Karachi, Pakistan and interviews in Washington DC in the Spring of 2014 provide primary data. 50 semi-structured interviews included, low to mid-level political party workers, journalists, community leaders, NGO members, ordinary citizens, scholars, and officials of the water and sewerage ministry (Karachi Water and Sewerage Board). National newspaper in English and Urdu language, namely the Daily Dawn, The News, Herald, and the Daily *Jang* provided another source. These newspapers were useful in providing statements of different actors such as political leaders, government officials, and independent monitors such as human rights groups and journalists who covered the city over time. I accessed these newspapers from the archives of the Library of Congress for the period of 1990-2008. For the period of 2009 until 2018, news reports were retrieved from Lexis Nexis.

For the second case study, fieldwork carried out in February-March 2019 in Manila, Philippines and interviews in Tokyo provide primary data. 33 semi-structured interviews included low level political party affiliates, representatives of NGOs, academics, leaders of community organizations involved in water provision and lobbying of housing and water

rights, residents of informal settlements, an informal water provider known in local vernacular as a 'syndicate', officials of the World Bank and the Asian Development Bank, former government officials who worked in water-related government departments, representatives of the two private concessionaires responsible for water provision in Metro Manila, and representatives of the government agency responsible for monitoring the two concessionaires. In addition to interviews, I visited informal communities in cities of Caloocan, Cavite, Southern Manila, and Quezon city. Secondary sources include previous scholarship. I will be conducting another round of interviews in October 2019 as well as additional site visits to informal settlements.

Karachi

> Water mafia?! the officer in the Karachi Water Board laughs incredulously at the suggestion of water mafias existing in the city. *They* (government officials, politicians) are all in this racket. Look around. Who can have the resources to run such established businesses and powerful networks?
>   ---*official of the Karachi Water and Sewerage Board in a conversation with the author.*

A port city of at least 20 million by unofficial estimates, Karachi has faced gaps between the demands of its residents and available water supply for a long time. This has to do at least in part with the city's growth rate, which although declined over time, still retains a high provincial urbanization rate.[2] With its contribution of a quarter of the GDP, Karachi remains an attractive place for migrants. Called mini-Pakistan as it is home to multiple ethnic groups,[3] the city's political and economic stability is not only important for Karachi; it holds significance for the entire country.

Intersection of the dynamics of organized crime, violence employed as a regulatory mechanism by political parties, and deregulated service provision for a significant section of its population shape Karachi's political economy. Informal housing and water provision are as much a part of service provision as formal institutions responsible for these functions (Hasan et al. 2013). During the 1990s, the city experienced waves of violence among political parties with body counts exceeding a thousand deaths every year. The situation worsened in the post September 11 period—in addition to violence among political parties, turf battles among organized crime groups that were backed by political parties at times, and activities of the Tehreek-e-Taliban Pakistan (TTP) contributed to high levels of body counts. Paramilitary forces brought in to curb violence among political parties in the 1990s have become a permanent presence—every few years, the state institutes military operations to 'clean house', bringing down violence levels (Frotscher 2008). These operations, however, are no guarantee for lasting peace. Some would argue that the urban landscape continues to become complex (Hussain 2016). While in the 1990s, one political party was levying extortion and employing militias against opponents (Khan 2010), by the aughts, multiple political parties were doing the same, employing armed players, in some cases, organized crime groups as enforcers (Gayer, undated manuscript), while the TTP emerged as a political contender (Hussain 2016). It is within this context that Karachi is increasingly facing shortages in water supply.

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[2] Pakistan Bureau of Statistics, Sixth Population & Housing Census-2017 [As on January 03, 2018]
[3] Chief among these ethnic groups include, autochthonous people (Sindhi and Baluchis, the first settlers in the city and province), *Mohajirs* (literal meaning, settlers, connoting migrants from India who moved to Karachi in the aftermath of the partition of British India in 1947) and Pashtuns (many settled in Karachi in the aftermath of Soviet invasion of Afghanistan in 1978). By latest census figures, *Mohajirs* form the largest group.

Unpacking water scarcity

According to the Karachi Water and Sewerage Board (KWSB), the government institution responsible for water and sewerage, for its demand of 1100 million gallons daily (MGD), only 650 MGD is supplied.[4] The city gets water from two sources—Keenjhar Lake from the River Indus (550 MGD) and Hub Dam (100 MGD); the latter is dependent on rainfall and thus of limited help in periods of variable rainfall. Even the supplied 650 MGD does not entirely reach the city—poor supply lines, illegal water business operators and pilferage[5] lead to the loss of at least 42 percent of the available water.[6] Water is sold at inflated prices to residents of the city, earning millions of dollars.[7]

The reasons behind this shortfall in demand and supply are credited to institutional mismanagement, poor infrastructure including supply pipes and filtration plants, and illegal water businesses widely referred to as 'tanker mafia'.[8] In a city that has long served as a transit route for drugs originating from Afghanistan,[9] and where local and transnational crime groups have operated and continue to (Hussain & Shelley 2016), the term bears significance. In addition, as the country experiences climate change, there is an increasing awareness, at least among advocacy NGOs in the city to begin paying attention to finite water resources.[10]

Whether the city is running out of water due to climate change, or increasing population, water scarcity is experienced by residents, especially those living in poor settlements. Some of the most densely populated parts of the city receive less than 40 percent of allotted water,[11] which may translate into receiving water for a few minutes per week (Rahman 2008). In that respect, water scarcity is as much about depleting water as it is about access. Poor people are at the losing end of this equation.

Everyday politics and informal water provision

Informality and implied criminality associated with the water racket exists in relation to everyday politics and involvement of government officials. As the report commissioned by the highest court of the province on the water crisis noted,[12]

> However….during proceeding of enquiry when DMD Mr. Asadullah Khan KW&SB was directed to give specific statement about illegal hydrants, he disclosed that pilferage of water through illegal hydrants has not been completely curbed despite efforts of KW&SB. Miscreants keep on changing puncture points in mains for taking water illegally….. On this issue, DIG and S.S.P West were called on next day, who when appeared before the Commission informed that illegal hydrants were running under the umbrella of KW&SB. The police take action against them and make some arrests but the KW&SB officials are always reluctant to come forward to register FIR against the illegal-hydrant-runners. DIG West further stated that in January, 2017, only 08 FIRs

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[4] Report of Commission of Inquiry, High Court of Sindh, Pakistan. (2017). p. 56-57.
[5] Report of Commission of Inquiry, High Court of Sindh, Pakistan. (2017). p. 56-57.
[6] Asad Hashim "Parched for a Price: Karachi's Water Crisis," *Al Jazeera,* 2017.
[7] "Asad Hashim, "Parched for a Price: Karachi's Water Crisis," *Al Jazeera,* 2017.
[8] Sabrina Toppa, "Dry dams, Leaky Pipes and Tanker Mafias—Karachi's Water Crisis," *The Guardian,* June 28, 2016.
[9] United Nations Office on Drugs and Crime (2011).
[10] See for instance, Hissar Foundation and Water Unit by Karachi Urban Lab
[11] Asad Hashim, "Parched for a Price: Karachi's Water Crisis," *Al Jazeera,* 2017.
[12] Report of Commission of Inquiry, High Court of Sindh, Pakistan. (2017). p. 56.

were registered by KW&SB, while the problem was more intense and deep-rooted. DIG East who was also called reiterated the same facts and further informed that against illegal hydrants, the police of his area had registered 03 FIRs in January, 2017. The revelation about illegal hydrants is also strengthened by the statement of Muhammad Hassan Bakshi Acting Chairman, Association of Builders and Developers Pakistan, who states that price of 1000 gallons of water through pipelines is Rs.245/- only, whereas through tanker it costs Rs.4000/- to 5000/-. A deliberate situation of shortage of water has been created by KW&SB to earn millions of rupees illegally.

Similar statements of complicity of government officials and local police were shared during the author's fieldwork as well as noted in journalistic accounts. For instance,[13]

> Unauthorised hydrants are run with the connivance of the water board and the police, claims Hazoor Ahmed Khan, the head of one of the city's main water tanker unions. There are about 100 illegal hydrants still operating in the city…most of them are in Manghopir, in Baldia, in Malir, in Landhi, and Korangi. They're running in Ayub Goth on the Super Highway.

> A former KWSB chief, who spoke to Al Jazeera on condition of anonymity, given the sensitivity of the subject.

> The mafia is very strong …. There is no doubt that the illegal connections that are made, our KWSB man knows about it. Even if it is an [illegal] connection within a building, he will know that a connection has been installed in the night, he says. The valve man takes his money, the assistant engineer takes his money … I could never say that there is no corruption in the KWSB. But I also know that the builder has so much influence, that no matter who [the KWSB chief] is … he will get a call from [a] minister [or senior bureaucrat] to just do it.

This is not only about corruption and poor governance, however. Providing access to water and housing in Karachi is also about everyday politics. To understand how water has become intrinsic to local politics, it is important to take stock of the time period between 1999 and 2013. The years between 1999 and 2008 in which the country experienced military rule presented a critical time period. In Karachi, it led to formation of the government of the Muttahida Qaumi Movement (MQM),[14] the party that supported then ruler, General Musharraf. During this period, constitutional reforms increased the scope of powers for elected local governments and reduced powers of provincial bureaucracies. The former became responsible for housing, urban planning, transport, land use, education, recruitment, and health (Gayer 2014: 212).

These reforms led to the city government mostly populated by MQM party members, giving them unprecedented access to resources and control over governance (Gayer 2014: 212). By increasingly hiring its members, the MQM strengthened control over local institutions and also ensured that workers could be called upon to carry out activities, at times illegal, in returning the favor of being given a government job.[15] During this period, the MQM government attempted controlling the city's resources through quasi-legal and illegal practices. Notably, the party encouraged informality in housing and water provision.

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[13] Asad Hashim, "Parched for a Price: Karachi's Water Crisis," *Al Jazeera,* 2017.
[14] The MQM originally began as a party espousing interests of *Mohajirs.* It expanded its message in subsequent years to represent all Pakistanis. However, it continues to remain a strong marker of Mohajir identity and interests in Karachi. [For a seminal study on the MQM, Verkaaik, O. (1994; 2004).
[15] Based on interviews with a mid-level official from KWSB, an NGO member, and an urban planner. News reports also corroborate this evidence, albeit in oblique references for fear of retribution. Gayer (2014, p.108) also cites the example of the clerk in the city government who worked as a government employee by the day, but was involved in murder and kidnapping in the after-hours at the directions of the party.

Members installed in key ministries were helpful as they became privy to information about development projects by international donors before it became public. For instance, if a foreign donor agency signed a contract with KWSB for building water connections in a part of the city, party members and land developers tried to find out before the information was made public as to where the pipelines would pass through. Development projects in any part of the city raised the value of the land—which in turn led to speculation and investment in land as well as land grabbing and settling migrants who may vote for particular political groups in return. Thus, along with financial kickbacks, a political constituency of voters was created.[16] Although development projects were implemented in the city under the MQM government, they contributed to a sense of alienation among other social groups as they primarily benefitted the electoral base of the MQM (Gayer 2014: 272).

The years following the MQM rule represented another key moment in the city's history. Between 2007 and 2013, other political parties that came to power mirrored strategies employed by the MQM in seeking their share of the city's political and economic resources. These included levying extortion, populating ministries, including water, with their affiliates, land grabbing etc. As many interviewees suggested,

> The MQM started it. It showed everyone the way. And now they (all political parties) do with impunity what they feel they must do. They are all the same.

This social and political learning[17] on the part of political parties representing autochthonous Sindhis and Baluchis, and Pashtun migrants[18] led to an increase in violence and contention over economic and political resources.

According to some accounts, even before the systematic involvement of political parties in water and housing during the aughts, it was the paramilitary forces that earned profits in the parallel water supply. Stationed in the city during the 1990s to quell political violence among multiple ethnic groups, they were also entrusted to provide water to parts of the city through makeshift solutions of water tankers (Ahmed & Sohail 2003:38). During this time, they sold water in the informal market, charging double the official rate (Rahman 2008:13).[19] They also extended support to organized crime groups engaged in the parallel water supply, earning significant (but difficult to quantify) incomes (Gayer 2010: 21).[20] Over time, what

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[16] Based on interviews at the offices of a local advocacy NGO involved in August 2013, Karachi. See also Ardeshir Cowasjee, " I Own Karachi and Can Sell it! II", *The Daily Dawn,* May 17, 2009

[17] That is, political actors have learnt by observing which patterns of practices yield gains and which practices if not carried out, result in retribution or losses. The theory of social learning is credited to psychologist Albert Bandura (1977).

[18] Pashtun migrants had largely settled in the city during and after the days of the Soviet invasion of Afghanistan in the 1980s. They continued to do so in the aftermath of the military operation in Afghanistan post 9/11 and drone attacks and military operations in the tribal areas of Pakistan.

[19] Official rate: 1000 gallons (150-250 rupees); 2000 gallons (300-450 rupees); 3000 gallons (450-800 rupees); 5000 gallons (1200 rupees). Unofficial rate: 1000 gallons (350-600 rupees); 2000 gallons (700-1200 rupees); 3000 gallons (1600-1800 rupees); 5000 gallons (2000-2400 rupees)

[20] Gayer (2010: 21) describes the system, through which the Rangers supported organized crime groups engaged in the parallel water supply in the 1990s,

> They honed a dual system that operates as follows: individual customers can purchase a tanker truckload at the official price, between 240 and 375 rupees (between 3.5 and 6 euros) depending on the location, but the waiting lines are generally so long that they prefer to go through the parallel market, where the price of a full tanker truck costs between 600 and 1,000 rupees (between 9.5 and 15 euros). The parallel market generally functions to full capacity whereas the Rangers artificially saturate the official market. Out of the 300 tanker trucks that fill daily at the Central District Federal B Area pump,

was considered a temporary solution became a lasting reality of the water woes of Karachi. Although not openly endorsed by formal institutions, government officials at varying levels and political parties became a part of this enterprise.

Contention in Karachi

During the aughts when multiple political parties competed over economic and political resources of the city through employing violence against members of political parties and ethnic groups, levying extortion, and land grabbing, the water ministry became highly contested (Hussain 2016). While some may view it through the lens of corruption alone, the contentious and political nature of these efforts is equally valid. For instance, during fieldwork, talking about water to political party affiliates was no easy task. The nature of "truth" was a matter of intense debate—what "they" said was mischaracterization of facts while "our" version of reality depicted ground realities.

This contentious nature of water in the city's politics has not changed considerably, even after five years of the military operation introduced in the fall of 2013 that weakened the hold of erstwhile powerful political players.[21] As the city experiences water shortages, political parties continue to blame each other in public discourse while blocking funds earmarked for water projects that could address the water demands of the city.[22] Political rhetoric has become urgent and contentious around water. For instance, one of the key leaders of the city's largest party, the MQM, raised concerns of potential inter-provincial fights over water distribution as well as riots in Karachi over water.[23] Other political parties have led protests over water shortages in the city.[24]

In these framings of water crises, the same political parties that have been involved in the informality of water provision, blame "tanker mafia" and its patrons.[25] This bogeyman of illegality and patronage of criminal elements belies patterns of informality that shape the very nature of service provision in the city.

Moreover, political parties in Karachi, despite their claims of representing all ethnic groups, rely on particular electoral constituencies where ethnic identities play a significant role. Although ethnicity is not a primordial identity but a constructed category (Bowen 1996) that continues to be shaped by political, cultural and historical processes, depleting water resources, as well as scarcity as experienced and perceived by residents of the city, may be framed along ethnic cleavages by political entrepreneurs. Such a turn of events has roots in

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only 40 are delivered at the official price. At the city's main water supply point, located in the Muslimabad area, this ratio is even more imbalanced: although 1,000 tanker trucks fill there daily, only 80 pay the official price. And when the pumps break down due to power outages that regularly paralyze the city, official water deliveries cease whereas, thanks to generators set up by the Rangers, the loads sold on the parallel market continue. The protection racket set up by the Sindh Rangers is not limited to protecting organized crime actors who control Karachi's parallel drinking water market, from which the paramilitaries derive a significant, though impossible to quantify, income.

[21] Abbas Nasir, "MQM: a cycle of peaks and troughs," *The Daily Dawn,* April 18, 2015.

[22] Syed Ashraf Ali, "Project to tackle Karachi's water crisis likely to face further delays," *The Express Tribune,* June 29, 2019.

[23] "Water Crisis in Karachi May Lead to Riots, Says Farooq Sattar," *Samaa Digital,* May 13, 2018.
" "Country Needs Big Dams but Water Dispute Among Provinces Should Also be Resolved," *The Daily Dawn,* October 22, 2018.

[24] "PTI to Protest Against Water Scarcity," *The Nation,* June 14, 2019.
"JI Karachi Chief Demands Judicial Commission," *The News,* August 21, 2019.

[25] "MQM-P slams Sindh govt for 'artificial water crisis' in Karachi, *The Daily News,*, July 2, 2019.

Karachi's history of violence during the 1980s and 1990s among different social groups. While some argue that high levels of violence comparable to ethnic conflict were a result of ethnic differences, others contend that political mobilization of identity politics and employing of violence against other social groups led to sharpening of ethnic identities (Verkaaik 2016).

Within Karachi's specific contexts, I contend that water will feature as one of the key terrains of contestation among political parties in the city. However, to develop a granular understanding of such a development, more data is needed vis-à-vis dynamics of informal water provision in relation to everyday politics. To that end, I intend to conduct fieldwork to investigate the limits of the proposed framework.

Manila

> His eyes gleam with glee at his ingenuity. 'I am not doing anything illegal, see?' He points at the water pipes he has laid on the river bed—a public land. This is uncontested territory where the issue of the 'right of way' does not matter. 'The poor are more rich than the rich!', he says, with a hint of sarcasm and benevolence. 'If I did not provide them water, they would be forgotten. No one would care!

----Informal water provider characterized by some as running a syndicate in an interview with the author

Metro Manila, contributing 52 percent of manufacturing (Migo et al. 2018) is home to at least 13 million residents.[26] It is among the most densely populated parts of the country; with its contribution of a third of the GDP, it remains an attractive destination for migrants.

Political dynamics in Metro Manila do not escape the enduring aspects of politics in the Philippines. Powerful political families continue to amass political and economic resources and monopolize local and national politics (McCoy 1993). The importance of local power brokers, landlords, oligarchs and educated elite is credited to the processes of state formation during the colonial times (Fujiwara 1990; Hutchcroft 2000). Present day politics in the country continues to be marked by political clans pursuing parochial interests and weak institutionalized political parties with limited accountability and effective relationships within society (Rivera 2016). Throughout the country, one may find a particular family or politician who has held office and monopolized resources for years (Sidel 2004).[27] On the other hand, social conditions for ordinary citizens are marked by inequality and deep class divides. Politics in the country cannot be reduced to these resilient realities, however. In the wake of democratization after the end of the Marcos regime, a vibrant civil society continues to check state power (Magadia 2003).

These dynamics also resonate in Metro Manila. Comprising of 16 cities and one municipality,[28] similar patterns of powerful political families running for office and accumulating economic and political resources are at play.[29] Because Metro Manila is the hub of economic activity and situated in a rapidly industrializing region attracting investment, it is also a site of intense social, economic and political contestation. The introduction of the

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[26] Philippines Statistics Authority.
[27] Based on interviews.
[28] Metropolitan Manila, the National Capital Region comprises of Manila, the capital city, Quezon City, the Municipality of Pateros, and the cities of Caloocan, Las Piñas, Makati, Malabon, Mandaluyong, Marikina, Muntinlupa, Navotas, Parañaque, Pasay, Pasig, San Juan, Taguig, and Valenzuela. Department of the Interior and Local Government, Republic of the Philippines.
[29] Based on interviews.

1991 Local Government Code that led to devolution of planning and governance to 17 cities and municipalities has created incentives for elite political families to continue to accumulate economic and political resources.[30] These local governments are granted 40 percent of national revenue as well as given powers to raise revenue through taxes (Shatkin 2016). Local government councils are entrusted to develop at city, municipality and *baranguay* (smallest political unit) level (Shatkin 2016). Since elections are held every three years, there is an urgency to cultivate ties, which sets in motion patron-client ties between local politicians and urban poor, especially the most disadvantaged, who have limited access to basic services including water.[31] It is within these broader contexts that provision and access to water takes place.

Unpacking water scarcity

Although water is abundant in the Philippines, it is approaching critical limits. Some credit it to poor water management, rural-to-urban migration, and deteriorating ground and surface water (Pulhin et al. 2018). Experts predict that by 2025, groundwater resources will be unable to meet the water needs of major cities including Metro Manila (Pulhin et al. 2018).[32]

While the specter of water depletion in Metro Manila is an emergent possibility,[33] for poor residents, access to water is precarious even in times of abundance. One could even argue that water flows along class lines, being accessible and cheaper for those living in formal residential neighborhoods in contrast to those living in informal settlements. Before the privatization of the water sector in 1997 however, although access to water was a challenge for everyone, it was far worse for poor social groups.

Inequality of access to affordable water is deeply connected with housing and land markets. Private concessionaires responsible for water provision cannot lay down infrastructure in informal settlements as they do not have, what people commonly refer to, as the "right of way"—on contested land, laying down water pipes may formalize settlements by implication.[34] Getting water through informal means, residents of informal settlements are caught up in a state of impermanence. They are in a continuous struggle against getting evicted as developers, often times, working with powerful families in government and business, claim space for development and commercial projects within the backdrop of a globalizing urban economy.[35] On the other hand, to secure votes,[36] local politicians may support residents of informal settlements in their efforts against eviction and moving to resettlement sites far from the city.[37] Access to water for the urban poor, thus, is a complicated issue, wound up in economic and political struggles over the city.

How do residents of informal settlements get access to water then? To understand those dynamics, it is helpful to acquaint with the basic facts of the case.

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[30] Based on interviews. Also Shatkin 2016.
[31] Based on interviews.
[32] Also, Asian Development Bank, "Water Quality Worsening." December 5, 2007.
[33] Water scarcity in Manila may be masked by the downstream/upstream distribution of water. Angat Dam in the Bulacan province serves most of the water needs of Metro Manila in addition to irrigation needs of farmlands in Bulacan and Pampanga provinces. In times of low water levels, the needs of Metro Manila are prioritized over farmers. In times when typhoons may raise water levels, water is released in farmlands causing flooding as happened during the 2004 *El Nino.* (Hall et al. 2018: 49-50).
[34] Based on interviews.
[35] Based on fieldwork interviews and impressions.
[36] Based on interviews.
[37] Based on interviews.

The Angat reservoir supplies most of the water, which is then provided to Metro Manila by two private concessionaires, Manila Water Company and Maynilad Water Services and regulated by the Metropolitan Waterworks and Sewerage System (MWSS) (Tabios III 2018). Water has not always been the province of private entities. Originating from the colonial water system (Cuaresma 2006: 62), the MWSS was established in 1971. Although water distribution under MWSS did not mirror class divisions, those living in low income settlements and informal housing along garbage dumps, water ways and other such available land were poorly served, if at all (Cheng 2014). By 1994, MWSS supplied water only to two-thirds of the population; supply was intermittent on an average of 16 hours each day (Dumol 2000). Moreover, the rate of non-revenue water was high, reaching 60 percent by the mid-1990s (Center for Policy and Executive Development 2002).

By 1997, MWSS was privatized to fix a flawed system and to increase water coverage for a growing urban population. Two concessionaires,[38] Manila Water and Maynilad, were awarded the responsibility of water provision in the eastern and western zones respectively.[39] The MWSS became a regulator of the state in the form of the Metropolitan Waterworks and Sewerage System Regulator's Office (MWSS-RO).

To increase coverage, both Manila Water and Maynilad introduced pro-poor water schemes even in settlements where residents did not have land title.[40] While these schemes have increased coverage to informal settlements, water costs are higher,[41] and have led to a 'persistence of informality' (Cheng 2014: 54).

Everyday politics and informal water provision

Informality around water provision is not only about informal means of provision and access to water—it is a key site of meaning-making as residents, community organizations, local bureaucrats, and politicians interact with each other. In that sense, it is intrinsically connected to everyday politics.

Although concessionaires can invest in settlements in disputed areas, they have preferred to rely on community based organizations (CBOs).[42] These CBOs are responsible for water distribution and payment collection (Cheng 2013). Concessionaires help install a bulk meter outside of the informal settlement. The CBO is responsible for laying down water pipes that provide water to residents. Payment of bills and regulation of payment is the responsibility of the CBO. Since the latter is shouldering initial costs, the price of water is higher for residents of informal settlements than those with a direct connection. Other methods include individual meters along public roads and small communal taps where one meter is shared by two to five households (Cheng 2014: 59). If one resident does not pay, at times the entire community's water may be cut off (Cheng 2014: 61). In other instances, those who do not pay may get their water connection suspended.[43]

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[38] A concession is a legal arrangement in which the partner is given the responsibility of not only operations and maintenance of assets but also of investments. (Center for Policy and Executive Development 2002: 63).
[39] Manila Water was led by the Ayala family owned-Ayala Corporation in association with International Water while Maynilad was led by the Lopez family-owned Benpres and the French company, Lyonnaise des Eaux (Cuaresma 2006).
[40] Concessionaires were to consult with local authorities that settlements were not under immediate threat (Garrido et al. 2001 cited in Cheng 2014:59).
[41] Based on interviews. Also Chng 2012, Cheng 2014.
[42] Based on interviews. Also, Cheng 2014.
[43] Based on interviews.

Problem-solving techniques and tensions within a community are navigated by CBOs on their own, with resolution mechanisms varying from one CBO to the next, dependent on their nature. While some of them may comprise of members of community elected through consensus, in other instances, one individual entrepreneur may be a community leader and an informal water provider working with concessionaires. While the former organization may make decisions through consensus, the latter may address challenges independent of consultation.[44]

For instance, one informal water provider recounted that he could extend his business in a Muslim community where others had failed.[45] He respected the local dynamics of this neighborhood in which the *Imam*[46] of the local mosque was the key person connected to the community. After gaining the *Imam's* approval, it was easy to provide water to the community. The other important individual in this community was the local strongman or *dato* who allowed water delivery as long as he received his share of the money. When he ran into issues of late and non-payments, the water provider went to the *dato* feared by residents. *Dato,* unhappy on not receiving his cut took matters in his own hands. This resulted in regular payments with everyone receiving their share of money. Similarly, the water provider regularly bribes local police officials and even an employee of one of the concessionaires for information that may be useful for running of day-to-day activities.

It is important to note that the relationships of CBOs with their respective communities are not always and entirely of financial nature but warm and based on respect.[47] Some may argue that CBOs make survival in poor communities possible (Velasco 2006). This may not be true of all communities; in some cases, people may feel apathetic or even antagonistic towards a CBO (Cheng (2014).

Despite their creative problem-solving, CBOs are in debt of the formal system that, while relying on them, may turn on them. Concessionaires may choose to work with one CBO or another (Chng 2008; Cheng 2014) Over time, they may be phased out once patterns of payment have been established, encouraging concessionaires to install individual meters (Cheng 2013).[48] In some cases, they may be criminalized by being termed 'syndicates', connoting illegality and unsavory practices (Chng 2008). During interviews, as one such 'syndicate' head took great pains to establish that he was running a legal business serving communities.

Local communities are caught in the middle of these dynamics. They also live with an ever-present fear of eviction.[49] As the city continues to develop commercial projects and infrastructure in efforts to make Metro Manila a world class city, the urban poor are further squeezed into situations of vulnerability. As a community leader explained, her community of 1,100 families live in a settlement near an area of high commercial value.[50] The informal

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[44] Based on interviews with CBOs.
[45] Based on interviews.
[46] *Imam* is a religious leader who may also lead prayers in a mosque.
[47] Based on interviews.
[48] Based on interviews. One of the CBOs in Caloocan I interviewed awaited this fate with installation of individual meters.
[49] For instance, one community leader in an informal settlement talked about how the community feared that developers were trying to remove the community through setting of fires. Since these are densely populated shanties, fires spread quickly. In this particular community, groups of women patrolled the community, taking turns to keep an eye on potential mishap.
[50] Based on interviews.

settlement was created by landowners who provided space to families to live while they developed the rest of the area commercially. Since there is no right of way, residents rely on illegal connections for water and pay tariffs many times more than those paid by residents in formal settlements. Not a lone occurrence, this event highlights how powerful families continue to accumulate political and economic capital through private investment and collaborations.[51]

Navigating this terrain where there are so many influencers[52] including *baranguay* officials, police, politicians, local strongmen, community leaders, NGOs, developers, and business competitors, is not possible without collaborations. Especially, as water serves as a site of social, economic and political struggles. As an informal water provider and community leader contended, 'whoever controls water controls politics.' Informal water providers and CBOs, with their deep networks in communities may be perceived by politicians as competition or a valuable resource for ensuring votes.[53] In one instance, a CBO was continually discouraged and threatened by politicians in the area. In another case, a politician relied on an informal water provider for securing votes in a community. Similarly, local enforcers in a community may also play a role in securing votes for a particular politician by aiding the working of CBOs.[54] These enforcers may prevent evictions as they have connections with the local police. As an interviewee explained,

> People like this exist all around. The distance is so small between us that we all are living in the same ecosystem.

These dynamics may be disrupted by operations of CBOs who may earn enough economic and political influence to make local politicians concerned (Chng 2012: 353-354). One such example was the mayor of Taguig city, who upon realizing that he had lost the support of the CBO in his area, passed a resolution in the city advisory council, chastising CBOs of overcharging consumers. He also wrote an op-ed in the local newspaper, equating CBOs with syndicates (Chng 2012). These antagonisms and alliances lend a window in the fluidity of relations among all involved. They also signify the vulnerability associated with informal water providers and CBOs who may be delegitimized by players in the formal realm.

This complex interlinkage of informality with local politics, while on the one hand, illustrates patterns of patron-client relationships, on the other, highlights interactions of multiple players coming together for their own goals. An example is that of collaborations among CBOs with the Institute of Popular Democracy (IPD), a think tank and the Freedom from Debt Coalition (FDC), a coalition of NGOs (Chng 2012: 354). These interactions helped formalize efforts to champion the cause of CBOs and local communities. For instance, the IPD formed the Associative Water Center Philippines (AWCP) in 2008 to 'share technical and policy inputs on alternatives to the privatization framework by supporting smaller, community-owned and managed "associative water systems"' (Chng 2012: 354).[55]

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[51] Based on interviews and visits to informal settlements.

[52] A term used by a small scale water provider operating in rural areas in the Philippines. He noted that while there are few palms to grease in rural areas, in the cities, there are multiple and overlying authorities, or influencers.

[53] Based on interviews.

[54] Based on interviews.

[55] Shatkin's (2016) systematic study of collaborations among CBOs, NGOs, and local communities as well.

Together, these interactions present a microcosm of broader social, political and economic struggles over the city.

Contention in Manila

What may be the short and long term effects of depleting water in such a complex urban landscape? Based on fieldwork, I argue that in the case of depleting water, residents of informal settlements will suffer more than those living in formal settlements, leading to increasing inequality and vulnerability. Scholars working on emergent urban crises resulting from scarcity of water in other cities of the world predict similar scenarios.[56]

Some general facts can be established. Informal water provision is not only about coping responses or illegality. It is entangled in claim making by multiple players including local communities. Moreover, informal water provision is facilitated by local politicians and government officials in varying capacities. Thus, informality is not a residual category but central to dynamics of politics, governance and distribution of resources.

The political nature of water provision was evident in the recent moment of 'scarcity' as low rainfalls depleted water in Angat Dam, resulting in suspension of service even in formal settlements for days.[57] Angry senators in public hearings blamed concessionaires for failing to meet their responsibilities.[58] Even President Duterte waded in the public outcry, assuring citizens of availability of water.[59] Both concessionaires were levied fines for water interruptions.[60] Eventually, the top executive of Manila Water had to tender his resignation to assuage public discontent.[61] This suggests that the seeming invisibility of water in dominant political discourses may change fortunes in moments of crises.

What is important to consider is who will make claims on behalf of communities, including those who are organized and well-connected with advocacy organizations and those who are less organized. While NGOs advocate on behalf of the urban poor, signifying grassroots mobilization, it is important to note the specific contexts in which these players are operating. Shatkin (2016) warns that the widespread perception of change being unlikely on account of clientelist politics and elite hegemony significantly discourages local communities against collective action. Kusaka (2017) suggests that while elite democracy may no longer be the only template explaining politics, a new form of exclusionary politics is at play through the *moral citizenry* of the middle class through which the latter decide what is "good" or "bad" behavior. Collaborations among local communities, NGOs, and CBOs then needs to be viewed with these undercurrents at play in society.

To further investigate these themes, more data will be collected, especially in terms of how informal water providers respond to water scarcity (as they did in the recent instance) as well as how water scarcity is framed in public discourse (and by whom) to form a more

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[56] See for instance, the special issue of International Journal of Urban and Regional Research, titled 'Parched Cities, Parched Citizens', 2018.

[57] "Manila Water Utility Apologizes to Shareholders Amid Shortage" *Nikkei Asian Review,* April 23, 2019. "Maynilad, Manila Water Set Water Service Interruptions," *ABS-CBN News,* June 19 2019.

[58] "Senators Demand Accountability, Solutions in Water Shortage Hearing," *ABS-CBN News,* March 19, 2019.

[59] "Duterte Vows To Provide Clean Water to the People," *Manila Bulletin,* July 28, 2019.

[60] "SC fines Maynilad, Manila Water P900M Each for Lack of Sewage Lines," *Rappler,* August 6, 2019.

[61] "Manila Water President Resigns; Almendras to Take Over in September" *The Business Mirror,* August 9, 2019.

nuanced argument. Any discussions on contention will also have to take the long tradition of activism in the Philippines and the workings of moderate leftists who left the communist party to join the political mainstream in account.[62]

IV-   Conclusion

This paper makes the argument for opening the black boxes of informality and scarcity to map potential trajectories of instability. As evidence from the two cases indicates, cities are dynamic and so are social, economic and political processes. Moreover, there cannot be a one-size-fits-all approach. As Karachi's case illustrates, water is already an arena of intense contestation among political parties in a multi-ethnic city. Manila on the other hand, presents a case where water provides a site for claim making to residents of informal settlements in collaboration with other players within the broader context of politics in the Philippines.

There are no straight paths between scarcity and conflict in these two cases. However, neither are fears of potential instability unjustified. What one may safely contend is that with urbanization and depleting resources, competition over water among different social groups is inevitable. It is in the informality around water in relation to everyday politics that these struggles may be understood.

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[62] Some of them have formed NGOs, while others continue to be politically and socially active in other ways. In lobbying or activism, these players collaborate with and advise local communities.

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