Hydropolitical potentialities in a post-'Day Zero' Cape Town: "Sensemaking" and the Cape Flats Aquifer

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Abstract

In the context of the climate crisis, water as a natural resource is under threat globally, and the Global South is of critical interest for political ecological studies. This article argues that environmental crises such as the "Day Zero" drought in 2018 in Cape Town (South Africa) can create possibilities for reformulating the deeply unequal hydropolitics stemming from colonial and apartheid regimes. The drought has enabled the politicization of underground water, examined through an ethnographic study of a small-scale farming organization in the Philippi Horticultural Area (PHA) of Cape Town. While tracking ways to secure the protection of natural resources such as aquifers in urban areas, the article further considers how such forms of activism around underground water have sought to "make the invisible, visible," thereby developing more inclusive forms of sensemaking. By providing an analysis of activism taking place during and after a period of acute water scarcity, it contributes to scholarship on emergent political ecological mobilisation in the climate crisis in the Global South.

Keywords: Water, sensemaking, Day Zero, crisis, environmental justice, hydropolitics

Résumé

Dans le contexte de la crise climatique, l'eau est une ressource naturelle menacée, et les cas dans le Sud global constituent un site d'intérêt clé pour les écologistes politiques. Cet article soutient, dans le contexte de Cape Town (Afrique du Sud), que les crises environnementales telles que la sécheresse "Day Zero" en 2018 créent des possibilités de reformuler les hydropolitiques profondément inégales issues des régimes coloniaux et de l'apartheid. Une étude ethnographique d'une organisation agricole à petite échelle montre comment la sécheresse a catalysé l'action pour protéger les sources d'eau souterraines dans la zone horticole de Philippi (PHA) au Cap. La protection des ressources naturelles telles que les eaux souterraines dans les zones urbaines "rend l'invisible visible." L'activisme a eu lieu pendant et après une période de grave pénurie d'eau, et a constitué une forme de mobilisation politique et écologique contre la crise climatique.

Mots-clés: Eau, sensemaking, Day Zero, crise, justice environnementale, hydropolitique

Resumen

En el contexto de la crisis climática, el agua es un recurso natural amenazado, y los casos del Sur Global son un lugar clave de interés para los ecologistas políticos. Este artículo argumenta, en el contexto de Ciudad del Cabo (Sudáfrica), que crisis medioambientales como la sequía del "Día Cero" de 2018 crean posibilidades para reformular la hidropolítica profundamente desigual derivada de los regímenes colonial y del apartheid. Un estudio etnográfico de una organización agrícola a pequeña escala muestra cómo la sequía catalizó la acción para proteger las fuentes de agua subterránea en la Philippi Horticultural Area (PHA) de Ciudad del Cabo. Proteger recursos naturales como las aguas subterráneas en zonas urbanas "hace visible lo invisible." El activismo tuvo lugar durante y después de un periodo de aguda escasez de agua, y fue una forma de movilización política ecológica contra la crisis climática.

Palabras clave: Agua, sensibilización, Día Cero, crisis, justicia medioambiental, hidropolítica

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1. Introduction

South African society is increasingly characterized through the lens of "crisis." From the crisis of the imploding South African state laid bare through the protracted Judicial Commission of Inquiry into Allegations of State Capture (Zondo, 2022) (known colloquially as the Zondo Commission) to the intersection of multiple crises seen through the COVID-19 pandemic. As Baumgardt & Robins (2023) point out, however, each of these crises are temporally dissimilar. While the COVID-19 pandemic captured both national and international attention, chronic crises such as gender-based violence, structural poverty and inequality, widespread unemployment, HIV/AIDS and everyday forms of violence receded from public discourse. Meanwhile, by the time the World Health Organisation (WHO) declared that COVID-19 "no longer constitutes a public health emergency of international concern" (WHO, 2023), the public discourse had shifted to other concerns and crises. Within a milieu of competing crises, the escalation of the degradation and exploitation of environmental resources has been emerging as one of these. In the context of the Cape Town metropolitan area in the Western Cape Province, these ecological concerns could be traced back to the establishment of the Cape as a refueling station in 1652, or what has been termed the inception of the age of the "white settlers" (Elphick & Giliomee, 1979) which is globally characterized by dispossession and terraforming. This history, based on extractivism and the commodification of natural resources, embeds the current political ecology of the Western Cape and is similar in most postcolonial nation-states.

This article focuses on one analytically and regionally bound crisis; the Western Cape Water Crisis, caused by both a drought and overuse of water, which was most acutely experienced from 2017-2018 in the Western Cape Province.[2] By tracking how historical accounts of the control, use, and exploitation of environmental resources intersected with the politicization of water, it further explores how the context of Day Zero made possible a reconfiguration of the political ecology of water. It illustrates the repertories of activism emerging from a group named the Philippi Horticultural Area (PHA) Food and Farming Campaign (PHA Campaign), which focuses on water conservation and "just"[3] (Boelens *et al*., 2018) use of natural resources in Cape Town. It tracks how the group was able to leverage the crisis around the drought to legitimize its campaign. This article forms part of a larger project on the political ecology of water and natural resources in a period of climate crisis in key metropolitan areas in the African continent; data presented were collected during a period of three years of ethnographic research with the activist group between 2019-2022.

2. Colonialism, temporality, and crisis

Water access for the global middle class is largely uninterrupted and imperceptible, without a breakdown of water infrastructure or water scarcity (Dos Santos *et al*., 2017; Sultana & Loftus, 2020). Through an urban political ecological lens, however, questions of power dynamics, poverty, justice and inequality in the control of and access to water resources can be raised (Lawhon, Ernstson & Silver, 2014; Ernstson & Swyngedouw, 2019). For a significant proportion of Cape Town residents, the drought was the first time in which the seamless access to water in the household had the possibility of being disrupted (Robins, 2019). This, of course, has led some to note the disjuncture between narratives which characterize the Western Cape as a site of "plentiful water" which caught the attention of the Dutch East Indian Company in the 17th Century, and the troubling current state of water provision (Enqvist & Ziervogel, 2019; Fash, 2022; Green, 2020). Through engaging and working with the concept of "sensemaking", the varied relations, sensibilities, and imaginaries that exist between diverse residents in relation to water in Cape Town will be explored. As this article will show, sensemaking is mediated through class position, and further by access to and the control of water.

Day Zero marked a significant disruption in the broader historical narrative around water provision in Cape Town (Table 1). While water access had been stratified racially or through class since colonial conquest

[2] While the drought was acutely experienced and associated with the Cape Town metropolitan region, the water scarcity has affected many other areas, with some towns in the neighbouring Eastern Cape Province experiencing continued water scarcity, long after the "Day Zero" moment passed in Cape Town.

[3] "Just" water use in this article is used to gesture toward water provision, access, and control that is attuned to the historical dispassion and the entrenched extractive relationship with water ushered in by the colonial regime.

(similarly to most postcolonial contexts), disruption of access across society had historically not taken place on such a scale as it did during the drought. This article explores the transformative potential of the "Day Zero crisis", the Day when municipal water would be shut off, through this framework. Some have argued the significance of Day Zero is derived from its exposure of the ineffective water governance by the City of Cape Town (CoCT) (Brühl & Visser, 2021). Others have argued it illustrated the overreach of the CoCT's plan to install prepaid water meters across the city (Millington & Scheba, 2020), critiqued as a form of neoliberal political technology (Von Schnitzler, 2008). This article locates its contribution in relation to the momentary destabilization of the political economy of water in a major metropolitan city. While wealthy citizens quickly sunk boreholes to mitigate the possible interruption of water supply (Robins, 2019, p.14), a brief moment existed where the livelihoods of the wealthy and poor alike were impacted by large-scale regulation and restriction of water use. This moment was surreptitiously followed up with the entrenchment of a class-based and racialized political economy of water.

Date	Event
2015	City of Cape Town dams decline from 71.9% in 2014, to 50.1%
1 November 2016	Level 2 water restrictions are introduced (20% tariff savings introduced)
1 February 2017	Level 3B water restrictions (30% tariff savings introduced)
1 June 2017	Level 4B water restrictions (87 litres per person per day limitation)
3 September 2017	Level 5 water restrictions (87 litres per person per day limitation; further restrictions on use of water)
February 2018	Level 6B water restrictions (50 litres per person per day limitation)
Mid-late 2018	Good winter rains, gradual reduction of water restrictions as dam levels improve

Table 1: A summary of the water restrictions from 2015 to 2018, spanning the duration of the Day Zero "crisis."

Even a temporally bracketed crisis gives rise to the possibility of transformative change; a temporary rupture in "normality" can thus be productive (Roitman, 2014; Roy, 2020). While some have focused on how crises can lead to exploitation by a neoliberal agenda (Klein, 2007), the article explores how an activist group 'worked' the Day Zero crisis to its benefit (Wingfield, 2022a). The PHA Campaign is an activist group operating in a horticultural area which has been fundamental to the food security of the broader Cape Town area (Figure 1) since the 1850s. The PHA, according to a report commissioned by the Western Cape Department of Agriculture, is a "vegetable pantry" where over 50% of Cape Town's vegetables are grown (Western Cape Department of Agriculture, 2018). Much of this production stems from commercial[4] farmers in the area, who

[4] Acknowledging the contestations of what leads to a farmer being characterized as "commercial" or not, this article uses the distinction used by the Western Cape Government's commissioned report on the PHA, the "Indego" (2018) report. While no clear criteria are established for this definition, the report highlights the scale at which land is being farmed, relative to the PHA's area of just under 2,000 ha (Western Cape Government, 2018: 56).

are largely descendants of German settlers brought in to establish a viable farming area and hub of horticultural production. This history of horticulture is juxtaposed with the PHA Campaign's small-scale regenerative farm located within the PHA (which is run by the Chairperson of the PHA Campaign), which eschews destructive practices of using pesticides, herbicides, and synthetic and inorganic fertilisers to expand production.

While the PHA Campaign had advocated for regenerative farming practices in the PHA since 2008, the context of Day Zero led this fringe group to become a key actor in the area. From objections to private mixed-use developments in the South-East of the PHA (Human, 2022), to residential developments supported by the City of Cape Town in the South-West (Payi, 2018), the PHA Campaign became a core stakeholder in the area. This is linked to its regenerative farm, Vegkop, run by the organization's Chairperson, in two ways. It is not only linked closely to its focus on protecting the soil in which crops are grown but chiefly through how regenerative agriculture affects (or rather protects) the Cape Flats Aquifer (CFA) which lies under the entire farming area.

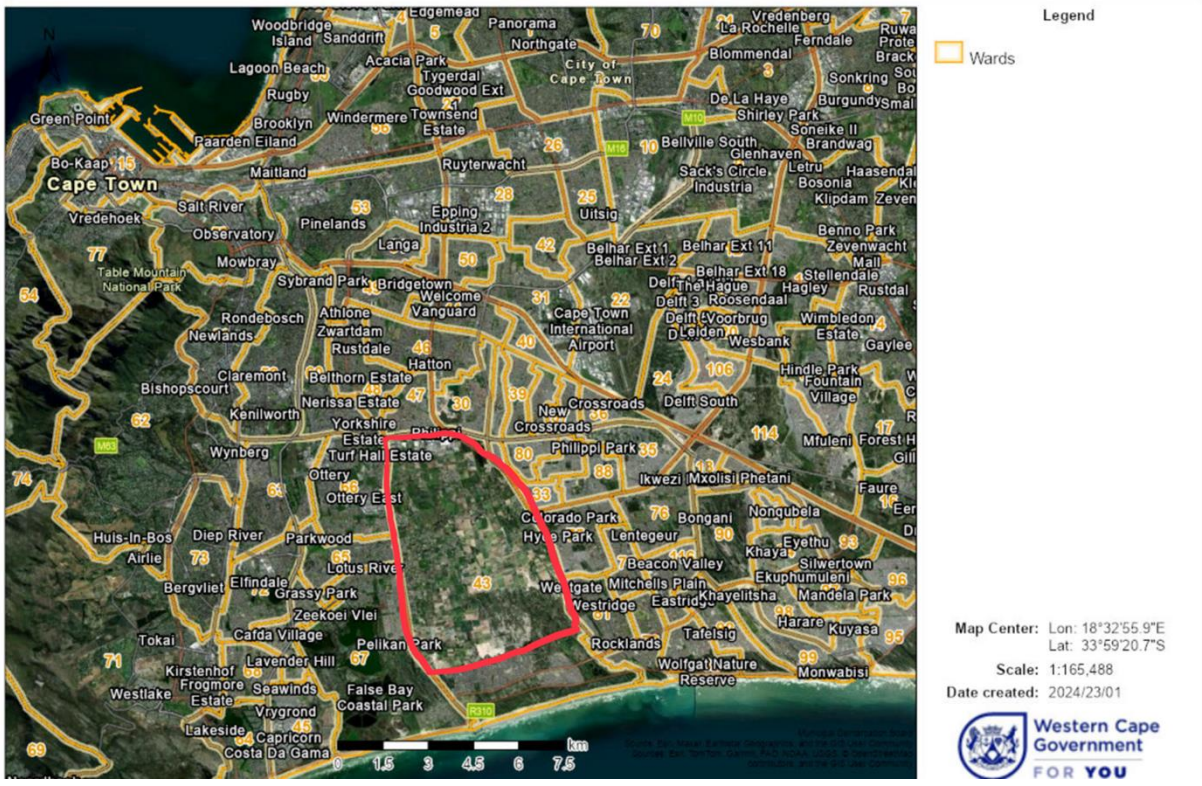

Figure 1: The broader Cape Town area, with a particular focus on the Cape Flats region, and the Philippi Horticultural Area outlined in red (Ward 43).

3. Politicizing 'nature'

The positioning of nature (natural resources) by governments, companies, and civil society organizations has become increasingly politicized in the context of the climate crisis. Longstanding critiques of commercial farming, largely quintessential to the field of political ecology, have become more pointed as water scarcity and soil depletion increase (Hargrove, 2021; Hetherington, 2020). Contestations over how land, arable soil, and water should be used embed the politics of the PHA. The PHA, comprising just over 3,000 ha, has less than 2,000 ha that is suitable for farming (Western Cape Department of Agriculture, 2018). All of the

six "big commercial farmers" (with an average of 149.4 ha), who cultivate 63% of the PHA, are "white." Even though there are more than double the number of smallholder farmers, their average size of land is only 9.6 ha, with smallholdings being made up of mostly "black" and "colored" farmers (Western Cape Department of Agriculture, 2018, p. 56).

Most of the farmers in the PHA, from smallholders to big commercial farmers, rely on pesticides and inorganic fertilizers to improve their yield. In addition, when questioned about the future of the PHA,[5] farmers raised concerns about economic viability and maximum yield in order to sell produce on both local and international markets. But they were also aware of the strategic importance of the Cape Flats Aquifer (CFA), which spans over 400 square kilometers, in terms of its vital role in securing food production, especially during periods of drought and water scarcity. To both the commercial farmers in the area and the PHA Campaign, the CFA is an invaluable resource; the PHA Campaign, however, has been outspoken in its critique of those actors who threaten this resource (through contamination and interference with aquifer recharge). However, as the above-mentioned urban developments were slated for the PHA over a decade ago, the PHA Campaign strategically muted the contestations between itself and commercial farmers, to display a "united front" against non-agricultural developments proposed within the confines of the PHA.

Before the drought, the PHA Campaign sought to halt a mixed-use real estate development proposed in the Southwest of the PHA (colloquially referred to as the UVest development), as it threatened a key tract of arable land in the PHA, along with the recharge of the CFA. In relation to the entire PHA, the potential for aquifer recharge is highest in the South (Figure 2). As Heynen (2006), has argued, among others (Ernstson & Swyngedouw, 2019), there is a historical and growing antagonism between cities and nature, especially in a rapidly urbanizing world. While such an analysis has been used by various actors to characterize the contestations between stakeholders in the PHA, this article stresses the financialization of both nature and land as vehicles for profit generation, through a grounded analysis. As highlighted by Rezende *et al.* (2024), the ever-encroaching reach of extractive capitalism can be located through various practices. Ranging from the financialization of land through infrastructure development, to the commodification of nature through commercial farming, biodiversity and "peasant" livelihoods are affected by both. Therefore, while developing a political ecological critique of the development, which aimed to rezone 95.6 hectares of the 1,884 hectare PHA (Amos, 2016), it aimed to politicize the use and function of agriculturally valuable land and natural resources in a time when the drought was reaching mainstream political discourse (Rezende *et al*., 2024)

Even though the development proposed in the Southeast of the PHA presents a more complicated and protracted case, the grounds on which the Uvest case was halted are noteworthy. The PHA Campaign's attempt to stop the development relied on the index of yield and production output of the PHA as a farming area as a whole. This in turn located itself within the logic of commercial agriculture production, which elevates concerns of yield over protection and care of both soil and water resources (Satgar, 2011). The PHA Campaign has historically positioned its 2 hectare farming model on Vegkop Farm as one that reconfigures the scale-dependent, monoculture-focused model ubiquitous in the PHA. Rather than relying on significant tracts of land, in combination with inorganic fertilizers, pesticides and dependence on cheap unskilled labor (as a majority of the farms in the PHA do), it aims to empower laborers while also protecting biodiversity and the CFA (Cousins *et al*., 2018). However, as Hetherington (2020) has illustrated in his critique on the entrenchment of industrialized food systems, the potentiality of small-scale regenerative agricultural projects faces pushback.

[5] For a more comprehensive engagement with the often-conflicting perceptions of commercial and small-scale regenerative farmers in this area, please refer to my PhD dissertation. Wingfield, M. M. 2022b.

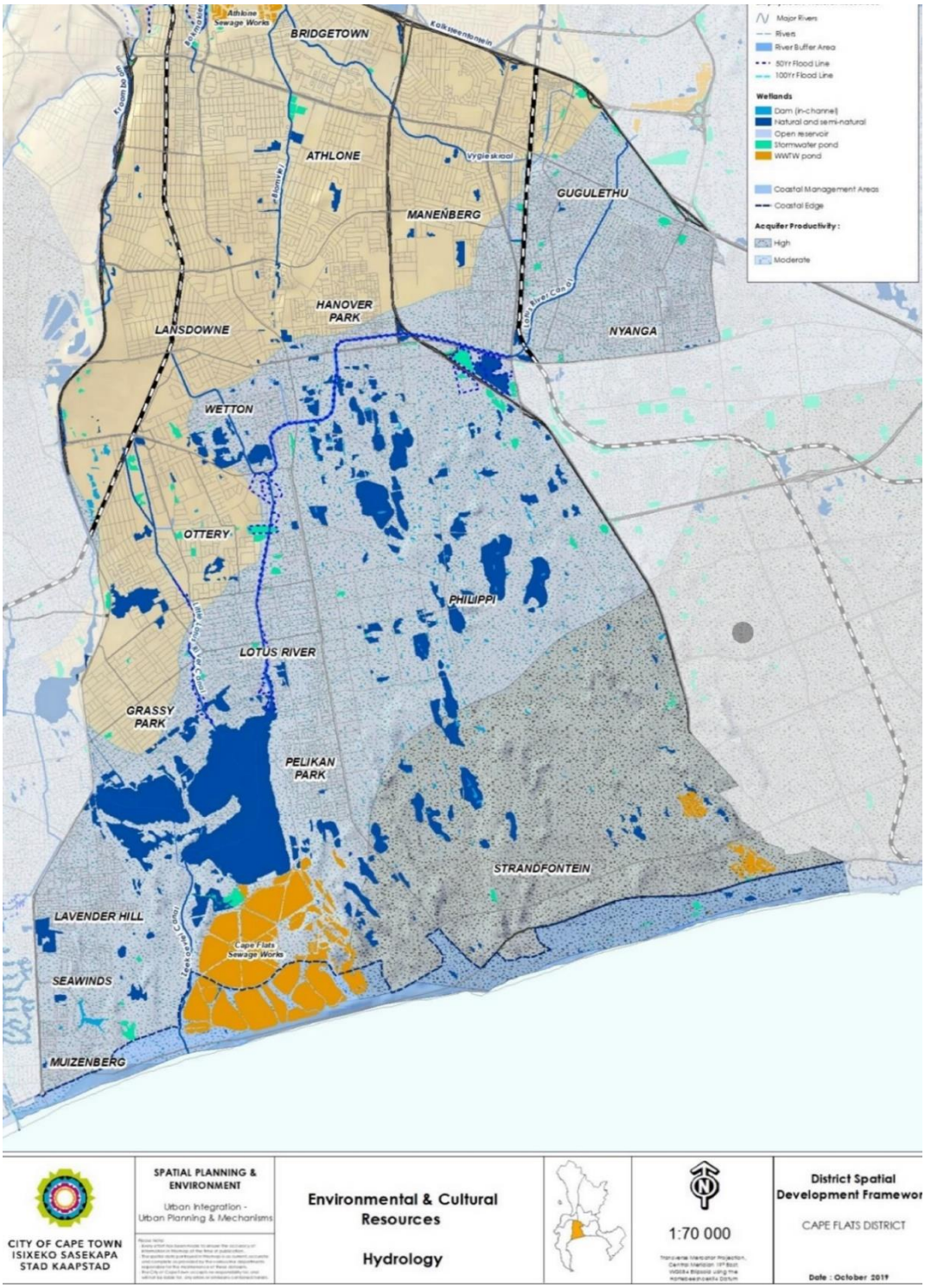

Figure 2: The hydrology of the Cape Flats region, showing the South of the PHA as an area of high aquifer productivity. (MSDF, 2023, p. 41)

4. Reconfiguring the "Cape of Developers"

The contestation between developers, commercial agriculture, and the model presented by the PHA Campaign is located within the larger metropolitan dynamics in the City of Cape Town. While the proposal for two non-agricultural developments in an area zoned exclusively for agricultural industries may seem unlikely to come to fruition, when read in the context of a city like Cape Town, the politics of a neoliberal city are laid bare. As McDonald (2008) and later Olver (2019) have argued, among others, the City of Cape Town has increasingly positioned itself to cater to wealthy local and international investors. Olver further tracks how the City took significant steps to "cut red tape" from 2011 to 2018. A former employee speaking of then-Mayor Patricia De Lille told Olver that "The Mayor [De Lille] thinks the market knows best, and the City planners are just interfering busybodies who should stand back and let the market lead the way" (Olver, 2019, p.54). Such accounts contextualize the political environment within which the PHA Campaign and other groups critical of ill-placed developments operate. This political orientation of the City has often elevated infrastructural developments over the concerns of environmental protection (Horber, 2022). Water and food security have thus been increasingly at risk.

The PHA Campaign's work is thus shaped by some of the above constraints. Through the contestation around the development in the Southeast of the PHA (the Oaklands development), the PHA Campaign has been able to politicize various forms of sensemaking, aligned mostly with water and environmental justice (Boelens *et al*., 2018), by leveraging the crisis of Day Zero. Before the drought, as noted above, the PHA Campaign had aimed to block all non-agricultural developments in the PHA. This positioned the PHA Campaign against a range of slated developments, some of which had the support of then-Mayor De Lille and the CoCT (Gosling, 2018; Horn, 2020). In an attempt to stop the ever-expanding list of proposed developments, various farmers and stakeholders in the area developed an alternative spatial plan for the PHA, which was quickly dismissed. As I have shown elsewhere (Wingfield, 2022b), forming one's appeals in relation to the Metropolitan Spatial Development Framework (MSDF) which structures all spatial developments in the broader Cape Town area, has a range of limitations: the competing land uses between agriculture and housing has fundamentally shaped the boundaries of the PHA for decades. It is therefore worthwhile reflecting on the efficacy of the PHA Campaign's strategy. They argued against development on environmental grounds, and in recent years based specifically on the varied forms of sensemaking, which intersect with the focus of protecting the CFA.

The CFA has long been positioned as an invaluable underground water resource that was fundamental in establishing the PHA by the "Philippi Germans" in the late 1800s (Rabe, 2010). Underground water more generally, however, has been largely "invisible", not sufficiently positioned as an essential resource for Cape Town Metropolitan water provision (Parsons, 2022). The PHA Campaign thus began to frame its agroecological project through the lens of protecting the CFA as the 2015-2018 drought increased in intensity. It also attempted to halt the Oaklands development for similar reasons, a project that had significant financial backing as well as local and provincial government support (Shoba, 2020). In 2013, a Notice of Intent to Develop (NID) was filed for 472.36 ha in the South East of the PHA (see Figure 3). This parcel of land, zoned as residential after a contentious administrative shifting of the urban edge in 2011, was proposed for a mixed-use development. After attempting to halt the development on the grounds of lack of public participation, the PHA Campaign was thus forced to take the developers to court. The analysis of the Oaklands court case which follows provides a range of insights regarding the intersection between spatial and environmental justice, along with an analysis of how the context of Day Zero was leveraged by the PHA Campaign to popularize alternative forms of sensemaking.

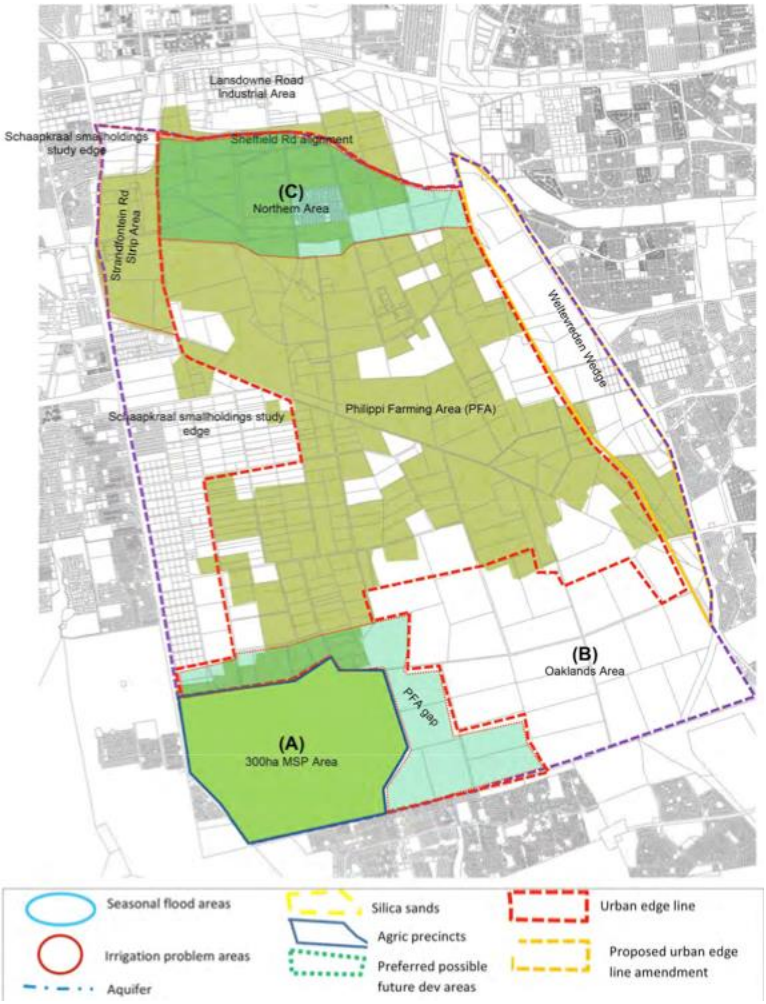

Figure 3: The extent of the PHA as it exists today, illustrating a catastrophic loss in core farming land. (MSDF, 2018: 148)

5. Sensemaking, crisis, and emerging hydropolitical potentialities

While the PHA Campaign's work stems from its intersecting focus on racial, environmental, and spatial justice, throughout the Oaklands court case it was required to translate forms of aspirational discourse into a formalized pleading, supported by scientific evidence and legal argumentation. Unlike private developers, who often have significant financial resources to commission various studies to support their applications for a particular development (Olver, 2019), activist groups like the PHA Campaign often rely on *probono* consultants and academic researchers. Case studies of South African civil society activism, such as the Treatment Action Campaign (TAC) (Friedman & Mottiar, 2004) and the Social Justice Coalition (SJC) (Robins, 2014) illustrate how the politics of evidence (Parkhurst, 2017) fundamental in rights-based activism, is favorable to those with financial and political capital. In the Oaklands court case[6], both the applicant (The

[6] Philippi Horticultural Area Food and Farming Campaign vs MEC for Local Government, Environmental Affairs and Development Planning: Western Cape (16779/17). [Online]. https://www.saflii.org/za/cases/ZAWCHC/2020/8.html

PHA Campaign) and respondents (various departments from the CoCT) brought commissioned reports which supported either side of the case. In her ruling, Judge Kate Savage ultimately found that:

> While appreciating that the impacts [of the mixed-use development] on the aquifer were relevant and had not been sufficiently assessed, the impacts then considered by the MEC [member of the Mayoral Committee] were *constrained by the limitations apparent from the reports before him* on the issue. These included the narrow focus, the age of the reports and the failure to consider the broader impact of the development on the aquifer in relation to water scarcity and climate change in the Western Cape. I am not persuaded that this was cured by the submissions put up by the applicants on appeal which should properly have alerted the MEC to the absence of relevant material information on the issue. (Savage 2020, p. 46, own emphasis)

Judge Savage halted the Oaklands development and directed the developers to address the above limitations in their reports supporting the development. The age and scope of the reports, along with the development's potential impact on water security in the context of Day Zero, led to this conservative judgement. In the past, the PHA's "unique characteristics" have been considered secondary to urban development. Therefore, the generalized binary between agriculture and infrastructural development was maintained. Such findings, however, must be read in the context of an intensifying critique that the South African legal system has struggled to address contestations over environmental resources across the country in the context of the climate crisis (Kotze, 2014; Cullinan, 2002). These critiques are grounded in the repositioning of nature as a vital precondition to life; too often environmental concerns are subordinate to those of financial interests (Liebenberg, 2023). Regardless of these overarching critiques, the court case was duly framed as a victory for the PHA Campaign by the media and other activist groups; what is concealed in such framing, however, is the non-juridically aligned work that the PHA Campaign had done before and after the court case: this is engaged through the concept of sensemaking.

Conceptually, sensemaking has been framed in a multiplicity of ways. The two we use here are technoscientific sensemaking following Andrea Ballestero's work (2019b), and the sensemaking leveraged by the PHA Campaign in relation to the communities it engages. In her work at the intersection of water access, commodification, and provision, Ballestero explores how aquifers as underground water resources are contested, and how various groups attempt to "make sense" of these resources. Ballestero acknowledges that "the fact that knowing the underground depends on travel, preparation, training, and archiving practices that happen above the surface is not a minor detail" (Ballestero, 2019a, p.7). This form of sensemaking is mostly framed through a technoscientific lens which is often exclusionary, often favoring the side of capital. In the PHA case study, this is illustrated through reports that formed the basis of the PHA Campaign's legal campaign to stop the Oaklands development. The Campaign explored the potential of this avenue by drawing on its own hydrological reports with emphasis on how sensemaking, for residents of the PHA, could occur. Sadly, hydrological reports are often politicized and financialized (Bond *et al.*, 2020), with wealthy developers often able to commission reports until a preferred conclusion is presented.

Rather than hoping for favorable scientific reports and legal judgements to aid in the protection of the PHA, or even to find a compromise between land being used for either housing or agriculture, the PHA Campaign has sought to "bring the political into the environment" (Swyngedouw, 2011). Eschewing commitment to a "post-political" framework of environmental governance which treats environmental concerns solely as managerial issues (Swyngedouw, 2011, p.266), the Campaign has aimed to connect environmental issues to the unequal socio-political landscape of post-apartheid Cape Town. This can be understood as a more socially oriented form of sensemaking; charting "just" socio-ecological pathways and imaginaries.

The PHA Campaign, farming in an area that is dominated by commercial farmers who depend on monocropping and inorganic fertilizers, it has attempted to put forward alternative ways of interacting with environmental resources. Akin to case studies in India (Santha *et al*., 2024) and across the world (Hetherington, 2020; Pasgaard *et al.*, 2022; Rogers *et al.*, 2022), political ecology challenges forms of commercial agriculture.

Therefore, the PHA Campaign aimed to connect its own form of interacting with environmental resources to other groups in the area, agriculturally focused on not.

In the wake of the favorable judgment in early 2020, the PHA Campaign concerned itself with how the judgment would interface with the people living in the PHA and its surrounding areas. An event was crafted to facilitate this form of sensemaking, namely the Aquifer Festival, held for the first time at the end of 2021 (Wingfield, 2022a). Using various forms of information transmission, from storytelling, music, film screenings, and public dialogue sessions, the PHA Campaign brought together a diverse range of people to reflect on and make sense of the invisible but invaluable resource which lay under their feet. This ranged from neighboring residents, "landless" farmers, and middle class residents from the neighboring suburbs; invites were sent out to commercial farmers who largely ignored them. Throughout this event, the PHA Campaign aimed to both publicize and politicize their perspective of how the PHA and its resources should be used.

While some residents (largely wage laborers on farms in the PHA) had reflected that this event helped change their perspective on how water should and could be used, many of the attendees had already expressed support for the PHA Campaign's view. Following up on this ongoing process is therefore an avenue for further research. Following Ballestero, thinking about the CFA as a form of infrastructure aids in mapping how this form of sensemaking is practiced. Ballestero argues that "Infrastructures have been theorized as arrangements with the capacity to produce and circulate value, as entities with the power to bring about social meaning, and as matter with the capability to move matter" (Ballestero, 2019b, p.21). The circulation of value as it relates to the CFA, however, has largely been configured to bypass the precarious labor force living in the area, along with residents without the capital to financially benefit from this resource (Archer, 2000). Therefore, rather than framing the use and supposed conservation of the CFA as a process that is separated from the political, the PHA Campaign used the aquifer festival to (re)politicize the unequal access to the CFA and the subsequent benefit to wealthy farmers. For many of the attendees, this was aligned strategically to bring both the colonial and apartheid histories together, while further connecting with the minimal and "responsibilized" water use (Marcatelli & Büscher, 2019; Colvin *et al*., 2010).

Nikhil Anand (2017) has illustrated, in the context of urban India, how the dynamics of municipal service delivery, and access to water more generally, are deeply political and, at times, strategically politicized. Anand argues that "cities, citizens, and their political authorities are mediated and made through the everyday government of hydraulic infrastructure" (Anand, 2017, p.6). Through the politicization of the infrastructure which mediates access to water, in this case, wells and boreholes, groups such as the PHA Campaign, akin to those in India, trouble the structuring principles of water provision and access. Historically, infrastructure which allowed access to water was developed and controlled by the white minority in South Africa; this pattern spans from the moment of colonial inquest until today. The Day Zero crisis brought the lack of infrastructure for much of the poor and working class across the Western Cape into focus (Green, 2020). Elsewhere, Anand (2011) highlights not only the matter-of-factness of unequal water infrastructure in Mumbai but also how "pressure" (both hydrogeological and political) plays a role in mediated access to water resources. As shown above, the PHA Campaign has illustrated how access to water from the aquifer exists at the nexus of hydrogeological and political pressure.

Crucially, the Day Zero crisis enabled the PHA Campaign, and others, to sharpen a critique against commercial farmer water use (and contamination) in the PHA. LaVanchy *et al*. (2018) observe that "The inherent tug between Cape Town and agriculture became acute during the context of Day Zero due to the politics inscribed in water governance." Embedded within the PHA Campaign's critique of commercial agriculture was the proposal of an alternative, regenerative small-scale agricultural model which it attempted to prototype in various "communities" throughout the PHA. Gesturing toward Satgar's work on the solidarity economy (Satgar, 2011), the sensemaking undertaken by the PHA Campaign is not grounded in the logic of extractivism, but that of more dispersed and communal social-ecological benefits. Its model aims to offer possibilities for challenging the dominant political ecology of water provision in the area (and more broadly). While this project has been standing for over a decade, the context of Day Zero brought it into focus.

The process of making the aquifer visible to the various working-class communities in the PHA, and the contestations around the water allocations to commercial agriculture, is not without complexity and

resistance. During the COVID-19 pandemic, the PHA Campaign saw rising levels of food insecurity throughout the PHA and thus developed a food distribution program to connect with, and feed, those living in informal settlements or dilapidated labor-tenant accommodation (Robins, 2020). Through this project, the PHA Campaign further highlighted the potential of its small-scale regenerative farming model, which it positioned as one that could be adopted by various communities made up of farm laborers in the PHA. It argued that the people in the PHA who had been farm laborers for decades, could use their locality and experience to farm "for themselves and their communities", rather than remaining as grossly exploited wage laborers (Gontsana, 2020). In various late-night meetings in 2021, PHA Campaign representatives coordinated community meetings through which it hoped to set up communal agricultural plots in these areas. What soon became evident was that the PHA Campaign's position in the broader area was unfamiliar to some, and even contested at times.

Through these extended engagements, the PHA Campaign sought to develop a connection between the residents of the PHA and the aquifer. However, unlike the commercial farmers, the PHA Campaign sought to develop this as a non-extractive relationship. As Bessire (2022) has argued, the extractive rationalities which often structure relations to aquifers almost inevitably result in eventual depletion; this is characterized by what he calls "aquifer aporias." The value thus drawn from aquifers in the PHA, and in various sites across the world, has largely been reaped by those who have the capital to access it. Furthermore, "Unsustainable resource consumption piggybacks onto the ranking of legitimate life, containment of undesirables…and anxieties over who deserves to get ahead" (Bessie, 2022, p. 355). This is true for the PHA, as it is throughout South Africa. Those who can access water reliably are embedded in historical forms of dispossession (Robins, 2019; Marcatelli & Büscher, 2019). The PHA Campaign's regenerative farming model is therefore positioned as a framework from which to foster different non-extractive relationalities with these resources.

Making sense of the potentialities of crises, such as the drought in Cape Town, is often framed retrospectively and pessimistically (Klein, 2007). This article, however, suggests that aside from grand narratives which often capture the attention of the media, being attuned to the slower, capacity-building, and environmental justice work done by the PHA Campaign, and a range of other groups, can provide texture to emerging hydropolitical potentialities. This is highlighted through the continued engagements by the PHA Campaign with the broader residents of the area.

LaVanchy *et al*. (2018), when attempting to draw insight from the drought (even as early as 2018), argue that "Groundwater is arguably the most important natural resource of the Western Cape and should be understood as a resource to be explored and managed as a water savings account (LaVanchy et al, 2018, p.1539). The context of Day Zero repositioned groundwater as an essential resource to be utilized (with the likelihood of an extractive relationship being forged) and protected as a fundamental element of water provision for Cape Town. In doing so, the PHA Campaign strategically used this moment to further animate its small-scale regenerative agricultural project and its associated lower water footprint, which had been historically overlooked. Furthermore, the PHA Campaign positioned itself as a key stakeholder in the area around concerns of environmental protection, and the transformation of agricultural practices in a time of increasing water scarcity, which is likely to plague the region going forward (Trisos *et al.*, 2022, p.1328).

In its attempts to "speak for the aquifer", the PHA Campaign has also become a key actor in the Managed Aquifer Recharge (MAR) program run by the CoCT. This project aims to ensure the aquifer does not become at risk of salination from the bordering False Bay and Atlantic Ocean. This affiliation with the MAR further legitimizes and grounds the PHA Campaign's form of sensemaking in relation to the aquifer, both through scientific and grassroots avenues. The shifting rationalities around extractive agricultural practices, which depend on and pollute water resources in the PHA, gesture toward the transformative work done by the PHA during the drought. Therefore, in attempting to put forward an alternative agricultural model, it begins to address the bifurcation of South African agriculture, or what Wandile Sihlobo calls "a country of 2 agricultures" (Sihlobo, 2023). Rather than contrasting agricultural modes of production through economies of scale and expansion, the PHA Campaign, among other organizations has articulated this rather through an ecologically attuned and empowering model (as displayed by the agroecological project at Vegkop Farm).

The case study is a contribution that is comparatively useful to increasing water scarcity across metropolitan areas but also to a reanimation of the political ecology of water in postcolonial contexts. While

the threat to small-scale agroecological farming is globally prevalent (Santha *et al*., 2024), this article highlights how the PHA Campaign was able to use the drought in Cape Town to reanimate and politicize agroecology and the political ecology of natural resources. During and after the drought, the PHA Campaign connected water governance and water access with the local socio-political landscape. When read in relation to Loftus's (2007) scholarship on how socio-natural waterscapes are "worked" by various actors, this article highlights the opportunities that the context of drought can open up.

There is also a contribution to the field of political ecology. The researchers and reporters who have entered the PHA to make sense of the contestations in this highly fragmented area, often end up misrepresenting the work of the PHA Campaign, or the impacts of the drought on farmers in the area. The article further illustrates not only the role of temporality as a tool in the repertoires of activism, but also highlights how "slow activism" (Robins, 2014) typically persists between the momentary spectacles of court cases, protests, and public displays of contestation. In a world that is increasingly drawn to media spectacles, these forms of ethnographic sensibility offer rich insights into the forms of transformative eco-politics that emerge during times of crisis.

6. Conclusion

The context of the climate crisis, with its associated manifestations of water variability (scarcity and flooding), brings with it the possibility of widespread disruption of the systems and relationships that govern our livelihoods. The experience of an acute drought in the Western Cape from 2017-2019 illustrated the limitations of instrumentalist perceptions of water. Seen as a resource to be used to create value, especially in the agricultural industry, led to pronounced water scarcity that almost led to major disruptions of household water services. The story of Day Zero is often told as a momentary crisis; this conceals the causes of the crisis, as well as the efforts made to reconfigure the political ecology of environmental resources more broadly in the Western Cape Province.

Within moments of crisis, a transformative hydropolitics can emerge, as this study of an environmental activist group operating in Cape Town shows. The PHA Campaign was able to use the drought to amplify its critique of the hegemonic commercial farming model in the PHA and to reposition its small-scale regenerative model as an alternative at a time when commercial farming methods came under scrutiny. Moving swiftly away from a precedent-setting court case, which gave the PHA Campaign's ecopolitics legitimacy during the drought, this article highlights the more grounded process of sensemaking, which happens out of the purview of the courts and media, in relation to other residents of the PHA. While significant challenges remain in the fundamental reconfiguration of the political ecology of water in the PHA, and South Africa more broadly, the case study highlights emergent potentialities.

As LaVanchy *et al*. (2018) have stated in the wake of Day Zero, "Managing water requires a long view and persistent commitment. Time shows us that governments change, climates change, and residents are quick to grow weary of austerity measurements" (LaVanchy *et al*., 2018, p.1539). The article has tracked the possibilities that can emerge in ways that depart from the relationships with environmental resources that have been dominant since colonial conquest. Lastly, temporality is used as an analytical tool both in terms of making sense of the PHA Campaign's activism, but also of the research methods which can map to the planetary crisis that humanity and the humanities are already increasingly facing.

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