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Assessing the Likelihood of a Water Scarcity-Induced Conflict in the Nile Basin

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Disclaimer

Introduction

Climate change has been placed on a pedestal as humanity's principal dilemma in the 21st century. Yet, whilst the social impact of climate change is often explored, the potential geopolitical consequences have been vastly under-examined, and in some cases ignored, by most scholars in the field.[1] I propose that it is inconceivable to underestimate the impact of climate change on geopolitics and could prove detrimental to the international community in the medium to long term. I will explore the geopolitical effects of one particular facet of climate change: freshwater shortages. More specifically, I will focus on water scarcity as a driver of escalating conflict among countries in the Nile Basin, particularly between Egypt and Ethiopia. The issue of freshwater shortages is extremely pertinent and one that is growing in frequency. The Intergovernmental Panel on Climate Change (IPCC) has confirmed the relationship between global warming and reduced freshwater availability. [2] This much is implied by the projection that 64% of the world's population would be living in water-stressed areas by 2025. [3] The growing prevalence of water scarcity provides me with the rationale for my analysis. Indeed, as freshwater shortages become more frequent, the need to explore the inevitable geopolitical consequences becomes more pressing.

The reality of freshwater shortages is that they disproportionately affect states in the Global South. [4] These states are typically: less economically developed, more politically unstable, and have greater levels of poverty than the rest of the world.[5] This means that the negative effects of freshwater shortages are often magnified, thus being more likely to escalate into political unrest or regional conflict. Though scholars are quick to dispel the notion of a 'water war', usually because there is no historical precedent for one, the current situation regarding water availability is unprecedented in its severity and continues to worsen. [6] As such, I assess whether the possibility of a water scarcity induced conflict in the Nile Basin is likely in the medium to long term.

Historical Overview

The fact that Egypt's fortunes are utterly entwined with the Nile has been recognised by commentators since ancient times. In his famed work *Histories*, Herodotus coined the maxim, "Egypt is the Nile and the Nile is Egypt".[7] This assessment accurately conveys the nation's utter reliance on the Nile. The Nile's harvests, famed for their constant abundance, have been the breadbasket upon which numerous empires have been centred. Despite the Nile's centrality within the pre-modern Egyptian cultural consciousness, security over its flows was never a pressing issue for those in power.

Though Egypt's relationship with the Nile is longstanding, I propose that the British colonial administration was responsible for the politicisation of its flows. Indeed, British officials were the first to bring the issue of water allocation to the forefront of strategic considerations. The 1929 Agreement between Egypt and British administered Sudan was the first recorded water-sharing treaty on the Nile. Assessing the Nile's annual flows at 52 billion m^3, the treaty allocated Egypt 48 billion m^3 and Sudan the rest. [8] Ethiopia, the only other independent Nile riparian at the time, was excluded from negotiations altogether.

This treaty must be viewed within its historical context in order to understand its true purpose and, as such, its significance. Though Egypt was technically independent in 1929, British influence over the nascent state was overarching. In large part, the 1929 Agreement was sanctioned in order to protect Britain's strategic interests. Apart from the obvious desire to ensure stability in Cairo, Britain had a keen interest in ensuring a constant supply of water to Egypt's thriving cotton industry, upon which Britain's mills had relied since the American Civil War.[9] Ultimately, therefore, I propose that the current water-sharing situation in the Nile Basin has its origins in British imperial policy. As such, many have argued that it lacks legitimacy and is no longer applicable to the present geopolitical situation in the region.[10]

Perhaps the most significant consequence of the 1929 Agreement was Egypt being granted the right to veto any construction projects which it deemed to be a threat to its own interests.[11] Moreover, Egypt gained the right to pursue its own hydrological projects on the Nile without the consent of its fellow riparians, as well as the right to monitor the river's flow in upstream countries. [12] Consequently, the nascent Egyptian state developed a conception of itself as the regional hegemon within the Nile Basin regional security complex. I argue that this development is responsible for Cairo's intransigence during more recent water-sharing negotiations.

In spite of its unavoidably colonial nature, the 1929 Agreement set a precedent that Egypt has deemed inviolable. President Nasser was firm in his insistence that the existing framework form the spine of any new agreement, thus preserving the advantageous status quo. Within the 1959 Nile Agreement between Sudan and Egypt, for the Full Utilisation of Nile Waters, this stubbornness is evident. Borne from regional concerns surrounding Cairo's proposed Aswan Dam development, international financiers of the project pressured Nasser to revise the existing water-sharing arrangement with Sudan. [13] Unsurprisingly, both Cairo and Khartoum sought to safeguard their privileged positions within the malleable post-colonial geopolitical context. Ultimately, the treaty increased the water allocation possessed by both Egypt and Sudan. Moreover, Egypt reaffirmed their right to construct the Aswan Dam, thus enabling it to exert more control over the Nile's flows.[14] Once again, Ethiopia and the newly independent upstream riparian states were excluded from all talks. In effect, Cairo and Khartoum had aggressively staked their joint claim to the Nile's flows in their entirety. Despite this collaboration, I forward that Egypt retained ultimate control within their partnership.

However, since Addis Ababa was not a signatory of either of the two earlier treaties, it is not legally beholden to their stipulations. Whilst Ethiopia's chaotic recent history had previously rendered this insignificant, its growing stability stimulated the government's desire to develop its abundant water resources.[15] As such, Cairo has repeatedly sought to destabilise Ethiopia, so as to prevent any unilateral hydrological development. This objective has dictated much of its regional foreign policy in the late 20th century. Egypt's role in instigating the Somali Ethiopian wars, which spanned from 1960-1978, illustrates this aim. Mekonnen posits that Egyptian radio broadcasts were pivotal in instigating Somali irredentism within the majority Somali region of Ogaden. [16] Yet, Egypt's role in the Somali Ethiopian wars was not limited to semantics. President Nasser openly supplied large quantities of arms and

ammunition to the invading Somali army.[17] Despite the failure of the Somali campaign, Cairo's tangible involvement is demonstrative of its desire to destabilise Addis Ababa, leaving it incapable of carrying out hydrological projects on the Nile.[18] Given that Somalia did not attempt to annex the ethnically Somali region of northern Kenya nor Djibouti, Wolde-Mirriam argues that its decision to invade the Ogaden must therefore be viewed as a direct result of Egyptian influence. [19] I propose that Egypt's failure to achieve tangible success during the Somali-Ethiopian War reflected its waning relative power in the region, opening the door for a move towards basin-wide cooperation in the Nile.

The 1980s saw the first forays towards basin-wide cooperation within the Nile. *Undugu* represented a vehicle for multilateralism in the region, being formed to promote cooperation between Nile Basin countries across common sectors. [20] Whilst *Undugu* generally avoided the controversial topic of the Nile, TECCONILE was established in 1993 to focus solely on water management. The relative success of these institutions paved the way for the Nile Basin Initiative (NBI), launched in 1999. The NBI's Shared Vision sought to establish a basin-wide water management institution, with the aim of, "achieving sustainable socio-economic development through the equitable utilisation of and benefits from the common Nile Basin water resources". [21] It should be noted that the NBI was intended merely as a, "transitional mechanism for cooperation until a permanent cooperative framework is established". [22] This is significant as the NBI did not have the power to alter the status quo in the Nile Basin, merely representing a commitment to do so. At first glance, however, the shift towards a more inclusive water-sharing framework appeared to represent a positive step in the hydropolitics of the Nile Basin.

However, Egypt remained reluctant to relinquish its longstanding hydro-hegemony on the Nile. I forward that these developments reflected Cairo's loss of influence within the Nile Basin regional security complex rather than an agreement to reform. This view is echoed by Kenyan strategist Peter Kagwanja, who attributes Mubarak's acceptance of the NBI to the overall weakening of Egypt's relative strategic position, due to the reinvigoration of the East African Community.[23] Similarly, Soffer labels Cairo's involvement in *Undugu* and subsequently the NBI as a pre-emptive exercise, allowing it to maintain some level of influence over the future hydrological policy of its co-riparians. [24] I posit that Soffer's assessment encapsulates Egypt's recent attitude towards multilateral cooperation over the Nile. Certainly, Cairo has sought to hinder the process of creating an effective cooperative framework from within the aforementioned institutions. As such, we are provided with an explanation for the abject failure of the NBI. Indeed, despite having made headway in many less divisive issues, no progress has been made regarding the reallocation of Nile Water.[25] By disrupting these diplomatic chanels Egypt successfully prevented any formal decision to redress the inequitable allocation from being reached.

Despite Cairo's blatant filibustering, progress was eventually made towards the establishment of a permanent Cooperative Framework Agreement (CFA) in 2007. The CFA was supposed to herald the beginning of a cooperative period in the basin. Significantly, its legislation would have superseded the 1959 Agreement between Egypt and Sudan, thus threatening the hydrological status quo.[26] Indeed, Article 4

of the agreement affirms the commitment to equitable and reasonable water use. This commitment prompted both Egypt and Sudan to oppose the CFA. The principal sticking point is Article 14, which refers to water security. Whilst Article 14 legislates against "significantly affecting the water security of any other basin state", Cairo and Khartoum insisted on an amendment which would redefine water security as, "not adversely affecting the current uses and rights of any other Nile Basin states".[27] In doing so, they sought to defend their historic rights over the Nile and, thus, preserve the inequitable water allocation. Unsurprisingly, this proposal was rejected by the remaining 7 upstream Nile riparians, for whom a revised water allocation is central to any future cooperation. The CFA was signed in April 2010, albeit with the notable absence of both Sudan and Egypt.[28] Without their participation, the CFA lacks the legitimacy to achieve a binding resolution. Ironically, this attempt at cooperation has only served to deepen the divide between those at either end of the Nile.

Despite its impotence, the CFA is illustrative of a seismic shift in the balance of power within the Nile Basin regional security complex. This can be attributed to two significant developments. Firstly, Equatorial East Africa has benefitted from greater economic and political stability in recent decades.[29] This has enabled political leaders to divert more attention away from internal security towards development projects, many of which are centred on their abundant hydrological resources [30]. Moreover, because of this increased stability, these states are now viewed as a safer investment, opening the door to international funding. The second development is increased Chinese involvement in the region. For a hydrological project to be financed by the World Bank, it is mandatory to acquire the consent of all the downstream riparians affected. As a result, Egypt effectively possessed a veto on all upstream developments on the Nile. [31] However, investment from China, a lender that ignores the established political/legal norms, has been vast, with most of the upstream riparians taking advantage.[32]

From this brief historical overview, one can begin to identify some of the underlying attitudes which continue to prevent the establishment of a meaningful water-sharing agreement between the Nile riparians. Firstly, the mistrust felt by the upstream states towards Egypt is hugely significant. In Ethiopia's case, being excluded from two separate treaties regarding the allocation of the Nile's flow has hardened its resolve against cooperating with Cairo. Moreover, the involvement of the International Bank of Reconstruction and Development (IBRD) in the 1959 Agreement has undoubtedly left Addis Ababa disenfranchised with neoliberal institutionalism in the region. Equally, the 1929 Agreement reaffirmed Egypt's historical entitlement regarding its right to exploit the Nile's flows, which it is unlikely to relinquish. Overall, one is exposed to numerous entrenched attitudes within the Nile Basin which make the prospect of a successful multilateral water-sharing agreement appear extremely unlikely.

Strategic Overview

Overview of Regional Vulnerability to Climate Change

The issues of climate change and water scarcity are not exclusive to the Nile Basin. Over 80% of the world's freshwater is concentrated in the Northern Temperate Zone, which is home to a relatively small

portion of the world's population.[33] Unsurprisingly, therefore, the world's developing countries are located predominantly in the arid regions of the Southern Hemisphere, where almost all water shortages occur.[34] I propose that a combination of natural and demographic factors places the Basin's states in a position of extreme vulnerability to the ever-intensifying impact of climate change. Moreover, I argue that states within the Nile Basin possess an extremely limited adaptive capacity, thus further amplifying this vulnerability. Taken together, I propose that these factors make the Basin uniquely prone to water scarcity-induced conflict.

First examining natural vulnerability, it is well-documented that the climate of the Nile Basin is, "naturally variable, with large annual weather fluctuations already a prominent feature of the region climate".[35] This is worsened by the fact that Nile flows are extremely responsive to changes in precipitation levels. The NeWater Project noted that a 10% change in precipitation translated into a 25% change in flows.[36] This has had a detrimental impact on water availability in the Basin on numerous occasions. Waako's work details the catastrophic effects of reduced rainfall on East Africa from 2004-6, most notably the widespread famines that plagued Ethiopia, Eritrea and Kenya.[37] Though recent research has projected that the Basin will experience more precipitation in the coming years, this will be accompanied by longer periods of hot, dry spells.[38] According to Coffel's findings, a hot and dry year is likely to occur every 6-10 years, as opposed to the current rate of around once every 20 years.[39] This will be compounded by the growing severity of these hot spells. Significantly, he forwards that they will pose more threat to water scarcity and crop yields than a reduction in precipitation would.[40]

Moreover, the Nile Basin, particularly the Delta area, is vulnerable to the threat of rising sea levels. According to the African Centre for Strategic Studies, Egypt is the continent's most vulnerable state to rising sea levels.[41] IPCC forecasts have forecasted that 45 million Egyptians will reside within the Low Elevation Coastal Zone (LECZ) by 2030, this being land less than 10m above sea level.[42] Naturally, these populations have little protection from flooding or coastal erosion. The Nile Delta's LECZ also contains 60% of Egypt's cultivable land.[43] It has been estimated that a one metre rise in sea levels would threaten a significant portion of the LECZ, thus rendering over 4000 km² of Egyptian cropland unusable and displacing over 6 million people.[44] Even a more conservative assessment of rising sea levels, measuring the impact of a 50cm rise, projected that 2 million Alexandrine citizens would be forced to relocate as a result.[45] Both the increased incidence of hotter, drier spells and the projected impact of rising sea levels are demonstrative of an emerging climate crisis in the Nile Basin.

Secondly, I argue that unique demographic pressures are exacerbating the Basin's susceptibility to climate change and water scarcity. Mekonnen predicts that the population of the Nile Basin will balloon by an astronomical 63%, from 490 million (2020) to 800 million in 2050.[46] Worryingly, this projection is conservative, with some forecasts for 2050 being as high as 1 billion. Regardless of these numerical discrepancies, any notable increase in population will pose a serious challenge to water availability in a region already considered 'water stressed', as per the parameters of the Falkenmark Index.[47] Its Water Stress Indicator measures water scarcity according to the amount of freshwater available per capita. Egypt's

freshwater availability of 628 m^3 per capita in 2020 falls far short of the 1700 m^3 threshold that is used to define 'water stress'. [48] Though Egypt has amongst the worst access to fresh water within the region, severe water stress will not be limited to the northern end of the Basin. By 2040, the number suffering from water scarcity is projected to total 35% of the Basin's population. [49] This projection considers a year without any climate variability, further emphasising the severity of demographic pressures in isolation.

Finally, I posit that the Nile Basin's virtually non-existent adaptive capacity will render it unable to independently mitigate the impact of climate change. The Nile Basin Initiative cites low water storage capability, inadequate water control systems and hydro-dependent energy sectors as Basin-wide factors constraining the region's adaptive capacity.[50] This can be attributed to the fact that the Nile Basin countries are some of the least developed in the world. If one excludes Egypt, Kenya and Sudan, all of the Basin's riparians rank amongst the least developed according to the Human Development Index (HDI).[51] Even Sudan's status as somewhat developed has been jeopardised by its ongoing civil strife. As a result, existing hydrological infrastructure is unevenly distributed along the Nile River, with numerous upstream states having virtually no water storage or irrigation capacity. Whilst Chinese investment into hydraulic infrastructure is beginning to redress this imbalance, the majority of the Nile's riparians have yet to harness their significant hydrological potential. [52] Collectively, therefore, the Basin's riparians are unable to mitigate the reduced Nile flows that may occur as a result of climate variability. This is compounded by the fact that the region's population is largely agrarian. Both the downstream states, which predominantly utilise irrigation-based farming, and the poorer upstream states, largely reliant on rain-fed subsistence agriculture, are equally vulnerable to the effects of climate change in this regard. Another pitfall of the Basin's predominantly subsistence-based agriculture sector is that it does not provide much flexibility for diversification into less climate-sensitive sectors. [53] Overall, I reassert that this combination of factors will precipitate reduced water availability, thus creating a fertile breeding ground for scarcity-induced conflict.

Egyptian Strategic Overview

Egypt's chief strategic consideration is that it possesses virtually no freshwater sources. With 97% of its water originating externally, only Turkmenistan is more reliant on upstream water contribution globally. [54] Whilst Cairo has taken huge strides towards optimising its water usage over recent decades, its hydrological position is not sustainable. In 2000, Egypt's total water demands were estimated at 73.3 km^3, with the projection for 2025 exceeding 86 km^3.[55] Both of these figures, as well as Egypt's recent consumption of Nile water (averaging 61.5 km^3 from 1988-2017) far exceed their allocation established in the 1959 Nile Agreement with Sudan.[56] For reference, the Nile River's average annual run-off is only 84 km^3. [57] As a result, Egypt has been increasingly dependent on virtual water for drinking and irrigation purposes. The concept is used to denote the importation of goods to forego the water consumption required in their production. [58] Nikiel predicts that virtual water imports will outstrip Nile water usage in Egypt before 2030.[59] Egypt's water shortfalls have been further exacerbated by its demographic explosion. In 1998, the UN projected that Egypt's population would hit 114 million by 2065.[60] In reality, its population had already

reached 109 million by 2021, suggesting that the previous figure will be surpassed long before 2065.[61] As virtual water imports and population figures grow exponentially, Egypt's hydrological position appears unsustainable. This viewpoint gained additional credence following the Russian invasion of Ukraine in 2022. Already the world's largest wheat importer, Egyptian consumers were forced to contend with an overnight price increase of 44%.[62] Thus, I argue that Egypt cannot afford to lose access to any more of the Nile's flows, which would likely result in further price inflation for consumers.

Following Egypt's recovery from the destabilising impact of the Arab Spring uprisings, the actions of its leaders have reflected the centrality of water security within political discourse. Despite initially displaying an accommodative stance towards GERD, President Muhammed Morsi's facade quickly faded once he had a more secure grip on power. In a private meeting, which was 'mistakenly' aired on state television, Morsi and his advisers were heard discussing the possibility of arming Addis Ababa's political opponents, ostensibly to discourage GERD's construction.[63] Cairo's belligerent attitude towards Ethiopia and its hydrological developments has been unrelenting in recent years, escalating further following the military coup in late 2013. As his actions demonstrate, Abdel Fattah el-Sisi, the incumbent president, is aware that water security is of paramount importance to domestic opinion. Events in Egypt's recent history have demonstrated that food shortages, a potential consequence of water scarcity, precipitate serious political instability. The 1977 "bread riots", for example, were a direct result of the IMF-mandated subsidy cuts on culinary staples.[64] The prioritisation of domestic opinion, despite international condemnation, was evident in el-Sisi's speech ahead of the proposed second filling of GERD in March 2021, during which he warned that, "no one is untouchable for us".[65] As if in conjunction with his threat, Egypt carried out a joint aerial training mission with Sudan, labelled "Nile Eagles 2", during which Egyptian fighter jets simulated air raids from the Sudanese air base at Merowe, with the town's large dam presumably imitating GERD.[66]

The content of the aforementioned speeches, by more than one Egyptian president, clearly follows the blueprint of securitising speech acts. Matching the definition laid out by Hayes, both of the aforementioned examples claim that a referent object - the Nile's flows - is faced with an existential threat, this being the hydrological ambitions of Addis Ababa.[67]

However, rather than seeking to securitise the Nile problem, the actors in question are merely reaffirming their commitment to addressing an issue that has long been securitised within the Egyptian collective consciousness. One can trace the Nile's securitisation within the public sphere to 1979, when President Anwar Sadat warned that, "the only matter that would take Egypt to war again is water".[68] Therefore, as per Balzacq's qualification, the threat of upstream riparians was already a perceived reality by the Egyptian population.[69]

As such, this paper proposes that President Morsi's policy shift vis-à-vis the Nile was an act of political necessity that reflected the uncertainty of his presidency during the turbulent period following the 2011 regime change. Political figures from both extremes of the ideological spectrum repeatedly lambasted Morsi's government for its reluctance to respond to the imminent threat

posed by GERD.[70] Whilst these sentiments originated from the fringes of the Egyptian political sphere, they represented populist voices with the potential to incite disgruntled public support. Equally, el-Sisi draws political capital from his 'strongman' persona, owing to his extensive military career and associations. As such, I forward that his regime would be under serious threat if it were to appear powerless in bringing the Nile problem to a satisfactory conclusion. It is clear that decision-makers in Cairo perceive that they are in a strategically vulnerable position which, in turn, threatens their domestic position. As I will demonstrate later on, these factors have served to create the foundations of an escalating conflict scenario in the Nile Basin.

Ethiopian Strategic Overview

In stark contrast to Egypt, Ethiopia is blessed with perhaps the best hydrological situation on the planet. The Blue Nile originates at Ethiopia's Lake Tana and the highland region supplies around 86% of the Nile's entire flow.[71] Yet, despite its recent developments, Addis Ababa has hardly scratched the surface in relation to the hydrological potential that it possesses. This is a legacy of the turmoil that accompanied the Derg regime, a period in Ethiopian history that saw infrastructural development seriously neglected.[72] However, Ethiopia has benefitted from over two decades of strong economic growth. GDP per capita has grown by more than 300% during this time, whilst absolute poverty has fallen from 69% in 1995 to 32% in 2015.[73] Moreover, [then] President Zenawi's policy of ethnic federalism has succeeded in reducing political instability within the ethnically fragmented state.[74] Taken together, the increased political and economic stability has dramatically improved Addis Ababa's ability to exploit its hydrological potential. As a result, Ethiopia is cultivating a growing reputation as an attractive location for foreign investment.[75] The financial capital and technical expertise possessed by external investors has enabled Ethiopia to become the principal hydroelectric producer in Africa, possessing three of the ten largest sites on the continent, including the largest, GERD.[76] Addis Ababa will be able to utilise this glut of hydroelectric power to improve domestic access to energy and become a significant energy exporter in the region.[77]

Additionally, successive leaders have demonstrated their shrewd diplomatic acumen within the Nile Basin, Ethiopia's geopolitical influence growing as a result. Exploiting its increased regional standing, Addis Ababa has been instrumental in politicising the principle of 'equitable utilisation' within the collective consciousness of the upstream Nile riparians. In doing so, it has united all six equatorial Nile riparians in support of this position, thus diplomatically isolating Egypt and gaining regional backing for its unilateral hydrological development.[78] Ethiopian policy has also been increasingly successful in driving a wedge between Cairo and the previously compliant Sudanese government. As a state with significant potential for hydrological development itself, a change to the status quo could be perceived as advantageous by decision-makers in Khartoum. Equally, access to cheap Ethiopian hydroelectric power may be a significant driver for Sudan to reconsider its position on the Nile.[79] Therefore, on the face of it, Ethiopia finds itself in a favourable strategic position, both an aspiring middle-income state and an emerging hydro-hegemon within the Nile Basin regional security complex.

Whilst Ethiopia has strengthened both its economic position and its geopolitical standing in the region, these successes mask the domestic issues that have plagued the government in Addis Ababa. Though the Ethiopian economy has proven extremely robust in the face of repeated civil strife, one cannot underestimate its destabilising impact on the nation. Estimates place the number of people affected by the recent Tigray War, either through death, injury or displacement, at over two million.[80] With reports of a brewing crisis in the Amhara region, it remains to be seen whether Prime Minister Abiy Ahmed's government is strong enough to endure another costly conflict. Moreover, Ethiopia's near perpetual economic growth has still not altered the reality that its economy remains, "poor, agrarian, rural and at an early stage of economic growth".[81] Despite its agrarian focus, Ethiopia's agricultural sector is almost wholly reliant on rain-fed smallholder farms.[82] The lack of irrigated farmland leaves Ethiopia more susceptible to drought and adverse weather conditions. The 2022 drought, labelled by the World Bank as the worst in 40 years, served to remind contemporaries of this vulnerability.[83] Whilst a repeat of the infamous 1983-5 famine is unlikely, the Famine Early Warning Systems Network (FEWS) has warned of severe food shortages that will affect 20 million Ethiopians.[84] Given Ethiopia's continued demographic pressures, food insecurity is unlikely to be addressed through the maintenance of current agricultural practices. Indeed, conservative estimates have projected population growth of 50 million to over 170 million by 2050, meaning Ethiopia would become one of the ten most populous states globally.[85]

Taking this into consideration, I predict that Addis Ababa will look to invest more financial resources into irrigation programmes. Unlike Egypt, Ethiopia has huge potential to do so. Only 4% of Ethiopia's potentially irrigable land is being cultivated, within what remains a predominantly rain-fed agricultural sector.[86] Given the success of GERD and its various other unilateral hydro-electric projects, Addis Ababa may now have the confidence to exploit its abundant water resources in order to modernise its agricultural sector. The rhetoric of the Ethiopian political establishment suggests that it would have no qualms in acting unilaterally to achieve this. In 2010, Zenawi warned that, "there will come a time when the people of East Africa and Ethiopia become too desperate to care about these diplomatic niceties. Then, they are going to act".[87] One could certainly argue that Ethiopia's worsening food security qualifies as the "desperate" situation to which Zenawi predicted. Significantly, Ethiopia's minimal irrigation schemes already use 1.5 km^3 of water annually, meaning a modest five-fold increase in coverage would require the utilisation of 10% of the Nile's average annual run-off.[88] Any Ethiopian irrigation scheme, particularly one of any magnitude, would have a significant impact on water availability in the basin, undoubtedly inflaming scarcity-induced tensions.

Escalating Conflict Scenario

Before exploring the likelihood of an escalating conflict scenario in the Nile Basin, it is important to note that, "in the last 4000 years there has never been a single war fought over water".[89] However, blind acceptance of this fact would be to assume that the management of trans-boundary water resources is characterised by cooperation. Ultimately, it is clear that this is not the case. In reality, freshwater basins across the developing world are party to a series of, 'silent conflicts', varying in

intensity and scope.[90] Interacting closely with Zeitoun and Warner's seminal framework on hydro-hegemony, I seek to explain why the 'water war' on the Nile has long been frozen and, in doing so, demonstrate why the possibility of an increased intensity of conflict is growing.

Broadly, hydro-hegemony refers to the dominance of a state over its fellow riparians, thus enabling it to exert control over water resources within a river basin. This is achieved through three main strategies: resource capture, containment and integration. Typically, resource capture is achieved through infrastructural developments, which enable the storage and/or diversion of water resources. For example, Egypt's Aswan Dam has provided the state with more control over the Nile's water resources. However, given Egypt's position in the basin, it has limited potential for resource capture when compared to its upstream neighbours. As such, it has typically resorted to the containment of its fellow riparian states. Essentially, containment refers to actions that weaken the military, economic and hydraulic capabilities of the target state.[91] In doing so, Egypt aims to maintain a power imbalance within the region and, with it, favourable access to Nile water. Warner forwards that power relations between riparians are the principal determinants of the degree of control over water resources that each attains.[92] As such, it is inferred that the reason a water conflict may fall short of a war is due to power asymmetries rather than any perceived cooperation.[93] Thus, I propose that hegemony, or a lack thereof, is one of the key factors determining the stability of a river basin. This much is implied within Frey's power framework, which focuses specifically on conflict and cooperation in a riparian context.[94] Overall, Zeitoun and Warner's description of a basin subjected to hydro-hegemony resembles my analysis of the Nile Basin's hydropolitics, particularly prior to the 21st century. During this period, as I explored in the historical overview, Egypt maintained hegemony in the Nile Basin on account of its perceived power, despite growing discontent with the existing water-sharing settlement. Thus, the behaviour of its riparian neighbours has largely tended to comply with the order that it had established and propagated.

According to the definitions laid out by Zeitoun and Warner, Egypt's hydro-hegemony would be classified as 'negative', following the dominant pattern of hydro-hegemony throughout the MENA region. Such an ordering is characterised by, "grossly inequitable water allocations" and the denial of water rights to non-hegemonic states.[95] Cairo has typically employed the tactics associated with its strategy of containment. One example was Egypt's role in stoking Somali irredentism in the Ogaden, coupled with its provision of material support for the Somali army during the resulting Ethio-Somali War of 1977-8.[96] By undermining its territorial integrity and sowing political instability, Cairo sought to distract Ethiopia from realising its hydrological potential. Moreover, coercive action, principally the threat of military and economic action, has been used repeatedly to discourage any challenges to the status quo.[97] Negative hegemony has also been expressed by Cairo through its dominance of the Basin's decision-making apparatus, allowing its politicians to ensure that conflicting opinions are not given a platform for debate.[98] Cairo's negative hydro-hegemony has been responsible for the maintenance of its historical rights over Nile flows, as per the 1959 Agreement with Sudan. Moreover, it has also ensured that Egypt's perceived water rights are a feature

of all future hydrological discourse in the Nile Basin.

As has been mentioned, power asymmetries have been largely responsible for Egypt's ability to coerce its co-riparians into respecting the existing hydrological status quo. In an attempt to address the vagaries of power asymmetry, Naff and Matson established three primary determinants of power between riparian states. They forwarded that the relative power of each state depended upon: military/economic (material) power, the ability to exploit the hydrological potential of its territory and the geographic position of the river.[99]

Traditionally, Egypt has always been the pre-eminent military and economic state within the Nile Basin regional security complex, enabling it to project both hard and soft power. Equally, Cairo has succeeded in securing the capital required to finance extensive infrastructural projects on its portion of the Nile, whilst simultaneously excluding its co-riparians from access to similar resources through diplomatic means. However, Egypt has always been constrained from achieving true hydro-hegemony by its geographical position at the mouth of the Nile. Therefore, as Ethiopia increases its power within the Basin, Cairo's geographical position represents the immutable determinant that could finally end its long-standing hydro-hegemony. As I will later demonstrate, it is changes to the first two determinants of riparian power which have precipitated a potential conflict scenario.

Since the turn of the 21st century, Addis Ababa has benefitted from a prolonged period of increased political and economic stability. This can be largely attributed to Zenawi's commitment to ethnic federalism and consistent delivery of economic growth. As such, Ethiopia's material power has grown significantly relative to Cairo. This is but one instance of a wider trend encompassing the entire Upper Nile region.[100] In turn, political development has led to increased mutual cooperation between Nile riparian states, with the CFA representing their collective desire to exploit their improved strategic position. However, perhaps the most significant change to the balance of power in the Nile Basin is China's growing involvement in the region. Beijing's "no strings attached" investment philosophy has enabled states that had been traditionally excluded by Western financial institutions to obtain capital.[101] As such, Chinese firms have become heavily involved in water development projects in the Nile Basin post 2000.[102] This is significant as upstream riparian states, particularly Sudan and Ethiopia, now have the developmental capability to exploit their massive hydrological potential. Upon the completion of the Chinese-funded dam at Tekeze and the GERD project on the Sudanese border, Ethiopia's hydroelectric generation capacity will far exceed that of Egypt.[103] As a result, Cascão forwards that Addis Ababa has now established itself in a commanding position from which it is, "contesting and challenging Egyptian hegemony in the Nile Basin".[104]

As has been illustrated, Addis Ababa has addressed the imbalances regarding material power and developmental capability relative to Egypt. Therefore, it is now in a position where its superior geographical position can be exploited. Because geography is not affected by the constant flux that characterises power relations, it is often brushed over within geopolitical analyses. However, in a riparian context, the power wielded by a powerful upstream state is unique. Prominent water conflict theorists Frey and Naff noted that a state in an upstream position can, "perform actions that

confront their competitors with a *fait accompli*, the alteration of which is far more demanding than the original action".[105] For example, tactics such as river diversion and flow delay would be difficult to reverse without military action. Moreover, these actions can be enacted unilaterally, meaning they do not require the acquiescence of a state's co-riparians. When one compares these with the tactics employed by downstream hegemons, which include coercive pressure and the propagation of inequitable treaties, it is clear to see which would prove more durable in the long-term.

Given that changes in regional balances of power very infrequently result in conflict, particularly in the modern era, I will now illustrate why the argument for an escalating conflict scenario is justified in this instance. Firstly, the changing power dynamics within the Nile Basin mirror the hypothetical situation deemed "least stable" within Frey's riparian power analytic framework. He posits that this occurs when, "the downstream nation is both the most powerful and has the most interest in shared water resources, but the interest of upstream nations is considerable and growing". [106] Additionally, the state of affairs between Egypt and Ethiopia mirrors Zeitoun and Warner's potential conflict scenario. They assert that the likeliest context for any such escalation is when, "a weaker riparian gains in relative power vis à vis the hegemon, thus presenting a serious challenge to the existing status quo". [107] I propose that the hydropolitics of the Nile Basin closely resembles the aforementioned hypotheses. As I have alluded to, Ethiopia has established itself as a politically centralised state, whilst also growing to become the seventh-largest economy in Africa.[108] This is a huge gain in nominal GDP relative to Egypt, for now still the largest economy in the Basin. Moreover, Addis Ababa now boasts the fourth most powerful armed forces in Africa, no doubt hardened by action in the recent Tigrayan conflict. [109] Therefore, one of the principal barriers to conflict, power asymmetries between Egypt and Ethiopia, has been massively reduced. Moreover, the aforementioned hydrological developments demonstrate Addis Ababa's new-found developmental capability, allowing the state to exploit its favourable riparian position and engage in resource capture tactics. For the first time in its history, Ethiopia has both the confidence and the capability to control the Nile's flows. However, these actions will undoubtedly be perceived by a politically unstable Egypt as a threat to the existing status quo, thus laying the foundations for escalating conflict between the two states.

Within this section, I have sought to make the case for an escalating conflict scenario between Egypt and Ethiopia. Firstly, I demonstrated the Nile Basin's vulnerability to water scarcity as a result of climate change and population growth. Moreover, I highlighted the Basin's lack of adaptive capacity, which makes its states ill-equipped to mitigate the impact of the aforementioned pressures. In doing so, it has made the Basin likely a source of scarcity-driven conflict. Secondly, I intended for the strategic summaries to highlight the deep-rooted issues facing both states, for which increased water usage appears to be the only remedy. Both states, already suffering from a lack of food security and political instability, will have to contend with a population boom over the next couple of decades. For Addis Ababa, increased exploitation of its water resources appears to be the most effective and the most feasible solution. However, as I have illustrated, this will have a detrimental impact on Egypt, a nation already suffering a sharp decline, and one that is already dangerously dependent on sizable virtual

water imports. The following section enabled me to provide some theoretical justification for an escalating conflict scenario. The application of Zeitoun and Warner's hydro-hegemony framework; Frey's riparian power-analytic framework; as well as Naff and Matson's determinants of riparian power, allowed me to demonstrate the theoretical validity of my assessment. However, as I forwarded in my introductory remarks, this projection of intensifying conflict is not a short-term prediction, nor is it unavoidable. I merely posit that the nature of relations between these two powers cannot be resolved internally. Thus, without the intervention of the international community, I believe that armed conflict is inevitable in the medium to long-term.

Future Risks and Opportunities

Typically, analyses of conflict in transnational basins conclude with a section devoted to future recommendations for a workable solution. However, in my view, this usually involves blindly advocating increased riparian cooperation. Unfortunately, I forward that voluntary cooperation between the Nile's riparians is highly unlikely due to the exceptional circumstances that I have outlined.

I propose that the visible success of GERD will make unilateral hydrological development appear a more attractive option to the Basin's upstream states, particularly as the effects of the region's growing climatic and demographic pressures become more pronounced. With regards to Egypt and Ethiopia specifically, I have presented evidence that clearly illustrates a worsening relationship, characterised by belligerent rhetoric and provocative actions. Given the recent escalation of tensions, I propose that conflict is a more likely outcome than independent cooperation between the two states. Thus, I am inclined to support Asiedu's suggestion that the involvement of an external power, as a "neutral mediator", is the only feasible means of ensuring cooperative dialogue.[110] However, I disagree with Asiedu's proposed candidates. Both the UN and the African Union have repeatedly failed to foster cooperation within the Nile Basin. Instead, I propose that China is the only feasible candidate, owing to its already extensive investment in the region.[111] As has been mentioned, Beijing is the driving force behind much of the recent infrastructural development in Sub-Saharan Africa, including the region's rapidly expanding hydro-power sector.[112] And whilst Chinese investment in Egypt is not as significant as in Sudan or Ethiopia, its influence is undoubtedly growing. A 2015 study carried out by the Egyptian Center for Public Opinion Research ranked China as Egypt's greatest ally amongst non-Arab countries.[113] More tangibly, Chinese investment in Egypt has increased over 300% from 2017-2022 and China also accounts for the largest share of Egyptian exports, at around 10% (2022).[114] Furthermore, I forward that Beijing will command more trust from the Nile Basin's upstream riparians, due to its non-involvement in the propagation of Cairo's negative hegemony in the region. Thus, I suggest that the best hope for cooperation between Egypt and Ethiopia lies outside of the western-oriented international order. The ongoing expansion of the BRICS grouping, to which Egypt and Ethiopia have agreed to become new members, adds credence to my recommendation.[115]

However, I am not convinced that mutual BRICS membership alone will bring an end to their conflict. Indeed, despite both being members of BRICS, China-India relations

remain hostile, culminating in a violent dispute over the Aksai Chin, which has left dozens killed on both sides since 2020.[116] Overall I propose that dedicated diplomatic channels, orchestrated by a neutral mediator, must be established for a lasting water-sharing agreement to be reached and, thus, for the escalating conflict scenario between Egypt and Ethiopia to be averted.

Conclusion

This analysis identifies three common themes: changing power dynamics between Egypt and Ethiopia, Cairo's foreign policy obsession with water security, and the Nile Basin's growing climatic and demographic pressures.

Ethiopia's influence in the Nile Basin is growing, as evidenced by its leading role in the political invigoration of the upstream riparians. Moreover, the Ethiopian state has benefitted from its growing material power, driven by consistent economic growth and increased political stability.

Egypt, on the other hand, is witnessing a relative decline within the Nile Basin regional security complex. Having long prospered as a result of its favourable position within the post-colonial order, Egypt's disadvantageous geographical position is now proving to be a serious strategic weakness. Owing largely to Chinese investment in upstream hydraulic infrastructure, Cairo must contend with the reality that its fellow riparians could exploit its reliance on external water sources. My escalating conflict scenario identified these changing power dynamics as the main driver of riparian conflict in the Basin.

Moreover, Cairo is obsessed with maintaining control over the Nile's flows, which has influenced all of its regional foreign policy decisions during the post-colonial period. My analysis of the 1959 Nile Agreement, Egyptian involvement in the Somali Ethiopian Wars, and even the unsuccessful CFA, illustrates that the desire to protect the existing water allocation is the driving force behind Cairo's decision-making. Certainly, Egypt's willingness to openly arm a Somali force invading Ethiopia, purely to prevent its hydrological ambitions, demonstrates the seriousness with which it views its control over the Nile. This objective remains a central concern for Egyptian leaders, as evidenced by numerous speeches that implore Ethiopia to cease its hydrological developments.[117] Thus, the failure of its diplomatic efforts will eventually drive Cairo to take military action.

This paper also highlights the Basin's worsening climatic and demographic pressures, which are clearly unmanageable and likely to trigger an existential crisis in the medium to long term. Firstly, its natural susceptibility to increased temperatures and rising sea levels could collectively threaten a significant portion of the region's cultivated agricultural land, whilst displacing millions. Moreover, with the Basin's population predicted to nearly double by 2050, water scarcity will be worsened in a region already deemed severely "water stressed".[118] Finally, the Basin lacks any adaptive capacity, meaning that it is ill-equipped to respond to these serious developments. Therefore, the combination of these factors leaves the Nile Basin seriously prone to water scarcity-induced conflict, further exacerbating tensions in a region already subject to intensifying conflict.

My research also includes a section on future suggestions to avert a 'water war'. China could play an important role within the region, being well-placed to act as a

neutral mediator for talks between Egypt and Ethiopia. Certainly, the likelihood of this outcome has increased with the recent news of Cairo and Addis Ababa's admission into the BRICS grouping.[119] However, I fear that recent developments have added credence to an escalating conflict scenario. The fact that these developments are ongoing has not allowed me to analyse them in great detail. However, I acknowledge that the brewing Amhara security crisis and the devastating Sudanese Civil War have plunged the region into a period of renewed instability. These developments provide Cairo with an opportunity to, once more, interfere in the internal politics of Ethiopia and redress any changes to the status quo. I propose that these events could serve as the new battlegrounds within an intensifying conflict between Egypt and Ethiopia.

Notes

[1] Hommel, D. and Murphy, A. B. (2013). 'Rethinking Geopolitics in an era of Climate Change', *Geojournal, 78(3)*: 507-24. https://www-jstor-org.ezproxy.lancs.ac.uk/stable/pdf/42002526.pdf?refreqid=excelsior%3Aa237323a6c182421fddb549109810c16&ab_segments=&origin=&acceptTC=1

[2] IPCC, 2007: *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland.

[3] Arnell, N. W. (1999). 'Climate change and global water resources', *Global Environmental Change, 9(1)*: 31-49. https://doi.org/10.1016/S0959-3780(99)00017-5.

[4] Hommel and Murphy (2013). *'Rethinking Geopolitics in an era of Climate Change'*.

[5] Kacowicz, A. M. (2007). 'Globalization, Poverty, and the North-South Divide', *International Studies Review, 9*(4): 565–580. http://www.jstor.org/stable/4621860

[6] Arnell (1999). *'Climate change and global water resources'*.

[7] Herodotus (2013), in *The Histories* (George Rawlinson, Trans.). Roman Roads Media. https://files.romanroadsstatic.com/materials/herodotus.pdf

[8] Swain, A. (2011). 'Challenges for water sharing in the Nile basin: changing geo-politics and changing climate', *Hydrological Sciences Journal*, 56(4): 687-702. DOI: 10.1080/02626667.2011.577037

[9] Mekonnen, D. Z. (2013). 'The Quest for Equitable Resolution of the Nile Waters Dispute: Wandering in the Wilderness?' *International Journal of Ethiopian Studies, 7(1 & 2)*: 77–100. https://www.jstor.org/stable/26586232

[10] *Ibid*.,

[11] *Ibid*.,

[12] *Ibid*.,

[13] *Ibid*.,

[14] Swain (2011). '*Challenges for water sharing in the Nile Basin*'.

[15] Rohne Till, E. (Palgrave Macmillan, 2022). 'Case Study Context: Ethiopia', *Agriculture for Economic Development in Africa*. https://doi.org/10.1007/978-3-031-07901-6_5

[16] Mekonnen, T. (2018). 'The Nile issue and the Somali-Ethiopian wars (1960s-78)'. *Annales d'Ethiopie 32*, 271-291. DOI: https://doi.org/10.3406/ethio.2018.1657

[17] Abdi Aden H., (2010). The Success and Failure of Somali Peace Processes since the Conflict of 1991, *MA dissertation, Addis Ababa University*.

[18] Elhance, A. (1999). *Hydropolitics in the Third World: Conflict and Cooperation in International River Basins*.

[19] Wolde-Mariam M. (Commercial Printing Press: Addis Ababa, 1999). T*he Horn of Africa: Conflict and Poverty*.

[20] Mekonnen, T. (2018). 'Ethiopia's Quest for and Efforts at Building a Nile Basin Cooperation: From the 1950s to the Beginning of the Signing of the Cooperative Framework Agreement (CFA)', *Journal of Ethiopian Studies, 51*, 67–104. https://www.jstor.org/stable/48619560

[21] Shay, S. (22nd June, 2017). 'Between the "Entebbe agreement" and "Entebbe meeting". Herzliya Conference. Israel's Strategic Balance: Opportunities and Risks.' https://www.runi.ac.il/media/rxmfbojo/nilebasinshaulshay_100617.pdf

[22] *Ibid*.,

[23] Kagwanja, P. (2007). 'Calming the Waters: The East African Community and Conflict over the Nile Resources', *Journal of Eastern African Studies, 6(2)*.

[24] Soffer, A. (Rowman & Littlefield Publishers: Lanham, MD, 1999) *Rivers of Fire: The Conflict over Water in the Middle East*.

[25] Swain (2011). '*Challenges for water sharing in the Nile Basin*'.

[26] *Ibid*.,

[27] *Ibid*.,

[28] Mekonnen (2018). '*The Nile issue and the Somali-Ethiopian wars (1960s-78)*'.

[29] Cascão, A. (2008). 'Ethiopia–Challenges to Egyptian hegemony in the Nile Basin', *Water Policy, 10*. 10.2166/wp.2008.206.

[30] *Ibid*.,

[31] Waterbury, J. (Yale University Press: New Haven, 2002). *The Nile Basin: National Determinants of Collective Action*.
[32] Cascão (2008). '*Ethiopia–Challenges to Egyptian hegemony in the Nile Basin*'.
[33] Swain, A. (Taylor & Francis Group, 2012). *Understanding Emerging Security Challenges: Threats and Opportunities*.
[34] *Ibid*.,
[35] Nile Basin Initiative (2012). 'Chapter 8: Climate Change and its Implications for the Nile Region', Date Accessed: 22/08/2023 http://sob.nilebasin.org/pdf/Chapter%208%20climate%20Change.pdf
[36] *Ibid*.,
[37] Waako, T. (2009). 'Impact of climate change on the Nile river basin', *Rural 21*. https://www.rural21.com/fileadmin/_migrated/content_uploads/R21_Impact_of_climate_change_on_the_Nile..._0409_01.pdf
[38] Coffel, E. D., Lesk, K. B., Horton, C., Bower, R. M., Lee, E. J., and Mankin, J. S. (2019). 'Future hot and dry years worsen Nile Basin water scarcity despite projected precipitation increases', *Earth's Future*, *7*: 967–977. https://doi.org/10.1029/2019EF001247
[39] Coffel, E.D and J.S. Mankin (2020). 'In the future there will be more rain, but less water, in the Nile Basin', *The Conversation Media Group*. https://theconversation.com/in-the-future-there-will-be-more-rain-but-less-water-in-the-nile-basin-129360
[40] Coffel *et al*, (2019). '*Future hot and dry years worsen Nile Basin water scarcity despite projected precipitation increases*'.
[41] African Centre for Strategic Studies (2022). Rising Sea Levels Besieging Africa's Booming Coastal Cities. https://africacenter.org/spotlight/rising-sea-levels-besieging-africas-booming-coastal-cities-lagos-dakar-alexandria-maputo-nile/
[42] *Ibid*.,
[43] *Ibid*.,
[44] Nile Basin Initiative (2012). '*Chapter 8: Climate Change and its Implications for the Nile Region*'.
[45] Buyana, K. *et al*, (2020). *Environmental Research Letters, 15*, 073002. https://iopscience.iop.org/article/10.1088/1748-9326/ab7951/pdf
[46] Mekonnen (2013). '*The Quest for Equitable Resolution of the Nile Waters Dispute'*.
[47] Nikiel, C. A. and Eltahir, E. A. B. (2021). 'Past and future trends of Egypt's water consumption and its sources', *Nat Commun*, 12:4508 https://doi.org/10.1038/s41467-021-24747-9
[48] *Ibid*.,
[49] Coffel and Mankin (2020). '*In the future there will be more rain, but less water, in the Nile Basin*'.
[50] Nile Basin Initiative, 2012.
[51] Swain (2011). '*Challenges for water sharing in the Nile Basin*'.
[52] Cascão (2008). '*Ethiopia–Challenges to Egyptian hegemony in the Nile Basin*'.
[53] Rohne Till (2022). '*Case Study Context: Ethiopia*'.
[54] Swain (2012). *Understanding Emerging Security Challenges: Threats and Opportunities*.
[55] Swain (2011). '*Challenges for water sharing in the Nile Basin*'.
[56] Nikiel and Eltahir (2021). '*Past and future trends of Egypt's water consumption and its sources*'.
[57] Swain (2011). '*Challenges for water sharing in the Nile Basin*'.
[58] Nikiel and Eltahir (2021). '*Past and future trends of Egypt's water consumption and its sources*'.
[59] *Ibid*.,
[60] United Nations (Population Division, Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: the 1998 Revision*).
[61] Nikiel and Eltahir (2021). '*Past and future trends of Egypt's water consumption and its sources*'.
[62] Tanchum, M. (2022). 'The Russia-Ukraine War has Turned Egypt's Food Crisis into an Existential Threat to the Economy', *Middle East Institute*. https://www.mei.edu/publications/russia-ukraine-war-has-turned-egypts-food-crisis-existential-threat-economy
[63] Hussein, H. (6th February, 2014). 'Egypt and Ethiopia spar over the Nile'. http://america.aljazeera.com/opinions/2014/2/egypt-disputes-ethiopiarenaissancedam.html
[64] Tanchum (2022). '*The Russia-Ukraine War has Turned Egypt's Food Crisis into an Existential Threat to the Economy*'.
[65] Reibe, H. (7th May, 2021). 'Ethiopia/GERD: What would push Egypt's Sisi to resort to force?' https://www.theafricareport.com/86356/ethiopia-gerd-what-would-push-egypts-sisi-to-resort-to-force/

[66] *Ibid*.,
[67] Hayes, J. (2012). 'Securitization, Social Identity, and Democratic Security: Nixon, India, and the Ties That Bind', *International Organization, 66*(1): 63-93. doi:10.1017/S0020818311000324
[68] Starr, J. R. (1991). 'Water Wars', *Foreign Policy, 82*, 17–36. https://doi.org/10.2307/1148639
[69] Balzacq, T. (2005). 'The Three Faces of Securitization: Political Agency, Audience and Context', *European Journal of International Relations, 11*(2): 171–201. https://doi.org/10.1177/1354066105052960
[70] Lawson, F. H. (2016). 'Desecuritization, Domestic Struggles, and Egypt's Conflict with Ethiopia over the Nile River', *Democracy and Security, 12(1)*: 1–22. https://www.jstor.org/stable/48602389
[71] Swain (2011). '*Challenges for water sharing in the Nile Basin*'.
[72] Rohne Till (2022). '*Case Study Context: Ethiopia*'.
[73] World Bank (2023). 'The World Bank in Ethiopia - Overview'. https://www.worldbank.org/en/country/ethiopia/overview
[74] Clapham, C. (Oxford University Press, 2019). 'The Political Economy of Ethiopia from the Imperial Period to the Present', in F. Cheru, C. Cramer, & A. Oqubay (Eds.), *The Oxford Handbook of the Ethiopian Economy*.
[75] Cascão (2008). '*Ethiopia–Challenges to Egyptian hegemony in the Nile Basin*'.
[76] Asiedu, M. (2018). 'The construction of the Grand Ethiopian Renaissance Dam (GERD) and geopolitical tension between Egypt and Ethiopia with Sudan in the mix'. *Global Political Trends Center* (GPoT). http://www.jstor.org/stable/resrep14136
[77] Cascão (2008). '*Ethiopia–Challenges to Egyptian hegemony in the Nile Basin*'.
[78] *Ibid*.,
[79] *Ibid*.,
[80] EHRC (Ethiopian Human Rights Commission), (2021). *Brief Monitoring Report on the Situation of Civilians in Humera, Dansha and Bissober*, Ethiopian Human Rights Commission.
[81] Rohne Till (2022). '*Case Study Context: Ethiopia*'.
[82] Headey, D., Dereje, M., and Taffesse, A. (2014). 'Land Constraints and Agricultural Intensification in Ethiopia: A Village-Level Analysis of High-Potential Areas', *Food Policy, 48*, 129–141.
[83] World Bank (2023). '*The World Bank in Ethiopia - Overview'*.
[84] FEWS NET (2023). 'Ethiopia Food Security Alert, May 30, 2023: The emergency in Ethiopia is far from over, as food aid remains vital to saving lives'.
[85] Lakew, Y. and Bekele, A. (2015). 'Projecting Ethiopian Demographics from 2012-2050 Using the Spectrum Suite of Models'. https://www.healthpolicyproject.com/pubs/724_PROJECTINGETHIOPIAN.pdf
[86] Swain (2011). '*Challenges for water sharing in the Nile Basin*'.
[87] *Ibid*.,
[88] Nile Basin Water Resources Atlas, 'Irrigation in the Nile Basin: Irrigation in Ethiopia', Date Accessed: 13/08/2023 https://atlas.nilebasin.org/treatise/irrigation-areas-in-ethiopia/#
[89] Yoffe, S., Wolf, A., Giordano, M. (2003). 'Conflict and Cooperation over International Freshwater Resources: Indicators of Basins at Risk' *JAWRA Journal of the American Water Resources Association, 39,* 1109-1126. 10.1111/j.1752-1688.2003.tb03696.x.
[90] *Ibid*.,
[91] Zeitoun M. and Warner J. (2006). 'Hydro-hegemony – a framework for analysis of trans-boundary water conflicts', *Water Policy, 8*, 435-460.
[92] *Ibid*.,
[93] *Ibid*.,
[94] Frey, F. W. (1993). The Political Context of Conflict and Cooperation Over International River Basins, *Water International, 18(1)*: 54-68. DOI: 10.1080/02508069308686151

[95] *Ibid*.,
[96] Kendie D. (1999). 'Egypt and the Hydropolitics of the Blue Nile River', *Northeast African Studies, 6(1)*: 141-169.
[97] Reibe, 2021.
[98] Swain (2011). '*Challenges for water sharing in the Nile Basin*'.
[99] Medzini, A. (2001). 'The River Jordan: Frontiers and Water', *School of Oriental and African Studies, London, UK*.
[100] Cascão (2008). '*Ethiopia–Challenges to Egyptian hegemony in the Nile Basin*'.

[101] McDonald, K., Bosshard, P., Brewer, N. (2009). 'Exporting dams: China's hydropower industry goes global', *Journal of Environmental Management, 90(3)*: 294-302. https://doi.org/10.1016/j.jenvman.2008.07.023.
[102] Cascão (2008). '*Ethiopia–Challenges to Egyptian hegemony in the Nile Basin*'.
[103] Asiedu, M. (2018). 'The construction of the Grand Ethiopian Renaissance Dam (GERD) and geopolitical tension between Egypt and Ethiopia with Sudan in the mix'. *Global Political Trends Center* (GPoT). http://www.jstor.org/stable/resrep14136
[104] Cascão (2008). '*Ethiopia–Challenges to Egyptian hegemony in the Nile Basin*'.
[105] Frey, F. W., & Naff, T. (1985). 'Water: An Emerging Issue in the Middle East?' *The Annals of the American Academy of Political and Social Science, 482*, 65–84. http://www.jstor.org/stable/1046383
[106] Frey, F. W. (1993). The Political Context of Conflict and Cooperation Over International River Basins, *Water International, 18(1)*: 54-68. DOI: 10.1080/02508069308686151
[107] Zeitoun & Warner (2006). 'Hydro-hegemony – a framework for analysis of trans-boundary water conflicts'.
[108] World Bank (2023). '*The World Bank in Ethiopia - Overview'*.
[109] Global Firepower (2023) 'African Military Strength', Date Accessed: 03/08/2023. https://www.globalfirepower.com/countries-listing-africa.php
[110] Asiedu (2018). '*The construction of the Grand Ethiopian Renaissance Dam (GERD) and geopolitical tension between Egypt and Ethiopia with Sudan in the mix'*.
[111] Cascão (2008). '*Ethiopia–Challenges to Egyptian hegemony in the Nile Basin*'.
[112] McDonald *et al*, (2009). '*Exporting dams: China's hydropower industry goes global*'.
[113] Maher, M. and Farid, M. (2023). 'The Growth of Chinese Influence in Egypt: Signs and Consequences', *Fikra Forum*. https://www.washingtoninstitute.org/policy-analysis/growth-chinese-influence-egypt-signs-and-consequences
[114] *Ibid.,*
[115] Singh, N. (27th August, 2023) 'ANALYSIS - Does Brics expansion mean a new global order?' https://www.independent.co.uk/world/brics-g7-india-china-russia-brazil-south-africa-b2400100.html#:~:text=Now%2C%20the%20five%2Dmember%20group,Western%20alliances%20in%20global%20affairs
[116] Joshi, A. (16th June 2020). 'India Has Handed China a Way to Interfere in Kashmir', *Foreign Policy*. https://foreignpolicy.com/2020/06/16/china-kashmir-himalayas-pakistan-conflict/#cookie_message_anchor
[117] Hussein (2014). '*Egypt and Ethiopia spar over the Nile*'; Reibe (2021). '*Ethiopia/GERD: What would push Egypt's Sisi to resort to force?*'
[118] Nile Basin Water Resources Atlas. '*Irrigation in the Nile Basin: Irrigation in Ethiopia'*.
[119] Singh (2023). '*ANALYSIS - Does Brics expansion mean a new global order*?'