Spring 5-10-2023

An Oasis in Crisis: Lesotho Highlands Water Project Turned Drought

Justine Wendt

An Oasis in Crisis:

Lesotho Highlands Water Project Turned Drought

Justine Wendt

Abstract

Water insecurity in underdeveloped countries is one of the most pressing issues for the longevity of our exponentially developing global economy. Countries like Lesotho, which are land-locked within another, more developed country, have few resources for water, food, and power without the aid of external forces. This paper investigates the Lesotho Highlands Water Project (LHWP), its relationship to South Africa, and the ramifications faced by local communities. Further, this paper can serve as a case study into what we can avoid in the future, as water initiatives are both inevitable and crucial. Chapter 1 explores quantitative data regarding water scarcity in Lesotho and South Africa, and lays the groundwork for why this water project was initially established. Chapter 2 explains the history of LHWP and the timelines it promised versus those it fulfilled. This chapter also models the pitfalls that the Basotho and South African national governments demonstrated when creating this agreement. Chapter 3 focuses on the economic consequences of the World Bank's involvement, something that remains controversial within what could be a strictly binational agreement. Information about Lesotho's domestic economy is also provided. Chapter 4 delves into the displacement and resettlement of local communities and the degradation in living standards they've absorbed, although they were guaranteed the opposite. This chapter also considers that many of LHWP's shortcomings are rooted in the reparations themselves, not necessarily the motives of the initiative. Chapter 5 proposes policy reforms for these reparations and how to best move forward regarding aid to underdeveloped areas while avoiding extractive capitalism.

Keywords: water initiatives, water insecurity, drought, international agreement, extractive capitalism

Table of Contents

Introduction

Lesotho is a beautiful country! Just imagine it; an oasis of water amidst a desert of grasslands, mountainous greenery, and hot, hot sun. Lesotho's geographic beauty masks its deep-seated problems of social equity, resource distribution, and water access. Conversely, Lesotho's host country, South Africa, faces water scarcity problems annually but has a higher average standard of living. To help mitigate these problems, international aid projects have become a popular and somewhat effective way to establish infrastructure, technology, and education about environmental protection. Particularly between South Africa and Lesotho, an international treaty agreement seemed to be the solution to ecological disparities and cross-border violence and migrant labor shortages. Lesotho's rural population, existing on less than $5 a day, stood to lose everything from the careless construction of Africa's second-largest dam, and many of them did.

The Lesotho Highlands Water Project (LHWP), created by the Lesotho Highlands Development Authority (LHDA), was implemented as part of a binational treaty agreement in 1986 to redirect Lesotho's precious freshwater to South Africa in exchange for hydroelectric energy generation. However, this complex system of dams, reservoirs, tunnels, and power plants has proven as a band-aid to the problems it looked to solve and the root cause of many more. Women and children lack healthcare access. Domestic employment is struggling. A minuscule percentage of the nation's population even has access to electricity, and clean freshwater is a commodity in rural areas. Further, those rural areas are now inhabited with relocated or resettled families, having been torn from the land that gave them life. The water crises of the underdeveloped southern hemisphere seem worlds away from us. Still, a modern solution to these crises dictates a progressive world for our future global water accessibility.

Affected inhabitants of flooded land include those like Thabang Makatsela, who described what it would be like to lose land to the dam's construction:

> My memories of this place [would be] firstly, my father's big field down the valley which was a source of food for the whole family throughout my childhood. All my brothers and sisters knew we all survived because of that field. This is to say we grew up feeding on that field… This field has also been of great importance to my family as a whole, in the sense that my son and I consume food from this field. It is so big that it allows us to grow different crops on it at the same time.[1]

Makstsela's connection to the land is familiar; we see it in indigenous cultures across the world. In many ways, the communities affected by the LHWP have followed very similar relocation patterns to other displaces communities. Everyday lifestyles change, community bonds are broken, and daily necessities for life become harder to access.

In this paper, chapter one will examine the ecosystem services provided by the water and land at stake, provide quantitative data on the dam's construction, and preview its effects. Chapter two will explain the history of the project's development and that of Lesotho and South Africa's contemporary political status, laying the groundwork for chapter three's discussion on the LHWP's ecological and economic ramifications. Chapter three will also explore the financial, ecological, and cultural costs of the project on local inhabitants and foreign investors. Chapter four will touch on what has become the Project's most controversial issue; its social consequences on the surrounding communities. Finally, chapter five proposes reparations for the

---

[1] Bennet, Olivia and Christopher McDowell. 2012. *Displaced: The Human Cost of Development and Resettlement.* New York: Palgrave Macmillan. 157.

plan's social rehabilitation framework and discusses what pitfalls the LHWP showed us that we can avoid in future water access projects.

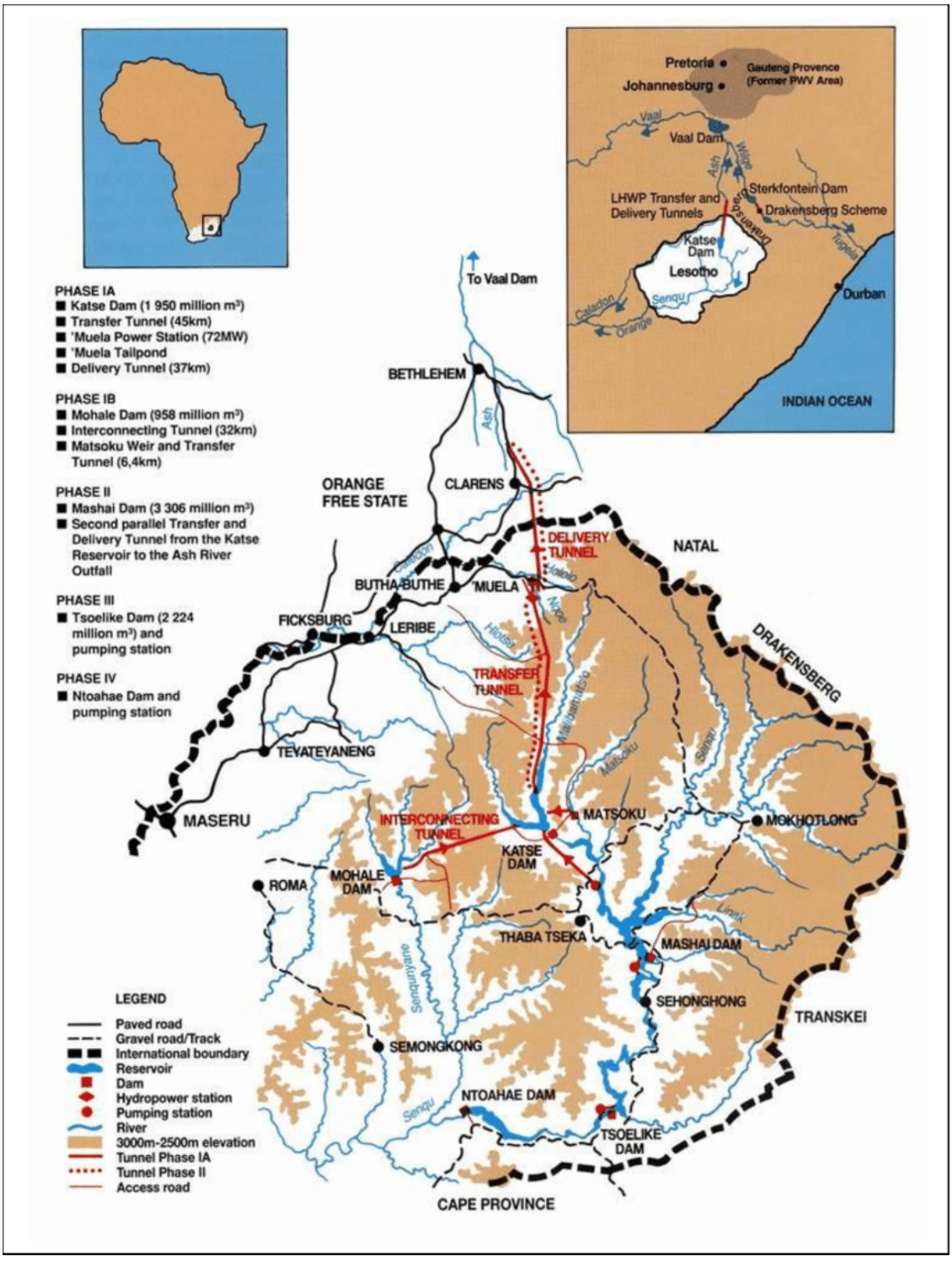

Figure 1. Map of Lesotho Highlands Water Project (Lesotho Highlands Development Authority, 1995).

Chapter 1: Scarcity in a Looming Crisis

	Components	Timeline
Phase I (A and B)	Phase IA: Katse Dam, 72 MW Muela Hydropower Station, 16 KM of water transfer tunnels Phase IB: Mohale Dam, Matsoku weir, and remaining 32 KM of water transfer tunnels	Phase IA: projected to be completed 1996, completed 1998 Phase IB: projected to be completed in 1998, completed in 2002 and inaugurated in 2004
Phase II	Polihali Dam, 38 KM Polihali Transfer Tunnel, 1 KM Polihali Diversion Tunnel, Katse and Polihali lodges	Still underway! Projected for completion in 2028
Phase III	Tsoelike Dam	TBD
Phase IV	Ntoahae Dam	TBD

Figure 2. Phase Breakdown of Lesotho Highlands Water Project.

Overview of Project's History. Before we can begin to understand the affects of such a large endeavor, we must understand what was intended to be completed, and when. The timeliness of this project is a particular point of weakness, as can be observed in the disparities between projected and genuine completion dates for each phase. These disparities will become more relevant in chapter 4, when I discuss the effects felt by local communities and the reparations they recieved. Phase I of the project entailed the construction of Katse Dam (holds 1950 million m^3 of water), the Mohale Dam (holds 946.9 million m^3 of water), the Matsoku Weir, the Muela Tailpond Dam (holds 6 million m^3 of water) , Katse-Muela Transfer Tunnel (45

kilometers), Mohale-Katse Tunnel (32 kilometers), the 72 MW Muela Hydropower Station, a Delivery tunnel (15 kilometers), and a Diversion tunnel (5.6 kilometers).[2] The Mohale Dam was planned as a water backup reserve for the Katse Dam, the primary dam for the accruement of energy by the Muela Hydropower plant. The Delivery Tunnel (divided into sections North and South) runs from the Muela Hydropower plant to the Lesotho-South Africa border and from the border to the Ash River Outfall in South Africa. Phase I served as the foundation onto which the rest of the project could build up, and was split into two phases. All together, the phase took almost two decades to complete, and all things considered, this is an extremely impressive turnaround time for the LHDA. Prior to the LHWP, there was no infrastructure in Lesotho for managing water resources, let alone funding to build it. By the time Phase IA was complete, Phase IB was underway, and plans for Phase II were being finalized. The LHDA's Achilles heel may have been their expectations regarding forecasted completion dates. While timelines are both helpful and customary in international construction projects, they're often ambitious and hard to stick to. Given the LHDA's resources when embarking on LHWP, what was completed in a relatively short period is impressive, just not when compared to their own expectations.

Phase II of the project, while still actively underway, includes the Polihali Dam (projected to hold 950 million m^3 of water) and the Polihali Transfer Tunnel (38 kilometers), Polihali Diversion Tunnel (1 kilometer), multiple access roads and bridges, the Katse and Polihali lodges, and new developments in community and education centers. Even without dissecting the intricate details of what these projects mean on a week-to-week or month-to-

---

[2] "Lesotho Highlands Development Authority." *LHDA*, http://www.lhda.org.ls/lhdaweb/.

month basis, their immense scale is evident, particularly for such a small, confined country with insufficient existing infrastructure.

While the entire LHWP anticipated the construction of up to five dams, only three are either completed or in construction as of the present. Evidently, projects of this degree, demanding this level of international cooperation, work slowly. For just under a decade, the project did not expand and settled into its methods of operation. The agreement to implement Phase II was signed in 2011 and construction of the project's largest dam to date, the Polihali dam, launched in 2013. This Phase is still underway and will allegedly finish in 2028, a whopping nine years after some projected its completion. The COVID-19 pandemic of 2020 has been accused as being the main reason for this delay. Like the phases proceeding it, the social welfare programs listed were minuscule compared to the civil resettlement and social detriment they demanded, as is explored more in chapter 4.

Lesotho's geographic positioning is essentially its only economic and developmental asset. South Africa completely surrounds Lesotho, hence the inevitable binational agreement at hand. Lesotho is divided into three regions: the lowlands, the highlands, and the foothills that separate the two. In reality, none of these lands are lowlands, as the entire country resides at 4,500 feet or above. This makes the climate cold and unsuitable for sustainable agriculture. To complicate matters further, essentially none of the country's land is covered with water, apart from the river networks that are also critical for Lesotho's economy. These rivers are not only necessary for Lesotho's cultural and civil welfare, they have now become the backbone of its economy. The services these rivers provide go far beyond provisioning services; if we do not

mitigate the problems these rivers are facing now, they may also serve as the primary factor for Lesotho's future economic and political problems, if not collapse.

Ecosystem Services. The ecosystem services provided by freshwater access have been discussed many times over. Those services are especially important in Sub-Saharan Africa, where drought strikes have plagued humanity for centuries. Services include provisioning services like freshwater and food, regulatory ones like moderation against extreme weather events (droughts and flooding, in this case), supporting services providing a space for genetic biodiversity, and a deeply imbedded cultural service that is part of Lesotho's history. South Africa, and its internally hosted country Lesotho, must cooperate to equitably distribute those ecosystem services. Not only are they critical for the physical landscape and the organisms that reside there, but rural communities need access to them for drinking, agriculture, and municipal services. While Lesotho has been praised as the oasis of freshwater within South Africa's barren mountain environment, that abundance has always been skewed relative to its allocation.

The potential for the redirection and extraction of freshwater from the Malibamat'so River in Lesotho's highland region is what sparked the LHWP's beginning. This ecosystem provisioning service had been in semi-regular use for at least a century, after the region's population boom in the late 1880s. However, with the area's current projected population growth, the service is projected to become increasingly strained. The IPCC stated, "over the next few decades … changes in population will generally have a greater effect on changes in resource availability than will climate change. Climate change would, however, regionally exacerbate or offset the effects of population pressures." The same report predicts that for approximately every global increase in median average degree, 7% of the global population risks exposure to a

decrease of renewable water resources of at least 20%.[3] According to the World Bank, Lesotho experienced a slight population drop after the project's establishment in the 1980s, but is presently experiencing growth at about 1.2% per year.[4] These increases are felt heavily in places like Johannesburg, where up to 37% of municipal freshwater is lost to leaks and other infrastructure-based losses.[5]

Droughts place additional strain on the capacity of a freshwater reserve's ecosystem service and its ability to maintain biodiversity. The Gauteng region, comprising both Lesotho and South Africa, is no stranger to a drought that would otherwise cripple many ecosystems. Aquatic stability in this region is due to the consistency of the Malibamat'so, Senqu, and Khubelu rivers and the mountains they hail from. Lives supported by this network of rivers is not limited to that of humans. Experts note a decline in habitats like grasslands, marshes, bogs, and reed meadows, leading to significant changes in surrounding flora and fauna. This includes a decline in wood used for fuel and medicinal plants previously used extensively by poor households unable to access affordable modern health care services.[6] Although little scholarly research exists on the biodiversity of Lesotho's river ecosystems, locals relying on them for food and income noted a substantial decrease in reliable fish communities. Intensified droughts in South Africa in the 1980s pushed the LHWP initial 1986 treaty signing, but little consideration was given to the

---

[3] Jiménez Cisneros, B.E., T. Oki, N.W. Arnell, G. Benito, J.G. Cogley, P. Döll, T. Jiang, and S.S. Mwakalila. 2014. "Freshwater resources". *Climate Change 2014: Impacts, Adaptation, and Vulnerability*. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 250, 232.

[4] "Population Growth (Annual %) - Lesotho." World Bank Open Data, 2021.

[5] Hoag, Colin. 2022. *The Fluvial Imagination: On Lesotho's Water-Export Economy*. 1st ed. Vol. 12. University of California Press. 3.

[6] Mwangi, Oscar. 2008. "Environmental Change and Human Security in Lesotho: The Role of the Lesotho Highlands Water Project in Environmental Degradation." *African Security Review.* 17: 3. 61.

region's future ecological welfare. The reservoir and dams' ability to protect against the symptoms of drought were tested in 2016, when a climatic drought matched with the sedentary build-up in the dams left many downstream without water.

Water's cultural significance in Lesotho is a primary concern for scholars of this project. Perhaps the most affected ecosystem service by the LHWP is the cultural significance water provides to the Basotho people; before water became the primary export economy for the land-locked country, it was a semi-accessible and critical part of life. As I will discuss in chapter 3, Lesotho is an extremely poor country. Living within the lavish confines of our over-developed lives, it can be easy to forget the sheer power that a land's natural resources have over one's life. Despite Lesotho's underdevelopment, a safe water supply reaches 83% of its urban population, but only 54 percent of its substantially larger rural population shares this benefit. Furthermore, as of 2002, only 3% of Lesotho's population had access to electricity.[7] Although water provides a strong cultural integrity, that is only if its distribution reflects who needs it or as it was when the area was naturally settled. When certain areas flood that were previously used for agricultural or residential purposes, water becomes a burden instead of a blessing. In Phase 1, 84,000 hectares of land were evacuated due to water inundation.[8] Meanwhile, Phase II is predicted to flood double.

Medicine and health are also an extremely prevalent issue in Lesotho. Prior to the LHWP, herbalist medicine was a primary source of health security for locals, because traditional Western

---

[7] Bohensky, Erin, Belinda Reyers, Albert van Jaarsveld, and Christo Fabricius. 2004. *Ecosystem Services in the Gariep Basin*. Stellenbosch University, Southern African Millennium Ecosystem Assessment, Sun Press, a division of African Sun Media. 32.

[8] Mwangi, Oscar. 2007. "Hydropolitics, Ecocide and Human Security in Lesotho: A Case Study of the Lesotho Highlands Water Project." *Journal of Southern African Studie*s (33.1). (March) 12.

hospitals were, and still are, few and far between, even in the capital city of Maseru. While medical aid has improved, there still exists still room development. This development might come in the form of reestablishing traditional methods of gathering fauna and roots fo medicinal purposes, as is touched on in chapter 5. The cultural service provided by natural medicine affects everyone in Lesotho who used this service, but those who made a living out of it, in particular.

For example, Khethsia Leteka had made a name for himself as a resident healer of both the body and the mind. The plants he familiarized himself with were traditionally found in the lowlands around riverbeds, which have subsequently become flooded. This forced him to learn how to harvest crops more sustainably in higher elevation areas were plants might not grow so abundantly.[9] To make matters worse, healers like Khethsia are in higher demand than ever, as simple Western medical supplies like painkillers or fever reducers are becoming increasingly more expensive for local communities. Prior to development like LHWP, services like medicine, wood for fuel, and even food were not monetized as they are now. Another resident, Matokelo Motseki, explains, "Life is difficult. Everything is money."[10] Without the ability to practice traditional herbal medicine, residents like Khethsia have faced higher living costs, compounded with costs faced by individuals depending on other figures like him.

Chapter 2: Principle Players and Development

The massive construction projects under the Lesotho Highlands Water Project were developed in a time of political, social, and economic turmoil in both South Africa and Lesotho.

---

[9] Bennet 2012, 180.

[10] Ibid.

Counterintuitively, it is this turmoil that created such a viable opportunity for the binational agreement. A political overhaul was underway in Lesotho as South Africa's apartheid unfolded, and the synchronicity of the two created a valuable economic and civil opportunity for both nations. This, compounded with the fact that international powers played a significant role in southern Africa's economic growth, made large-scale infrastructure projects inevitable. It was a revolutionary plan in many ways; it promised security and development at the environment's risk, a new kind of project for the region. However, the project's plan development was gradual and happened primarily at the executive level. Understanding the evolution of such an undertaking, starting over half a century ago, helps us to better understand its impacts today.

South Africa's Involvement. South Africa has been mitigating water crises for centuries. One of the nation's largest urban centers, Johannesburg, is home to over five million people. In this instance, Johannesburg can serve as a case study for the country as a whole, as they have faced water shortages in the past forty years that are exacerbated by climate change and economic unrest. The Vaal Dam, constructed in 1938 just a few kilometers outside of Johannesburg, was an early attempt at managing the existing resources. However, the dam has faced a multitude of problems in recent years regarding flooding and improper treatment of wastewater that consequently pollutes previously useable freshwater. The proximity of Johannesburg to Lesotho created an opportunity for urban dwellers to benefit from nearby water resources without having to domestically reconfigure anything. To grasp why these water construction endeavors are necessary, it helps to know why and when the region became so populous.

The nineteenth-century gold-rush to the southernmost tip of Africa exploded the area's population with eager-to-work laborers when it had little infrastructure or resources to support them. Prior to development within the last 150 years, small communities lived peacefully in the mountainous regions of South Africa. Existing natural resources kept localities afloat, although there was little-to-no national organization. Consequently, the region was slow to develop regarding political stability and economic growth. The scramble for natural resources allowed foreign interests, like Britain and Ireland, to intervene and implement Western constructs like racism, something that previously posed little threat to the stability of the region. South Africa's growth in racial tension inescapably included Lesotho, although these tensions here were primarily between indigenous groups and incoming South African developers. "Its national borders were leveraged by the mining industry to manage the flow of labor to South African mines, and the country was positioned as a labor reserve, a kind of holding tank for an army of surplus African workers."[11] Lesotho's seemingly predisposed socioeconomic situation was offset by its political urge for independence.

The apartheid that took place in South Africa for the majority of the twentieth century left ripples of tension between the nation's two primary adversaries: black and white; poor and rich. There was a struggle over whom to urbanize and what that would mean for South Africa's labor source, particularly for indigenous communities. The ways in which established laws systematically instilled racism into South African culture in a way that cannot be reversed in a mere century. These laws include the 1923 Natives (Urban Areas) Act and the 1937 Native Laws Amendment Act. While tensions within South Africa had less to do with the surrounding

---

[11] Hoag 2022, 2.

countries than they did with internal racial conflicts, it increased the belief that economic and political tensions should be avoided at all costs. Additionally, many black refugees found homes in Lesotho and Swaziland, a nation in a similar political position to Lesotho, in respect to South Africa. Although they may have technically relocated, national borders are an invisible construct at best. This phenomenon of cultural versus national borders has riddled African conflicts across the continent, primarily since the Scramble for Africa in 19th century Europe. Cultural connections between these nations counteract the diplomacy installed to keep them separate. “Passports are required for citizens of the two countries. Former homelands residents have built lives and own houses in these distant and under-serviced places. Residents remain trapped: both by decisions taken during apartheid and by the inflexibility of modern states and decision makers.”[12]

South Africa's national government made the first step forward in negotiations with Lesotho over water access. In 1955, before the apartheid escalated and Lesotho's coup occurred, British and South African engineers formulated the early notions of the LHWP, predominately the plans for Phase IA.[13] The urgency to move forward with this plan was worsened by a regional drought in the 1980s, which increased South Africa's demand for water by 10 to 15 percent per year.[14] Further, cross-border conflicts in 1985, including the killing of 13 white South Africans, strained binational relationships. In this sense, due to the supposed mutually-beneficial nature of the LHWP, administrators foresee improved international diplomacy.

---

[12] Twala, Chitja and John Aerni-Flessner. 2021. “Lesotho: South Africa's Apartheid Regime Manipulated Borders. Today, the Effects Linger.” *allAfrica.com*, November 11, 2021, NA.

[13] Hoag, Colin. 2019. "'Water is a gift that destroys': Making a National Natural Resource in Lesotho." *Economic Anthropology* 6, no. 2 (June). 190.

[14] Mwangi 2007, 8.

Lesotho's Governmental Organization and Motives. The plan was presented to a newly-independent Lesotho national government, headed by Chief Leabua Jonathan, and backed by the Basutoland National Party (BNP), a nationalist political entity. He was supported in Lesotho for increasing international aid donations and domestic development, but was notoriously in favor of urbanization, thus alienating the mountainous and agricultural sectors, where the LHWP would primarily affect local communities. Lesotho's economic dependence on South Africa cannot be emphasized enough, a fact that national leaders are more than aware of. Chief Jonathan wished to maintain this dependency without becoming hyper-reliant. "Therefore, the BNP's political strategy for sustaining a national political-administrative class is predicated upon Lesotho's economic dependence upon South Africa and its political independence in securing foreign aid and assistance from Western and communist sources."[15]

In the first of many military coups, Chief Jonathan was overthrown by General Metsing Lekhanya, who immediately sought to improve relations with South Africa. Critics have argued that this relationship reparation may prove detrimental to Lesotho's long-term independence. Although African chieftaincy systems do not translate directly into our Western political boxes, one could argue that Jonathan was fairly liberal and Lekhanya was more conservative. These orienting terms aside, General Lekhanya signed a treaty with South Africa just ten months after his claim to rule to move forward with LHWP. The hastiness at which this treaty was signed should not go unacknowledged; while this treaty had been in discussion for years, it took General Lekhanya mere months to fast-track its completion. This could be credited as an act of necessary political initiative. However, as was discussed in chapter 1, the lethargic pace at which the

---

[15] Libby, Ronald T. 2014. *The Politics of Economic Power in Southern Africa.* Princeton: Princeton University Press. 152.

project has proven to move do not reflect the hastiness with which it was signed. Concrete implementations of the water project began quickly following the formation of the LHDA in 1986. Since 1989, the LHDA has released annual reports concerning committee developments, financial statements, future plans, and environmental detriment evaluations. The first of these reports claim the completion of Phase IA would be 1996, including the dam, bridges, and hydropower plants discussed in chapter 1. Additionally, an Environmental Division has been in place since the project's beginning, which was divided into three subdivisions in 1988: one for Compensation, Rural Development, and Heritage, another for Natural Environment conservation, and a Cartographic Unit.[16]

In 1994, the South African and Lesotho national governments met to review the 1986 Treaty, thus establishing their inextricable linkage between the two countries. As we flash forward to 1996, Phase IA is now forecasted to finish in 1997, while Phase IB is "proceeding according to plan… All is set for construction of the Phase IB works to commence in early 1998."[17] While Phase IB did begin in 1998, against the advice of NGOs and international interest but following pressure on the World Bank from the Department of Water Affairs. Coincidentally, Phase IA was not completed until the same year, 18 months later than planned. This delay has little to do with contemporary political turmoil, like the overturning of South Africa's apartheid government in the 1990s, and more to do with internal affairs, like environmental restrictions and a worker strike in 1996, which is discussed in chapter 3. For the first time, water deliveries to

---

[16] *Annual Report 1988/1989*. Maseru, Lesotho: Lesotho Highlands Development Authority, 1989. 10.

[17] *Annual Report 1996/1997*. Maseru, Lesotho: Lesotho Highlands Development Authority, 1997. 5.

South Africa from the Katse Dam begin, along with power production at the Muela Plant. With Phase IA complete and Phase IB underway, the LHWP seemed to be somewhat on track.

Phase IB incorporated an additional dam and two water transfer tunnels into the hydroelectricity plans' design. The annual records from the early years of Phase IB's operations are inaccessible through the LHDA, though the project was completed in 2003, only a year after its projected finish. Phase IB had more social welfare programs in relation to Phase IA, but they were still vague and broad. When the dam was inaugurated in 2004, thus completing Phase I of the project, both nations' leaders (in 2004, President Thabo Mbeki of South Africa and King Letsie III of Lesotho) again emphasized the importance of international cooperation. President Mbeki stated in the inauguration speech that, "Lesotho and South Africa should draw pride from the fact that we have demonstrated what we need collaboration rather than competition over resources, thus to avoid violent conflict."[18] This subtle nod to the area's past conflicts demonstrates the general knowledge that the project hangs in a delicate balance, the loss of which promises to harm several communities.

Successive phases of the LHWP, Phase III and IV outlined in the table in chapter 1, have yet to begin, so are not yet apart of the region’s history .The prospect of undertaking of these phases hint at another thirty years of construction for the region, if not more. The Tsoelike Dam of Phase III is the most likely endeavor after the infrastructure of Phase II is complete. These future phases of the project are not even listed on the project’s website, evidently cementing the absence of excessive planning that most would agree is necessary when planning such a project of scale.

---

[18] Mwangi 2007, 11.

Reparations to local communities will be discussed further in chapters 4 and 5, but they are an integral part of the project's historical development. Environmental degradation was overlooked as an inevitable problem, and social welfare policies were prioritized. This would have been fine, given they were *actually prioritized*, but this was rarely the case. For example, in 2014, instead of paying communal compensation owed to cooperatives and local entities, the Lesotho Highlands Water Commission (LHWC, a subchapter of the LHDA) withheld compensation, arguing that "the communities were doing a poor job of managing the communal compensation funds."[19] This statement seems contradictory with the knowledge that the LHDA and LHWC do not even present opportunities for local involvement in project decision-making, as is discussed in chapter 5.

Instead, the emphasis tends to be on the interests of foreign investors and the social well-being of Lesotho's partner in this agreement, South Africa. Lesotho itself is facing its own water crisis. Though it may be different to the one occurring in South Africa, the complete reconfiguration of a cultural disposition towards water should not go unacknowledged. Additionally, this reconfiguration is happening under the thumb of the World Bank, South Africa's national government, and Lesotho's private domestic interests. We know that water is a principal environmental crisis as we move into the twentieth century; the people of Lesotho are reminded every day. We also know that international water projects may be inevitable to avoid this crisis. Studying their evolution and social, political, and economic repercussions can aid more effective projects in the future.

---

[19] Hitchcock, Robert. 2015. "The Lesotho Highlands Water Project: Dams, Development, and the World Bank." *University of New Mexico: Sociology and Anthropology* 3 no. 10. (October). 533.

Chapter 3: At What Cost?

International aid projects inevitably bring economic repercussions for their host countries, particularly if those projects pertain to precious surrounding environmental resources. As discussed in chapter 1, these environmental resources provide necessary ecosystem services to not only surrounding communities, but also other surrounding ecosystems. For example, depletion of freshwater access not only inhibits local usage, but decreases diversity in local flora and fauna. While these examples of natural capital do not inherently have monetary value, the consequences of their destruction has very concrete financial repercussions, as I will discuss later.

Binational agreements. Sub-Saharan Africa is known for its richness in mineral mining, oil reserves, and species diversity. Water is never on that list. Lesotho's water abundance places it at both an economic advantage and a position of leverage in respect to surrounding nations. The ability to harness hydroelectric power from the water promises a more developed future for the country. The unique water access contrasts its almost total economic dependence on South Africa, as most of its workforce comprises migrant laborers. When initiating the Lesotho Highlands Water Project, the Basotho government knew its reliance on international support would be a factor, but the degree to which it became so was unprecedented.

Before Lesotho and South Africa proposed the LHWP to the World Bank, Lesotho was on the World Bank's list of lowest-income countries, with the average citizen existing on under US$2 a day.[20] Lesotho had recently emerged from a time of difficult civil and political unrest when binational agreements regarding water redistribution were first discussed, as was reviewed

---

[20] Hitchcock 2015, 527.

in chapter 2. The country was already geographically scattered and socially divided. As a nation, its leading export prior to 1986 was labor. South Africa was regionally developed for its rich mining opportunities, drawing the masses from Lesotho to Cape Town and Johannesburg. As these communities settled, they realized the economic abundance of such a place was not to be met with geographic resources. “Work” was perhaps the only resources South Africa had to offer Batho migrant workers, as supporting this massive influx of laborers proved extremely stressful on South African infrastructure.

South Africa and its encompassing land are mountainous and arid. Agriculture was never a viable mass-export option. Additionally, due to its late development compared to the rest of the Western world, international business endeavors are still humble. To quickly modernize the region, capitalizing on natural resources was, and still is, an obvious option. When the LHWP was proposed, Lesotho used ambitious "if-then" logic; if we have an abundance of water and the ability to draw hydroelectric power from it, then we should redirect the water to South Africa and harness energy for the sake of our economic advancement. Colin Hoag states, "If apartheid-era Lesotho was part of an infrastructure of economic production that sought to regulate the flow of labor… Lesotho today is part of an infrastructure of economic production that seeks to regulate the flow of water."[21] After all, Lesotho had the labor and land means for the construction of such a massive project. Essentially, Lesotho’s chosen export product switched from labor to water.

Making water a national resource requires a reconfiguration of the nation's general disposition towards it. Water is by no means abundant in Lesotho, it is only described as such in relation to its surrounding country. Modern water access is not known to most people in Lesotho,

---

[21] Hoag 2022, 3.

instead, it is described as localized, scarce, and destructive. A local 65-year-old farmer by the name Mohlakoane Molise notes, “I am very angry about that water, because it could benefit us, we could use it to water the crops when there is a drought. But that's not happening… There were fields around the river before the dam was built, and there were trees, but they are covered by water,Since the dam is here, it's difficult to get water. The crops are very poor, even the grazing land. It's like a desert.”[22] By framing water exportation as increasing potential in economic and energy advancements instead of extractive capitalism, Lesotho's cultural relationship with water was molded to match its economic desires. This clumsy, reductive shift away from water as a valued cultural resource toward water as an exploitative object, emphasizes why this project is so detrimental, and not just to surrounding ecosystems. This will be touched on further in chapter 5.

International aid and World Bank Involvement. As was discussed in chapter 2, the World Bank agreed to invest US $9 million in the LHWP after Lesotho and South African governments approached them with a binational agreement in 1986. This was the first of many multi-million dollar investments in the project. These investments include "cumulative combined Phase IA and IB royalties", "Managerial and Institutional capacity in place to manage the project", environmental degradation mitigation strategies, and "local development spin-offs for the project.”[23] The latter two listed investments are particularly relevant to study the social impacts of the LHWP. Environmental degradation mitigation strategies have been all but put into action

---

22 England, Charlotte. “Drought Devastates Lesotho as Water Is Exported to South Africa.” The Independent, August 13, 2016. https://www.independent.co.uk/news/world/africa/drought-lesotho-water-exported-south-africa-katse-dam-food-insecurity-a7189211.html.

23 World Bank. 2007. I*mplementation Completion and Results Report (IBRD-43390) on a Loan in the Amount of US$45 Million to the Lesotho Highlands Development Authority for Lesotho Highlands Water Project – Phase 1B.* Report No. ICR 168. Washington DC: World Bank.

in Lesotho; there exists knowledge and talk of why these strategies are necessary, and ideas about how to implement them, but environmental depletion has been heavily disregarded throughout this process. “Local developmental spin-offs” is also a convoluted term, and according to a World Bank Staff Appraisal Report for Lesotho Highlands Project Phase IA, these “spin-offs” are more baked in than implied. It states, “Project related infrastructure in the form of access roads, power lines and housing will also contribute to the development of the economy, and open up remote areas of Lesotho.”[24] In other words, the infrastructure created for the project is projected to help with more than just water distribution. Additionally, the construction of Phase I's dams and transfer tunnels anticipated the provision of around 3,000 domestic jobs, but these jobs were temporary, for low pay, and required physical labor in poor conditions.

By 1990, The World Bank was projected to invest a whopping US $2.4 billion, exponentially higher than their original investment. With this increased invested, the World Bank also identified five risks that demand mitigation; financial, technical, political, administrative, and last but not least, environmental.[25] Financial risks include South Africa defaulting on debt, and losing funding due to project delays, the second of which has proven most relevant in recent years. Technical risks fully came to fruition when Phase IA missed the completion deadline by a whole two years, thus increasing existing financial risks. Political risks cover the acknowledged disproportionate benefit experienced by South Africa, instead of Lesotho, throughout the course

---

[24] Lesotho - Lesotho Highlands Water Project (Phase 1A) Staff Appraisal Report. 1991. Washington, D.C. : World Bank Group. 3.

[25] Lesotho, World Bank Group 1991, ii.

Project Cost Estimates

	Local	Foreign	Total	Local	Foreign	Tot.
	Maloti Million			US$ Million		
A. Civil Works & Equipment						
Katse Dam	449	355	804	179	137	310
Transfer Tunnel	316	280	596	122	108	230
Delivery Tunnel	150	132	282	59	51	109
Infrastructure	514	0	514	198	0	198
Hydropower	116	234	350	45	90	135
Subtotal	1,545	1,001	2,546	596	386	982
B. Construction Supervision						
Water Transfer	133	83	216	51	32	83
Infrastructure	68	7	75	26	3	29
Hydropower	15	60	75	6	23	29
Subtotal	216	150	366	83	58	141
C. LHDA Costs						
Technical Support	93	46	139	36	18	54
Operating & Adm. Expense	142	60	202	55	23	78
Training	3	13	16	1	5	6
Subtotal	238	119	357	92	46	138
D. Environmental Protection, Compensation, & Rural Development	168	4	172	65	2	67
E. Others						
Studies	0	5	5	0	2	2
GOL Representation to JPTC	6	9	15	2	3	5
Other GOL Cost	60	0	60	23	0	23
Subtotal	66	14	80	25	5	30
Base Costs	2,233	1,288	3,521	861	497	1,358
F. Contingencies						
Physical Contingencies	212	173	385	82	67	149
Price Contingencies	1,097	1,045	2,142	135	161	296
Subtotal	1,309	1,218	2,527	217	228	445
Total Project Cost	3,542	2,506	6,048	1,078	725	1,803
Interest during Construction	1,588	805	2,393	405	206	611
Total Financing Required	5,130	3,311	8,441	1,483	931	2,414

Figure 3: Projected World Bank Expenses (World Bank Group, 1990, 34.)[26]

of the project. To mediate administrative risks, The World Bank stated, “Experience with the implementation of large infrastructure contracts indicate that the proposed project may take longer to complete than programmed. To ensure that unnecessary delays do not take place in the future, adequate staffing sad technical assistance have been provided.” The report continued to state assert that “out of a total staff of 477 (mid-March, 1990), 203 were skilled, 60 were unskilled employees and 214 hired as laborers on an hourly wage basis.”[27] In comparison to the workforce available in a country whose main export was *labor*, these numbers are humble at best. Finally, environmental risks are at the bottom of the World Bank’s list of concerns. To mitigate these risks, the Bank and the LHDA formed three plans: a Natural Environment and Heritage plan, a Compensation plan, and a Rural Development plan.

---

[26] Lesotho, World Bank Group 1991, 34.

[27] Ibid., 26.

The Natural Environment and Heritage plan includes monitoring the following: local flora and fauna, river and reservoir flow, public health, preservation of cultural heritage (ie cultural ecosystem services), excavations and salvageable fossil material, and sedimentation and build-up. Essentially, this plan monitors anything that the physical environment might affect. The Compensation plans acknowledges that dam construction threatens to flood up to 4,000 hectares in arable or grazable land, and about 4,600 households will be forced to relocate due to this flooding. Financial reparations are stated without concrete numbers. These statistics are further expanded upon in chapters 4 and 5, in addition to background on the Rural Development plan.[28]

Destruction of Natural Capital. On September 14, 1996, amidst the erection of the Katse Dam, blue-collar workers went on strike against the poor conditions and pay to which they had been subjected. This strike included peaceful occupation—no violence of any kind. Police stormed the occupation, killing five and injuring thirty or more. Thousands of workers gathered in nearby churches for up to a week after the event, seeking refuge. Besides a press release from 1996 that contains a first-hand account of the affair, the Lesotho government did an incredible job of sweeping this strike under the rug. The press release recounts, "Police charged upon [workers] while they were in peaceful occupation and were not destroying any property. [Police] threw a great quantity of tear gas and as the workers started fleeing, they started shooting at them.… One ambulance driver with injured people in the vehicle was even arrested and shot."[29] There is little to no video or photographic evidence that this clash occurred. This intentional silencing of provincial voices demonstrates the neocolonialism that the World Bank had been

---

[28] Lesotho, World Bank Group 1991, 51.

[29] Moyo, Herbert. 2019 Dec 18. "Outcry over Delays in Completing LHWP II." *Lesotho Times*, Lesotho Times.

demonstrating for the entire previous decade. Non-government organizations urged the World Bank to take action following the occurrence. In response, the World Bank delayed the project. The bank's task manager for the project explained, "For us to proceed with the next phase, environmental and social elements of [Katse Dam] have to be satisfactorily met." This strike was the first in a substantial list of reasons that Phase II of the plan was postponed, a delay whose worst effects are felt by the surrounding communities.

The displacement of local communities led to economic ramifications for Lesotho's rural farming and agricultural sector. Soil erosion and reservoir sedimentation have become increasingly present in LHWP's institutions, but these repercussions were largely ignored in the planning phases. Hoag explores why this might be the case, and further, why there are no scientific or statistical models that monitor the current sediment levels. He found in a meeting with a project engineer that sentiments build-up due to the inconsistent water release demands on a yearly basis. Water may sit in the dam longer than usual on a wet year, allowing the soil to erode. Lesotho's energy demands do not fluctuate with the seasons. Additionally, the degradation of alpine wetlands causes water to flow downhill too quickly and can cause flash flooding. Factors like these encourage farmers to relocate, and since many of them are also working for the LHWP or are dependent upon South African labor resources, a negative economic feedback loop is formed.

The depletion of natural capital, or any natural resource that can potential provide a service to humans, is particularly detrimental to communities that are hyper-dependent on these resources, unlike a country like the United States, where infrastructure exists to work around resources shortages. The lack of monetary value assigned to natural capital resources like

freshwater or arable land forces the responsibility for maintenance of these resources onto vulnerable, local communities, who typically do not have the means to "pay" for their destruction. Thus, not only do these communities feel the effects of the loss of these resources, but in the process of trying to recover them, lose other resources, like time and energy. Hence, the distribution of goods and services provided by this project do not equate to the cost paid and change in livelihood that local communities experienced.

In addition to the loss of natural capital at the hands of the LHWP administrators, actual capital, at least $1 million USD to be exact, was embezzled by chief executive director Masupha Sole by a number for foreign investment banks.[30] "The companies, Balfour Beatty, Sir Alexander Gibb and Co, Stirling International Civil Engineering and Kier International are charged alongside the Swiss-Swedish group, ABB, Impregilo of Italy, Acres International of Canada and Sogreah, Dumez and Cegelec of France."[31] These investors, while not initial or majority investors in the project, have provided millions of funds over the past three decades. "According to the DTI [Department of Trade Industry], back in 1994 the UK provided consultancy support to the Lesotho Highlands Development Authority under technical co-ordination arrangements. This is the very organisation to which Mr. Sole, the accused public servant in Lesotho, was appointed as chief executive in 1986 when the project began."[32] British investment banks in particular turned to the LHWP as a viable investment opportunity in Africa, especially after their involvement in South Africa's apartheid. However, the case of Masupha Sole was less of an

---

[30] Bracking, Sarah. 2007. "The Lesotho Highlands Corruption Trial: Who has been Airbrushed from the Dock?" *Review of African Political Economy* 28, no. 88 (February). 302.

[31] Bracking 2007, 302.

[32] Bracking 2007, 302.

international conspiracy to smuggle money or bribe an administrator, and more of an issue regarding individual embezzlement due to lack of proper oversight. “Yet no one, it appears, had the resources to provide oversight and establish the integrity of the organizations they had bankrolled.”[33] This kind of neglect follows a recurring pattern within the LHWP; sheer ignorance of financial or operational developments leading to disproportionate distribution of said finances. However, the way in which the Lesotho high court handled the case set a precedent for how these cases are handled moving forward.

In 1999, Masupha Sole was sentenced to 18 years in prison, nine years into which he filed an appeal and was subsequently released in 2011. In an interview with the New African, Refiloe Masemene, minister of justice, human rights, law and constitutional affairs in Lesotho, explores the groundbreaking nature of this case. As discussed in chapter 2, Lesotho exists under an unstable democracy, with a history of chaos, coups, and corruption, which have become pillars of “African-ness” in the Western world. In an environment like this, a high court struggles for efficacy, in any government. Masemene sees this case as an opportunity for Lesotho to establish itself on the Western stage. By prosecuting a local authority figure and implicating British banks in particular, Lesotho drew attention to itself as a country that would not be infected by corruption. He speaks of Lesotho’s culture prior to Western involvement one of together-ness and self-help, and accuses the introduction of international capital for the shift in cultural orientation away from cohesion and towards greed.[34]

---

[33] Bracking 2007, 305.

[34] Refiloe Masemene. 2003. “What can a mosquito do to an elephant?” Interview by Baffour Ankomah and Khalid Bazid. *New African*, May 2003.

While this case was a initially major win for the justice advocates such as Masemene, Sole was controversially appointed as chief technical advisor to the Lesotho Highlands Water Commission, a tangential organization to the LHDA, just four months after his release from prison. While all has been quiet on the corruption front side his reintegration, this appointment turned this case from one of precedent-setting importance into one from which we must only *tentatively* take lessons. Authorities should continue to be investigated for corruption and embezzlement. Conversely, the LHWP evidently faces problems staying true to its promises and decisions, as will be further explored in the next chapter.

Chapter 4: Environmental (In)justices: Slipping Through the Cracks

The definition for the term "environmental justice" is still finding its place in the eyes of the general public. Some see the environment as their city, their house, the nearby park, a national forest, our oceans, and many things in between. Our environment is the physical space and factors around us that affect our physical and mental being. American environmental justice advocate Julie Sze explores how "race, indigeneity, poverty, and environmental inequality are all linked in a toxic brew. Environmental justice is focused on intersectionality (race, class gender, immigration/refugees, Indigenous land claims/territorial sovereignty) and organized around expanding social and racial justice is environmental terms (land, pollution, health)."[35] For the sake of understand this definition in the context of the LHWP, it is important to emphasis the indigeneity and poverty components and the impacts those communities feel on environmental factors like land and health. To expand this definition further, "environmental factors" in this

---

[35] Sze, Julie. 2020. *Environmental Justice in a Moment of Danger.* California, University of California Press. 5.

case encompasses the built community of support that cannot be rebuilt with external aid. While the LHDA was successful in delivering their promises on some community rebuilding efforts, a majority slipped through the cracks.

Acknowledged Injustices at Hand. A majority of the criticism faced by the LHWP stems from its inability to equitably reimburse disparaged communities for any costs the dams, tunnels, or power plants may have imposed, whether financial or ecological. This is not due to the severity of their construction (although it is severe) or the lack of a structured social welfare plan. It was due to the immense neglect that those reparation plans were approached with, along with unaccounted-for, negative civil externalities imposed on local communities. Particularly affected local communities include migrant laborers, the rural agricultural economy, and women. To make matters worse, the flooding of new reservoirs demanded the relocation of many communities. Thus, these disproportionately affected communities were also denied the ability to rebuild a life on the land they had worked for years, worsening the cost they bore. While international aid forces, like the World Bank, should theoretically supply substantial aid for relocation and rehabilitation programs, they rarely do so.

At face value, the World Bank has been known for some of the most comprehensive environmental justice standards and rehabilitation plans since the 1980s. In 1980, they released the first Operational Manual Statement, outlining what defines an ‘affected community,’ how income and land loss should be calculated, and what defines ‘just’ or ‘fair’ compensation. But the World Bank’s wide-reaching scope of investment projects demand a certain level of ambiguity, and because of this, “Bank policy on involuntary resettlement covers only the direct economic and social impacts of the expropriation of land or the restriction of access to natural resources

and does not cover all of the social issues and impacts of an investment, whether or not it involves resettlement."[36]3 Here, we see the acknowledgment of inequity within reparations, ignoring detriment to social organization. Nonetheless, there are supposed guaranteed financial reparations involved with resettlement projects.

But these guidelines have a loophole; they only pertain to the restoration of livelihoods of people affected by projects but ignore potential improvements for the living standards of these disenfranchised people.

> "While the World Bank has declared that any subsidized economic project must also be a development project… the programs that comprise the 'development' portion of the LHWP generally are secondary measures that aim to serve the dual purpose of fulfilling the World Bank standards and the LHWP's treaty obligations to ensure that the standards of living of the affected peoples are not lowered."[37]

However, that was not the case for the average citizen in Lesotho. As poverty was already extremely common in Lesotho, touched on in chapter 2, the further development of the dams destroyed communities. This is directly in line with the project's website, which passively states, "The project facilitates the resettlement or relocation of persons who are affected by the construction activities of the Project."[38] According to data obtained from the LHDA, a total of 573 families were *relocated* just during Phase 1 (see figure 4)[39]. According to research conducted

---

[36] World Bank. 2004. *Involuntary Resettlement Sourcebook: Planning and Implementation in Development Projects*. Washington: The World Bank. 3.

[37] Braun, Yvonne A. 2010. "Gender, large-scale development, and food insecurity in Lesotho: an analysis of the impact of the Lesotho Highlands Water Project" *Gender & Development* 18 no. 3 (November). 251.

[38] Lesotho Highlands Development Authority." *LHDA*

[39] Hitchcock 2015, 528.

by the Southern African Sub Global Assessment of the Millennium Global Assessment, "The project affects an estimated 8250 households along 5 kilometres of river, having required the relocation of 24,000 people under Phase 1A."[40] These kinds of semantic differences are the root cause of the conceptions surrounding international aid initiatives.

The displacement of local communities has become an increasingly prevalent issue as the project progresses. Phase II is projected to flood approximately 500,000 acres of the valleys and tributary catchments of the Senqu and Khubelu Rivers. This land currently belongs to people whose entire lives, and families' entire lives, have been spent farming and living there. The LHDA claims that there exists "a Compensation Policy for Phase II, which defines the range of losses and specifies compensation and relocation entitlements, has been prepared in consultation with affected communities.…" This broad statement concludes that "The Compensation Policy was approved by the Project authorities in August 2016."[41] This policy includes the education rehabilitation in communities that previously might not have had access to education, as well as the construction of service roads. These service roads are projected not only to add to the infrastructure of the project, but add to the kingdom's overall infrastructure, connecting communities and resources.

Despite the World Bank's welfare standards, impoverished communities have felt the blunt end of this relocation crisis. In fact, "the two governments claimed that they wished only to restore living standards to what they were before first disturbance. The government spokespersons pointed out that this approach was in line with World Bank thinking…"[42] Luckily

---

[40] Southern African Sub Global Assessment of the Millennium Global Assessment

[41] Lesotho Highlands Development Authority." *LHDA*

[42] Hitchcock 2015, 527.

for project administrators and essentially nobody else, project rehabilitation guidelines appear standardized across the board. The standardization of these policies aids in the LHDA's ongoing effort against negative public relations.

One success story from the LHWP, also aiding in their effort for positive PR, is the relocation of the burial sites along with resettled communities. The issue of what would happen to the buried was a primary concern for individuals whose families had resided on the same farmland for as long as they could recall. Luckily, the LHDA handled this problem with grace. Apparently, many burial sites were unearthed, relocated, and reburied in designated areas. Locals recall this process as satisfactory, and some even acknowledged the immense effort this must have taken on part of the LHDA.[43] Residents of the village Molika-liko noted that although their community cemeteries were successfully relocated, traditional connections to the dead may have been lost. These traditions include the funeral process and the sacredness of burial land. Not only had the costs of holding funerals greatly increased, but the promised new cemetery land for the residents at Molika-liko was just beside the existing burial site for an existing community, Makuena Mohlomi. While no conflict has begun between the two, neither group is completely satisfied with their new organization. When these types of factors are ignored in relocation efforts, domestic conflict is brushed off as unimportant or irrelevant.

At the Expense of Local Communities. The ecological damage of dam construction, following what was discussed in chapter 1, deeply altered the livelihoods of communities that depend on natural resources. "The depletion of fuel resources, wild vegetables, and medicinal plants has not only led to losses in income, food, and energy, but also to cultural deprivation and

---

[43] Bennet 2012, 187.

Stage	Destination	Foothills	Maseru	Total
1A Katse	**Katse Basin**			
	71 (25 in crash program in 1995)	0	0	71
1B Mohale	**Mohale Basin**			
Stage 1(1996-1998)	37	38	24	99
Stage 2 (2002-2006)	27	177	18	222
Stage 3 (post inundation, 2006-present)	103 (165)	4	0	169
People Who Lost over 50% of their land under Stage 3	72			74
Total	298	233	42	573 relocated, resettled, or affected directly

Note: Data obtained from the Lesotho Highlands Development Authority (LHDA). In the Stage 3 (Residual Resettlement) category of Phase 1B, project affected households that lost over 50% of their arable land were allocated fields in two areas in the Mohale basin, Ha Nthakane and Ha Koporale

Figure 4. Families Resettled or Relocated by stage and location in Phase IA and IB (Hitchcock, 2015)

a decline in the health standards of the affected communities."[44] When addressing the tangible reduction in ecological stability, it can be easy to ignore the cultural importance tied to such resources. When Lesotho converted to a water-export-based economy, the cultural significance surrounding water had to shift as well as the economy. Because Batho people were used to a relative abundance of water and were told the Project would not change that, their resulting water scarcity left them with no choice but to migrate and/or completely change their livelihoods. In an interview with Sipho King, Katse village local explains, "They promised when they built the dam that we would get water all over the village.… It is our resource. Where is our benefit?"[45]

Anthropologists Olivia Bennet and Christopher McDowell's *Displaced: The Human Cost of Development and Resettlement* relays a multitude of first-hand interviews with local communities around the dam project, both before and after its construction. The overwhelming consensus *before* construction expressed tentative optimism for the project, with a healthy skepticism about the efficacy of the LHDA. A recurring theme throughout these interviews

---

[44] Mwangi 2007, 15.

[45] Kings, Sipho. 2016. "Drought Bites as Lesotho Exports Precious Water." *Climate Home News*. Climate Home, October 7, 2016.

regarded the trust felt between the residents and the land, as it provided all the services discussed in chapter 1. Interviews after the project reflected a different reality. A primary service lost was that of a cultural nature. She recalls that "... land was not only their prime asset, it was an integral part of their lives and identity. As [resident] Motseki Motseki said: 'Our life here is the soil, we live by the agriculture.'"[46] Further, relocation promises were complicated, written in unfamiliar languages, and changed frequently, as did the project's overall timeline. In that regard, she also noted, "While their financial skills and experience varied, even the most astute had some difficulty understanding the compensation arrangements, not least because they changed several times."[47]

An unintended consequence of this ambiguity is the vulnerability of the elderly and the very young. Of the working age residents, a majority are providing more multiple children, and are doing so with the help of with fertile land there is for farming. In addition to the economic strains faced by these families, relocating them placed strains on essential community ties. This intensified another unintended consequence; distrust among individuals of other individuals. While families were typically relocated together, community bonds that held people together regardless of financial status were broken when communities of families were separated. One example of this strain is a disparaged money-lending system, which operated on an honor-code basis. This was functional until it was made difficult, or physically impossible, to actually reach each other and exchange money. This type of example perpetuates a familiar feedback loop within environmental justice crises; affected communities not only face the aforementioned

---

[46] Bennet 2012, 157.

[47] Bennet 2012, 162.

repercussions of construction projects (ie relocation involving a change in lifestyle, strains on community bonds, etc.), but the repercussions of the reparations provided inhibit progress that was promised.

Pressure on the ever-present AIDS/HIV epidemic also increased as the dams' construction progressed. Needless to say, the African AIDS/HIV crisis is a symptom of underdevelopment and poor healthcare access. Prior to project implementation, AIDS had a 0.9% prevalence rate in the Lesotho highlands, the primary project impact area. As of 2009, that prevalence rate reached 22%, approximately the same infection rate found in Lesotho's major cities, like Maseru.[48] While the LHDA has yet to claim responsibility for this increase, as this is not a direct cause-and-effect relationship, the increased human migration patterns and decreased living standards allow us to believe they are not innocent. Further, tearing communities from their naturally consistent source of medicinal supplies

The injustices faced in Lesotho are acknowledged by project authorities. As will be touched on in chapter 5, these inequities also have manageably applicable solutions, but there needs to be attention on the problems in Lesotho for them to be applied. The number of unpublished project plans, data tables, or economic reports by the LHWP of the LHDA is shocking; documents simply were never submitted to authorities and investors, making it extremely difficult for scholars to build a case against those involved in the project, or even decipher if that would be necessary. By illuminating local voices, authors like Olivia Bennet allow for a closer look at the injustices at hand. Interviews like hers have helped many scholars

[48] Hitchcock 2015, 530.

and critics of the project to properly adjust policy reformation plans, which have varied over the past decade.

Chapter 5: Redistribution and Policy Reforms

Of course, no humanitarian effort can be perfect. Their missions may be of good intent, like increased water accessibility and reliance on renewable energy sources like hydroelectric power. However, they usually seriously lack social and environmental rehabilitation programs, and the LHWP is no exception. This pattern evolved from a commodity-based culture, in which natural resources are viewed as extractable and available for political leverage. Proposing reparations to an international project that was initially launched as a response to an ecological crisis is a caveated task, yet it is critical to recognize where the execution might have gone wrong. In the case of the LHWP, a majority of those pitfalls lie within human relocation efforts and ecological degradation, particularly within the agricultural sector.

Environmental Impact Reports. An environmental impact assessment (EIA) would be a great place to start LHWP's reparations. The US has mandated environmental impact reports since 1969 and implementing this mandate on an international scale through the World Bank could potentially have great lasting effects on our current climate change crisis. Mandated environmental impact reports on such a large scale would have to be just broad enough to include projects within varying disciplines, but not so broad they they become vague and riddled with loopholes for extractive capitalists to jump through.

Any ecological assessment the LHWP conducted was carried out by what Colin Hoag calls "ecological bureaucrats."[49] They prioritized economic development at the expense of ecological conservation. He notes that these bureaucrats saw ecological management as their direct dynamic with the land conditions, not the climate as a whole. In other words, these ecological bureaucrats are solely concerned with the well-being of the land in front of them, with little concern for the effects on other ecosystems. Ignorance about southern Africa's hyper-reliance of variable conditions like heat and rainfall demonstrates the carelessness the environment was treated with throughout this process. This is a common pattern among large-scale projects like these. Adjusting the LHWP's view of the environment would imply an entire reconfiguration of humanity's relationship with ecology. Instead, adjustments in favor of human security can be made to already-instituted plans.

In addition to skimping on an EIA, the LHWP also failed to account for transboundary impacts. The large and engulfing nature of this project alludes to natural repercussions outside Lesotho's invisible national boundaries. "However, they feared that assessing these impacts would severely delay implementation of Phase 1B … Out of the approximate 140 impacts identified from Phase 1B, 29 included downstream impacts associated with altered river flow, altered geohydrology and geomorphology."[50] These impacts also affect To compensate for the lack of EIA or a transboundary impact report, the LHDA carried out In-stream Flow assessments and established In-stream Flow requirements. These assessments primarily focused on reserving *some* water for ecosystem maintenance, "ensuring that the reserved water is made available to

---

[49] Hoag 2022, 81.

[50] Willemse, Nico. 2007. "Actual Versus Predicted Transboundary Impact: A Case Study of Phase IB of the Lesotho Highlands Water Project." *Water Resources Development*, vol. 23, no.3. 460.

the ecosystems at times when it is most appropriate for river maintenance"[51], and defining acceptable water quality. While these assessments and requirements give a semblance of organization and proper maintenance, they do not account for larger-scale effects of dam projects, like changing in seismic activity of an area. Nico Willemse suggests that future EIA are made with four primary components in mind: duration, scale, and severity of the project, and the likelihood of its occurrence.[52]

Listed on the World Bank's top five list of primary risks, discussed in chapter 3, environmental risks are listed last. Not only are they portrayed here as an afterthought, but the rhetoric used to discuss them is alarming. The World Bank stated:

> "The environmental risks are acceptable given the physical location of the dams and the reservoirs in deep canyons with minimal vegetation and wildlife. Because of the altitude, the risk of introducing water-borne disease is minimal. Expected temperatures will make it very unlikely that problems with water weeds would occur or that the water quality In the reservoir will deteriorate through eutrophication. Sedimentation of the reservoir is unlikely to become a problem, but will be monitored."[53]

The rural economy of Lesotho was faced with its own set of challenges, as was discussed in chapter 4. Those include increased disease (whether obtained from decreased access to healthcare or otherwise), decreased biodiversity, and increased sedimentation. The Rural

---

[51] Willemse 2007, 460.

[52] Ibid., 461.

[53] World Bank. 2007. I*mplementation Completion and Results Report (IBRD-43390) on a Loan in the Amount of US$45 Million to the Lesotho Highlands Development Authority for Lesotho Highlands Water Project – Phase 1B.* Report No. ICR 168. Washington DC: World Bank. iii.

Development Plan (RDP), touched on in chapter 3 was developed by the LHWP and World Bank and was "designed to provide skills training and alternative income-generating activities in recognition that those seriously impacted would be hard pressed to have the means to maintain their standard of living."[54]

The RDP was undoubtedly a step in the right direction. It became necessary because "Land in the project area is mainly grazing land and is already seriously degraded. Traditional farming systems are therefore no longer economically sustainable in the project area and most households survive on a combination of wage earnings, remittances, and support from non-governmental organizations (NGOs)."[55] For foreign investors, the RDP was likely seen as an opportunity to implement a project that was long overdue. While this policy was formatted in 1988, its implementation took until 1993 and was ineffective at that. A large contributor to this delay was the RDP's source of funding, which neither Lesotho's nor South Africa's development authority saw as a priority. Because these areas are responsible for most of Lesotho's agricultural output, the RDP's negligence had the negative unintended consequence of skewing the entire agricultural sector as well. This serves as a prime example of how sufficient development programs can be in place, and by simply approaching them with more urgency, reparations to the LHWP can be made without changing any of the plan's integrity.

Human Rights and Sustainable Development. The dams' effect of women and their increased load demanded specific rehabilitation programs that were seriously lacking in any LHWP plan. While the RDP has specific training for women, that training included poultry

---

[54] Tilt, Bryan, Yvonne Braun, Daming He. 2009. "Social impacts of large dam projects: A comparison of international case studies and implications for best practice." *Journal of Environmental Management* 90 no. 3. (July). 252.

[55] Lesotho, World Bank Group 1991, 51.

maintenance programs while the men were taught welding.[56] Thus, disenfranchised women are again reduced to traditional, western roles, like maintaining the home, and are denied the opportunity to learn new trades. As is now commonly recognized in developed countries, women's rights are human rights and as this project has been acknowledged as a human rights infringement, the rights of women in these communities ought to be treated with respect.

Local woman Matokelo Motseki of chapter 1, after being relocated from her home village of Molika-liko, explains how reduced access to natural resources affected women and has perpetuated a culture of 'laziness'. She expresses, "It has changed my routine because at Molika-liko, I used to go gathering firewood at least twice a week. But here… we no longer go out for wood; instead we go to the chief over there and ask [to buy it]… Here we are bored, because even for washing we draw water from the well over there instead of going to the river…"[57] Here, we see how the cultural service provided by the rivers was also ripped from communities. Reparations to women affected by local construction could come in the form of childcare, education, and food security. Childcare in particular is generally the most requested service by women in developing countries. This could include the erection of new structures like daycare centers and schools, which in turn help provide jobs for an already crippling domestic employment rate.

The construction of new buildings, like childcare centers, schools, and hospitals would denote a quickly developing country, which Lesotho should theoretically be, as is its host country, South Africa. A common conundrum within environmental ethics is the debate between

---

[56] Tilt 2009, 252.

[57] Bennet 2012, 198.

disparaged countries' development and the extent that they should be allowed to do so, as ecological degradation is now a know side effect of rapid industrialization. In places like Lesotho, where hydroelectricity is now somewhat reliable and accessible, industrialization seems to be on the horizon. This industrialization has the potential to change the lives of millions of people, but not without external help. International aid is crucial for underdeveloped countries to grow, and comes with its own set of stipulations. Consistent progress must be made, along with annual reports of what the money is used for and who is receiving the funds, the latter of more importance in this matter. Equitable allocation of money can make or break a reparation plan, as was the case in the shortcomings of the RDP.

Public health is also a primary concern for Lesotho's administrators because, "in Lesotho, it is estimated that 23% of Basotho aged 15–49 are HIV positive; 74% of TB patients are HIV positive and each year one person in every 100 develops active TB."[58] While the HIV/AIDS crisis runs rampant in Lesotho, resources to mediate this epidemic are limited. The Community Health Workers (CHW) program was introduced in 1979, prior to LHWP's introduction, and has proven to be effective. Responsibilities of CHW are outlined in figure 5. However, the "heavy burden of disease because of HIV and/or AIDS and tuberculosis shifted resources from health promotion to home-based care."[59] This "home-based care" refers to local herbal medicine experts like Khethsia Leteka of chapter 1. Leteka's access to naturally-occurring medicine was limited

[58] Seutloali, Thato, Lizeka Napoles and Nomonde Bam. 2018. "Community health workers in Lesotho: Experiences of health promotion activities." *African Journal of Primary Health Care & Family Medicine* 10 (Feb): 2.

[59] Ibid., 1.

Health promotion approaches	Activities
Medical approach	• Administer basic first aid • Case findings and referrals • Measure blood pressures, weights and heights • Administer family planning pills
Behaviour change approach	• Distributing condoms to promote practice of safe sex
Educational approach	• Door-to-door education • Health education in public gatherings and schools
Empowerment approach	• Increasing access to food through demonstration of construction of key hole gardens • Establishing support groups for ART patients, to help each other with the collection of medication refills from the facility • Door-to-door education • Health education in public gatherings and schools
Social change approach	• Lead support groups • Advocacy for alleviation of poverty and lack of water

Figure 5. Role and Responsibilities of Community Health Workers (Seutloali 2018, 3).

by the implementation of the LHWP, regardless of the extra pressure that public health crises are facing.

Programs like CHW are incredibly beneficial to disenfranchised countries like Lesotho, should they be instituted correctly. Right now, the CHW program in Lesotho is run by majority transplant workers, or those who are *not* from the communities, giving back to those communities. A fundamental adjustment to this program could include a domestic emphasis on STEM and/or health fields. Coupled with the growing educated population in Lesotho and improving infrastructure, less emphasis on the latter, a focus on health fields could help to grow a population of CHWs that know what resources are needed on a daily basis. Additionally, they could potentially provide insights into ways to combine traditional methods of medicine with western methods.

Independence. However, Lesotho and even South Africa should not be left to their own devices to maintain acceptable living conditions when international aid helped in creating the

crisis they find themselves in. For example, as discussed in chapter 4, the World Bank's restoration programs do not sufficiently rehabilitate the communities they target. Additionally, financial aid from the US government and other NGOs is not necessarily going to LHWP's rehabilitation programs, but if not tracked correctly, could go straight into the pockets of project administrators, as was the case of former LHDA director Masupha Sole of chapter 3. The World Bank's alleged ignorance of this embezzlement emphasizes their apathy towards humanitarian well-being in Lesotho. Due to this complicated cocktail of domestic and international players, social and environmental justice advocates would be hard-pressed a linear solution.

To aid in mediating problems with LHWP authority figures, I suggest following the precedent that the prosecution of administrator Masupha Sole set. If we are to see this case as a progressive exercise of democracy, we must intentionally ignore Sole's reinstatement and continued work on the project. Otherwise, the same corrupt and chaotic patterns of Lesotho's past continue to repeat. Instead, through actions like establishing administration *without* a criminal record or sufficiently relocating a burial site, can stand to break an existing vicious cycle.

Concluding Thoughts. Luckily, the LHWP is still incomplete. Development authorities still have time to make it a project that not only helps in energy and water distribution, but brings industry, jobs, and security to a country that previously lacked those qualities. When the LHWP was proposed, it was viewed as the potential solution to a number of ecological and social problems. Instead, it has proven to create more than it may have solved. This is not to say that its proposal should not have ever happened, just that its pitfalls began the same year, if not before, the construction began. However, this does not have to be the case! While disenfranchised

communities continue to suffer the consequences of the LHWP, their voices have never had more attention. Academic publications regarding the injustice in Lesotho were almost nonexistent before the twentieth century, despite its presence for almost fifteen years.

It is crucial to recognize the origin of such projects of scale, especially when they are perpetually engulfed in scrutiny. The initial project was proposed by the Lesotho government and the South African government together. It vowed to provide hydroelectric power for the former and water for the latter. At face value, this seems like a mutually-beneficial operation. The reliable supply of water and financial security would also provide thousands of jobs, however temporary, and infrastructure for the future of both countries. Moving forward, it is key to remember that eventually, Lesotho either needs an expansion in existing water resources, or a mass human migration towards more reliable sources. It is blatant that the World Bank saw the project as a development opportunity for the global south as a whole.

The expansion of the global south has proven to be a controversial issue, especially for conservationists in the global north. Environmental degradation may be inevitable for underdeveloped countries to "catch up" to more developed ones, something the global north had no problem with until recent decades. Should countries in the global north aid countries in the global south, and is financial support enough? Should we allow them to pollute and construct to expand, or should we hold them to the same (somewhat) harsh standards to which we hold domestic private construction entities? On the other hand, would allowing development companies to construct in poverty-stricken countries just be worsening the already existing problem of extractive capitalism? Lesotho having reliable, clean energy and South Africa having clean water for the foreseeable future would be a massive win not only for them but for the

Earth. However, planning and implementing a project of this size and scope runs into many obstacles; in this case, loss of human life. But for these types of projects to succeed would mean an increase in human potential. The success of impoverished countries is ultimately critical for the planet's ecological success.

Bibliography

Annual Report 1988/1989. Maseru, Lesotho: Lesotho Highlands Development Authority, 1989.

Annual Report 1996/1997. Maseru, Lesotho: Lesotho Highlands Development Authority, 1997

Bennet, Olivia and Christopher McDowell. 2012. *Displaced: The Human Cost of Development and Resettlement.* New York: Palgrave Macmillan.

Bohensky, Erin, Belinda Reyers, Albert van Jaarsveld, Christo Fabricius. 2004. *Ecosystem Services in the Gariep Basin*. Stellenbosch University, Southern African Millennium Ecosystem Assessment, Sun Press, a division of African Sun Media.

Bracking, Sarah. 2007. "The Lesotho Highlands Corruption Trial: Who has been Airbrushed from the Dock?" *Review of African Political Economy* 28, no. 88 (February). 302-306. https://doi.org/10.1080/03056240108704538.

Braun, Yvonne A. 2010. "Gender, large-scale development, and food insecurity in Lesotho: an analysis of the impact of the Lesotho Highlands Water Project" *Gender & Development* 18 no. 3 (November): 453-464, https://doi.org/10.1080/13552074.2010.522028.

Brown, Oli and Alec Crawford. 2008. "Environmental Change and Human Security in Lesotho: The Role of the Lesotho Highlands Water Project in Environmental Degradation." *African Security Review* 17 no. 58–70.

Chairman of the Military Council, "Lesotho Highlands Development Authority of 1986." *Lesotho Government Gazette Extraordinary.* November 6, 1986: 429-452.

Cisneros, Jiménez B.E., T. Oki, N.W. Arnell, G. Benito, J.G. Cogley, P. Döll, T. Jiang, and S.S. Mwakalila. 2014. "Freshwater resources". *Climate Change 2014: Impacts, Adaptation,*

and Vulnerability. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 229-269.

Cobbe, James and John Bardill. 1985. *Lesotho: Dilemmas and Dependence in South Africa.* London, Routledge.

Hitchcock, Robert. 2015. "The Lesotho Highlands Water Project: Dams, Development, and the World Bank." *University of New Mexico: Sociology and Anthropology* 3 no. 10. (October). 526-536.

Hoag, Colin. 2019. "'Water is a gift that destroys': Making a National Natural Resource in Lesotho." *Economic Anthropology* 6, no. 2 (June): 182-194. https://doi.org/10.1002/sea2.12149.

Hoag, Colin. 2022. *The Fluvial Imagination: On Lesotho's Water-Export Economy*. 1st ed. Vol. 12. University of California Press.

Kings, Sipho. 2016. "Drought Bites as Lesotho Exports Precious Water." Climate Home News. Climate Home, October 7, 2016. https://www.climatechangenews.com/2016/10/06/high-and-dry-african-drought-leaves-lesotho-parched/.

"Lesotho Highlands Development Authority." *LHDA*, http://www.lhda.org.ls/lhdaweb/.

Lesotho - Lesotho Highlands Water Project (Phase 1A) Staff Appraisal Report. 1991. Washington, D.C. World Bank Group.

Libby, Ronald T. 2014. *The Politics of Economic Power in Southern Africa.* Princeton: Princeton University Press. https://doi.org/10.1515/9781400858828

Matete, Mampiti and Rashid Hassan. 2006. "Integrated Ecological Economics Accounting Approach to Evaluation of Inter-Basin Water Transfers: An Application to the Lesotho

Highlands Water Project" *Ecological Economics* 60, no.1 (November). 246-260. https://doi.org/10.1016/j.ecolecon.2005.12.010.

Meissner, Richard. 2015. *Interest Groups, Water Politics and Governance : The Case of the Lesotho Highlands Water Project*. SpringerBriefs in Environmental Science. Cham: Springer.

Moyo, Herbert. 18 Dec, 2019. "Outcry over Delays in Completing LHWP II." *Lesotho Times*, Lesotho Times. http://lestimes.com/outcry-over-delays-in-completing-lhwp-ii/.

Mwangi, Oscar. 2007. "Hydropolitics, Ecocide and Human Security in Lesotho: A Case Study of the Lesotho Highlands Water Project." *Journal of Southern African Studies* 33, no. 1. (March) 3-17.

Mwangi, Oscar Gakuo. 2008. "Environmental Change and Human Security in Lesotho: The Role of the Lesotho Highlands Water Project in Environmental Degradation." *African Security Review.* 17 (3): 58–70. doi:10.1080/10246029.2008.9627483.

Pearce, Fred. 2006. *When the Rivers Run Dry: Water- The Defining Crisis of the Twenty-First Century.* Boston: Beacon Press.

"Population Growth (Annual %) - Lesotho." World Bank Open Data, 2021. https://data.worldbank.org/indicator/SP.POP.GROW?locations=LS.

Porter, James and Kamal Birdi. 2018. "22 Reasons why Collaborations Fail: Lessons from Water Innovation Research." *Environmental Science and Policy* 89, (November): 100-109. https://doi.org/10.1016/j.envsci.2018.07.004

Seligson, Mitchell. 2014. *Development and Underdevelopment: The Political Economy of Global Inequity.* Boulder: Lynne Rienner Publishers.

Shiva, Vandana. 2002. *Water Wars : Privatization, Pollution and Profit*. South End Press.

Sze, Julie. 2020. *Environmental Justice in a Moment of Danger.* California, University of California Press.

Refiloe Masemene. 2003. “What can a mosquito do to an elephant?” Interview by Baffour Ankomah and Khalid Bazid. *New African*, May 2003.

Seutloali, Thato, Lizeka Napoles and Nomonde Bam. 2018. “Community health workers in Lesotho: Experiences of health promotion activities.” *African Journal of Primary Health Care & Family Medicine* 10 (Feb): 1-8. https://doi.org/10.4102/ phcfm.v10i1.1558.

Tilt, Bryan, Yvonne Braun, Daming He. 2009. "Social impacts of large dam projects: A comparison of international case studies and implications for best practice." *Journal of Environmental Management* 90 no. 3. (July): 249-257. https://doi.org/10.1016/ j.jenvman.2008.07.030

Twala, Chitja and John Aerni-Flessner. 2021. “Lesotho: South Africa's Apartheid Regime Manipulated Borders. Today, the Effects Linger.” *allAfrica.com*, November 11, 2021, NA.

Willemse, Nico. 2007. “Actual Versus Predicted Transboundary Impact: A Case Study of Phase IB of the Lesotho Highlands Water Project.” *Water Resources Development*, vol. 23, no.3. 457-472. doi:10.1080/07900620701400575.

World Bank. 2004. *Involuntary Resettlement Sourcebook: Planning and Implementation in Development Projects*. Washington: The World Bank. https://doi.org/ 10.1596/0-8213-5576-7.

World Bank. 2007. I*mplementation Completion and Results Report (IBRD-43390) on a Loan in the Amount of US$45 Million to the Lesotho Highlands Development Authority for Lesotho Highlands Water Project – Phase 1B.* Report No. ICR 168. Washington DC: World Bank.