Title

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<div align="center">**Bursting at the Seams: Water Access and Housing in Luanda**</div>

Introduction

Urbanization and inadequate urban services have rapidly created enormous health and housing problems for the people of Luanda, the capital and largest city of Angola. The volume of water available is insufficient and contaminated, and the lack of adequate sanitation has resulted in high levels of water- and waste-related disease. According to a World Bank Report, malaria and cholera account for over 60% of the mortality rate in Luanda.[1] Infant mortality resulting from diarrhea has reached levels of 20-30%.[2] These alarming statistics stem from an urban government that is both overwhelmed and unprepared for the massive influx of (1) migrants who fled Angola's rural provinces during the three decades of post-independence civil war and (2) migrants drawn to Luanda looking for work opportunities caused by the country's recent oil boom. These migrants tend to live in informal communities, known as *musseques*, on the outskirts of Luanda. The musseque residents still pay astronomical amounts for bad water service, and the quality of life in these communities is abysmal.[3] These shantytowns with poorly constructed housing and appalling health conditions form the periphery of Luanda's formally constructed areas. The lack of water access and proper housing in Luanda has a long history which can be traced back to the earliest days of Portuguese colonialism over 400 years ago.

This paper will examine the various ways in which the problems of water access and urban planning have evolved since Luanda's founding. It will also analyze how the massive influx of rural refugees and migrants has overwhelmed Luanda and how the city was never intended to provide water and housing on such a scale. Finally, this paper will tie the past to the present and look to the future of how water and housing problems are being addressed by the Angolan government and non-governmental organizations in Luanda following the cessation of hostilities in 2002.

The first part of this paper will explain Luanda's development since the arrival of the Portuguese in the late fifteenth and early sixteenth centuries. Portuguese slaving interests dominated the urban planning and what little development the Portuguese undertook in Luanda at the time. After the abolition of slavery in the mid- to-late nineteenth century, Portuguese Angola in general and Luanda in particular underwent changes as agricultural export replaced slave export as the primary source of revenue. Changes in Portuguese policy, coupled with attempts at industrialization and the luring of white settlers from Portugal, dominated the changing landscape of Luanda in the twentieth century. When Portugal proved intransigent in the face of decolonization, war ensued, and construction and development of Luanda were abandoned as white settlers fled after independence. The subsequent civil war amongst rival factions vying for control of newly independent Angola devastated the rural countryside and led to a massive influx of rural refugees into Luanda.

The second part of the paper will look at Luanda during the civil war and after the cessation of hostilities in the early twenty-first century and how Luanda was totally unprepared to provide services to the incoming refugees. The following questions will be addressed: Who were these migrants? What types of communities did they form in Luanda? What was the role of the government in providing social services and public

utilities during the colonial era and in the face of war and post-war reconstruction? In particular, how has the historical problem of water access and urban planning in the context of land tenure changed since the earliest days of Luanda's founding? What has this meant for the majority of Luanda's inhabitants who reside in the musseques*?*

The final part of this paper will address how the influx in oil wealth and diamond exports and Angola's projection as one of the world's fastest growing economies are affecting reconstruction in Luanda. What is being done to accommodate Luanda's post-war population in terms of housing and water access? What is being done for the musseques? This paper will end with an examination of whether the poorest residents of Luanda can truly expect housing and water improvements from peace and mineral resource wealth, or whether Luanda will continue its legacy of underdevelopment.

The Founding of Luanda

Paulo Dias founded the present-day city of Luanda in 1576, after landing on Luanda Island. He moved his camp to the mainland and began constructing Sao Paulo de Luanda on the bluff over the sea, erecting a fort, a church, and a hospital. There were already less than a hundred Portuguese in the area preceding his arrival, these predecessors mainly being agents from Sao Tome and refugees from Portugal's earlier Kongo experiment to feed the Portuguese empire's need for slaves. Having already established themselves in Brazil, the Portuguese government falsely believed that Angola would immediately offer a hidden wealth of minerals, but when these ambitions failed to materialize, Luanda took on the role of intermediary between Lisbon and Portugal's interests in India while serving as a major slaving port, mainly to serve an emerging plantation economy in Brazil. James Duffy describes Luanda in 1600 as follows: "Food was scarce, the climate debilitating, the Portuguese chronically weak and sickly. The most common traffic in the streets was half-naked slaves, many of them in chains."[4]

Luanda's weakness in terms of both manpower and Portuguese interest was defined by Dutch conquest in 1641, when the Portuguese governor ordered the evacuation of the town upon seeing twenty-one Dutch ships enter Luanda harbor. The governor feared the Dutch would plunder Luanda. At the time, Portugal was involved in a war with Spain and called upon colonial leaders in Brazil to organize a campaign against the Dutch, since the loss of Luanda would have been felt most deeply in Brazil, where the majority of slaves had been imported from Luanda's port. A Brazilian force was able to re-take Luanda and restore the flow of slaves to Brazil by 1650. The new Portuguese governor suggested issuing trade licenses to foreigners, but this idea was rejected by the government at Lisbon, which wanted Luanda and the slave trade to remain under Portuguese control.

The colonial policy of only allowing the Portuguese to trade in Luanda would have a significant impact on the growth of the city. The port was intended to serve only Portuguese interests. Non-slave Africans were restricted from the city, as Portuguese residents grew rich off the slave trade and began constructing stately homes there. As long as the slave trade prospered there was little attempt to develop Angola outside of Luanda.

The Origins of a Water Crisis

F. Clement Egerton's *Angola in Perspective* documents Luanda's long and difficult problem of accessing clean drinking water.[5] Francisco de Tavora, the governor of Angola from 1669 to 1676, was challenged to find adequate water to supply Luanda. At the time, water could only be found in stagnant, mosquito-ridden pools near the city. The island across from mainland Luanda had small pockets of freshwater which could be retrieved from the sand, but nowhere near enough to supply the town. Fresh water had to be drawn from the river Bengo, a considerable distance away, and carried in canoes until they reached Luanda. Upon reaching Luanda the canoes would be set down so the mud could settle to the bottom of the canoe, which was the most hygienic method of obtaining clean water available. De Tavora eventually created a well, lined with stone, and fitted it with a pump that worked continuously to bring up water in small buckets. The buckets were then emptied into barrels and rolled to wherever they were needed, a method of transporting water over long distances still practiced today. The poor living conditions in Luanda have contributed to a state of constant disease which has been a problem for Luanda since its inception.

Slavers braved the constant sickness because of the profits to be made in the slave trade. Egerton notes that at one time the revenue earned in export duties was enough to pay the dowry of Catherine da Braganca, the Portuguese wife of Charles II.[6] The trade was so profitable because the Portuguese had closed off trade to foreign shipping in order to maintain a monopoly on slaves, who were in high demand in the plantations of Brazil and North America. This contributed to an over-reliance on slaving as a means of trade, which became monopolized by a few prominent local Portuguese settlers. Galvao and Selvagem, and Duffy, respectively, comment on Luanda languishing for the next century as it relied primarily on slaving exports to Brazil:

> Angola was becoming the colony which most betrayed the adventurous nature of Portugal's expansion, diverting its people from their ancestral ways which tied them to the soil and inciting them to covetousness, to an uneasy trivial existence, more disposed to risk all for easy immediate gain, instead of to a slow and legitimate profit from their sober hard work.[7]

> By the beginning of the nineteenth century, the surface splendor of Luanda had begun to tarnish; the fine buildings were falling into disrepair; its streets were unattended; transportation into the interior was in a state of neglect…the population of Luanda…was made up predominantly of social castaways…The countenance of the colony, in the first years of the century, was apathy on the coast and indiscipline in the interior."[8]

Essentially Luanda and its Portuguese inhabitants were growing fat off the slave trade. With slaves pouring into Luanda from the interior, there seemed to be no need to adjust economic planning to be more long term. The short-term benefits of growing rich off the procurement and shipment of slaves would haunt Luanda's Portuguese settlers even after the slave trade was abolished.

Luanda After Slavery: The Beginning of the Housing Crisis

A visit by Winwood Reade in 1862 after the abolition of slavery describes Luanda as follows:

> The slave merchants became bankrupt, foreign coin disappeared…and people began to talk of cultivating cotton, coffee, and groundnuts…All that remains of poetry and of power is dying away in this colony. It is in its Dark Age—in the interregnum between two civilizations. When will the second begin?[9]

Duffy cites a report from Joachim John Monteiro in 1858 on how the abolition of the slave trade negatively affected the building of adequate housing in Luanda; the slave ships that no longer returned from Brazil had also tended to be loaded with timber for rafters and flooring.[10] At this time Luanda had about 11,000 inhabitants, approximately 4,000 of them Portuguese. The whites were accustomed to living in large houses of stone with comfortable verandahs and upper stories. No formal housing in Luanda seemed to have been constructed for the black Angolans; rather they were left to their own devices to construct their homes around the formal Portuguese settlement in Luanda.

Luanda was opened up to foreign trade in 1844, but the harbors were ill-equipped to handle anything other than the export of slaves. It was not until twenty years later that a suitable harbor was built. Egerton writes,

> Some idea of the change that has come about may be gathered from the figures of ships entering the port. In 1934, there were 135, with a tonnage of 846,146. The number did not appreciably increase before the Second World War, and in 1943, only 94 ocean-going ships, 77 of which were Portuguese, sailed into Luanda. In 1953 there were, in all, 685 ships, 165 of them ocean-going, and the port handled a net tonnage of 1,369,199, half a million tons less than Lobito which has an immense transit trade to and from the Belgian Congo via the Benguela Railway. In 1954, the Customs at Luanda dealt with imports of 195,015 tons, valued at 1,372,506 contos, half the total value of all imports into the country.[11]

The following figures provide some insight into Luanda's population and what the city was equipped to handle in around 1950. According to a 1930 census there were 39,000 blacks and 6,000 whites. By 1950 those numbers had increased to 111,112 blacks and 20,710 whites, tripling in 20 years time.[12] In around 1960 a hydroelectric works at the Dande River, forty-five miles from Luanda, was completed to provide water and electricity to Luanda's 130,000-odd residents. However, this primarily served the formal housing of Luanda, which was disproportionately held by white settlers. In 1950, the African settlement of Luanda was informal and there was no formal definitive boundary of an African quarter of Luanda. Mud huts of dubious condition ringed the outer edge of the formal Portuguese neighborhoods. Even in around 1950 Egerton had noticed a severe housing problem in Angola. He noted that the Portuguese government did not have enough housing for colonial officials.[13] Though the formal housing for whites was insufficient, the housing for Luanda's blacks living in informal settlements was considerably worse.

> As the white population increased and the land on which the natives lived was needed, they moved back to the level ground which is now called

Musseque. The rapid development of Luanda has resulted in an ever-increasing demand for labour in works of construction, and the city has become a magnet drawing men and women from every corner of the country. Of the four million inhabitants of the country nearly 200,000 have converged upon Luanda…The result is not beautiful, and it has its dangers… the deplorable conglomeration of insanitary huts into which the natives have crowded at Musseque…There is no such thing in Luanda as an 'official' native quarter in the sense that the natives must live there and nowhere else. Musseque exists in all its ugliness because the natives have chosen to go there. They would not now, I imagine, be allowed to set up a hut of mud and thatch somewhere between the Chamber of Commerce and the Hotel Imperio as, two centuries ago, they were allowed to do between the houses of white Portuguese, but that is a matter of town planning.[14]

Egerton goes on to note how the Portuguese authorities were systematically clearing the huts and trying to replace them with concrete dwellings, but the pace of construction was too slow and resources too scarce to keep up with demand.[15] Construction of black housing was only of tertiary importance to Portugal, which had turned its attention to luring white settlers from Portugal to develop its African colony with promises of the best jobs, housing, and land to be had in the colony. The parameters of social mobility within the colony had been laid out in the Portuguese Colonial Act of 1933, which effectively recognized the supremacy of the Portuguese over native black Angolans. The majority of blacks were denied access to the best jobs and education unless they became *assimilados*, which could be achieved by having attained a certain level of Portuguese culture. In reality, few black Angolans ever achieved this status. Forced labor had effectively replaced slavery, as free labor was required of all native men to be given to the colonial state as it deemed necessary. For instance, blacks could "volunteer" to work on state projects or plantations or they would face conscription. The intensification of white settlement antagonized long-standing racial tensions, resulting in sporadic violent outbreaks of resistance to colonial rule in the first half of the twentieth century, and culminating in outright war for independence by the 1960s.

War and Luanda's Population Explosion

Ronald Chilcote has described Luanda as "the crucible of Angolan nationalism, for there were located the major schools, churches, and social groupings that produced political activities."[16] Luanda was the center of the *Movimento Popular de Libertação de Angola* (Movement for the Popular Liberation of Angola, or MPLA), which saw itself as the sole heir to an independent Angola after fifteen years of fighting a war of liberation against the Portuguese colonial state until independence in 1975. Portuguese settlers, fearing reprisals for centuries of maltreatment of Angolans, fled Luanda after independence, and all construction and commerce in the city was immediately halted. Most settlers left with whatever they could take with them. A 1989 report in *The New York Times* contains the following description, "Next to the main hotel in Luanda there is a 10-story skeleton of steel and concrete with a construction crane on top. It has been

that way since 1975."[17] The report further details how the city's construction and economic activity completely shut down with the withdrawal of the Portuguese:

> This is Roque Santeiro, the hub of commerce in Luanda. It is on top of what used to be a garbage dump, and by the end of a tropical day it is unpleasant…But for Angolans it is a big economic step upward. "People think this market does miracles," an Angolan explains. "You can get anything here." To understand why the Roque Santeiro is valued so highly you have to walk around Luanda. It is a fair-sized city, with lots of shops. But almost all of them are shut, and have been since the Portuguese left in 1975. Downtown there is virtually nothing for sale.[18]

Another *New York Times* report documented the appalling conditions for those on the outskirts of Luanda during the civil war and quoted Andrew Natsios, the Bush Administration's expert on foreign disaster relief in Angola: "Mr. Natsios told reporters he had seen the effects of the drought during a visit to the affected areas. At one location, he said, he saw children who had eaten only two or three meals in a week. At another village, five children had only mice to eat in the preceding days."[19]

Luanda remained relatively untouched by violence, but was forced to accommodate the trauma affecting the countryside where the war was primarily fought for close to 30 years after independence in 1975. The main hospital was overwhelmed during the civil war:

> In the fly-blown wards of the country's main hospital, a pillared colonial hulk overlooking Luanda, doctors are so short of medicine that instead of writing prescriptions, they write shopping lists. Patients with money pass the lists to relatives, who then search for stolen antibiotics or bandages in the stalls of the Roque Santiero market.[20]

Luanda's government was ill-prepared to accommodate the refugees streaming into the capital looking for a safe haven from the near-constant fighting in the rural provinces. Refugees took up residence in homes vacated by the Portuguese and rapidly increased the size and scope of Luanda's informal settlements, the musseques. Luanda's pre-war/pre-independence population was estimated at under half a million inhabitants. That number dropped upon independence, when Portuguese settlers fled for Portugal and South Africa, so by 1994 the city had grown to five times its pre-independence size despite the facts that (1) colonial Luanda's urban services could barely keep pace with the white settler population and (2) commerce and construction ground to a halt after the skilled-white exodus. What little urban services existed following independence declined even further during the war in the face of such massive urbanization. The following report from 1994 illustrates just how bad the situation in Luanda had become:

> Life is not much better in Luanda. It is estimated that 2,000 children live on the streets. Many are war orphans. Others come from provincial capitals in the thick of the fighting tossed into the holds of cargo planes by desperate parents. Dressed in rags, they spend nights in the sandy strip along the bay and their days begging and foraging for food through mounds of garbage. Luanda's 2.5 million people also lack electricity. A month ago the rebels severed a major power line from the Cambambo

Dam, and now aging diesel turbines crank out just enough power to feed the central district with rotating blackouts.[21]

War raged in Angola outside of Luanda for close to thirty years following independence. A peace accord was signed in 2002, following the death of Jonas Savimbi, leader of *União Nacional para a Independência Total de Angola/*UNITA, effectively ending the war until the present. Before the war, Luanda was a city that had been built to handle 300,000 Portuguese settlers who dominated all aspects of the economy, from government officials to waiters and taxi-drivers. In 2002 Luanda was the capital of independent, war-torn Angola and found itself coping with close to 3 million inhabitants who had set up informal housing—musseques—around the periphery of Luanda's more formal concrete buildings that had existed since the colonial era.

The Challenges Facing Luanda's Population

At the end of the civil war, Luanda faced a massive shortage of clean water and adequate housing. When the war ended the government was able to more effectively control the diamond and oil export trade, which had previously funded the conflict, thus earning valuable foreign exchange. In *Angola from Afro-Stalinism to Petro-Diamond Capitalism,* published in 2001, Tony Hodges, describes how Angola's wealth in natural resources was being used to fuel a conflict while Angolans sank further into poverty, as well as how the Angolan civil war was used by the *Movimento Popular de Libertação de Angola/*MPLA as a cover for its lack of fiscal accountability. Moreover, the enormous revenue to be earned through mineral wealth provided the MPLA with a strong motive to fight as long as the mineral wealth could be exploited absolutely.[22]

The Guardian confirms this massive allocation of mineral resource wealth to fighting the war in a 2003 report:

> For 27 years it had an explanation: a civil war between the formerly Marxist government and South African-backed UNITA rebels ravaged one district after another, destroying what little the Portuguese colonists had left behind. Oil money, about 90% of state revenue, was needed to buy arms, said the government.[23]

What is being done with this money since the war ended in 2002, particularly in the areas of housing infrastructure and water access? A 1997 World Bank report states:

> The lack of urban services is most common in the poorer communities that have developed in recent years on the periphery of the cities. In Luanda, not only do the residents pay many times more for the services than residents in other parts of the City, but the services that they receive are usually inferior. Luanda's water supply system is in very poor condition and the operating company, Empresa Provincial de Agua de Luanda (EPAL), is unable to perform the normal functions of a company, such as providing regular maintenance, issuing bills, making collections, and maintaining accounts and records. The two water production plants and the treatment plants, in Luanda, produce about 50% and 30% of their respective nominal capacity, and the distribution network supplies water

to about 25% of the residents. The majority of the population, and virtually all of the poorer communities depend on private suppliers of truck-distributed water that is frequently untreated and can cost up to 10,000 times more than the water distributed by EPAL.[24]

The report goes on to mention the overburdened Luanda sanitation system and how the lack of access to clean water, coupled with inadequate sanitation services, contributed to deteriorating health, environment, and poverty in and around Luanda. The report also mentions that the government, as of 1997, planned to privatize the water supply centers in Luanda. Before the end of the war, these problems were attributed to the lack of capital and inadequacy of taxation on the part of the local government to fund an overhaul of the water crisis.

A more recent World Bank report provides the following statistics:

Recent economic performance continued to be strong, with both the oil and non-oil economy performing well. GDP has doubled every third year, from 19.8 billion in 2004 to 30.6 billion in 2005, jumping to 41 billion in 2006 and reaching 60.4 billion in 2007. The GDP real growth rate of 22.3% in 2007 reflected the real growth of 20.4% of the oil sector and 25.7% of the non-oil sector, including growth of 37% in construction, 32.6% of manufacturing and 27.4% of agriculture.[25]

With such encouraging statistics and the war effectively over, how has the government responded to the crisis in housing and water now that it is no longer burdened with security concerns? How is Angola's natural wealth from oil and minerals being used to address the housing and water crisis in the capital?

Formal Housing Construction in Luanda: Effects on Slums and Response

Since Angola's government has only had six post-war years to deal with housing and water problems and since the funding is closely tied to changing events in both Angola and the rest of the world, it is difficult to do more than suggest general patterns that have emerged in recent years. The government has announced large-scale projects to address the water and housing crisis in Luanda. Foremost amongst these is the China International Fund's (CIF) large-scale national reconstruction project, which broke ground in 2006 and aims to build 215,500 housing units across the country.[26] Though this is a massive undertaking, questions remain as to which sectors of the population will be given these units, the quality of the units, and how many individuals each can one accommodate. The project is being built 25 km away from the old downtown Luanda; what effect this will have on the livelihood of those who currently live in Luanda, particularly in regards to the likelihood of being placed further away from their places of work, remains to be seen.

Evidence exists that the transition from slums to formal housing will be rocky. A Human Rights Watch report from 2007 notes that between 2002 and 2006 there were 18 mass evictions in the slums of Luanda, affecting 20,000 people.[27] Police and private security firms swept through the slums forcibly removing residents and destroying swaths of slum housing. Those who were evicted were given no compensation upon

destruction of their homes. The government was able to take advantage of the informal nature of these settlements, as the musseque residents had no legal tenure rights: "Most of the evictees are poor and vulnerable Angolans; their houses were demolished and many were left only with the clothes they were wearing," said Luiz Araujo, director of SOS Habitat, an Angolan non-governmental organization that focuses on housing rights. "Millions of Luanda's residents will remain vulnerable to forced evictions unless the government takes immediate steps to end forced evictions completely and address the insecurity of land tenure in this city."[28]

These slums were the result of centuries of neglect on the part of the Portuguese colonial administration, as little was done to address informal land tenure. Nor has the post-colonial Angolan government done much to address this issue; instead it knocks down slums when it deems the action necessary to the public interest, defined as government projects deemed of particular significance in reconstruction. What this means is that the musseque residents have had little recourse if the government decides to evict them from their settlements.

The severity of this situation led to the formation of SOS Habitat, which supports the urban poor of Luanda in obtaining legalization of their land and homes in the face of evictions made by private landowners and the Luanda government. It grew out of the action of musseque residents to address the evictions stemming from their precarious tenure situation.[29] SOS Habitat seeks to educate musseque residents about their land rights. SOS Habitat works with civil society groups in Luanda's impoverished neighborhoods to push for more effective legislation and compensation for the displaced. SOS Habitat also fosters assertiveness by providing legal counsel to those displaced by government evictions.[30]

The Water Crisis: Effects on Slums and Government Response

The China International Fund is also at work on a large water/hydroelectric project drawing energy and water from the nearby Kwanza River. A December 2007 report from the Center for Strategic and International Studies states that "in 2005, China International Fund Ltd. (CIF) a private Hong Kong-based institution, extended $2.9 billion to assist Angola's postwar reconstruction effort. This credit facility is managed by Angola's Reconstruction Office, *Gabinete de Reconstrução Nacional* (GRN), which is exclusively accountable to the Angolan presidency."[31] The report also mentions that rehabilitation of electric and hydroelectric infrastructure has resulted in new clean water access for 60,000 Luanda residents.[32] In 2003 Angola's Cabinet Council announced a $98 million plan for "the improvement of Luanda's water supply and distribution. A cabinet document released to the press states that the project will demand the elaboration of a guiding plan for Luanda water supply and sanitation."[33]

Though there are signs of optimism, the water situation in Luanda is still dire. Historically, Luanda has had poor access to clean freshwater. Today Luanda's musseque residents depend on private tankers for their water supply and often have to walk considerable distances from their homes in the musseques to the water distribution points. The water is frequently untreated, and most slum residents lack knowledge about the basics of water treatment.[34] The musseques have developed on top of piles of

garbage, making the installation of standpipes impossible. UNICEF has attempted to make residents aware of water treatment options, but the reach of their efforts is limited.[35]

The state of sanitation in the slums has compounded the situation. With no access to latrines or toilets, the urban poor in Luanda frequently urinate in public and defecate in plastic bags to be thrown away later. Human waste seeps down from garbage pits into standing pools of water that are used by residents. A massive cholera outbreak in 2005 was directly attributable to the inadequacies of the water and sanitation system.

Like the housing crisis, solutions to the water crisis are being addressed by both the government and non-governmental organizations, though on different levels. As mentioned earlier, the government has attempted to privatize the water distribution system in hopes of making it more efficient, yet it will take a considerable amount of time to rehabilitate the network to accommodate the population. In the meantime, NGOs have attempted to address the problem on a more localized level. A 2005 report from the Integrated Regional Information Networks (IRIN) notes that the Luanda Urban Poverty Programme (LUPP)—a partnership between CARE International, the Development Workshop, One World Action and Save the Children UK—concentrates on providing basic services and helping local residents to find solutions to a host of other problems. In Hoji-ya-Henda, LUPP has supported the creation of an Association Committee of Water (ACA), which does everything from building the water points and managing them to liaising with the Luanda provincial water authority (EPAL).[36]

LUPP is an excellent example of steps by government and NGOs to combat the situation. The 2005 IRIN report quotes a musseque resident:

> "The situation is much better now. Before, we had to walk for a long time to collect water, and then it wasn't clean—many people were sick. But now, while there's still sickness, we cannot blame the water, and there are far fewer cases of diarrhea—that's why there are so many people here," said Josefa Eduardo, pointing to a long line of women patiently waiting to fill their buckets.[37]

While progress is being made, it is difficult to overhaul a water distribution system that is outdated and was never designed to handle the volume of the musseque population. The result is a balance between government steps to overhaul a system in difficult circumstances and the NGOs' efforts to provide highly localized solutions by creating water distribution points in the middle of these informal settlements. The solution is a delicate balance of addressing the water needs of a population whose existence is not secured by legal land tenure. Bolay sums up this problem of balance:

> Nevertheless, the solutions are not cut and dried: legal versus illegal, formality versus informality. They will depend on the political will of the authorities, the lobbying and negotiating capacities of the affected populations and on the innovative measures implemented to regulate land ownership. This perhaps lies at the crux of the problem: the vast majority of the urban poor suffer precarious forms of territorial integration, leaving much scope for conflicts between urban investors and the social needs of local inhabitants.[38]

Conclusion

For nearly four centuries, Luanda was constructed to serve Portuguese interests. The lack of planning on the part of the Portuguese colonial state to deal with the musseques created disastrous results when Luanda became a place of refuge after independence. The burden on the historically inadequate water distribution systems has increased exponentially. The earliest formal housing was never intended to accommodate the African population of Luanda, and housing was always struggling to keep up with Portuguese demand. Little was done during over 300 years of Portuguese rule to improve housing and water for Luanda's African population.

For the first time since Luanda's founding, the problems of clean water access and decent housing for the urban poor are being seriously addressed. Though the water and housing crises this paper addresses are colossal, the government has at least acknowledged its responsibility to bring better services to the residents of Luanda. Massive housing projects are under construction and enormous sums of money have been directed towards rehabilitating Luanda's water distribution system. NGOs are playing a vital role in securing land tenure for the musseques and in creating water distribution points throughout these massive informal settlements. Yet these projects have not occurred without significant problems.

NGOs such as SOS Habitat are assisting the urban poor by educating them about their land rights, yet progress in securing these rights is ambiguous; the government in Luanda has not forcibly evicted residents in over two years, perhaps suggesting that it is merely biding its time to let the protest from the evictions subside until it undertakes further such actions. NGOs and community action in the face of such informality perhaps represent the musseques residents' best chance of avoiding further eviction, though at present they are still subject to the will of the local authorities.

Access to clean water services is improving, but construction and rehabilitation remain slow in the face of the enormity of the communities these water networks will need to serve. It is only since the war has ended that the Angolan government has been able to use part of its massive mineral wealth to undertake urban reconstruction and expanding water access to the massive population in Luanda. Like the housing situation, the response to the water crisis is being addressed at the governmental and non-governmental level. The government has announced large-scale projects to rehabilitate the system, but progress is slow in the face of such an enormous task. Non-governmental organizations have picked up a share of the responsibility as well, cooperating with and working outside of the government to bring water distribution points to the musseques.

Since the reconstruction effort is so recent it is difficult to predict what improvements the musseque residents can expect in the near future. Angola's government is not particularly transparent about where the mineral wealth is being spent. As of 2008, Angola's government is ranked 158th out of 180 worldwide governments in fiscal transparency,[39] meaning that accurate figures detailing the government's commitment to reconstruction are difficult to come by. For the first time in Luanda's history the urban poor's access to decent water and housing is being addressed by the government, and this is cause for optimism, but government commitment remains to be seen until a more open and transparent record of accountability exists to determine how

the wealth from Angola's mineral resources is being spent on Luanda's centuries-old problem of inadequate housing and clean water access.

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