Cape Town Taps Run Dry: Government's Willful Ignorance Exacerbates the Problem

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Abstract: *The water crisis of Cape Town, South Africa, in the mid-2010s revealed serious governmental corruption and damage, which ultimately had serious consequences on the outcome of the drought. The government implemented the Critical Water Shortage Disaster Plan in an attempt to fix the problem, but it ultimately exposed several institutional issues at a governmental level concerning leadership and misconduct. This paper seeks to highlight the issues brought on by the drought and the governmental failures and problems that were exacerbated by this national emergency.*

Keywords: Cape Town, water crisis, South Africa, climate change

The 2015-2018 water crisis of Cape Town, South Africa, shook the world as one of the worst droughts in the past century. However, it came as no surprise to many as major cities around the world were facing similar water droughts due to climate change. What took people by surprise was how close this city was to running out of water and having to turn off the taps to everyone in the city, a day the government coined as Day Zero (Winsor). On the surface, it looked like any other drought that resulted in decreased water usage and water restrictions. What most people didn't know was that there were some serious governmental issues that lay beneath the surface, all of which had some detrimental effects on the outcomes of this drought. Much has been written about what went wrong in Cape Town. Wessel Visser, professor of history at the University of Stellenbosch, concluded that failures at multiple levels of government caused the water drought to turn into a crisis, while Mike Muller, fellow at the South African Institution of Civil Engineering, concluded that the lack of planning and responsive political leadership caused the dramatic decrease in reservoir

water levels. Johan Enqvist, researcher at the University of Cape Town, even emphasized that the government needed to do a better job at understanding their people's lived realities in order to properly provide help during the water drought. To understand the crisis more fully, two additional essential elements need to be considered: the Critical Water Shortage Disaster Plan and the implementation of the plan. The analysis that follows will show that the Cape Town municipal government willfully wore blinders and refused to acknowledge existing problems in their water management. It becomes apparent how oblivious they are in looking at the Critical Water Shortage Disaster Plan where they overlooked the existing efforts of their citizens in water insecure areas, unstable infrastructure, climate change, and the overall severity of this water crisis. The lessons learned from the missteps that were taken by the Cape Town government during the water crisis should be heeded worldwide to prevent history from repeating itself.

The city of Cape Town gets its water from six major reservoirs that are found in the Cape Fold mountain range that lies east of the city. They also use miniscule amounts from rivers, groundwater extraction, and springs (City of Cape Town 7). Water can be drawn from the reservoirs until they get down to 10% capacity (Bosman 7). After that point, the water is no longer safe to drink. Even though water levels were dropping quickly in the reservoirs since summer of 2015, the government waited to release an official water plan until October 2017 to regulate the amount of water the city used to help conserve their diminishing water supply. They called this the Critical Water Shortages Disaster Plan (Bosman 3). This plan was written by the Department of Safety and Security, and it outlined a strategy for a three-phase operation that had varying levels of water regulations that increased in severity according to supply levels. The government would decide when to progress to the next phase based on how critical the water crisis became. Each phase was designed to tackle a specific problem. The three phases were titled Preservation Restrictions, Disaster Restrictions, and Full-Scale Disaster Implementations. These phases included imple-

menting water restrictions, installing water management devices, and charging fines for excessive water use (Bosman 5-8). A summary written by Richard Bosman, the Executive Director of the Department of Safety and Security, was published on the resources department page on the Cape Town government's official website (Bosman 1-2). The analysis uses the Critical Water Shortage Disaster Plan because it was the government's main response and communication to the citizens about what they planned to do to help combat the water crisis.

The implementation of the Critical Water Shortage Disaster Plan ran into many pre-existing government-based issues that were in need of attention, such as preference of corporate interest over public interest, water and infrastructure inequality, and inattention to climate change effects. For example, there was a suspicious lack of attention to how Cape Town's public springs were being used. The city owned about 70 natural springs, but the public only had access to two of these. Meanwhile, the South African Brewing Company and other commercial companies were able to access as much water as they needed to continue making product (Robins 15). There is also evidence of the government choosing to ignore the inefficient use of water in agricultural sectors, which had a significant impact on the rate of decrease of the dam water level (Taing 530). Many of the residents already had to deal with their own version of Day Zero with little to no help from a government that was focused on the wants and needs of big business, instead of the water and infrastructure inequality that existed.

The water and infrastructure inequality in South Africa had been an issue for decades since the end of British colonization. In South Africa's Water Governance Hydraulic Mission (1912-2008) in a WEF Nexus Context, Johann Tempelhoff outlines the history of the discrimination by whites against people of color in South Africa. The Native Land Act of 1913 was the first law that outlined the racial discrimination in accessing land and water for people of color. As a result, the first segregated neighborhoods were formed because people of color were run out of cities on the basis of water with white officials claiming that

illnesses could be spread to whites through the water in their new sanitation system (Tempelhoff 65). As of 2016, over 60% of Cape Town's population, the majority being people of color, still lived in these impoverished communities with little access to clean water, stable jobs, or reliable healthcare . Over the years, the municipal government refused to upkeep and develop the infrastructure in these communities, especially the water pipes (Fogel). Johan Enqvist and Gina Ziervogel, researchers of environmental and geographical science at the University of Cape Town, address some of the problems that these underprivileged communities have had to endure in "Water Governance and Justice in Cape Town: An Overview" where they stated, "Addressing inequality is partly a matter of finding new technical solutions for piping water into informal settlements, but more broadly the situation is a result of political priorities which have historically often catered to the interests of rural, commercial, white farmers" (Enqvist and Ziervogel 1363). They believed these communities were disadvantaged because the government constantly denied that there was an actual problem to begin with. While Enqvist and his colleagues agree with their previous article "Informality and Water Justice: Community Perspectives on Water Issues in Cape Town's Low-Income Neighborhoods" that there was some significant discrimination against people of color, they contradict each other in regards to the government's attention to the problem. For example, Enqvist claims "South Africa's subsequent democratic government has attempted to uplift previously disadvantaged groups, but this was undermined by widespread corruption as well as efforts to promote economic growth and international competitiveness simultaneously" (Enqvist et al. 4). The government's inaction with regard to the water infrastructure of poor communities of color greatly contributed to the severity of the water crisis in these areas.

The water inequality problem was addressed in the Critical Water Shortage Disaster Plan, but more in a sense of suggesting that these inequalities needed to be prevented rather than acknowledging that they already exist. Executive Director

Bosman pushed the involvement of all citizens to help stop the effects of this water crisis. He urged "If we don't pull together now and drive down water usage even further, we face the risk of disrupting the daily lives of our households and businesses" (Bosman 1). Bosman described how there was a risk of disrupting citizens' lives, but he didn't acknowledge that there were hundreds of families in lower income neighborhoods whose lives had been disrupted by water shortages long before the drought. These people have had to work together to fix broken pipes and organize distribution sites for water, often without any help from the government (Robins 6). As Bosman goes on, he continually fails to recognize these pre-existing efforts. He says, "The drought and actions required to get Cape Town through a difficult time are everyone's responsibility, and while the city will continue to lead this process, all residents are going to need to contribute and to take leadership in their own communities" (Bosman 2). Bosman was trying to instill hope in the people that they would all get through this disaster if they all worked together and encourage other members in their community to follow the water restrictions in the disaster plan. The reiteration that the city would "continue" to take the lead in preventing a water crisis contradicted the fact that this was the first formal plan and public communication drafted to help combat the effects of the drought. Meanwhile, communities had worked together to set up communal distribution sites and helped each other keep their water usage levels down long before the government started taking initiative (Robins 6).

The failure of the municipal government to take responsibility occurred on more than one front. This is especially true with warnings made by scientists, who have been able to track the effects of global warming and population growth. Wessel Visser, author of "A Perfect Storm: The Ramifications of Cape Town's Drought Crisis," found that warnings were given as early as the 1970s stating that the government needed to take preventative action to conserve water. This was before climate change was widely recognized as a huge problem, so this report was based solely on the rate of population growth and the rate

of distribution from the water supply (Davies and Day). Decades later in the late 1990s, this problem arose again from an anonymous statement who says "Contributing to the problem is the fact that since 1995, Cape Town's population has grown by 55%, but over the same period, dam storage has increased by only 15%" (qtd. in Visser 570). Johan Enqvist and Gina Ziervogel came to a similar conclusion in their article about these early warnings. They believed that the government knew and understood the warnings of a potential water crisis, especially the risks of only using water from the dams, but they didn't have the authority or the money to fund exploring other water sources, like groundwater and desalination (Enqvist and Ziervogel 1365).

Even though no change was made to the management strategy of water resources in the years after these warnings were released, the government did track the water levels in their yearly status report. In 2017, Mike Muller in his article "Understanding the Origins of Cape Town's Water Crisis" analyzed the 2007 Western Cape Water Supply System Reconciliation Strategy and the subsequent yearly status reports in depth and concluded that the government planned to intervene if necessary. Muller analyzed the progression of the water crisis, comparing the reports to what was actually happening. In 2007, the Department of Water Affairs published a water plan called the Western Cape Water Supply System Reconciliation Strategy to outline their plans to help with water conservation and demand management (Van der Berg et al. 6). From 2007 to 2014, no major problems occurred. The government took an overly optimistic viewpoint of their current situation and overestimated how well their public and corporation conservation efforts would do in the future. An example of this overly optimistic viewpoint is shown in their October 2014 status report. The report claimed, "Due to the good winter rains and the fact that most of the dams of the Western Cape Water Supply Scheme (WCWSS) are nearly full, there is no need for implementing restrictions" (Muller 14). The continued overoptimism narrowed their window of opportunity for a diversity of intervention options. When the

drought intensified in 2017, they were only left with conservation options that were too small to make enough of an impact. Although Bosman, speaking for the city in his 2017 summary of the Critical Water Shortage Disaster Plan, never addressed how the government prepared for this water drought, he did make it clear how unexpected it was, claiming "Getting through this unprecedented drought remains our priority" (8). Bosman's statement was designed to show the commitment of the government to addressing the water shortage in Cape Town. However, evidence found in Visser's research supports the fact that the government had been warned about a drought of this size and severity by multiple environmental groups several decades before the drought arrived (Visser 568). The facts show that the government chose not to act on the likelihood of a significant drought. Unprecedented should not mean unexpected.

The government's inaction also extended to their lack of negotiation for funding of various water projects. In 2011, the new Western Cape Water Supply System Reconciliation Strategy outlined the need for additional water management technologies and augmentation sources in the upcoming years, including desalination as an additional water source (Western Cape Strategy Steering Committee 3). However, the Critical Water Shortage Disaster Plan presented water restrictions as the city's main course of action against the water crisis and gave up on investigating other water sources (Winsor). It stated, "The disaster plan for managing critical water shortages adopts a pessimistic approach and assumes very little additional supply will arise from water augmentation measures, such as desalination and increased ground water extraction" (Bosman 4). Although we know that there were political tensions between national and local governments that may have influenced the severity of budget cuts in 2011, the local government chose not to fight for the necessary funds because they believed there wasn't a need to fast track other water strategies or seek other means of accomplishing the increase in water capacity needed for their anticipated population growth (Western Cape Strategy Steering Committee 3). In the time between the 2011 Reconciliation

Strategy and the 2017 Disaster Plan being released, they showed a lack of foresight that climate change could lead to many different outcomes. The government inaction in response to the data that the scientists were providing made a dire outcome was more likely for Cape Town.

History has painted a clear picture of the development of the 2017 Cape Town Water Crisis. The analysis of the Critical Water Shortage Disaster Plan allows for the conclusion that the plan was a last ditch effort after years of mismanagement by a government who deliberately favored corporate sectors, was unwilling to address the structural racism present in the water infrastructure, and interpreted scientific data with continued overoptimism regarding water resources and demands. The available options were limited in number and insufficient in scope to deal with a drought of this magnitude.

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