

## **SOUTH AFRICAN CLIMATE CHANGE ADAPTATION POLITICS: URBAN GOVERNANCE PROSPECTS**

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### **—Abstract —**

The combination of voluntary approaches to climate change policy and a growing interest in local action on climate change has supported climate change politics where multiple forms of governance, rather than a regulatory understanding of governing, play a fundamental role in addressing the challenges. Intermediaries such as business, Non-Governmental Organisations (NGOs) and communities play a profound role towards climate change and governance in urban areas, and subsequently offer the local government with an innovation potential. However, urban areas are also a site of political struggle where climate change politics manifest. Conflicting political ideologies create a problem in terms of climate change adaptation policy formulation and implementation. The discussion surrounding the notion of urban governance is intrinsically linked to discourses about who has the responsibility to deliver climate change action to participate in acts of governing. The paper argues that urban governance as a complementary mechanism rather than a principal means of addressing climate change requires a multi-stakeholder engagement to palliate climate politics that derail local actions towards addressing climate change. The paper concludes that a multilevel and urban governance approach has the potential to palliate the lack of knowledge about climate change, thereby changing the entrenched ideologies to ensure adaptability towards climate change.

**Key Words:** *Urban governance; Multi-level governance; Climate change adaptation,*

**JEL Classification: R28****1. INTRODUCTION**

Climate change is an inevitable phenomenon and most dangerous environmental problem the global village is currently facing. Scholars have argued that mitigation and adaptation to climate change is eminent due to the inevitability of its effects (Birkmann, Garschagen, Kraas and Quang, 2010; Broto, 2017; NemaKonde and Van Niekerk, 2017). In 2015, the international development policy advanced a consolidated notion that cities and urban areas remain strategic arenas for addressing climate change (Broto, 2017). According to NemaKonde and Van Niekerk (2017), most disaster risk abatement and climate change adaptation and mitigation structures are developed parallel to each other, consequently operating in isolation. In the midst of mitigation approaches, it is imperative for governments to develop structures in order to adapt to the adverse impact of climate change. The South African government promulgated policies and legislations which promote environmental protection in order to achieve sustainable development. Furthermore, many South African local governments have recognised the importance of addressing the effects of climate change, thus ensuring that cities and urban areas are adaptable. Polokwane local municipality, the Cities of Johannesburg and Cape Town have acknowledged climate change effects in their municipal Integrated Development Plan (IDP) to ensure that they address this undying environmental problem. However, the intensity of floods, heatwaves, snows, drought and the ever-rising sea level are have significantly increased in South African cities. In order to ensure that coastal cities are adaptable, South Africa has developed infrastructure along the coastal areas to circumvent sea water intrusion into the inland. Despite this form of adaptation to sea level rising, heatwaves, droughts and floods (Cornes and Cook, 2018) are continuously and evidently becoming a character of South African cities thereby demonstrating the inability of local government to adapt to climate change.

Prioritisation of climate change adaptation and mitigation in developing countries such as South Africa is part of a political and development dilemma. The inability of local government to provide sustainable basic services to the majority of its clientele deter the commitment to implement climate change adaptation politics. The triple challenges (poverty, unemployment and inequality) of development in South Africa further complicate the implementation of climate change objectives (Mokoele and Sebola, 2018) due to their financial and economic constraints. In

addition, political ideology that a governing party in a particular country upholds might have a positive or negative outcome within the environmental discourses. Hu, Jia, Zhang, Zheng and Zhu (2017) postulated that the conservatives in the United States of America (USA) have lower levels of climate change beliefs than the liberals. The conservatives' scepticism about the notion of climate change is based on the idea that it is not a fact, but only a mere perception without pragmatic evidence to support it (Hu *et al.*, 2017). Despite this multiplicity of developmental challenges, "cities have become implicated in new forms of urban governance that have a broader expression in the global arena" (Broto, 2017: 2) in order to address climate change adaptation and its political face. Therefore, urban governance provides the potential to ensure the implementation of climate change adaptation. The collaboration, cooperation and coordination between private sector, public sector, civil societies and local communities is imperative to circumvent the challenges that local governments face which derail the implementation of climate change adaptation (Bulkeley and Betsill, 2005; Birkmann *et al.*, 2010; Broto, 2017). Urban governance seeks new ways to be creative, to build strength and to access and utilise resources (Kearns and Birkmann, 2000) during policy formulation and planning in order to address climate change adaptation. Despite this potential that urban governance offers, it is confronted with various problems at a local level such as absence of political will and contrasting political ideology. However, these problems can be minimised by fostering public awareness about climate change, coordination and collaboration with other sectors. The paper argues that urban governance as a complementary mechanism rather than a principal means of addressing climate change, requires a multi-stakeholder engagement to palliate climate politics. The paper interrogates urban governance in order to address the politics of climate change. Therefore, it is imperative to conceptualise the notion of urban governance.

## **2. URBAN GOVERNANCE AS A CONCEPT**

The term governance should not be confused with the notion of government due to their distinct ideologies. This term can be understood in terms of how authority and various resources are allocated in making controls and coordinated actions (Kearns and Paddison, 2000; Aylett, 2015). It is important to understand governance as one position of local government actors within a spectrum of activity and authority that spans multiple scales (local, regional, national, inter-

municipal and global arena), and different kinds of actors (governmental, civil-society and private sector) (Aylett, 2015). This shows that collaboration and coordination within the local government context is important in order to foster various action. Urban governance refers to how government (local, regional and national) and stakeholders collaborate in making decisions about plans, finances and managing urban areas in a coordinated manner in order to circumvent some of the challenges faced within local government (Knox and Pinch, 2000; Slack and Côté, 2014; Aylett, 2015). Urban governance deals with the extent to which these decisions recognise and respond to the interests of the poor. This is imperative as the local government in South Africa is constitutionally mandated to ensure a developmental state and deepen democracy among the ordinary citizens. Broto (2017) stated that urban governance is intrinsically related to who is responsible for making decisions about climate change actions and analysis of actors' motivation to participate in the act and process of governing. Urban governance encompasses a host of economic and social forces, institutions and relationships (Devas, Amis, Beall, Grant, Mitlin, Nunan & Rakodi, 2004). These include labour markets, households, social relationships, basic infrastructure, land and public safety (Devas *et al.*, 2004).

Governance represents a shift in the roles of formal government structures and contemporary agencies to a more bottom-up approach to planning. There is also a change in the distribution of responsibilities between public, private, voluntary, and community groups (Slack and Côté, 2014). The increase in the involvement of community groups, government, private and voluntary groups is imperative within local government to address the manifestation of environmental challenges the country is facing, particularly climate change. Increasing fragmentation of responsibilities in the urban areas about who is responsible for climate change has increased the importance of new institutional relations and policy process among different constituencies and agencies. The effects of this fragmentation and rescaling process of the state are reflected as networked forms of governance. The relations between continental, national, regional and local government together establish a new form of urban politics that can effectively be address the development needs of a particular country. This is because addressing climate change requires a serious political will and a shared political ideology in order to enforce policy formulation and implementation. Therefore, climate change is not only an environmental problem, but also embodies economic, political and social

problems. A satisfactory urban governance model that can adequately represent all cases has not been developed yet (Knox and Pinch, 2000).

Urban governance represents an essential institutional scaffolding upon which the national and sub-national geographies of state regulation are configured as well as one of the major political institutional mechanisms through which those geographies are currently being reworked. Urban governance is based on the explicit representation and coordination of functional interests active at the local level. There is a co-operative style of policy-making and local authority moderates or initiates cooperation instead of giving orders. It is obvious that with the effect of the globalising economy and subsequent changes, local government structures have changed. The process has shifted from governing to governance. Therefore, the number of actors involved in the decision-making and implementation stages of public services have increased, with the private sector becoming widely involved. Together, this bottom-up policy approach has replaced some top-down approaches to policy formulation and implementation.

### **3. CONTEMPORARY URBAN CHALLENGES WITHIN THE CLIMATE CHANGE DISCOURSE**

Managing cities and urban growth are some of the defining challenges of the twenty-first century in developing countries such as South Africa. If managed well, cities can act as engines of growth and provide inhabitants with better job opportunities, improved healthcare, housing, safety and social development. Furthermore, cities can contribute to national growth through increased revenue generation and political stability, as well as playing a role in post-conflict reconciliation. Conversely, cities that are poorly planned, managed and governed can become centres of poverty, inequality and conflict (Brown, 2015). Expanding urban populations are straining the already overburdened and ill-equipped local government, planning mechanisms, infrastructure and urban finance (Bhatkal, Avis and Nicolai, 2015) without the capacitated personnel to manage the city. In the urban areas, the population has been increasing faster than the capacity of urban planners and local government to provide houses, infrastructure and the ability of local businesses to create employment. This has led to the emergence of large informal settlements, extensive crime, an expanded informal economy, and increased social tensions. The densification of urban population increases the vulnerability of cities to the effects of climate change. Furthermore, the

densification of urban population has increased the consumption of electricity and scarce resources which has resulted in climate change (Mokoele and Sebola, 2018).

The well-being of the urban poor can be improved by facilitating access to economic opportunities, supportive social networks, access to land, infrastructure and basic services. The outcomes depend on a number of factors which include the nature of existing local democratic institutions, processes, availability of resources and the ability of the poor to organise and articulate demands. Thus, ineffective urban governance affects the poor disproportionately because the application of urban governance is aimed at the improvement of the conditions of the poor people. Therefore, ineffective and inefficient urban governance can be attributed to the lack of local knowledge, funds, political will and collaboration between all spheres of government. Many city governments face severe capacity constraints, lack the vision to address urban growth, and need better information on poverty and the environment. Devas *et al.* (2004) and Brown (2015) suggested that the design of the city-level political system, including democratic structures with checks and balances between executive and legislature, must be supplemented by broader public participation to ensure that decisions reflect the needs of the poor. Maximising their potentiality of urban areas requires institutionalising mechanisms of coordination, planning and accountability among diverse stakeholders (Fox and Goodfellow, 2016). According to Venables (2015), urban governance is vital because the scale and high population density of cities enable economic and social interaction to occur more frequently and effectively. This creates the potential for cities to be productive and to offer inhabitants a better quality of life. Harnessing urbanisation requires a smart policy and hard work (i.e. effective urban governance), since the implications of failure have long term effects. Effective urban governance depends not only on local institutions and actors, but also on the framework set by national governments that establish a connection between the city, regional and national development. National governments allocate responsibilities to various levels of government, designating territorial jurisdictions, establishing electoral arrangements, designing internal management structures and creating appropriate accountability mechanisms (Moir, Moonen and Clark, 2014; Parnell and Simon, 2014; UN Habitat, 2015). It is difficult to determine whether decentralisation has been a positive or a negative force in addressing climate change. In many contexts, inadequate legal

frameworks, institutional and financial capacity have impeded effective decentralisation of decision making in fostering effective implementation of urban governance (UN-Habitat, 2015).

According to Aylett (2015: 5), “urban climate policies requires feats of internal network building and coordination of every bit as delicate and contested as the external relationships between state, community and private sector actors which are the focus of traditional studies of governance”. Therefore, the effectiveness of urban governance in addressing climate change is entrenched in its capacity to integrate all levels of government with non-state actors. Within urban governance discourses, the political question is related to the management of governance institutions which have both the responsibilities, motivations and capacities to deliver climate actions (Broto, 2017). Therefore, network governance has emerged as an imperative mechanism whereby cities make visible their influence on transnational climate change politics. Decentralisation of responsibilities to the lowest echelon of local government has been identified as a means of rebalancing relations between cities and national government, making urban governance more responsive to local contexts and actors (Rao, Scott and Alam, 2014).

Decentralisation is assumed to have a positive relationship with democracy, political reform, participation, empowerment, urban development, fiscal and economic development, accountability, and capacity-building (Smoke, 2003). Ensuring good working relationships between central, regional and local government is important. Unfortunately, mistrust among various parties often characterises these relations. The multiplicity of urban challenges in developing countries such as South Africa deter the commitment of local government to collaborate and foster climate change action.

### **3.1. The effects of climate change**

In contrast to the single natural disasters that take place in various countries such as floods, the impact of climate change can be characterised by multi-hazard phenomena (Birkmann *et al.*, 2010). This multiplicity of the effects of climate change has created a huge problem in the management and governance of cities. It is critical to state that climate and weather related effects such as heatwaves, droughts and floods have been taking place throughout history, but the intensity and severity has currently increased tremendously through the intensification of climate change and global warming (Birkmann *et al.*, 2010). Floods and drought

in many third world countries such as South Africa have caused serious social and economic consequences. South African cities such as Cape Town and Johannesburg were hit by adverse droughts and floods respectively which affected many people and animals. The drought in Cape Town resulted in the government putting in place stringent measures to reduce the water consumption in order to avoid what came to be known as “day zero”. Furthermore, local government preached the day zero message in order to demonstrate that the city does not have sufficient water to sustain it until the next rainy season. Thus, the “changes in the hydrologic cycle due to climate change can lead to diverse impacts and risks, and they are conditioned with non-climate drivers of change and water management responses” (Abraham, 2018: 168).

Global cities have been experiencing the effects of heat waves (Birkmann *et al.*, 2010; Moriarty and Honnery, 2015). In India, cities such as Mumbai and Kolkata have experienced heatwaves that resulted in the death of many people (Moriarty and Honnery, 2015). The intensification of heatwaves has an adverse impact on agricultural production (for both livestock and crop production). Heatwaves are Australia’s most deadly climatic hazard (Cornes and Cook, 2018). This has led to approximately 55% of death when compared with other natural disasters. According to Cornes and Cook (2018: 160), a “heatwave is defined as a period of 3 or more consecutive days of excessive heat” and contributes to numerous negative effects including the abatement of agricultural production. According to Hu *et al.* (2017), construal level theory argues that, as the distance in terms of time in the future increases, the potential risks of climate change are just mental construed at a more abstract levels when juxtaposed with the present realities. This means that the future time orientation in terms of climate change impacts are just perceptions that lacks pragmatic evidence. It can be argued that this is just a political ideology that protect the interest of business in order to increase profit at the expense of the environment. These effects are projected to increase both in intensity and severity in the near future (Mokoele and Sebola, 2018). The intensification of atmospheric temperature, drought, floods and heatwaves in the 21<sup>st</sup> century calls for attention in the quest to attain sustainable development.

Birkmann *et al.* (2010) posited that climate change implies the emergence of new trends such as the rising sea level and heat islands. Many such impacts are likely

to take place at an increasing speed and with greater magnitude than ever experienced in the modern human societies. These impacts require a different type of thinking about the adaptation approaches towards climate change. The development in terms of severity and intensity of these impacts on humanity in the future remain uncertain. The emerging field of urban climate change adaptation must address these uncertainties (Birkmann *et al.*, 2010). These impacts make cities to focus on adaptation as tomorrow's prediction become today's realities. This intensification of climate change requires cities to be adaptable in order to palliate the punitive realities of climate change. The most concerning issue in urban areas where population has densified is that it upsurges the vulnerabilities to a range of acute and slow onset disasters if no major action is taken (Abraham, 2018). These include "flood damage to urban settlements; water and electricity supply failures impacting on public health as well as on the economic performance and sustainability of urban communities; and financial cost that will render water and related services unaffordable, and potentially causing their collapse, with the same results" (Abraham, 2018: 168). South Africa is currently experiencing harsh environmental problems related to climate change. A few years ago, for the first time in the modern history, South Africa was covered in a snow which resulted in loss of lives among citizens and a reduction in agricultural production. Furthermore, in 2017 the City of Cape Town was heavily hit by veld fires which destroyed residential, economic and tourism areas. Therefore, adaptation to climate change is an imperative factor in ensuring that the cities remain operational in the midst of climate change challenges.

#### **4. CLIMATE CHANGE ADAPTATION CAPACITY IN THE CITIES IN SOUTH AFRICA**

The South African government is divided into three hierarchical spheres of government which are the national, provincial and local government (The Constitution of South Africa, Act 104 of 1996 (henceforth referred to as The Constitution). All these spheres of government are constitutionally mandated to address the environmental problems although the local government does not have decision making rights (Asha, 2014). The absence of local government during decision making about the environment creates a policy implementation gap. Furthermore, the contestation in terms of political ideology further complicates the implementation of climate change policy. Consequently, differing political ideologies can create a situation where opposing parties with the support from

business (private sector) may palliate the structural vulnerabilities opposed to prioritising climate change governance to reduce carbon emissions (Broto, 2017). The palliation of climate change adaptation and mitigation require a unified political ideology between the ruling and opposition parties. Therefore, addressing the issue of climate change requires concerted efforts from the state and non-state actors. The South African government promulgated policies to ensure the management and protection of the environment. The National Environmental Management Act was promulgated to ensure that the environment is fully protected and the adverse impact of climate change is minimised (Mokoele and Sebola, 2018). Furthermore, South Africa formulated the National Development Plan (NDP) (2030) as the country's developmental trajectory and thus, climate change is entrenched in this plan. NDP recognises that climate change has the potential to reduce food production and the availability of potable water, with consequences for food security, migration patterns and levels of conflicts (NDP, 2012).

South Africa's legislative framework provides for environmental protection and the adverse impact of climate change. However, the outstanding question revolves on whether South Africa's local government coupled with contrasting political ideology has the capacity to ensure that cities are adaptable to climate change. The capacity of most governments to adapt to climate change is entrenched in the ability to integrate local knowledge in planning which is embodied in effective urban governance. Local municipalities are constitutionally mandated to formulate IDP documents to address the developmental needs of their constituencies. Furthermore, most developed countries have important resources (financial and human) which have the potentiality to ensure adaptation to climate change (Mokoele and Sebola, 2018). The creation of the green infrastructure can be employed as an important adaptation approach towards climate change effects such as heatwaves. In contrast to developed countries' urbanisation benefits, in the developing countries, this process takes place without institutions planning for it (Ogbazi, 2013; Mokoele and Sebola, 2018). In vulnerable cities, "climate change governance may be directed toward the empowerment of citizens capable of dealing with the consequences of disasters, so that responsibility for safety and service provision is once again displaced to the urban poor" (Broto, 2017: 9). Furthermore, the notion of multi-level governance knowledge highlight at local government is not the only urban actor that can bring about the palliation of

climate change (Broto, 2017). Various actors must be employed within local government to help address climate change. IUDF (2014: 19) identified various challenges that South African cities face in pursuit to resolve environmental problems as follows: the lack of capacity in policy implementation; the problem of environmental management and governance; inadequacy of institutional placement of disaster management function in the provincial departments and municipalities; inadequate funding for proactive risk abatement planning and activities; dearth of capacity to amalgamate disaster risk abatement into the day-to-day operation and planning of organs of state; and constraints in technical expertise and capacity to promote amalgamation at the local government level.

It is clear that local governments in South Africa are confronted with multifarious problems that paralyse their ability to adequately ensure that cities have an adaptive capacity towards climate change. The multiplicity of local government challenges coupled with the complex nature of climate change require a shift from government towards governance of cities. To ensure that climate change adaptation is implemented, there is a requirement for an effective urban governance in order to circumvent the harsh realities of the changing climatic conditions. The contemporary planning systems in addressing climate change adaptation in most South African cities does not provide the potentiality to ensure that cities have the capacity to adapt to climate change. Thus, the prospects of urban governance can be used to ensure that cities are adaptable to climate change. Interrogating the questions on how the politics of climate change reconfigure the environmental battlefield, “the idea of governance as a means to control, directs attention to the political struggles that emerges as a results of action to address climate change” (Broto, 2017: 2). Another important factor is that, scholars have discovered that there is a serious lack of clear roles and responsibilities in terms of the implementation of climate change adaptation policies (Taylor, 2016). This lack of clear roles and responsibilities create a serious problem in ensuring that cities are adaptable to climate change. Therefore, it is imperative to examine the challenges and prospects of urban governance in South Africa in the quest to ensure an effective implementation of climate change adaptation politics.

## 5. CHALLENGES AND PROSPECTS OF URBAN GOVERNANCE IN ADAPTING TO CLIMATE CHANGE

Scholars have questioned the use of urban governance within the development planning discourses more than urban management (Kearns and Paddison, 2000). These scholars have postulated that the word management means ‘to handle and train men’ to a general sense of controlling, taking charge and directing. The connotation of the word management cannot be adequately applied in the complex and dynamic cities to address the complexity of climate change. Therefore, the notion of governance was now included in the climate change adaptation discourse. According to Birkmann *et al.* (2010: 202), “even though the range of discourses and approaches identified under that label of governance has become very wide and comprises of normativisms, epistemologies and ontologies, ... some common elements can be identified in almost all governance understanding”. Therefore, the notion of governance describes various ways in which individuals and institutions exercise their authority and manage common affairs at the interface of the public, civil societies and the private sector. It is clear that urban governance’s main character is entrenched in the notion of collaborative planning approaches. Governance is important because it governs through permeable boundaries between organisations in both state and non-states actors (Kearns and Paddison, 2000; Birkmann *et al.*, 2010; Broto, 2017). This is important because it recognises their interdependence, but also improves the sharing of responsibilities within organisations for both economic and social issues.

Due to the complexity of climate change and the wide range of actors that it affects (Mokoele and Sebola, 2018), governance provide an important model of ensuring that cities are adaptable. According to Kearns and Paddison (2000: 847), “governance is about the capacity to get things done in the face of complexity” in which climate change adaptation embody such complex characters. Urban governance is profound because it has the potentiality to empower organisations and government officials by blending their resources, local knowledge, skills and purposes with other sectors. Despite this potentiality that urban governance portrays, there is still a political struggle where the politics of climate change continue to manifest (Broto, 2017). This means that addressing climate change depends strongly on the political will and political ideology of the governing party

in a country. Internationally, governments have different political ideologies within environmental debates. The conservatives have adopted the political standpoint that put emphasis on authorities, stability and comfortability on environmental status quo (Hu *et al.*, 2017). However, the liberals' political ideology "tend to perceive environmental change as a higher level of risk and even prefers to act with promoting behaviour or action" (Hu *et al.*, 2017: 125) on climate change adaptation. Therefore, urban governance provides local government with the prospects to coordinate, cooperate and collaborate with other sectors (Kearms and Paddison, 2000; Birkmann *et al.*, 2010) to address climate change adaptation.

Climate change does not only affect South Africa, but the entire world. This means that addressing climate change requires a concerted effort by not only one country, but many countries working together. The efficiency and "effective adaptation planning in urban areas is akin to a revolution in urban governance that addresses the political, economic and social determinants of poverty and climate change vulnerabilities" (Broto, 2017: 3). On the other hand, Kearms and Birkmann (2000) stated that various cities have discovered the virtue of the city-region as an important space in which they collaborate instead of being competitors within an economic arena. However, the creation of a city-region approach in ensuring that cities are adaptable to climate change is not a straight forward process. In the developing countries, the challenge is about addressing the contemporary problems (water provision, sanitation, electricity and poverty) that the locals are facing rather than focusing on ensuring the implementation of climate change adaptation policies. Furthermore, Kearms and Birkmann (2000) asserted that the socio-spatial segregation and administrative reforms which resulted in the fragmentation of the city-regional space connotes that the achievement of the desired collaboration to foster the implementation of climate change adaptation is proving difficult in many nations. One major difficulty of urban governance is that no one spatial scale is predominant as the scale at which economic and social problems can be solved. The disintegration and fragmentation of the South African government departments in fostering the implementation of climate change adaptation is derailed by the politics of climate change adaptation and political ideology. Furthermore, corruption in South Africa reduces the available financial resources that can be used in the provision of basic services and implementation of climate change adaptation policy.

### 3. CONCLUSION

With a range of actors (formal and informal) participating at different levels in decision-making at a local government, there is a need to foster a network-based instead of a hierarchical governance. For example, evolving roles of states and non-state actors, combined with new forms of political participation have in some contexts facilitated a transformation of urban governance (if only temporarily). In such contexts, institutions and the values that underpin them have played an instrumental role in aligning and reconciling interests and fostering shared paradigms of urban governance and development. However, failure to agree on a shared vision in many urban areas due to contrasting political ideologies has the potentiality to derail cooperation, even when actors share common objectives. Limited capacity and legitimacy of government agencies, weak performance, accountability mechanisms and the immaturity of political institutions can undermine urban governance and result in pervasive clientelist relations and corrupt practices. In the last three decades, parallel to the changing structure of the city, public-private partnerships in urban renewal and urban development projects have gained prominence in addressing the political face of climate change. Local government provides the subsidy, power and necessary modifications in government regulations, while the private partners meet certain project goals, take on later management tasks and share project returns with the local authority. This type of collaboration provides the local authority with the ability to attract more financial resources to urban development and increase its effectiveness in achieving development goals. This type of partnership is important within the local government to ensure that some of the environmental challenges are addressed. Although urban governance does not on its own address climate change, it fosters a collaborative and coordinative approach towards climate change adaptation.

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