The politics of African energy development: Ethiopia’s hydro-agricultural state-building strategy and clashing paradigms of water security

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As key economic, ecological and demographic trends converge to reshape Africa and its relationship with the outside world, a new politics is emerging in the twenty-first century around the water–food–energy nexus, which is central to the continent’s relevance in the global economy. On the one hand, Malthusian anxieties are proliferating; pessimists link population growth and growing water scarcity to state failure and ‘water wars’. On the other hand, entrepreneurs, sovereign wealth funds and speculators consider Africa’s potential in water resources, energy production and food output as one of the last great untapped opportunities for the global economy: Africa is on the brink of an agro-industrial transformation. This article examines how African actors are not merely responding to economic and environmental changes but also thinking politically about water, food and energy security. Many of them are seizing the new opportunities to redefine their national politics, their relationship with local communities and their ties with external players, regionally and globally. Ethiopia’s project of hydro-agricultural state-building helps to identify the most important fault lines of this new politics at the national, local and international level. The politics of water security and energy development simultaneously puts African states and their populations on the defensive, as they grapple with huge challenges, but also provides them with unique opportunities to take advantage of a more favourable global configuration of forces.
1. Introduction: three ways of thinking about water security

The statesman’s task is to hear God’s footsteps marching through history, and to try to catch on to His coattails as He marches past. Otto von Bismarck

Fifty years after independence, the African continent is reaching a crossroads. The outcomes of the convergence of several crucial developments in the early twenty-first century—what I term ‘the critical moment’—are deeply unsure, but the decisions that will be taken in the next couple of years will determine how different—or not—the region’s future will be from the last half a century of economic disillusionment, vicious internal politics and dependence on external forces. Almost all of these game-changing trends—population growth, shifts in global economic power, climate change, the emergence of an African consumer class and new state-building agendas—are (in)directly linked to the use of water: how water resources management can promote economic growth; what role water needs to play in addressing issues of human rights and equity; whether water can help to reconfigure Africa’s role in the world economy; how African countries will relate to each other in the age of global warming; and in which ways political power will be exercised in the future, given how integral concerns over water and food security are to the legitimacy of African governments and how important they are becoming, as I argue by expounding the case of Ethiopia, to the strategies of elites to maintain hegemony.

My central argument is that as worries over water scarcity, rising food prices and the multiplier impacts of climate change are mounting, a new politics is emerging around the water–food–energy nexus in Africa. In this article, I highlight the fault lines, unpack their origins and show how they intersect at this ‘critical moment’, as local, national and regional actors are forced to navigate real-world trade-offs. The context in which societies will have to determine what water-related risks they find tolerable is highly complex and simultaneously poses dangers and opportunities to African states.

Two discourses regarding Africa’s future are competing for political and academic pre-eminence. They depend on specific epistemological premises, emphasize certain trends at the expense of others and offer policy prescriptions. Both of them rightly identify what will happen with African water resources as a major determinant of the continent’s future. Wrongly, they have both adopted simplistic understandings of African politics and are almost completely ahistorical in their analysis of the options available to decision makers, whether they are African heads of government or local community leaders.

The first discourse is rooted in a tradition of underscoring the dystopian consequences of the interplay between demographics, economic development and environmental change. Neo-Malthusian voices are gaining ground [1]; nowhere is population growth and degradation of habitats occurring as fast as in the Horn of Africa. The number of extreme droughts and flash floods is rising and population doubles every 30 years: an additional 150 million mouths will have to be fed in a region already notorious for large-scale malnutrition and erratic water management policies [2]. Food insecurity is linked to the wider malaise and upsurge in discontent in African cities, including the failure of Hosni Mubarak’s regime to respond effectively to skyrocketing food prices and youth unemployment in Egypt.

Water is not just a key to food production through agriculture, it is also increasingly linked to regional energy security. Less than one-third of East Africans are connected to the electrical grid, a major impediment to the welfare of individuals and to macroeconomic development. Soaring demand puts unprecedented pressures on water resources; pessimists predict that the frequency and intensity of conflicts (‘water wars’) are rising, particularly as regional climate change worsens [3]. Amidst fears of instability, states are racing to capture critical resources through a zero-sum conceptualization of water security, part of a ‘new scramble for Africa’ [4]. The global economy is undergoing seismic changes, with power shifting to several rising powers—China, India, Brazil and Gulf Arab states. As investment, production and consumption in these centres reshape commodity prices and commercial networks, this increases anxiety about securing vital resources [5].
The second dominant discourse, by contrast, argues that these demographic and economic shifts provide the building blocks for a new optimism—the continent is no longer a victim of Malthusian collapse but an opportunity for new patterns of international economic integration: *The Economist* recently replaced its gloomy etiquette of the year 2000—‘The Hopeless Continent’—with the bullish ‘Africa Rising’ [6]. This narrative posits that the critical moment means that Africa is on the brink of an agro-industrial transformation like Europe in the 1820s or East Asia in the second half of the twentieth century. With Africa’s gross domestic product now rivalling that of Brazil and Russia, returns on foreign direct investment (FDI) higher than that in any other developing region of the world and 128 million Africans likely to join the ranks of a new middle class by 2020, global attention for African resources is news to be welcomed, not to be feared [7].

The case for optimism is rooted in neoclassical economics, identifying a win–win situation all around and regarding water flows and energy security in particular. Historically, Africa has underused its water resources for irrigation and power generation but Sudan, South Sudan, Ethiopia, Rwanda and Uganda have all instigated dam projects to increase energy supply and to revamp irrigated agriculture. In the past decade, the BRIC countries (Brazil, Russia, India, China) have concluded myriad agreements with African governments in the water–food–energy nexus, spearheaded by a wave of dam-building and investment in capital-intensive agriculture. These multibillion-dollar developments might reshape Africa more dramatically than traditional oil investments [8].

This article offers an alternative approach which enables a deeper, historically informed understanding of the changing narratives and material interests that are impacting on the region from within and from without [9]. I think politically about water security and the alleged repositioning of Africa in the global economic system. Following from Bismarck’s observations and by drawing on a detailed study of Ethiopia’s politics of water security and energy development, I demonstrate how African actors, at different scales of analysis, are not merely responding to demographic, economic and environmental changes. Many are actively seizing on the opportunities presented by technocratic discourses to redefine their national politics, their relationship with local communities and their ties with neighbours-cum-rivals/potential partners. I thus argue that water security is not predominantly determined by exogenous biophysical factors but becomes endogenous to the strategies and (mis)calculations of political elites [10].

This approach to water security is rooted in the tradition of political ecology, which is critical of the positivism that characterizes much of the mainstream sustainable development literature and which posits that science and values are co-produced; rather than any technocratic (‘neutrally’) determined measures of ‘water stress’, political–ecological contributions focus on how notions of security and risk are socially constructed, whose paradigms they embody and what the distributional logic is that underpins supposedly objective benchmarks for the management of scarcity and allocation quota [11]. Who is ‘water secure’ and who is not? Which risks are deemed tolerable for certain population groups and not for others? And how do perceptions of security and risk change over time? Political ecology highlights how the societal values that underpin discourses and material realities of water security and risk are not static, but the outcomes of often violent struggles that amplify the voices of some and silence those of others [12]. This approach not only historicizes and politicizes debates around water—tackling questions many scientists rather not address in their aggregations—but also argues that scale is an important factor to understand how security and risk are defined by those who have the power to do so: tussles over values, definitions and distributions often play out differently at different levels but should not be analysed in isolation. It is the interaction between actors at various scales that is critical for understanding change and continuity—and inevitable inconsistencies and contradictions—in the political constructions of water [13].

This article draws from several disciplinary wells to build a multifaceted picture of the collision of different imaginings of water security and risk—an exercise in deconstruction of and empathy with a multitude of perceived realities mediated through power dynamics, rather than a positivist assertion of one reality that actors either recognize and respond to or foolishly ignore.
Following the Thomas theorem of sociology—‘If men define situations as real, they are real in their consequences’—the methodology underpinning this article is therefore one that combines various methods to do justice to this complexity and subjectivity: environmental problems, like water scarcity, are real and data produced by natural scientists are taken seriously, but in order to articulate people’s understandings and social constructions of water, qualitative techniques such as elite interviews and field observation over an extended period of time were crucial. Interview material and fieldnotes were systematically triangulated with primary documents, secondary literature and biophysical information (parts of which are selectively highlighted by protagonists and ignored at other times) with an eye to improve the validity of the claims made here.

My analysis seeks to show how the new politics under discussion is taking shape, but does not pretend to be the only possible reading of an objectively existing truth ‘out there’. The focus on material and discursive dimensions of power means that ‘struggles’, and all the subjectivity they produce [14], are central to my argument. Critics rightly note that this does not translate easily into neat policy recommendations and much-craved templates of ‘best practices’ and ‘evidence-based optimal allocations’ [15]. However, I submit that rather than such an ‘unrigorous’ analysis miscasting water security, risk and energy development in Africa, it is subjectivity itself that matters tremendously to knowledge creation, problem diagnosis and policy implementation [16] and that needs to be studied to help to explain the ostensibly irrational decisions and oppositions that technocrats so often deplore. Such a methodological approach, and the rich insights it yields into the internal logic of water security paradigms and their articulation of interests, values and relevant scientific knowledge, arguably has much greater potential to contribute to addressing real-world trade-offs, injustices and dilemmas regarding water, energy and agriculture [17].

I use the example of Ethiopia, Africa’s second most populous country and the dominant power in East Africa, to demonstrate the power of this approach in coming to grips with the complexity contemplated in this Theme Issue. Ethiopia’s hydro-agricultural state-building project highlights how dynamic and contradictory Africa’s changing politics of water security and energy development are at the national, local and regional level. I begin by analysing the political logic behind Ethiopia’s flagship policy—Prime Minister Meles Zenawi’s idea of a ‘New Ethiopia’ through hydropower. I provide historical context to the dam programme, which is unparalleled in its ambitions in Africa. Via alliances with Western, Indian and East Asian partners, Ethiopia’s dams aim to catapult the country from an aid-dependent, impoverished state to a regional hegemon that ties East Africa to it through hydropower flows. The economic success and international legitimacy that this strategy produces are consolidating the Tigrayan People’s Liberation Front (TPLF)’s hold on power—or that at least is the calculus of the (late) Prime Minister and his advisors.

Subsequently, this article delves into the local but increasingly internationalized controversy surrounding the Gilgel Gibe dams in the Southern Omo Valley, which, taken together, are scheduled to become one of the biggest generators of hydropower on the continent. While co-funded by global capital and targeted to produce thousands of megawatts, the dams have devastating environmental and social consequences for local populations, not least through planned large-scale irrigated sugar production. The new politics of water security and energy development are producing ‘glocalized’ trade-offs and underlining the competing logics of different scales [18].

The third section focuses on the regional chessboard to demonstrate how the ‘hydropolitical status quo’, which carved up the Nile waters between Egypt and Sudan during the twentieth century, is being destabilized by the convergence of regional and global developments at this critical moment. The erosion of the hydropolitical status quo—the paramount reality that has structured policy discussions in the region for decades—is leading to a new energy landscape in which Ethiopia and Uganda aspire to leadership roles. The future of water security and African energy development has never been so open ended as today.

In the conclusion, I reflect on what water security developments teach us about broader trends in African politics. I also discuss the implications of the politicization of the water–food–energy nexus in East Africa for global water security debates. Four key lessons emerge, which
suggest that there is not just one future of water, food and energy security in the region and elsewhere but multiple possible futures, contingent on many factors, most important of all human decision making.

2. Water and the New Ethiopia: from environmental crisis state to regional hegemon?

Notwithstanding the pride Ethiopians take in being Africa’s oldest nation, the history of contemporary Ethiopia is one of recurrent conflict, disaster and economic turmoil. Geography—Ethiopia’s erratic climate, hugely diverse landscapes and complex hydrology—has long been considered a major determinant of politics and prosperity levels. Ethiopian elites have been embarrassed by chronic underachievement: still ranked no. 174 on the Human Development Index [19], insiders and outsiders alike continue to worry about Ethiopia as an exemplary case of repeated Malthusian collapses [20]—a nation perennially on the brink of another food crisis induced by rapid population growth (expected to rise from 84 million people now to about 150 million people by 2050) and environmental degradation. The ghosts of the famines of the 1980s still linger [21].

Since coming to power in 1991 after two decades of guerrilla warfare, the Ethiopian People’s Revolutionary Democratic Front (EPRDF)—the coalition dominated by the TPLF—has made socioeconomic transformation and the restoration of Ethiopian greatness its overarching objectives [22]. Hailing in large part from Tigray where man-made famine killed hundreds of thousands, the legitimacy of the leftist regime has depended on solving three interrelated challenges: re-establishing peace and security after 17 years of civil war; restructuring the relationship of the many people who constitute Ethiopia with the political centre through a redefinition of citizenship; and delivering sustainable, inclusive growth to reduce Ethiopia’s vulnerability to droughts and floods. While tight-fisted governance and ethnic federalism are claimed to have resolved the former two, an astute reading of Africa’s critical moment and Ethiopia’s own strengths and weaknesses inspired long-serving Prime Minister Meles Zenawi and his lieutenants to develop an audacious strategy to address the latter: big dams as the sword to cleave the Gordian Knot of underdevelopment.

The vast majority of Ethiopians live in rural areas, with small-scale agriculture as the main livelihood for millions of impoverished people. The central problem of Ethiopian agriculture is its low productivity [23], which is in substantial part a function of extreme hydrological variability, estimated to cost the economy about a third of its growth potential. Ethiopian farmers are disproportionately dependent on rainfall, which is notoriously erratic across the territory [24]; even during good-on-average precipitation years, there are often huge regional discrepancies that devastate rural livelihoods in one area while producing plentiful harvests elsewhere. Drought strikes every 3–5 years, a pattern which is expected to worsen as climate change further increases the unpredictability of the water cycle and the likelihood of extreme weather events. Moreover, endemic erosion and rampant deforestation have further reduced water availability. As the World Bank put it: ‘these circumstances leave Ethiopia’s economic performance virtually hostage to its hydrology’ [25]. An integrated strategy for water, agriculture and poverty reduction is essential if the country is to escape its low income/productivity trap.

The EPRDF/TPLF government has since the 1990s pursued a strategy of encouraging industrial activity to diversify the country out of its dependence on agriculture and of trying to broaden livelihood options in rural areas. Both the Agricultural Development Led Industrialization and its 2010 successor, the Growth and Transformation Plan, rejected neoliberal growth models in favour of statist interventionism, spending on infrastructure and a selective engagement with the world economy [26]. The most ambitious dam programme in African history sits at the heart of this agenda (table 1).

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The first objective is to boost domestic electricity production and consumption, both by extending the grid to hitherto unelectrified regions (thereby fulfilling a popular promise to the EPRDF/TPLF’s rural support base) and by intensifying use in urban areas to promote industrialization; almost nowhere in the world is per capita electricity consumption (28 kWh) lower [28]. With only a fifth of the Ethiopian population connected to the grid and demand growth by households and business close to 25% per annum, there can be little doubt that prosperity and political stability are closely associated with this energy agenda [29]. The second goal of the dam programme is to reduce Ethiopia’s vulnerability to climate and hydrology, weakening its dependence on erratic rainfed cultivation (which often limits farmers to a single crop per year) and enabling irrigated production for both internal consumption and international exports. According to the late Meles Zenawi and his successor Hailemariam Desalegn, the ability to store water through hydro-infrastructure is the key to tackling food insecurity and adapting to climate change; the problem has never been absolute scarcity—Ethiopia is Africa’s ‘watertower’—but the inability to capture and harness it for development [30]. The final objective is to obtain a new source of foreign exchange, another long-term weakness. Exporting electricity to other power-scarce African countries could bring in steady flows of cash to recover costs and reinvest in other productive ventures.

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estimated at 40 000–45 000 MW, dwarfing that of any other African country barring Congo—the spectactorily expensive dam programme also represents perhaps the regime’s boldest attempt at transforming the Ethiopian state since overthrowing the Derg dictatorship.

For the EPRDF/TPLF political power ultimately rests on three components: control of the political economy/means of production; external legitimacy/alliances; and, as a last resort, coercion. The ca 150 000-men strong Ethiopian National Defence Forces and an impressive array of security/intelligence services ensure political stability and the absence of existential challenges

1Interviews in Ethiopia with senior members of the TPLF, May 2010–December 2012.
to EPRDF/TPLF rule in the short term [31]. The dams are part of a wider, long-term domestic strategy of state-building which seeks to strengthen ruling circles and to prevent the emergence of rival centres of power that are outside the regime’s orbit. While the EPRDF/TPLF seldom talks about its Marxist–Leninist roots to Western donors who provide more than USD4bn in overseas development assistance annually, its views continue to be rooted in a radically leftist analysis of how to ensure hegemony [32]. Ethiopia’s hydro-infrastructure is vital in stimulating private sector and smallholder initiatives, but does so in a way that allows the Prime Minister’s inner circle to firmly control the development process, select key beneficiaries and boost national prestige simultaneously.

The EPRDF/TPLF state-building and development model[2] is resolutely heterodox, with giant infrastructure projects, a repressed financial sector and favoured economic entities as instruments for the centralization of rents; this kind of primitive accumulation and state-led development has proved quite successful in Ethiopia, despite neoliberal warnings to the contrary. Four huge endowment conglomerates—each with a regional remit to target selected constituencies—and numerous sprawling local development agencies guide investments, provide public goods and set sector-wide examples of successful strategies [33]. They have contributed substantially to Ethiopia’s breathtaking growth: gross national income *per capita* more than tripled between 2002 and 2010 to USD390 [34]. Above all, they have entrenched the ruling coalition in power, enabling it to penetrate even the country’s most remote localities via opaque networks of influence and money that ensure that no serious economic activity takes place outside the regime’s watchful gaze.

Power in Ethiopia is thus exercised legally and extralegally, within the confines of the formal economy and the state, and outside it in EPRDF/TPLF-dominated webs of patrimonial governance [35]. The dams, associated electricity lines and irrigation projects further deepen this model. According to the Ministry of Agriculture, only 37 million acres are currently in use as farmland, while 170 million of Ethiopia’s 270 million plus acres are suitable for agriculture, the overwhelming majority are in lowland areas where the writ of the state has historically been strongly contested. This vast area is to be developed through large-scale farming by the private sector; the World Bank documented land deals involving 1.2 million hectares between 2005 and 2009 [36]. The push for capital-intensive production in the peripheries, with half of the agreements involving foreign investors, is crucial to the process of strengthening economic links between southern and western Ethiopia and the core of the state, as well as to their insertion into global markets in the belief that marketing agricultural surplus—generated by both smallholders and big producers—is the key to beating underdevelopment [37].

### 3. Water security for whom? The local politics of hydro-agricultural state-building strategy

The EPRDF/TPLF’s ‘state-building as hydro-development’ offensive is a strategy that simultaneously aims to improve the structural strength of Ethiopia’s national economy and to entrench the ruling elite’s grip on political power, but has important ripple-effects internationally and locally. The dams on the Omo River and the irrigation projects that they enable in southern Ethiopia illustrate the competing logics of different scales of water and food security: ostensibly technical debates about macroeconomic policy, energy development and climate change adaptation are really political struggles as the paradigms of water security of local, national and global actors prioritize radically different interests and lead to misunderstanding and confrontation.

It was never supposed to be this way. After the fall of the ancien régime, Ethiopia’s new rulers promised a transformation in the historically violent relations of the country with many

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nations, with the central state dominated by the Amhara [38]. Meles and his comrades pledged to give the peripheries a stake in a united Ethiopia through ethnic federalism and decentralized development; as a last resort, the revised constitution promised the right of self-determination, which Eritreans duly exercised in 1993. The EPRDF made a point of including the Southern Ethiopian People’s Democratic Coalition, to represent the territories of Ethiopia’s deep South, in its government. When the EPRDF/TPLF’s vision for dam-led national development took shape in the mid/late 1990s, the new Addis recognized the dire poverty across southern Ethiopia and the chronic lack of access to public services, including sanitation, electricity and clean drinking water.

Erecting a cascade of power plants along the Omo—five have been planned, of which two have been built while the most controversial dam, the Gilgel Gibe III, is under construction—was intended to be part of the answer to the South’s ‘development crisis’. The dams would target the national energy deficit and lay the groundwork for Ethiopian regional energy diplomacy; they would also ‘finally’ allow the country to harness its formidable water reserves in its most distant regions, while providing jobs for local populations on irrigated sugar production schemes. The aim is to increase the sugarcane plantation acreage from 65 000 in 2010 to 657 000 acres by 2015, to kick-start a ‘sweet revolution’ that, through higher productivity and extension, allows Ethiopia both to meet domestic demand (per capita consumption is currently one of the world’s lowest) and to export white gold to global markets. A USD571m new refinery in remote Afar province and the South Omo region have been designated as key sites for ‘sweet success’.

The Omo River is cast as ideal for power generation and irrigation, dropping from over 2000 m altitude to around 350 m when it enters Lake Turkana, flowing through a steep gorge; the 700 km long stream lies entirely in Ethiopian territory, which means that local water security and development objectives can be pursued without competing claims by other riparians. Ethiopia’s central government recognized the presence of hundreds of thousands of people in the valley, but argued that dam-induced resettlement would be a unique opportunity to provide formal employment and public services to populations that had historically maintained antagonistic relationships with the state. Optimistic regime powerbrokers claimed that the local benefits of the dam might even exceed the Gibes’ contribution to the national economy.4

However, every fresh phase in the implementation of the EPRDF/TPLF’s dam programme in southern Ethiopia has further fuelled local resistance against the plans of the Addis politicians and technocrats and their rhetoric of Ethiopian water security. Gibe I and II, both of which were finalized without the completion of a comprehensive environmental and social impact assessment, displaced approximately 100 000 people [39]; there was hardly any consultation of customary leaders about either the project itself or their resettlement. The vast majority of the displaced were directly reliant on the riverain ecology for their livelihoods, with their traditions intimately linked to multifaceted interactions with the environment of the Omo Valley. Gibe III, currently under construction, further deepens attempts to regulate the annual flood and use the waters for the cultivation of biofuels and sugarcane; it directly clashes with the needs—the water security—of subsistence farmers who have historically been dependent on seasonal changes in water flows. Moreover, further downstream, at Lake Turkana, fears abound regarding changes in the local ecology owing to upstream damming and irrigation [40]. Turkana might shrink dramatically, with devastating consequences for already impoverished communities in the Ethiopian–Kenyan borderlands [41].

The fundamental problem remains that southern Ethiopia’s subsistence farmers and pastoralists approach the electricity and irrigation projects in the Omo Valley with a paradigm that is totally different from that of the EPRDF/TPLF. In their eyes, the dams and associated development initiatives are merely the latest efforts by Ethiopia’s highland elites to ‘civilize’ the barbarian peripheries [42]—i.e. to extend state authority over the unruly peripheries and subject

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them to agendas of coerced modernization and resource extraction, a process of state-building that has waxed and waned since the nineteenth century brutal ‘pacification’ of the south [43]. The TPLF/EPRDF may have beaten the Derg by uniting an alliance of nationalities but has inherited a state which remains unrepentant and still harbours hegemonic ambitions of control and accumulation; for a Mursi or Daasanach nomad, the continuities between Haile Selassie, Mengistu Haile Mariam and Meles Zenawi may be bigger than the differences, despite politico-ideological rhetoric or bureaucratic claims about ‘water security’: the dams are therefore simultaneously a reconstitution of ‘Ethiopianness’ [44] by the current regime and an affirmation of the historically dominant mode of state–society relations.

The TPLF’s mindset is exemplified in statements like those of Ethiopia’s Sugar Corporation, a leading actor in the transformation of the South Omo region through irrigated sugarcane production, about the generous, top-down civilizational work it is undertaking: ‘A typical example is the construction of infrastructures, social service giving institutions, etc. which are being directed towards reaching mainly the long marginalized parts of the society who had been leading their lives devoid of any of these. Some among these Ethiopian societies are the South Omo and Afar pastoralists. And, the Omo-Kuraz and Tendaho-Kessem sugar development projects, in addition to the nation’s overall strategic economic advantage, are aiming at doing away with the marginalization of those living in and around the projects’ command areas and also other neighbouring people. Unlike the biased and ill-motive outlooks of some foreign as well as domestic institutions, the South Omo and Afar marginalized communities have begun reaping the fruits of sugar even at the project’s early implementation stage’ [45].

The current generation of dam projects and the displacement they engender must be inserted into a long, painful history of resettlement of peripheral peoples for development purposes by omniscient authorities in Addis and their local allies, often couched in language that suggests a Malthusian collapse may be imminent [46]. Mengistu’s forced transfer of 1.5 million people from drought-stricken Tigray and Wollo Provinces to sites across the country during the 1980s is the most infamous example, but by no means the only one. Successive Ethiopian governments have implemented grandiose resettlement schemes following two cardinal axes: the conviction that organized displacement can be militarily useful, through deliberate targeting of political opponents (e.g. relocating potential rebel supporters) [47] and the belief that moving large groups of people to locations more suited to development strategies would provide a boost to local production, accelerate their integration into the national economy through economies of scale and facilitate government service provision. The Derg turned a blind eye to warnings of consistently low levels of land and labour productivity on resettlement schemes compared with traditional forms of agricultural organization: this resulted in agricultural failures and high death rates associated with resettlement programmes, despite government propaganda about counteracting food production crises and growing resource scarcity [48]. Civil society organizations and academics have reported how the EPRDF/TPLF risks committing similar mistakes in its contemporary mission to ‘safeguard water and food security’ in Ethiopia, possibly leading to the destitution of the livelihoods of hundreds of thousands of people [49,50].

The controversial politics of the Gibe dams and irrigation projects transcend the straightforward, intra-Ethiopian clash between the EPRDF/TPLF and local populations. A multitude of actors has entered the arena to advance different visions of water security in Ethiopia. Lobbying, media coverage and expert reports are internationalizing what started as a local dispute: Kenyan business interests, desiring electricity for industrial expansion, are backing Ethiopia’s hydroelectric dams as are influential southern Ethiopian powerbrokers, Addis-based engineers and Asian investors. Meanwhile, Kenyan civil society groups, Diaspora activists in Europe and North America and the anti-EPRDF/TPLF national opposition denounce the environmental and social impact of the projects in coalition with global academic networks and non-governmental organizations (NGOs) like International Rivers and Survival International. The World Bank and the European Investment Bank, initially driving forces behind the Omo Valley schemes, have withdrawn their public support owing to human rights concerns but are seeking ways of maintaining leverage over the Ethiopian government, including continued
backing for the dam programme more broadly as an answer to regional instability. This illustrates how the new politics of water security and energy development is highly dynamic and complex, with actors at different scales prioritizing their paradigms and associated definitions of problems and solutions at the expense of others in sometimes rapidly shifting alliances.

4. The end of the hydropolitical status quo in the Nile Basin

The convergence of several important developments at this critical moment for Africa is leading to ambitious national political–economic strategies and turbulent centre–periphery arguments around water security at the local level in countries like Ethiopia, but also produces significant regional changes. The key catalyst in the Nile Basin has been the erosion of the ‘hydropolitical status quo’, the paramount reality that has structured policies (and discourses [51]) surrounding water security and energy development in the region for decades. This has greatly added to the unpredictability of the new politics [52]. The choices regarding water, energy and food that will be made in the next 5 years might well lock in interaction patterns for at least another generation.

Water has been political since time immemorial in the Nile Basin. For most of the twentieth century, the hydropolitical status quo, as legally embodied by the 1929 and 1959 treaties, essentially turned the Nile into an Egyptian river, dividing most of the water available between Egypt and, to a lesser extent, Sudan as a relic of the colonial era during which both countries’ hydropolitical economies played vital roles in the British imperial system [53]. Haile Selassie’s Ethiopia was denied access to the negotiations and found itself presented with a fait accompli; his downstream neighbours dammed the river and initiated large-scale irrigation schemes. British and American engineers had drafted masterplans for comprehensive basin management with flood regulation mechanisms and agricultural projects along the Nile in which Ethiopia was supposed to play a key role [54]. Seeing these thwarted as national security paradigms and narrow self-interest dictated Egyptian–Sudanese diplomacy turned out to be Addis’ greatest foreign policy frustration of the last 50 years [55].

These hydropolitical tensions help to explain why Ethiopia, Egypt and Sudan became embroiled in a series of regional proxy conflicts, with support from the Cold War superpowers [56]. The Soviet Union initially backed Cairo and Khartoum, but switched its support to Addis from 1974 onwards; the USA did the reverse when Haile Selassie was ousted, becoming a staunch ally of Anwar Sadat, Ja’afar Nimeiri and Hosni Mubarak, which helped to preserve the hydropolitical status quo that benefited Egypt and Sudan. Multilateral funding for Ethiopian dam or irrigation projects on the Nile was blocked owing to Egyptian–American influence; the World Bank maintained that it could not fund dams when water was so politicized. Moreover, the Ethiopian civil war, during which Khartoum assisted the anti-Derg rebels, gobbled up any resources Mengistu wanted to spend on hydro-infrastructure.

Three important factors have since the end of the Cold War gradually eroded the hydropolitical status quo and altered the politics of water security and energy development—inter alia opening up space for Ethiopia’s hydro-agricultural state-building strategy.

First, despite initial expectations that East Africa would vanish off the radar, the region gained international prominence after 1989, not coincidentally as regional alliance structures were again reconfigured and external powers had new priorities [57]. The West worried about the spill-overs of state-failure in Somalia while Sudan’s support for militant extremists had turned military–Islamist Khartoum into an international pariah hostile to America. At the same time, the EPRDF/TPLF in Ethiopia became a Western ally and eventually supported the SPLA/M rebels in South Sudan; the notion of Southern Sudanese secession became an increasingly respectable option for US policy makers and ultimately materialized on 9 July 2011, much to Cairo’s chagrin because Egyptians fear it opens the door for a challenge of the Nile Waters Agreement by upstream countries. Mubarak’s Cairo remained an important partner for Washington in the 1990s and 2000s, but lost influence. It was no longer the primus inter pares in the Nile Basin now that the international community increasingly needed and trusted Ethiopia. Global geopolitics thus
redrew regional water security debates and struggles, by considerably strengthening some actors at the expense of others and generally giving African governments more leverage internally and externally. Ethiopia’s dam programme is a direct result of this shift.

Second, the growing political importance of East Africa was flanked by rising economic relevance, especially in energy. Over the last 10–15 years, there has been a resurgence of interest in African oil and gas exploration as prices have spiked and global demand has soared. Sudan has exported oil since 1999, with China, Malaysia and India as partners in producing almost 500,000 barrels per day before July 2011 [58]; reserves in Uganda’s Lake Albert region are reckoned to be the largest onshore discoveries in Africa since 1985, with over 2 billion barrels waiting to be exploited; and the Horn of Africa is abuzz with rumours about significant oilfields in Somaliland and Puntland, further augmenting international desire to restore a modicum of stability in Somalia. Investors and national ministries in Egypt, Tanzania, Congo, Kenya, South Sudan and Ethiopia are discussing multibillion-dollar plans for further exploration of potential in hydropower, oil and gas [59]. Such frantic activity is strengthening the position of African states in their dealings with the outside world and their ability to pursue agendas of energy development.

A third contributing factor to the new politics of water security is that changing global dynamics not only create the space for Ethiopia to confront the hydropolitical status quo but also offer financial and technical options that were not available prior to 2000. While the World Bank, historically the biggest funder of hydro-infrastructure and the most influential actor in development thinking, pulled out of many dam projects following a barrage of criticism in the 1980s and 1990s, China—the world’s biggest domestic dam-builder—entered the Nile Basin. Since Sinohydro, the global market leader, began building the Merowe Dam in Sudan in 2003, Chinese state-owned enterprises and private companies have partnered their extensive financial resources and technical expertise with the political commitment of regimes yearning to launch a ‘hydro-agricultural mission’ (Sudan) [10, p. 695] or a sprawling dam programme (Ethiopia). It is hard to overstate the spectacular surge in Chinese activity on the continent [60]: whereas Africa–China trade was worth USD1bn in 1990, it reached USD8bn in 2000, but nothing compared with the explosion since then—in 2010, two-way imports and exports surpassed USD120bn. While investments in oil and minerals have made headlines, the lightening expansion of Chinese dam-building is equally significant [61].

The interplay between Malthusian perspectives on the global environment and the rise in global commodity prices fuelled by emerging powers has also brought India, Qatar, Turkey and East Asian states to the continent, as well as Brazil, whose President Lula visited Africa no less than 11 times between 2002 and 2010. Driven by a combination of fear about a world running out of resources and a desire to secure the key production areas of the future in regions like East Africa, a motley crew of sovereign wealth funds, agro-industrial giants and financial speculators have pushed water and food up the international agenda through real-world investments and deals that function as hedges against future price rises [62]. Gulf Arab states especially have worried about the deepening water deficit and ‘food gap’ [63]. These anxieties and international rivalries allow African states to replace more conservative partners with more forthcoming, less demanding allies [64]. In Uganda, the 660 MW Karuma Dam will be built by Chinese contractors after a fall-out with Western donors whose conditionalities are considered cumbersome by President Museveni. Similarly, the Industrial and Commercial Bank of China supports the Ethiopian Electric Power Corporation through a USD500m loan, which is essential for Gibe III after the World Bank, African Development Bank and European Investment Bank withdrew, citing social and environmental concerns discussed in the previous section.

The inexorable unravelling of the hydropolitical status quo in the Nile Basin is a catalyst for the implementation of new political–economic strategies across the region—water security is more political than ever and better business too. Regimes are benefiting substantially from this heightened importance of East Africa’s water resources for the global economy and the associated availability of funds, technical expertise and political support for hydropower generation and irrigated production of cash crops. New, often opaque partnerships have given momentum to an agenda which differs substantially from the promarket, ‘good governance’ prescriptions of
the West: dozens of hydro-infrastructure projects worth billions of dollars are reshaping political economies; they are integral to the modernization agendas of ‘Africa’s illiberal state-builders’. Meles Zenawi’s grand strategy, despite the World Bank’s role in co-writing much of the technical details, is ironically a result of the erosion of the West’s dominance—Ethiopia’s ambitions are decades old but were politically and financially unachievable until recently [65, p. 260].

Ethiopia, with its strategy of hydro-agricultural state-building and its vision of regional leadership through energy diplomacy leads the pack. It is closely followed by the military-Islamist regime in Khartoum which has staked its political future in the post-oil era on the most far reaching (hydro-)infrastructure programme in Sudanese history, with Kuwaiti, Emirati and Qatari funding for its dams totalling almost USD10bn [10, pp. 695–699]. The opportunism of Ethiopia and Sudan is being emulated. East Asian, Zimbabwean and Australian entrepreneurs are trying to bring hundreds of thousands of acres of land into cultivation in South Sudan, where President Salva Kiir is desperate to boost (non-oil) export revenues [66]. The Juba government also wants to develop its hydropower potential and is partnering Chinese state-owned enterprises and Norwegian companies in several schemes, including the Fula rapids project in eastern Equatoria. Another emerging regional heavyweight in energy and agriculture is Uganda. The Museveni regime has for years been trying to seduce agro-business—most controversially during the Mabira Forest saga [67]—and is craving FDI flows, notably from the Indian subcontinent in the sugar industry. It has also been trying to turn Uganda into an energy hub, mixing hydropower production for domestic needs [68] (the 250 MW Bujagali Dam and Karuma Dam, both to be completed in the near future after years of delays) and petro-exports. Uganda’s dependence on Kenya for fuel imports—costing USD500 m annually—could be reversed if it developed its own refining capacity. This also helps to explain Kampala’s proximity to South Sudan in its stand-off with Khartoum: Museveni is hoping to put Uganda at the centre of a new regional oil landscape, thus effectively competing with Ethiopia’s hydropower for East African energy leadership.

5. Conclusion

This article has argued that a new politics is emerging in the early twenty-first century around the water–food–energy nexus as a result of ‘the critical moment’—the convergence of key political, economic, ecological and demographic trends at this particular point in African history. My central thesis has been that this rapidly changing context, in which various actors try to turn their conception of water security and risk into the salient narrative, is highly complex: it simultaneously puts many African states and their populations on the defensive as they struggle to come to grips with huge challenges, but it also provides them with unique opportunities to benefit from a relatively favourable international configuration of forces.

I have drawn on the case study of Ethiopia’s hydro-agricultural state-building strategy to identify the most important fault lines of this new politics at the national, local and international level. Four main conclusions emerge from analysing Africa’s most ambitious development strategy. These contain important lessons regarding Africa and the critical moment; they also have wider relevance for water security discussions elsewhere—regionally and locally.

Firstly, this article has underlined the importance of African agency—political agency—at this critical moment for the continent, not least with regards to the environment. Contrary to what is often supposed, Africans are not merely on the receiving end of powerful forces shaping their destinies, but also actively shape and rework these developments in function of their local, domestic or international interests [69]. To paraphrase Bismarck, they are catching on to God’s coattails and nudging Him in different directions: I highlighted how ruling elites can draw on lucrative external funding and influential global narratives to implement long-cherished, state-building agendas through the water–food–energy nexus; the strategy of Ethiopia’s EPRDF/TPLF might be one of the most elaborate and sophisticated such attempts, but it is by no means the only one.
Secondly, the analysis of local, national and regional trends has underlined how crucial it is for actors on the continent and outside it to engage with history—memories of coerced pacification through development, geopolitical injustices of the past, violent templates of state-building. Much of the current moment is the result of an unprecedented convergence of trends; the politics of water security and energy development is not as ‘new’ as many African elites claim. Many of the problems and pitfalls inherent in development strategies and political offensives predicated on water, energy and food have been confronted before, often unsuccessfully. Those involved in today’s politics would do well, for moral and pragmatic reasons, to explore the painful lessons of the past.

Thirdly, the politics of water security and energy development are being determined by a whole range of actors; the complexity involved in having to deal with both traditional players (states, multilateral organizations) and a rapidly increasing set of newcomers (Western NGOs, Asian state-owned enterprises, Gulf Arab sovereign wealth funds, local civil society, networks of academics, etc.) can be bewildering, as each pursues its own objectives and parties come together on an ad hoc basis to form ‘discourse coalitions’ which shift through time and space [70]. Boundaries between local, national and international interests and discussions are blurred in the new politics, as they are increasingly co-constitutive of the dynamics at other levels of analysis. The complex, multi-scalar configuration of actors does little to improve understanding between clashing paradigms. Political battles surrounding the water–food–energy nexus revolve in large part around being able to impose one’s framing of a strategy or project at a particular scale, often at the expense of actors at other scales.

Fourthly, at current trends, the new politics of water security suggests that while African elites are showing remarkable ambition to leapfrog into a future of faster growth and economic modernization, the grand designs of regional leaders for water, energy and food security are not nearly as sophisticated and well calibrated as their discourse suggests. On the contrary, given the growing tensions between local, national, regional and global scales and the wishful thinking that underpins the plans of many governments, the latter should consider themselves fortunate if some of the intended transformations of African states materialize after all and do not produce greater conflict, growing core–periphery inequalities and maladaptation to ecological upheaval. Global, national and local actors still understand much less than they admit about the complex environmental processes, not the least the regional impact of climate change and hydrological processes, on which many of their political and socioeconomic plans are premised. The confrontation with on-the-ground realities is likely to be frustrating and the source of new tensions within scales and between actors operating at different scales.

My concluding reflection is therefore that future developments around water security and energy development in Africa are likely to be neither straightforwardly cornucopian nor violently Malthusian. There are no inherent mechanisms or automatic linkages between development, security and the water–food–energy nexus. Water security must be approached politically and seen as endogenous to the choices made by human beings of flesh and blood at this critical moment: the future could well be characterized by regional integration, inclusive national development and local space to experiment with water management and food sovereignty; or it could be marked by geopolitical antagonism and dispossession of communities to fuel ‘glocalized’ processes of primitive accumulation. Whatever choices Africa’s leaders and its people make, expect them to be primarily shaped by politics and mediated through a daunting mix of interests, values and perceptions.

References

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