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The real governance of disaster risk management in peri-urban Senegal: Delivering flood response services through co-production

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Delivering flood response services through co-production

Abstract

Disastrous and recurring floods have impacted West African urban centres over the last decade, accentuating already existing vulnerabilities in poor neighbourhoods. Climate change-induced changing weather patterns and more extreme weather events are only part of the explanation for this situation, as large segments of the urban population in West Africa are not offered the public services, infrastructure and protective regulations needed in order to respond to floods. Through an empirically grounded approach, the article shows that the ability to respond to floods is formed largely outside the realm of the state in a poor peri-urban municipality of Pikine, Dakar. The authors show how the organization of collective services pertaining to flood response and climate change adaptation is maintained through co-production among service users and providers entailing a mixture of diverse governance modes. The article concludes that weak state capacity is not equivalent to non-existent of ungoverned collective services linked to floods. While flood response service delivery through co-production, may constitute the best available options in a context of poor resources, because of the negotiated character of public service delivery it also creates an environment favourable for brokers to take ownership of central processes of service delivery and for structural inequalities to be reinforced locally.

KEYWORDS: climate adaptation, urban flooding, real governance, active citizenship, decentralization, disaster risk management, Senegal.

1. **Introduction**

In recent years, urban flooding has become an increasingly severe and frequent problem for the poor in many West African urban centres. In diverse metropoles of the region, including Lagos, Cotonou, Accra, Abidjan and Dakar, low-income populations who typically live in undesirable flood-prone areas see their already considerable vulnerability increased for every flooding event. In the long term, climate change is expected to make matters worse for these already tried populations, due to an increase in storm frequency and intensity, and with them in the risk of floods (Bartlett et al. 2009; Simon, 2010; Douglas et al. 2008). However, climate change is far from being the sole underlying cause for the damage caused by recurrent urban floods in West Africa. The example of Pikine, on the outskirts of Dakar, serves as a microcosm of the situation in the rest of the region. Here, uncontrolled urban growth, obsolete sanitation networks and the lack of storm water drainage are all factors that contribute to the yearly recurrence of floods (Mbow et al., 2008). Public management of poor urban centres is shown to be particularly invisible (Pelling & Wisner 2008). As a result, large parts of the urban population are not provided with institutions, infrastructure, services and protective regulations (Satterthwaite 2011).

Local municipalities are expected to have an essential role to play in disaster risk management (DRM) and planning for climate change adaptation (CCA) since key areas of public services (urban management, health and sanitation, economic development, etc.) have been transferred from central government to local municipalities.[1] However, the devolution of responsibilities has not been followed by a tangible fiscal decentralisation. This means that local municipalities are characterised by a lack of financial and human capacity and weak coordination (Eyoh & Stren 2007). Far from increasing local accountability, the process of democratic decentralisation has often resulted in non-decision-making for climate adaptation, as seen in relation to vulnerability to coastal storms (Adger, 2003). This is partly due to the fact that adaptation to climate change is

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[1] Law n° 96-06 from 22 mars 1996

commonly understood as a matter of creating resilience[2] to likely changes with, for example, better drainage systems or coastal defences. In most urban centres in West Africa, these important infrastructural investments are often considered a governmental responsibility and an unachievable target for municipal actors that are limited by derisory financial and human resources. However, urban actors in developing countries are not merely spectators of their repeatedly devastated living conditions or passive victims of climate change. They might not be able to solve a global problem at the local level, but, as we show in this paper, they take action in order to contain the damages caused by periodic flooding by being involved in the co-production of flood related services.

The need for a better understanding of the means to strengthen local resilience of the urban poor against environmental hazards is being increasingly acknowledged by the research community and development agencies (Few 2003). The significance of local responses to climate change and local governance capacity as determinants of local resilience is receiving increasing attention in both the scholarly literature (Few, 2003; Adger et al., 2003; Agrawal, 2010; Dodman & Satterthwaite, 2008; Satterthwaite, 2013) and reports on climate change (e.g. Working Group II contribution to the Fifth Assessment Report of the IPCC (IPCC 2014)). Most research on urban flooding conducted in West Africa has dealt with the impacts and causes of urban flooding (Mbow et al., 2008; Douglas et al., 2008b), the vulnerability of urban communities in flood-prone areas (Adelekan 2011) and the disaster risk reduction measures that have been adopted in specific cities (Diagne & Ndiaye, 2009; Gaye & Diallo, 1997; Diagne, 2007). Although local vulnerability to climate events is commonly attributed to failures in governance and weak institutions (Agrawal et al, 2008; Adger, 2000; Fatti and Patel, 2013), the body of research on local governance is sparse and still in its infancy, especially in urban and peri-urban contexts (Satterthwaite et al., 2007). Peri-urban research has mainly been led by multilateral and bilateral development agencies (Mbiba & Huchzermeyer 2002). Most of these discussions of urban dynamics concentrate on what constitute 'well-governed' cities. Based on the ideals of 'good governance', these recommendations remain largely normative, abstract and insufficiently theorised. They focus on what *should* be done to enhance local climate adaptation capacity and see local institutions as vehicles for risk management and adaptation. Although studies of environmental infrastructure and services (water, sanitation, drainage and garbage collection) have emphasized some of the structural and historical explanatory factors for the deficiencies in service provision in West African urban centres (Gandy, 2006; Nunan & Satterthwaite, 2001), studies of the nature of governance for the provision of services related to DRM and CCA from a non-normative and empirical perspective remain scarce (see Resnick, 2014; Resnick, 2014a).

This article aims to contribute to the sparse body of empirical research on the everyday functioning of the state in a West African urban context. Based on the recognition that local governance in poor urban centres is more than just a clear-cut question of official bureaucratic authority (Pelling & Wisner, 2008) and that it involves a complex negotiation process among various actors and groups, the present article sets out to investigate the 'real governance' (Olivier de Sardan, 2011) of flooding response and how related services are co-produced. Weak state capacity is not necessarily equivalent to non-existent or ungoverned collective services. As we argue, the ability to respond to floods is formed largely outside the realm of the state and is maintained through co-production by service providers and users. The article concludes that while the specific co-production arrangements found in flood response service delivery in Pikine, may constitute the best available solutions, in a context of poor resources, it is also found that co-production for flood services creates an environment favourable for brokers to take

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[2] Resilience in the context of climate change and cities is defined here as the capacity of a city to absorb climate change-related disturbances and shocks while retaining the same basic structure and way of functioning (Satterthwaite, 2013).

ownership of central processes of service delivery and where structural inequalities are reinforced locally.

The section below first presents our overall theoretical approach. In the second section, we show how public services continue to be provided in contexts of weak state capacity through co-production. The subsequent section analyses some of the implications of the co-production of flood related services in Pikine.

2. From 'good' governance to 'real' governance of public services – a conceptualisation

Until recently, a prominent characteristic of the research on processes of state-building and public services in Africa was that it was principally conducted within the field of political science and mainly concerned with describing the particularities of the 'African state' (Boone 2003, Hyden 2006, Jourde 2009) with notions such as the 'hollowing out' of the state and the 'balloon state' (Hyden 2006). This state-centric approach was more focused on theories of the state than on their empirical analysis, and the state was mainly viewed as an entity rather than a set of complex social processes (Blundo & Le Meur 2009). Although the lack of capacity of the state in Africa to offer public services and exert authority has been exposed and discussed extensively (Chabal and Daloz 1999), surprisingly little work has focused on an empirically grounded understanding of the functioning of the state (Olivier de Sardan, 2008). Little attention has been paid to the civil servants operating daily within (and in the name of) the state, and few empirical studies of administrations, state professions and public service delivery have been undertaken (Bierschenk & Olivier de Sardan, 2014). In parallel, the focus on 'good governance', which has subjugated donor-driven public-sector reforms on the continent, does not account for the actual functioning of the public administration, but focuses instead on what should be in place, based on Western criteria and the norms of New Public management (Olivier de Sardan, 2008; Bierschenk & Olivier de Sardan, 2014). As a result, bad governance, defined as both unrepresentative government and inefficient non-market economic systems (Farrington, 2015), has been used as the stereotypical description of the gap between the formal idea of the functioning of local political institutions and the way they operate in practice (Blundo & Le Meur, 2009). A normative approach to governance, which pervades most of the literature on urban governance, is not only insufficient to grasp this complexity, it is deceptive for the way state institutions actually function and are translated locally, and the ways public services are provided in contexts of poor financial means. The fact that most public goods in Sub-Saharan Africa are co-produced by several actors, including formal organisations and informal collaboration between individuals and groups (Joshi & Moore, 2004; Olivier de Sardan, 2011), has not been the object of extensive research.

In the last ten years a new body of research has emerged departing from the normative use of the governance concept and the culturalist-traditionalist approach that is pervasive in much scholarly work on the functioning of public administration in Africa, where, for example, cultural determinants, kinship, ethnicity and shared values are used to describe the modus operandi of the functioning of the state and bureaucracy (see Anders, 2002; Booth, 2011; Olivier de Sardan, 2011a; Blundo and Le Meur, 2009; Bierschenk & de Sardan, 2014). The aim of these studies is to propose a rigorous empirical approach to analyse the real functioning of the state. This body of research considers that the state is no longer the sole actor in collective service provision. In understanding statehood, it is not only state institutions and bureaucracies that are in focus, but the multitude of formal and informal actors and institutions in the field of public authority (Migdal & Schlichte 2005). In this sense 'multiform institutions' of a non-state character contribute to the provision of collective services. It is what happens at the interface between

service providers and users, through an empirically grounded use of the notion of governance, which is the centre of interest. According to Blundo and LeMeur (2009), the notion of governance pertains to *'situations in which ordering is neither restricted to the state, nor located in other (traditional or local/indigenous) institutions.'* In this sense, a wide variety of institutions exercise governance, meaning that public services are governed by various combinations of statal, associative, individual, entrepreneurial and exogenous aid-driven forms, also labelled 'real governance' or 'everyday governance' by Olivier de Sardan (2008).

Interestingly, such empirically grounded approaches shed light on the modes of brokerage, mediation and translation which configure the interface between service providers and users and which thereby form the production and co-production of collective services. The concept of co-production, which has been explored since the 80s within the literature on state and citizen relations, captures well these interface arrangements, between providers and users of services. Co-production is often understood as a way to improve the delivery of services in circumstances where public services are inadequate or inexistent (Mitlin 2008). The concept is defined here as *'the provision of public services (broadly defined to include regulation) through regular, long-term relations between state agencies and organized groups of citizens, who both make substantial resource contributions'* (Joshi and Moore 2004, p.40). Where co-production takes place, power, authority and control over resources are often shared between state and non-state actors, in a mutually dependent and equivocal manner (Joshi and Moore 2004). In this sense, observing configurations of mechanisms of everyday governance and service co-production makes it possible to consider transformations of traditional centres of power and the creation of new configurations of public authority and public service delivery, where the distinctions between the state and civil society become invalid (Blundo & Le Meur 2009). In order to comprehend local governance contexts and prevailing co-production arrangements, the difficulty is not only to identify the variety of actors operating locally, but also, and importantly, to depict the complexity of the ties which connect them (Baron 2003).

Against this background, this article applies an exploratory approach and descriptive use of governance, by presenting the case of local urban flood management in an underserviced municipality of Pikine). The aim is to identify spaces where public services (commonly provided by state institutions) pertaining to floods are co-produced and the consequences of the application of these particular delivery measures. The following section outlines the methodology applied, before presenting the case narrative.

Methodology
The case narrative is built on ethnographic fieldwork carried out in the period from November 2012 to April 2013. The data collected consists of explorative and semi-structured qualitative interviews (66) conducted with local actors, households, CBOs, NGOs, national actors and experts in Guinaw Rail Nord/Pikine and Dakar and focus groups sessions (4), where participatory diagramming methods were used. Focus group participants were among others asked to depict the groups and individuals directly and indirectly involved in flood management in their community, their opinion of them and their sense of belonging or relationship with them. The sampling technique was based on snowball sampling and random walk sampling (Mikkelsen 2005). Moreover, observations, informal conversations, attendance at workshops and community meetings also constitute the data production methods used. Nearly all interviews and focus groups were recorded and transcribed from Wolof to French. Then, the data was coded and analysed with the aid of Nvivo qualitative analysis software, where it was 'broken down' into concepts and categories allowing the process of going back and forth between data and theory, and tracing patterns and causal pathways throughout the analysis.

3. 'L'homme poisson' (the fish man): responding to floods in an underserviced peri-urban context

Guinaw Rail Nord (GRN) is a densely populated peri-urban municipality of 35,780 inhabitants (République du Sénégal 2011) situated in Pikine, on the periphery of Dakar. The area is characterized by insecure land tenure, the close proximity of habitations to one another, poor infrastructure and rough shacks and brick houses. From the early 1950s the area experienced uncontrolled urban growth as a result of rural-urban migration and state-ordered evictions from Dakar city centre (Fall et al, 2005). Short and more intense outbursts, together with a rapid and anarchic process of urbanization, a lack of storm drainage and waste disposal systems and the rising groundwater table of the Thiaroye aquifer, are creating increased local runoff rates in the area. The result is a higher frequency, intensity and duration of floods reported over the last thirteen years (Guha-Sapir et al, 2013). Yearly floods have had dramatic consequences for the inhabitants of this municipality, where twelve of the municipality's fourteen neighbourhoods are flooded almost every year. During three months, places of work are made inaccessible, families are separated, people devote all their time and resources to securing their houses and belongings from the torrents of water, and houses are eventually abandoned. For several months after a disaster, the families who decide to stay in their home are forced to live with the health and security risks which occur in the aftermath of a flood. These include diarrheal disease, wound infections, vector-borne diseases such as malaria and the risks of drowning, especially for children. The inhabitants of GRN, predominantly un- or underemployed and women-headed households, see their already considerable vulnerability drastically increased for every new flood event, since their capacity to pursue income-generating activities is considerably reduced.

The government intervenes during the floods through the formal national risk prevention and disaster management system that is put in train for flood occurrences in the country, namely the 'Plan National d'Organisation des Secours' (Plan ORSEC) under the 'Direction de la protection civile' of the Ministry of Interior.[3] The objective of the ORSEC Plan is to minimize risks and organize and coordinate a national flood response. However, in practice activities implemented under the plan are mainly limited to some degree of acute relief, such as water-pumping and channel-digging by the fire brigade and the evacuation of affected households to schools and military camps. Although democratic decentralisation was seen as a reform that would allow greater proximity between rulers and ruled, there is a growing consensus over the inability or unwillingness of elected rulers to solve flood-related problems. As one resident of GRN voiced it: « *There are very few mayors who have their homes flooded. They do not live what we live, and as the Wolof say it is only the person who sleeps in his own bed, who knows if there are fleas or not. If they meet, they only meet amongst themselves, it is administrative, but if they could come down to the low population it would be a good thing' (inhabitant of quartier Manguegui, GRN, 20 January 2013).* However, the municipality of GRN has initiated a local flood management committee, overseen by the mayor of GRN and presided over by MM, which coordinates the municipal flood response. MM is also a municipal councillor in GRN and a member of 'United in Hope', a political party coalition which supports the President of Senegal, Macky Sall. The flood management committee is supposedly composed of five sub-committees in charge respectively of environmental issues, health, information dissemination, water pumping, and monitoring and evaluation. Although specified in the organizational chart for the municipal flood response, these are not fully functional due to the lack of resources and to MM's personal appropriation of the activities related to the floods.

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[3] (République du Sénégal, 2013).

Officially, MM's function is to coordinate the sub-committees and administer the funds, food and other forms of support in order to assist the victims and minimize the impacts felt by inhabitants. However, the committee president rather works alone within the community and engages in frequent activities neither with the sub-committees nor with the neighbourhood committee or the neighbourhood chief ('chef de quartier'). This implies that he has full control of the meagre resources allocated to his committee and that his peers have little social control over his management. The members of the committee were appointed by the mayor in 2009. All are part of the 'United in Hope' coalition. This committee replaced the former committee, which comprised members of the 'SOPI coalition', previously in power under Senegal's former president, Abdoulaye Wade. In other words, the municipality has been enjoying government support during two electoral mandates. It is important to note that party politics has been found to influence public service delivery in urban areas in the country, whereas strategies of subversion are adopted by central government towards municipalities represented by the opposition (Resnick, 2014a, 2014b). As a result, it can be expected that the political affiliation of GRN to the ruling party would have benefitted the municipality and its inhabitants through the two governmental resources earmarked for municipalities, the *Fonds de dotation de la décentralisation* and the *Fonds d'équipement des collectivités locales*, which are allocated on an ad-hoc basis by a committee of government officials. However, the resources the national government has allocated to tackle flooding issues in GRN have been derisory. In addition, there is no municipal budget earmarked exclusively for flood management. Financial resources are taken out of the budget allocated for the environment, which is between FCFA 4 and 5 million yearly out of a total municipal budget of FCFA 60 million[4] for a population of 35,780.

Although residents acknowledge the limited room for manoeuvre of the municipality due to its inadequate resources, they are generally very dissatisfied with and suspicious of the support provided by both the municipality and the government. Out of this expected budget, MM declares having received approximately FCFA 300,000[5] yearly to meet the demands of the population with minor responses. These include mainly the provision of gasoline for water pumping, the repair of defect water pumps, emptying sceptic tanks, and giving 'motivations' (cash) to mobilize help in order to dig temporary channels for water evacuation. Moreover, the use of backfill ('*remblayage*', i.e. the elevation of the floor level by filling house and yard with sand and gravel) constitutes a common activity supported by the committee. This practice was opposed and abandoned by the former committee and discouraged by experts and government officials, due to its unsustainability and its potentially negative impacts on the community as a whole. Yet MM argues that it is necessary to adopt a realistic and pragmatic approach to the problems posed by floods. Residents are often aware of the negative implications of the use of backfilling. As one resident voiced it, '*if we continue like this, we will soon reach the sky*'. Indeed, after a few years most residents have to abandon the ground floor of their houses and live on the first floor, since the water level is constantly increasing. Moreover, people who do not have the means to backfill have no choice but to leave their houses permanently. Nonetheless, most people apply this approach to stay safe from the floods.

As president of the flood management committee, MM is personally allocated funds to perform his tasks on an ad-hoc basis. He is a voluntary municipal agent and therefore does not receive a fixed salary. Instead he is given a share of what is allocated by the municipality for the activities under his responsibility. This informal remuneration procedure does not allow a strict control of the resources in his charge. Not surprisingly, an atmosphere of suspicion surrounds his management of this public service, as much as it pervades the management of public goods and

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[4] USD 113,976,

[5] USD 570.

services more generally in Senegal (Blundo and Olivier de Sardan, 2006). In addition to the scarce public resources made available to him, MM makes use of alternative ways to fulfil his role as president of the flood management committee. Despite the fact that he is a municipal actor, his actions are not seen as the result of an institutional response to flooding. Being often seen working in the floods of water, he is nicknamed 'l'homme poisson', the fish-man, by his neighbours. Indeed, MM takes his responsibilities very seriously by engaging in a number of ad-hoc activities which are managed outside what is covered by the municipal budget. In emergency situations, where there is a need for the urgent cleaning or digging of channels for water evacuation, he calls upon religious disciples of local *dahiras* (urban Mouride associations based on shared allegiances to a particular marabout or common geographical location) of the Baye Fall brotherhood (a Mouride brotherhood founded by Ibra Fall), of which he is member, to mobilize members for support. According to him it is his status and reputation as a role model in his community and as a trusted and dedicated participant of a *dahira*, which allows him to call upon their assistance. He explains that the support of other *dahiras* from outside GRN is also provided, given their vocation to come and work for God. According to him, it is his status as a role model and his strong ties with particularly the young, most of whom have known him their entire life, which permits him to draw on the youth committees and the sports and culture associations (Associations Sportives et Culturelles) of his neighbourhood in order to support activities related to channel digging, information sharing, cleaning, etc. Out of the sum received from the mayor, he explains that he gives financial incentives to young people for the work that has to be done and in order to have some influence over them.

Municipal flood response work is also occasionally supported by volunteers, private sponsors (*mécènes*) and by the umbrella organisation of all community organisations called the CCDGR (Comité de Concertation pour le Dévelopement de Guinaw Rail). This coordinating body is led and financed entirely by local organisations, and it has donated a water pump to the municipal flood response committee. Despite this donation, the president of the CCDGR is very frustrated at the non-inclusion of their member associations in the planning and work of the municipality with respect to floods. He finds it very counter-productive that the municipality has set up a new structure to tackle flood issues without taking into account the existing coordinating body for activities and the actors who operate in the area. In his opinion, this shows that the municipality is not interested in listening to the local associations and groups that represent the population, which are already engaged in a number of activities to prepare for floods and support victims.

MM works directly on the ground with the fire brigade assigned to the flooded areas under the Government's ORSEC plan. He, too, is frustrated by the lack of involvement of the municipality in the planning of activities under the ORSEC plan in terms of the targeting of areas to support, and the extent and duration of the help provided. Neighbourhood committees and households are regularly forced to provide a 'motivation' (payment before the service or an expected reward a posteriori) for the fire brigade in order to divert assistance to their neighbourhood or to finish a job already initiated. This motivation may be in the form of cash, gasoline or the provision of meals. The fire brigade considers this extra payment to be supplementary to a salary, which they do not consider corresponds on its own to the actual workload needed in terms of time and effort. Alternatively, when governmental or municipal support fails, households have recourse to private actors such as sceptic-tank emptiers and sand suppliers. As the president of the flooding committee, MM is also a member of the Malick Fall GRN neighbourhood committee, which is composed of the *chef de quartier*, an imam, a youth representative, a member of a community-based organisation, a women's group representative and a Bajanou Gokh (a woman responsible for women's health issues in the community). The neighbourhood committee is supposed to represent the interests of the neighbourhood vis-à-vis the municipality. This additional

membership allows MM to benefit from the support provided by NGOs (e.g. Caritas, Eve[6]). MM considers working with NGOs to be problematic at times because of the mismatch between the extent of the damage and the resources made available. Because it is not possible to satisfy all needs, the allocation of assistance is often the object of jealousy and controversy. As a result, MM's neighbours suspect him of not taking them into account on purpose and of favouring people closer to him. Being at the midpoint of a number of networks and institutions, MM is subjected to a number of pressures, including from his family and friends. Together with the *chef de quartier* or the imam, he is occasionally involved in resolving the conflicts that arise in his work with flood responses. Although he possesses some degree of authority and legitimacy, MM is also challenged, especially by those residents who expect some help or resources from a range of institutions to which he is connected. People openly express their frustrations and their claims. The flood management committee is not widely known by the inhabitants of GRN. Those who know it often question the usefulness and transparency of its activities, together with the competence of those responsible.

4. Reinventing and negotiating the everyday state

4.1 Service delivery through co-production and brokerage
The above narrative sheds light on several aspects of flood governance and how flood-related services are co-produced. This case attests to the fact that the lack of efficiency of state institutions to provide public services has not resulted in a vacuum. Instead, a wide range of actors have entered the domain of public service provision, as is visible in the co-production of public services such as security issues, waste management, and flood prevention and relief. Although mainly non-governmental and often spontaneous, informal responses to flood risk in GRN are nonetheless relatively organized. This substantiates findings by Pelling and Wisner (2008) regarding general urban responses to disaster risks in Africa. The flood responses observed in GRN are found to be organized according to locally developed governance logics. Several kinds of actors intervene in this field and are in various ways involved in the co-production of flood related services, including municipal actors (the committees, the fire brigade), local associations (youth and women groups), religious actors (Muslim Brotherhood, *dahiras*), neighbourhood chiefs and even NGOs. Given the insufficient resources available, the extent to which MM is able to fulfil his position as president of the flood management committee and the tasks which follow is conditional on his capacity to mobilize people collectively. He circumvents the bottlenecks he encounters and deploys palliative forms of governance (Olivier de Sardan 2011) by prompting, for example, the *dahiras* and local youth organisations to clean the streets and help dig waterways, a task that formally falls under the responsibility of the municipality. In this case study, the co-existence of a variety of political communities (youth and women's groups, *dahiras*, Mouride brotherhood) offers the resources needed to enact palliative forms of governance.

Paradoxically, the formal structures which are supposed to configure MM's room for manoeuvre (e.g. the ORSEC plan and the flood management sub-committees) do not come into play as envisioned. Instead of mobilizing public institutions only according to the legal texts and formal procedures, local inhabitants give 'motivations' to the fire brigade for the relief services provided under the ORSEC plan. This attests to the prevalence of the informal privatization of public services and shows how state institutions are being privatised by its own agents as much as by users (Blundo & Le Meur 2009). The compensation paid to youth groups for community work provides another example of this informalisation and privatisation of public service provision.

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[6] These NGOs typically provide food aid, distribute non-food items, dig temporary channels for water evacuation and hold awareness-raising sessions on health and hygiene.

This 'unintended' privatization, where communities and households step in to compensate for the failure of public services, have been found to be common in poorer countries, in the spheres of essential services and basic infrastructure such as health, water, electricity, etc. (Moser et al, 1993; Batley, 1996). Despite its limited efficacy, this daily practice of 'bricolage' allows the delivery of a public service. As the central role played by MM attests, personal connections are crucial to the effective delivery of the service. Flooding is an opportunity for him to show up as a broker as well as a patron (redistributing 'motivations' to the young) involved in public service provision. Co-production for flood services thus creates an environment favourable for brokers like MM to take ownership of central processes for service delivery. The existence of these negotiators, who operate through practices of intermediation and administrative brokerage for public services in the daily management of the state in Senegal, is also described by Blundo in the context of the justice, customs and tax system (Blundo, 2006).

Even though MM enjoys some level of popular legitimacy, his political influence is somewhat limited, as he is found at the margins of most institutions and does not fully control the allocation of the resources possessed by these institutions. MM's marginality allows him to denounce the lack of priority given to his area by the government and the little inclusion of the municipality in government plans and activities. By being seen as 'l'homme poisson', working for the people and knowing their realities, MM is viewed by his supporters less as a municipal agent than as an individual who is doing what he can for himself and for the community with the limited resources available to him. Because of the multiple hats that MM wears, he is not automatically held accountable for his actions based on his official function. The accountabilities that he meets are bureaucratic (towards the municipality), representational (towards the neighbourhood committee), reputational (towards his neighbours and the Muslim Brotherhood) and financial (towards NGOs). The multi-layered accountability he experiences sometimes works in a complementary manner when claims proceed in the same direction, as seen in the example where his work with the Baye Fall Brotherhood contributes to their will to 'work for God', provides the residents of GRN with relief, and fills a resource gap between the service provided by the municipality and the expectations of the residents. At other times, multi-layered accountability works in contradictory ways, when conflicting demands arise, and it becomes difficult to satisfy all demands.

4.2 Practical norms of flood response
MM's ability to function as a broker of flood-related services is contingent of the existence of different normative orders in his local environment. Official rules (or norms) defined by municipal decrees and national laws stipulate that the official responsibility for disaster relief, urban management, basic service provision, etc. Yet they are rarely translated as such in the everyday life of the population. Instead, official norms are accompanied by social norms (morally accepted modus operandi) and practical norms (informal rules of the game), which altogether configure real governance (Olivier de Sardan, 2008). This is apparent in GRN, where the residents' behaviour is guided by a set of unwritten rules. An example of a practical norm is the use of backfilling, which impacts negatively on neighbouring houses (against the social norm of solidarity). By accumulating sand in one place, the water is merely displaced to lower lying areas and houses. Flood-related problems are thus displaced to other houses, which is damaging for households that cannot afford to follow the same procedure and which is often a source of conflict among the residents of GRN.

Whereas municipal law prohibits the practice of backfilling, most residents in the flooded areas practise it and municipal actors even encourage it. This activity is certainly illegal (by reference to official norms) but also largely practiced (by reference to practical norms) despite its ambiguous and contested legitimacy. In line with Blundo, the above provides an example where the state

voluntary averts its eyes in situations of crises for which it has no solutions, and thus contributes to the creation of permissive spaces which legitimize, de facto, irregular practises without modifying regulations (Blundo, 2006). Another example of a practical norm is the way that users have learned the practical rules of accessing public services by providing donations. As we have seen, informal remuneration for public services is widespread and often the only alternative if households are not to be plunged deeper into vulnerability. The informal payment literature describes a donation (by opposition to a fee for service) as a sum of money or other resources given by grateful users to civil servants after the service has been provided. This type of ex-post payment is generally seen as a benign form of unofficial payment. Most authors give socio-cultural explanations for such 'voluntary' behaviour, which is said to be related to an endemic culture of gifts (Ensor, 2004; Gaal and McKee, 2005). Such practices are presented as compatible with social norms, although contrary to official norms. As Olivier de Sardan et al. (2005) note, the frontiers between illegality and illegitimacy are blurred, as civil servants often ask users for gifts in contexts where small presents are also thought socially acceptable.

Interestingly, MM, who holds a position of a public authority (to some extent at least), draws his relative popular legitimacy from his deliberate breach of formal rules. His belonging to the municipality per se does not grant him automatic respect –quite the reverse, given the generally negative view of the population on socially distant municipal authorities. For a municipal representative like MM, the conflict between official norms and the demands of everyday life makes it possible to play with different sets of rules, according to the situation in question, in order to maintain his position in both the public administration and the private sphere. In this sense he can actively exploit the ambiguities resulting from the plurality of normative orders and thereby establish and reinforce his leverage as a broker in his social networks and his municipal activities. His public authority is negotiated through his connections to, and relations with, non-state actors and entities to which he has particular affiliations. At the same time, his activities are often met with suspicion or indifference by people who are outside the circle of the beneficiaries of his actions. Given the personalization of the service, MM navigates across different networks (based on residence, social status or religious membership) and political communities to mobilize the support he needs to fulfil his role, as well as to nurture his networks and to make a living. His resourcefulness or 'street-smartness' (*débrouillardise*) enables him to appropriate the procedures and means of the municipality informally and to take ownership of some of the flood response processes.

4.3 Implications of service co-production
Co-production is often understood as a way to improve the delivery of services in circumstances where public services are inadequate or inexistent (Mitlin 2008). The specific co-production arrangements and practical norms found in flood response service delivery in Pikine are a way to address pragmatically the bottleneck of African public service provision and constitute often the best (and only) available practices, in a context of poor resources. It is however also worth considering the less desirable consequences of this particular approach to service delivery.

In GRN the most vulnerable population groups[7] are typically voiceless in municipal affairs, as they normally do not belong to local organizations (i.e. women's groups)[8], they are not represented in neighbourhood committees or in the municipal Council and they have limited access to local networks. Because of the inherent disparity between actors and the negotiated character of public service delivery, the capacity to identify and impose decisions is a result of

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[7] Typically unskilled, tenants, the elderly and/or female-headed households living in the most precarious habitations, without water, electricity or a regular source of income.

[8] either because they cannot afford to pay for the membership or because they have not lived in the neighbourhood long enough to be sufficiently trusted by committees (typically tenants).

ongoing negotiations and is not intrinsic to the state, as also found by Titeca and de Herdt (2011). This means that the results of this negotiation will not be uniform, but will depend on the power configurations in specific places at specific times. In this sense, the provision of collective services is unavoidably linked to the issues of exclusion and inclusion in terms of access and control (Ribot & Peluso 2003).

As a result, in GRN the most vulnerable segments of the population have more difficult access to flood-related services, as they are normally situated outside these negotiating arenas. The negotiating process for flood relief services in GRN therefore sometimes fails to be inclusive of the poorest, as is seen in the example of poor tenants who powerlessly watched the digging of a channel initiated by the local flood-management committee. The channel created important health and security risks for them by sending all the neighbourhood's sewage water and garbage in front of their doors. This is an example where a vulnerable population group is not integrated into the local negotiating arena for flood-related services and is thereby excluded from taking part in its management. Users who are not represented in the negotiating context become anonymous and almost invisible. Excluded vulnerable population groups therefore suffer from the disproportionate and sometimes undesirable outcomes of these negotiations and thus of the way services are co-produced. Another example is the 'unintended' privatization of the service (i.e. fire brigade) where a price barrier to access services reinforces structural inequalities locally.

Furthermore, the multiplicity of institutions and governance layers tend to benefit *the more affluent, the better connected and the more knowledgeable* (Lund 2006). The municipal committee for flood response in GRN is a perfect example of what Bierschenk and Olivier de Sardan (1998) characterize as *the piling-up* of diverse types of power in the local arena, where a new type of authority is created. This merely adds to the multiple layers of institutionality already in place (i.e. the CCDGR), instead of replacing them. This means that multiple legitimate practices may be found within the same negotiating context (Hallett 2003), which makes a coherent and transparent delivery system for flood-related services difficult. Although the official coordinating body for flood response is there, it is not structured by any mechanisms of accountability to people or users, but depends on personal priorities and established networks. Consequently, while the plurality of actors and institutions involved in the co-production of flood-related services enables a response in a context where state services are almost absent, by belonging to almost anyone – NGOs, local organizations, municipal authorities, state and private actors – the public space for flood response ends up belonging to no one (Blundo & Le Meur 2009). As a result, multi-layered accountability fails to be inclusive of the poorer and more vulnerable segments of the population, as no one is directly held accountable to fulfilling their needs. Flooding thereby becomes mainly a problem for voiceless citizens. The case of GRN shows that the governance configurations evolving around emergency situations tend to cement established power structures, where the voices of less powerful actors are less likely to be heard, as also found by Næss et al (2005).

5. Conclusion

The lack of the technical and financial capacity for both national and local government institutions to find an answer to urban flooding is a critical issue in West African contexts (Baudoin 2014). As we argue here, flooding not only affects the daily lives of millions of people among the most vulnerable, it impacts on the daily governance of public services and the social contracts that tie government to citizens. Although public services related to floods are inadequate, the analysis of real governance in Pikine has shown that they are still being provided. By analysing the production of public services, this article has shown that the myriad of actors and organizations engaged in the diverse governance modes are through their contribution to public service delivery all involved in 'doing' the state (Migdal and Schlichte 2005), in

collaboration as well as in conflict with one-another. As such, weak state capacity is therefore not equivalent to non-existent or ungoverned collective services. As we have seen, the impacts of rapid urban expansion, poor urban planning and climate change are driving the residents of poor flood-prone urban areas to reinvent the daily practice of public services by engaging actively in their provision; sometimes with undesirable effects on the most vulnerable population groups because of the negotiated nature of public service delivery. By examining real governance in Pikine, local governance was found to be much more than an unambiguous matter of official bureaucratic authority, as the provision of flood-related services to a large extent does not rely on the efficiency of public institutions. Rather, the ability to respond to floods is maintained through a mixture of various governance modes (statal, associative, individual and aid-driven forms), depending on the capacity of municipal actors and residents to combine these, through co-production by service providers and users. These new relations formed between state and non-state actors, are also found to play an important role in the context of territorial struggles in Pikine (List 2015). Here territorial alliances - as these modes of interaction are labelled by the author - are also constantly negotiated and reconfigured. Quite similar to what has been described in the context of flood response in GRN, actors invest in these coalitions in their struggle to secure their access to urban land (List 2015). The particularities of the governance configuration for flood management related services found in this case study also extend beyond the borders of Pikine and Senegal, with common traits in the governance of public services found across West African countries such as Benin, Niger, Mali and Burkina Faso, where community associations and municipalities for example, share similar modes of functioning and difficulties (Olivier de Sardan 2014).

This ability is dependent also on the adoption of practical norms, by producing flood-related services which sometimes go against the official rules. Including the layer of practical norms to the understanding of this multi-actor governance opens up to new ways of understanding governance processes locally. By performing state functions without necessarily belonging to the state, actors are all regulated by formal and informal rules, each submitted to they own forms of accountabilities. Acknowledging that the traditional dichotomies (formal/informal, exogenous/indigenous, private/public, state/civil) are fading, and thus observing configurations of mechanisms of everyday governance, co-production and practical norms, proposes important lessons for policy-making. Development actors have favoured the promotion of distinct governance forms over the years. This has included a predilection for the associational mode, followed in the name of community participation or the adoption of the municipal mode of governance, with the focus on decentralisation reforms. In these approaches little attention has been given to the interface between the different modes of governance. While it is tempting to think that universal solutions for enhanced access to public services and improvement of their quality exist, this article has through an empirical understanding of the dynamics influencing actors involved in their provision, shown that the reality of service delivery in underserviced urban areas is complex. Participatory solutions to flooding and co-production might be a solution, but in their present shape they are certainly not a panacea. What will come out of these new forms of public service delivery remains uncertain. A better understanding of the contextual processes involved and their implications is therefore essential. The need for this improved understanding will become even more acute in view of the increasing pressure of climate change impacts on governments and the urban poor.

References

Adelekan, I.O., 2011. Vulnerability assessment of an urban flood in Nigeria: Abeokuta flood 2007. *Natural Hazards*, 56(1).

Adger, W.N. et al., 2003. Adaptation to climate change in the developing world. *Progress in Development Studies*, 3(3), pp.179–195.

Adger, W.N., 2000. Institutional Adaptation to Environmental Risk under the Transition in Vietnam. *Annals of the Association of American Geographers*, 90(4), pp.738–758.

Adger, W.N., 2003. Social Capital, Collective Action, and Adaptation to Climate Change. *Economic Geography*, 79(4), pp.387–404.

Agrawal, A., 2010. Local institutions and Adaptation to Climate change. In R. Mearns & A. Norton, eds. *Social dimensions of climate change, equity and vulnerability in a warming world.* Washington DC: The World Bank.

Agrawal, A., McSweeney, C. & Perrin, N., 2008. *Local Institutions and Climate Change Adaptation.*, Washington, DC: World Bank.

Anders, G., 2002. Like chameleons. Civil servants and corruption in Malawi. *Bulletin de l'APAD*, 23-24, pp.2–19.

Baron, C., 2003. La gouvernance: débats autour d'un concept polysémique. *Droit et société*, 54(2003/2), pp.329–349.

Bartlett, S. et al., 2009. Social aspects of climate change in urban areas in low and middle income nations. *contribution to the 5th Symposium on urban research* , pp.28–30.

Batley, R., 1996. Public-Private Relationships and Performance in Service Provision. *Urban Studies*, 33(4), pp.723–752.

Baudoin, M.A., 2014. Climate change adaptation in southern Benin. A multi-scale perspective on rural communities of Mono and Couffo. In Carrapatoso & Kürzinger, eds. *Climate-resilient Development: Participatory Solutions from Developing Countries.* London and New York: Earthscan– Routledge, pp. 59–85.

Bierschenk, T. & de Sardan, J.-P.O., 2014. *States at work - Dynamics of African Bureaucracies* 1st ed. T. Bierschenk & J.-P. O. de Sardan, eds., Leiden: Koninkijke Brill.

Blundo, G. & Le Meur, P.-Y., 2009. *The governance of daily life in Africa 　　　　□: ethnographic ex public and collective services* G. Blundo & P.-Y. Le Meur 1962-, eds., Leiden; Boston: Brill.

Booth, D., 2011. Towards a Theory of Local Governance and Public Goods Provision. *IDS Bulletin*, 42(2), pp.11–21.

Diagne, K., 2007. Governance and natural disasters: addressing flooding in Saint Louis, Senegal. *Environment and Urbanization*, 19(2), pp.552–562.

Diagne, K. & Ndiaye Abdoulaye, 2009. History, governance and the millenium development goals:Flood risk reduction in saint-louis, senegal. In M. Pelling & B. Wisner, eds. *Disaster Risk Reduction - Cases from urban Africa*. London and Sterling VA: earthscan.

Dodman, D. & Satterthwaite, D., 2008. Institutional Capacity, Climate Change Adaptation and the Urban Poor. *Ids Bulletin-Institute of Development Studies*, 39(4).

Douglas, I. et al., 2008b. Unjust waters: climate change, flooding and the urban poor in Africa. *Environment and Urbanization*, 20(1), pp.187–205. Eyoh, D. & Stren, R., 2007. *Decentralization And The Politics Of Urban Development In West Africa*, Washington DC.

Fall Salam, A., Guèye, C. & Tall Mansour, S., 2005. Changements climatiques, mutations urbaines et stratégies. In A. Fall Salam & C. Guèye, eds. *Urbain-Rural: l'hybridation en marche*. Dakar: enda tiers-monde, p. 191.

Fatti, C. and Patel, Z., 2013. Perceptions and responses to urban flood risk: Implications for climate governance in the South. *Applied Geography*, 36, pp.13–22.

Few, R., 2003. Flooding, vulnerability and coping strategies: local responses to a global threat. *Progress in Development Studies*, 3:, pp.43–58.

Gandy, M., 2006. No TitlePlanning, Anti-planning and the Infrastructure Crisis Facing Metropolitan Lagos. *Urban Studies*, 43(371), pp.371–396.

Gaye, M. & Diallo, F., 1997. Community participation in the management of the urban environment in Rufisque (Senegal). *Environment and Urbanization*, 9(1), pp.9–30.

Guha-Sapir, D., Below, R. & Hoyois, P., 2014. EM-DAT: International Disaster Database. *(CRED), Centre for Research on the Epidemiology of Disasters*. Available at: www.emdat.be.

Hallett, T., 2003. Symbolic Power and Organizational Culture. *Sociological Theory*, 21, pp.128–149.

Joshi, A. & Moore, M., 2004. Institutionalised Co-production: Unorthodox Public Service Delivery in Challenging Environments. *Journal of Development Studies*, 40, pp.31–49.

List, N.C., 2015. Contentious Territorial Alliances: Coalition Politics and Struggles over Urban Development in Pikine, Senegal. *EchoGéo*, 29(2014).

Lund, C., 2006. Twilight institutions: An introduction. *Development and Change*, 37, pp.673–684.

Mbiba, B. & Huchzermeyer, M., 2002. Contentious development: peri-urban studies in sub-Saharan Africa. *Progress in Development Studies*, 2(2), pp.113–131.

Mbow, C. et al., 2008. Urban sprawl development and flooding at Yeumbeul suburb (Dakar-Senegal). *African Journal of Environmental Science and Technology*, 2(4), pp.75–88.

Migdal, J.S. & Schlichte, K., 2005. Rethinking the state. In *The Dynamics of States*. pp. 1–40.

Mikkelsen, B., 2005. *Methods for Development Work and Research, A New Guide for Practitioners*, New Delhi, California, London: Sage Publications.

Mitlin, D., 2008. With and beyond the state -- co-production as a route to political influence, power and transformation for grassroots organizations. *Environment and Urbanization*, 20(2), pp.339–360.

Moser, C., Makonnen, R. & Herbert, A., 1993. *Urban poverty in the context of structural adjustment: Recent evidence and policy responses*, Washington.

Næss, L.O. et al., 2005. Institutional adaptation to climate change: Flood responses at the municipal level in Norway. *Global Environmental Change*, 15(2), pp.125–138.

Nunan, F. & Satterthwaite, D., 2001. The Influence of Governance on the Provision of Urban Environmental Infrastructure and Services for Low-income Groups. *International Planning Studies*, 6(4), pp.409–426.

Olivier de Sardan, J.-P., 2011. Local Powers and the Co-delivery of Public Goods in Niger. *IDS Bulletin*, 42(2), pp.32–42.

Olivier de Sardan, J.-P., 2014. The Delivery State in Africa. interface Bureaucrats, Professional Cultures and the Bureaucratic Mode of Governance. In T. Bierschenk & J.-P. Olivier de Sardan, eds. *states at work. Dynamics of African Bureaucracies*. Leiden; Boston: Brill, pp. 399–426.

Olivier De Sardan, J.P., 2008. Researching the practical norms of real governance in Africa - Discussion paper No.5.

Pelling, M. & Wisner, B., 2008. *Disaster Risk Reduction: Cases from Urban Africa* 1st ed. M. Pelling & B. Wisner, eds., UK and USA: Routledge.

Resnick, D., 2014a. Strategies of Subversion in Vertically-Divided Contexts: Decentralisation and Urban Service Delivery in Senegal. *Development Policy Review*, 32(s1), pp.s61–s80.

Resnick, D., 2014b. Urban Governance and Service Delivery in African Cities : The Role of Politics and Policies. , 32(2001), pp.3–17.

Ribot, J.C. & Peluso, N.L., 2003. A Theory of Access. *Rural Sociology*, 68, pp.153–181.

Satterthwaite, D. et al., 2013. Adapting to Climate Change in Urban Areas : The Possibilities and Constraints in Low- and Middle-Income Nations.

Satterthwaite, D., 2011. How urban societies can adapt to resource shortage and climate change. *Philosophical Transactions: Mathematical, Physical and Engineering Sciences*, 369(1942, The sustainable planet: opportunities and challenges for science, technology and society), pp.1762–1783.

Satterthwaite, D., 2013. The political underpinnings of cities' accumulated resilience to climate change. *Environment and Urbanization*, 25, pp.381–391.

Sénégal (République du) Direction de la Protection civile, M. de l'intérieur, 2013. *Rapport sur l'Etat de la protection civile au Sénégal: Protection civile et participation de la société civile, la prévention des risques et la gestion des catastrophes.*, Dakar: Direction de la Protection Civile.

Simon, D., 2010. The Challenges of Global Environmental Change for Urban Africa. *Urban Forum*, 21(3), pp.235–248.