

Ecologies of Development: Ecophilosophies and Indigenous Action on the Tana River

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Abstract: This article argues for a reorientation of African environmental history that incorporates localized ecophilosophies, racial ecologies, and environmental justice, and posits that doing so allows us to challenge the sociocultural and ecological implications of colonial and postcolonial environmental development more rigorously in East Africa. Focusing on Kenya, I argue that environmental justice-oriented histories of economic development elevate the subjectivities, cosmologies, and experiences of rural Kenyan populations rather than reducing the environment and its resources to their instrumental qualities. On the Tana River, pastoral and riverine groups such as the Pokomo and Orma suffered and challenged the exigencies of water extraction in specific ways tied to their existing relationships with the local environment. By looking at the ways rural communities in arid regions framed their environmental relationships, we can begin to appreciate the specific modalities and cosmologies through which they resisted the imposition of cash crop agriculture and water development. The article demonstrates an interdisciplinary approach utilizing Black ecologies and environmental justice frameworks that restores vitality to the rural experience of imperialism and offers more rigorous critiques of global development dogmas under racial capitalism, particularly surrounding the omnipresent threat of ecocide driven by dispossession, resource extraction, toxicity, and climate change.

Résumé: Cet article plaide pour une réorientation de l'histoire environnementale africaine incorporant les écophilosophies localisées, les écologies raciales et la justice environnementale. Il interroge de manière plus rigoureuse les conséquences socio-culturelles et écologiques du développement environnemental colonial et postcolonial en Afrique de l'Est. En me concentrant sur le Kenya, je soutiens que les histoires de développement économique orientées vers la justice environnementale élèvent les

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subjectivités, les cosmologies et les expériences des populations rurales kenyanes plutôt que d'instrumentaliser l'environnement et ses ressources. Sur la rivière Tana, les groupes pastoraux et fluviaux tels que les Pokomo et les Orma ont souffert et défié les exigences de l'extraction de l'eau de manière spécifique, liée à leurs relations existantes avec l'environnement local. En examinant la façon dont les communautés rurales des régions arides pensent leurs relations avec l'environnement, nous pouvons commencer à apprécier les modalités et les cosmologies spécifiques par lesquelles elles ont résisté à l'imposition de l'agriculture commerciale et du développement lié à l'eau. L'article démontre le potentiel d'une approche interdisciplinaire utilisant les écologies noires et les cadres de la justice environnementale redonnant de la vitalité à l'expérience rurale de l'impérialisme et offrant des critiques plus rigoureuses des dogmes du développement mondial sous le capitalisme racial, en particulier autour de la menace omniprésente de l'écocide causé par la dépossession, l'extraction des ressources, la toxicité et le changement climatique.

Introduction

In 1958, a Pokomo elder living with and alongside the Tana River in eastern Kenya petitioned the colonial state, complaining that the onset of irrigation developments there had destroyed communal riverine lands via flooding and dispossession.¹ These lands, codified by the state as belonging to the Crown, were essential emergency agricultural lands for the Pokomo community, where plants, shrubs, and beehives could all provide critical nutrition in the event of crop failure elsewhere. The access roads, pumps, and canal intakes imposed there by the state thus reified a materialist interpretation of the environment that separated land into a binary of barren and productive, erasing the web of values that the riverine ecosystem held for local communities.

Some 55 years later in 2001, Pokomo agriculturalists just a dozen or so miles away from the site of that initial complaint clashed with Orma herders, as both communities relied upon the river during a particularly potent drought. During the intervening years, state and private economic development projects had dispossessed local communities and upset delicate ecosystems across the length of the river in search of economic growth. In the ensuing violence, dozens of people died as the consequences of capitalist expansion alienated not only those whose *shambas* (farms) abutted the river but also diverse communities from across the wider arid region who relied upon, but held no legal claim to, the river.²

While separate in time and nature, these two conflicts originate from a similar pressure point: a disjuncture between previously cooperative ways of living with the riverine ecosystem and the singularly extractive goals of outside actors. Moreover, contests over land and water frequently occur some distance

¹ E. C. M. Green, "Compensation for Fruit Trees," 19 March 1959. Kenya National Archives [KNA hereafter] DC/TANA.RV/7/20.

² "More Than 50 Killed in Tana River Clashes," *The New Humanitarian*, December 11, 2001, <https://www.thenewhumanitarian.org/fr/node/197984>.

from the physical sites of change (directly or indirectly) generating them. Dispossessed from the physical site of economic development, Pokomo and Orma anger urges us to consider African environments and environmental histories not as singular sites but as ecosystemic wholes. Development history on the continent largely relies upon analyses of particular projects with discrete boundaries and contributes to understandings of the environment that are tied to demarcated lands where development “happens.”³ Alternatively, edited volumes provide much-needed geographic breadth while occasionally balkanizing sites or communities.⁴ Instead, this article thinks through development as an ecosystem built upon vascular lineages between riverine and hinterland, catchment and floodplain, material and spiritual embodiments, flooding the traditional boundaries of environmental history.

In doing so, this article makes a case for the necessity of interpretive interdisciplinarity within the field of African environmental history that treats folklore and oral storytelling not only as historical artefacts or narrative sources, but as indicators of vibrant ecophilosophies, which hold potent social justice potential in the present. In this manner, the approach makes a creative case for historians to reimagine existing sources as intellectual histories of ethics, simultaneously alongside existing configurations of material and social analysis. Such work is by no means easy, given the limitations of colonial archives and anthropology, and is made all the more difficult in areas such as Tana River district where both local activism and scholarship are overlooked, owing to successive colonial and postcolonial states’ disregard for the region’s peoples. The river’s definition by outside actors as a specifically material resource places communities in permanent opposition to those actors’ economic goals. Valuing and representing forcefully erased ecophilosophies therefore requires casting a new eye over colonial, anthropological, or capitalist sources in the search for a counter-narrative.⁵

³ Works on colonial and postcolonial development have been particularly in vogue in recent years. A small selection that touches on technocratic postwar attempts to enforce change on the global south can be found in Gabrielle Hecht, *Entangled Geographies: Empire and Technopolitics in the Global Cold War* (Cambridge: MIT Press, 2011); Joseph Morgan Hodge, *Triumph of the Expert: Agrarian Doctrines of Development and the Legacies of British Colonialism* (Athens, OH: Ohio University Press, 2007); Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002).

⁴ Joseph Morgan Hodge, Gerald Hödl, and Martina Kopf, *Developing Africa: Concepts and Practices in Twentieth-Century Colonialism* (Manchester: Manchester University Press, 2014); Frederick Cooper and Randall Packard, *International Development and the Social Sciences: Essays on the History and Politics of Knowledge* (Berkeley: University of California Press, 1997); Jonathan Crush (ed.), *The Power of Development* (London: Routledge, 1995); Stephen Macekura and Erez Manela (eds.), *The Development Century: A Global History* (Cambridge: Cambridge University Press, 2018).

⁵ The aforementioned approach of course owes much to Ann Laura Stoler’s urge to read against the archival grain in Ann Laura Stoler, *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense* (Princeton, NJ: Princeton University Press, 2008).

The Tana River, the longest waterway in Kenya and the home of geographically consecutive and diverse forms of economic “development,” ties together numerous environmental understandings, knowledges, and prerogatives, and thus represents a compelling scenscape for reconceptualizing the nature of historical analyses of rural Africa. Specifically, this article argues that we must consciously think outside of the structures of colonial and racial capitalism if we are to historicize and guide discussions of future environmental mitigation procedures.⁶ Capitalist problems cannot have capitalist solutions; solutions have long been consciously and repeatedly imposed upon buried indigenous knowledges and riverscapes that offer fertile solutions to current issues.

In stark contrast, rural African ecologies are (and have historically been) defined by numerous understandings of human-nature relationships based on symbiosis and mutual interdependence. Rooted in *ubuntu*, ecological knowledge such as *ukama* and others emphasize humanity’s embeddedness and reliance upon the natural world, and communities’ active engagement in that relationship.⁷ Further, communities’ use of the land frequently remains rooted in tangible and micro-understandings of the environment, which are widely more sustainable and appropriate for their locations than the supposedly superior forms of development introduced by governments and NGOs. In engaging with oral testimonies, folklore, rumor, and environmental action, this article values rural ecophilosophies, alongside existing conceptions of Black and indigenous ecologies from scholars such as Katherine McKittrick, Kim Hester Williams, and LeiLani Nishime, to analyze the consequences of colonial capital alongside a plurality of socio-ecological relationships that must be treated as politically potent in their own right.⁸ In particular, Nishime and

⁶ Specifically, this work builds upon the relationship between racial capitalism and the environment built by Francois Vergès in “Racial Capitalocene: Is the Anthropocene Racial?,” in Thompson, Gaye Theresa and Lubin, Alex (eds.), *Futures of Black Radicalism* (London: Verso Books, 2017), ch. 4. The concept of the Black Anthropocene is also the subject of Kathryn Yusoff’s *A Billion Black Anthropocenes or None* (Minneapolis: University of Minnesota Press, 2018), and Destin Jenkins and Justin Leroy (eds.), *Histories of Racial Capitalism* (New York: Columbia University Press, 2021).

⁷ Munyaradzi Felix Murove defines *ukama* as a form of responsibility and solidarity between kinship groups and humans-ancestors, based on a moral obligation to the past. Localized and regional variations of these principles can also be found in Munyaradzi Felix Murove, “Ecological Conservation: Shona Ukama and Ubuntu,” *Mankind Quarterly* 45 (2004), 195–215; Workineh Kelbessa, “The Rehabilitation of Indigenous Environmental Ethics in Africa,” *Diogenes* 207 (2005), 17–34; Olesegun Steven Samuel and Ademola Kazeem Fayemi, “Afro-Communal Virtue Ethic as a Foundation for Environmental Sustainability in Africa and Beyond,” *South African Journal of Philosophy* 38 (2019), 79–95; and Kevin Behrens, “Exploring African Holism with Respect to the Environment,” *Environmental Ethics* (2010) 465–484.

⁸ For instance, Kwasi Densu’s 2018 work in the *Journal of Black Studies* pushes us towards an idea of African and African Studies that foregoes western conceptions of land as a tool of economic development, in favor of a more holistic eco-philosophical

Williams' work in articulating the ways that Black and indigenous communities perceive, experience, and survive ecological racism is crucial to this article, as is their urging for academics to approach racial ecology in ways that foreground multiple ways of knowing and interacting with the environment.⁹ Above all, this paper values those relationships as counter-points and paths-not-taken throughout the course of the twentieth century, and thinking in this manner enables us to identify *exactly why* these external forms of development are so destructive by moving away from an oversimplified "profitable or not" binary. Here, the article does so by explicitly contrasting pre- and early-colonial paradigms of environmental action with the slow application of colonial economic ideologies on the Tana River to demonstrate the clear and urgent divergences between local ecologies and external interventions.

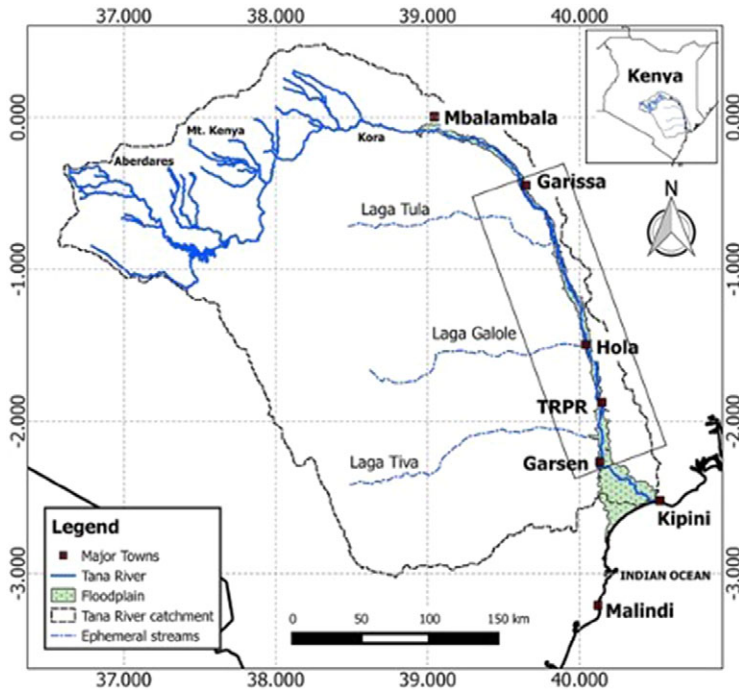
In doing so, this article states clearly that colonial archives and postcolonial conceptions of the environment are both simultaneously implicated in and reliant upon capitalist structures via economic impositions or discursive erasure.¹⁰ Within this rubric, colonized and marginalized populations, as well as their environments, are defined by their capitalist potential for energy, agriculture, or conservation.¹¹ Even where communities align with or join these projects, as is the case in Tana River in the latter half of the twentieth

and Black Ecological standpoint: Kwasi Densu, "Omenala: Toward an African-Centered Ecophilosophy and Political Ecology," *Journal of Black Studies* 49 (2018), 29–52. That work builds upon longer term notions of racial ecologies and indigenous ecological knowledge that explore the multiple ways of knowing and imagining the human-natural world in opposition to dominant structures of white supremacy and exploitation. See for instance: Katherine McKittrick, *Demonic Grounds: Black Women and the Cartographies of Struggle* (Minneapolis: University of Minnesota Press, 2006); Leilani Nishime and Kim Hester Williams, *Racial Ecologies* (Seattle: University of Washington Press, 2018); Laura Pulido, "Geographies of Race and Ethnicity II: Environmental Racism, Racial Capitalism and State-Sanctioned Violence," *Progress in Human Geography* 41 (2017), 524–533; Mishuana Goeman, "From Place to Territories and Back Again: Centering Storied Land in the Discussion of Indigenous Nation-Building," *International Journal of Critical Indigenous Studies* 1 (2008), 23–34; Kyle Whyte, "Settler Colonialism, Ecology, and Environmental Injustice," *Environment and Society: Advances in Research* 9, 2018, 125–144.

⁹ Nishime and Williams, *Racial Ecologies*, 1–2.

¹⁰ This is part of what Ann Stoler calls imperial debris, the palimpsestic and ephemeral material and psychological remnants of colonial extraction. Ann Laura Stoler, *Imperial Debris: On Ruins and Ruination* (Durham: Duke University Press, 2013).

¹¹ A broad overview of how this situation has come to be can be seen in Corrie Decker and Elizabeth McMahon, *The Idea of Development in Africa: A History* (Cambridge: Cambridge University Press, 2021). Amongst the many excellent critiques of this extractivist imperative, see Issa Shivji, *Silences in NGO Discourse: The role and future of NGOs in Africa* (Nairobi: Pambazuka Press, 2007); Samir Amin, *Unequal Development: An Essay on the Social Formations of Peripheral Capitalism* (New York: Monthly Review Press, 1976); Samir Amin, *Maldevelopment – Anatomy of a Global Failure* (Oxford: Pambazuka Press, 2011); and Thandika Mkandawire (ed.), *The State and Agriculture in Africa* (London: CODESRIA, 1987).

Map 1. Map of the Tana River, and its location within Kenya.¹²

century, such participation should be seen as arising in part due to the ways that capitalist impulses have destabilized and erased former ways of living sustainability within a wide ecosystem. Whether individuals chose to seek employment, resist, or simply continue their existing lives in the orbit of these impositions, none of these should be considered to be an expression of weakness or passivity, and the terms of engagement *and* rejection around development have always been subject to negotiation and challenged in myriad unseen ways. Asymmetrical relationships of power between local communities and external actors make the outright rejection of development programs difficult, making petition, protest, and, indeed, outright avoidance as potent as other more direct forms of contest.

This article thus contributes to an awareness of how our sources, and the theoretical lenses through which we read them, can rebuild the vitality of intentionally overlooked ecological knowledges. In doing so, we can follow Micere Mugo's urging that we consider local actors as scholars in their own

¹² Figure taken from Fred O. Omengo, Naomi Geeraert, Steven Bouillon, and Gerard Govers, "Deposition and Fate of Organic Carbon in Floodplains along a Tropical Semiarid Lowland River (Tana River, Kenya)," *J. Geophys. Res. Biogeosci* 121 (2016), 1132.

right.¹³ In unencumbering communal knowledge and action from capitalism's entrenchment of the land or water as solely sources of revenue, environmental histories of Africa can and should engage with other sources, disciplines, and ways of knowing in a complementary manner. Precolonial, oral, cosmological, and coexistent ecophilosophies are thus critical nodes in building true environmental justice on a global scale that does not simply rely on realigning or tweaking existing forms of racial exploitation.

Precolonial Riverine Life

Stretching nearly 1,000 miles in length from the foothills of Mount Kenya to its delta at Kipini on the Indian Ocean coastline, the Tana River is perhaps the ideal example for modeling how environmental histories can benefit from a more capacious disciplinary approach (Map 1).¹⁴ From the Seven Forks hydroelectric projects upstream to a host of irrigation schemes near Hola and Bura, as well as conservation areas in the delta region, the River hosts a plurality of attempts by national and international donors to monetize what is the longest stretch of river in Kenya. Alongside those economic development priorities, numerous Kenyan communities rely directly and indirectly on the water for their own survival, either for small scale agricultural *shambas*, riverine grazing, emergency crops, or varied sociocultural elements that for many are essential pillars of communal identity. Rather than simply a material entity, the waters of the Tana are instead imbued with multiple meanings and remembrances of largely equal order.

Numerous streams, tributaries, and subsurface waterways on the southern and eastern foothills of Mount Kenya and the Nyandarua mountains

¹³ Mugo explores these ideas across her work, while this interpretation is taken from a longer discussion of the role of art and oratory in Black liberation in "Art, Artists, and the Flowering of a Pan-African Liberated Zone," in Soyinka, Wole, Amin, Samir, and Mkandawire, Thandika (eds.), *Reimagining Pan-Africanism: Distinguished Mwalimu Nyerere Lecture Series 2009-2013* (Dar es Salaam, Tanzania: Mkuki na Nyota Publishers, 2015), 161–198., and a talk given at the Carter G. Woodson Institute in 2021: Micere Mugo and Besi Brilliant Muhonja, "A Discussion in Honor of Micere Githae Mugo," Carter G. Woodson Institute, University of Virginia, 24 March 2021. Besi Muhonja expands on these ideas through the work of Wangari Maathai, particularly in terms of indigenous women's environmental activism in Kenya, in *Radical Utu: Critical Ideas and Ideals of Wangari Muta Maathai* (Athens, OH: Ohio University Press, 2020).

¹⁴ Recent water histories in Africa should be seen as being at the forefront of this shift. For instance: Matthew Bender, *Water Brings No Harm: Management Knowledge and the Struggle for the Waters of Kilimanjaro* (Athens, OH: Ohio University Press, 2019); Meredith McKittrick, "Making Rain, Making Maps: Competing Geographies of Water and Power in 19th-century Southwestern Africa," *Journal of African History* 58–2 (2017), 187–212; Maurits Ertsen, *Improvising Planned Development on the Gezira Plain, Sudan, 1900–1980* (London: Palgrave Macmillan, 2016); Allen Isaacman and Barbara Isaacman, *Dams, Displacement, and the Delusion of Development: Cahora Bassa and its Legacies in Mozambique, 1965–2007* (Athens, OH: Ohio University Press, 2013); and Heather Hoag, *Developing the Rivers of East and West Africa: An Environmental History* (New York: Bloomsbury Publishing, 2013).

coalesce to feed the nation's longest river, aided by streams and runoff from a drainage basin stretching from Kitui in the west to southwestern Somalia and the Indian Ocean coast in the east.¹⁵ The Upper Tana between the highlands and Garissa is marked by a series of power stations producing over 65% of the nation's electricity, constructed in the years after independence in 1963 with little regard for the socio-ecological conditions of the riverscape at large.¹⁶ After falling to around 150 meters above sea level near Garissa, the river enters its middle portion, meandering through the otherwise semi-arid landscape and falling slowly. The plain here floods with increasing irregularity twice a year due to rains in the highlands, at which point the Tana bursts its shallow banks and inundates the surrounding landscape. The shallow lands of the surrounding area collect water and fertile sediments across a floodplain that ranges from 2km to 42km, providing vital agricultural grounds for riverine communities.¹⁷ Further, the slow and winding course of the river remains susceptible to frequent redirection during floods, forming oxbow lakes and new channels. Passing Garsen, some 50 miles by water from the mouth of the Tana at Kipini, the river enters a deltaic floodplain that historically has been the most highly populated and regionally integrated section of the river.¹⁸ The delta is further considered one of the most exceptionally biodiverse landscapes in the country, owing to the presence of numerous endemic species amongst hundreds of hectares of riverine forest.¹⁹ Diverse forms of economic intervention like these agricultural, hydroelectric, and conservationist projects have been guided by a historical and current assessment of the riverine region as unused and empty wetlands and as a fertile site of water grabbing for capitalized agriculture.²⁰

¹⁵ Urs Wiesmann, Boniface Kiteme, and Zachary Mwangi, *Socio-Economic Atlas of Kenya: Depicting the National Population Census by County and Sub Location, Second Edition* (Nairobi: Kenya National Bureau of Statistics, 2016), 24.

¹⁶ Wiesmann et al., *Socio-Economic Atlas*, 4.

¹⁷ Steven Gichuki Njuguna, "Tana River Delta Wetlands," in Njuguna, Steven G. et al. (eds), *Wetlands of Kenya: Proceedings of the Kenya Wetland Working Group Seminar on Wetlands of Kenya* (Nairobi: National Museums of Kenya, 1992), 139–146.

¹⁸ These dynamics have been explored by both missionaries and anthropologists, for instance: Alice Werner, "Some Notes on the Wapokomo of the Tana Valley," *Journal of the Royal African Society* 12 (1913), 359–384; David Lawrence Miller, "Social formations in transitions: social and economic change in the lower Tana Valley, Kenya, 1850–1939" (unpublished PhD thesis, Syracuse University, 1981).

¹⁹ In particular, deltaic forests have been targeted for conservation due to the endangered status of the Tana River Mangabey and the Tana River Red Colobus within the Tana River Primate National Reserve (in operation between 1976 and 2007). Despite the demise of the reserve, local inhabitants are continually barred or moved from the deltaic forests.

²⁰ Government of the Republic of Kenya, *Vision 2030* (Nairobi, 2007); and Stephanie Duvail, Claire Medard, Olivier Hamerlynck, and Dorothy Wanja Nyingi, "Land and Water Grabbing in an East African Coastal Wetland: The Case of the Tana Delta," *Water Alternatives* 5 (2012), 323.

The major riverine population of the Tana, downstream of Mbalambala at least, is the Pokomo community.²¹ The Pokomo ethnic group at large was historically made up of four relatively self-embodied sections or *kyeti* (the Lower, Upper, Welwan, and Munyo Yaya), each further organized into 13 subgroups around distinct sub-clans, centered around common ancestries.²² These subclans or clan alliances reside on geographically consecutive *muicho* (or sections) of the river, with the Upper-Lower Pokomo boundary historically laying between the villages of Ndera in the north and Mwina below.²³ Over time, the population of the district has increased from 16,355 in 1948 to approximately 100,000 in 2019.²⁴

As Pokomo author Mikael Samson Kirungu wrote, Pokomo life has historically been attached to and largely reliant on the Tana.²⁵ Indeed, the name itself is an anglicized bastardization of *Tsana*, the Pokomo word for “river,” and a reflection that this was a key body of water for many in the region.²⁶ Beyond a simple spatial marker or a site of residence, the Tana should be considered a vibrant actor within Pokomo communities across its entire length. Its importance is perhaps best embodied by the early twentieth-century aphorism “the Tsana is our brother.”²⁷ As a Pokomo brother (and son) in the early twentieth century would labor on the family *shamba* to produce rice, bananas, or maize before receiving a parcel of his father’s land upon marriage, so the river acted simultaneously as both a singular agent and

²¹ The historical self-definition of Pokomo identity represents a coalescence of communities who migrated to the Tana region and settled, and as such sections can take their names or ancestry from Boran, Kamba, and other ethnic groups. Further, in the early twentieth century some Pokomo communities claim Shungwaya origins in the Somali borderlands. These delineations and self-conceptions of identity are outlined by Mikael Samson Kirungu in Mikael Samson and R. G. Darroch, “Some Notes on the Early History of the Tribes Living on the Lower Tana, Collected by Mikael Samson and Others,” *Journal of the East African Natural History Society* 17 (1943–1944), 244–254.

²² The differentiation between Upper and Lower sections is rooted largely in cultural and religious norms, while Welwan and Munyo Yaya communities derive linguistic and cultural norms from Orma and Somali emigres. Munyo Yaya in fact means Northern Pokomo in Orma.

²³ Miller, “Social Formations in Transition,” 19.

²⁴ Norman Townsend, “Limited Options: Contingency and Constraint in the Economy of the Pokomo of Northeastern Kenya” (unpublished PhD thesis, University of Toronto, 1976), 50; and Republic of Kenya, *2019 Kenya Population and Housing Census Volume IV: Distribution of Population by Socio-Economic Characteristics* (Nairobi: Kenya National Bureau of Statistics, 2019), 423.

²⁵ Samson and Darroch, “Some Notes.” See also Alice Werner, “Pokomo Folklore,” *Folklore* 24 (1913), 456–476.

²⁶ Edward Yesse, *History of the Pokomo* (Nairobi, 2019), 3.

²⁷ Quoted in Werner, “Some Notes,” 361.

an integral contributor to community life along its banks.²⁸ The Tana and the community are thus given life by the other's presence, embodied by the proverb *maji ni mugeni* (water is a welcome guest).²⁹ Such was this centrality that the Pokomo *mwaka* (year) was tied to the arrival of the *sika* and *kilimo*, or long and short rains.

Such reciprocity extended to the practical role played by the river in day-to-day life. Populations in the middle Tana region relied on the river's waters for agricultural production based on riverine cropping, and as such it was illegal to own river water or forests due to their communal necessity.³⁰ The reliance upon flood recession agriculture saw rice planted in flooded areas and maize in less saturated hinterlands of the plain, and introduced bananas and other crops on higher, drier ground as subsidiary rations. In the event of crop failure, fruits from the doum palm and lily pad seeds acted as emergency crops, alongside the many varieties of fish endemic to the river.³¹ Communal prohibitions on the destruction of crocodile eggs and the fatalism of Pokomo hunting songs, which acknowledge the reciprocal need of human and crocodile to hunt one another, both point towards a sustainable codependence within Tana socio-ecological articulations.³² Finally, the river also provided the bulk of economic resources, as nets, spears, baskets, and traps were all fashioned out of riverine resources for sale into local and coastal markets, supplementing income received from migrants to the coast.

Material needs also bled into social, political, and religious performance. Those punished for crimes beyond redemption were sacrificed to the crocodiles, while the productivity and consistency of the river were both the requested through numerous cosmological rituals.³³ In these acts, the river again was host to the non- and more-than-human elements of Pokomo society, as evidenced by Peter Nzuki's observation of funeral rights that saw community elders wade into the river and pray to *nkoma* spirits.³⁴ These *nkoma* are considered to be dynamic spirits subordinate below a higher God and residing within nature, and are the subjects of ritual prayer or offerings for rain, crops, or cures.³⁵ Linking the material and spiritual

²⁸ Norman Townsend, "Limited Options: Contingency and Constraint in the Economy of the Pokomo of Northeastern Kenya," (unpublished PhD thesis, University of Toronto, 1976), 103–106.

²⁹ Townsend, "Limited Options," 55; Alice Werner, "Note on Bantu Star Names," *Man* 12 (1912), 193.

³⁰ Miller, "Social Formations," 58.

³¹ Werner, "Pokomo Folklore," 464.

³² See, for instance, *The Crocodile Song* published in Ferdinand Wiirtz, "Lieder der Pokomo," *Zeitschrift für Afrikanische und Ozeanische Sprachen* 1 (1895), 324–28.

³³ Miller, "Social Formations," 63; Robert Louis Bungler, "Islamization Among the Upper Pokomo of Kenya," (unpublished PhD thesis, Northwestern University, 1972), 58.

³⁴ As quoted in Bungler, "Islamization," 153.

³⁵ Bungler, *Islamization*, 141–142.

capacities of the river were the *wakijo* (or community elders) who had the capacity to requisition and redistribute food and resources during times of need on the basis of their apparent connection with the spiritual world. The secrets of the *wakijo* were limited to elder men who had proven their leadership throughout their lifetime, and conferred the right to operate the *ngadsi* drum. The threatening sound of the drum was claimed by the *wakijo* to be a grove-dwelling spirit, whose calls demanded donations of rice, maize, and other crops to stave off violence and ensure peace. *Wakijo* were banned from revealing the true source of the noise to the community at large in order to uphold the ritual, and their ownership and utilization of the *ngadsi*, prior to the predations of colonial capitalism, acted as a source of communal feasts and relief, especially during dry periods.³⁶

The linear connection between riverine production, ritual spirituality, and resource distribution more fully reveals the importance of the Tana's consistent place within Pokomo life. However, the arrival of particularly Christian missionaries in the late nineteenth century saw communal *ngadsi* rituals terminated. Most Tana Pokomo communities converted (forcibly or voluntarily) to either Christianity or Islam in the late nineteenth century due to the creep of British and German missionary activity from the south and incursions by Somali and Orma from the north.³⁷ More relevant for our purposes, however, is the changing class dynamics of Pokomo communities following the establishment of British rule, as cash tax requirements and capital accumulation amongst elder community members drew resentment from younger landholders.³⁸

Of course, it was (and is) not simply Pokomo communities who rely upon the Tana for their livelihoods, as the district at large is inhabited by Orma, Wardei, Somali, Malakote, Munyoyaya, Wata, Bajuni and Mijikenda communities. The Orma are the largest pastoralist community in the region and have relied since the late-nineteenth century upon the western banks of the Tana for dry season grazing and watering, particularly following the community's defeat to Somali incursions in the mid-nineteenth century.³⁹ While pastoralism as a whole has been largely undermined by colonial and postcolonial attempts to settle transhumant communities and introduce diversified economies, the Orma have lost out more significantly than similar communities in

³⁶ Miller, "Social Formations," 60–66.

³⁷ This division accounts for a relatively clean religious bifurcation between the Christianized Lower Pokomo and the Islamized upper Pokomo.

³⁸ Miller, ch. 6. The implications of colonial taxation at large in Kenya have been fully explored elsewhere, most deeply by Leigh Gardner in *Taxing Colonial Africa: The Political Economy of British Imperialism* (Oxford: Oxford University Press, 2012).

³⁹ The Orma, pejoratively known as *Galla* (a term used by Abyssinian and Somali communities for Wanderer or Immigrant) under the colonial system, are sub-group of the larger Oromo ethnicity stretching across the Horn and east Africa from Oromia in southern Ethiopia.

northern Kenya by virtue of the economic potential of the Tana and its priority place within the development framework.⁴⁰

Those trends hold true across the Orma community at large despite internal divergences. Those Orma residing within the Tana delta, described as *ch'afia* after the floodplain itself or *warr tezo*, meaning “households that stay put,” are traditionally more settled thanks to the fertile nature of the land and its capacity for housing higher population densities.⁴¹ These households retain stock holdings but are less reliant upon pastoralism as a mode of production. In contrast, those upstream remaining within the pastoral nomadic economy, the *warr godana* or “households that move,” rely upon the Tana for dry season grazing, while utilizing hinterland wells during the wet season.⁴² During dry season, both herds moved closer to the river to take advantage of water and grazing. However, the Tana region at large was considered lushier than many of the pastoral landscapes of northern Kenya, meaning herd sizes tended to be larger and more productive.⁴³ Even during times of drought when the wells dried up, the river provided critical resources that prevented mass death on the same scale as could be seen elsewhere.

The modern bifurcation of pastoral/agricultural ignores the mutual intelligibility and interdependence of Orma and Pokomo especially in the pre- and early colonial era. Particularly, Nene Mburu and Norman Townsend have both shown that Pokomo and Orma communities traded widely with one another, owing to the differing ecological niches that each occupied, while also mediating community-led resource sharing agreements.⁴⁴ Specifically, the ecological boundary between riverine agricultural land and arid grazing grounds marked something of an ethnic boundary, while access to the river was granted regularly by community elders in the pre- and early colonial period. Agricultural waste or the remnants of cultivated crops provided important fodder for cattle, whose manure provided important fertilization for the year ahead. Furthermore, floodplain land not occupied or claimed by Pokomo families could also be settled by Orma herders, with their usage rights to those areas conferring relatively stable ownership.⁴⁵ The socioeconomic ecosystem here thus offered a degree of balance in times of

⁴⁰ James Pattison, “Orma Livelihoods in Tana River District, Kenya: A Study of Constraints, Adaptation and Innovation” (unpublished PhD thesis, University of Edinburgh, 2011), 71–72.

⁴¹ Hilarie A. Kelly, “From Gada to Islam: The Moral Authority of Gender Relations among the Pastoral Orma of Kenya” (unpublished PhD thesis, University of California, Los Angeles, 1992), 29.

⁴² Kelly, “From Gada to Islam,” 29.

⁴³ Jean Ensminger, “Political Economy Among the Pastoral Galole Orma: The Effects of Market Integration,” (unpublished PhD thesis, Northwestern University, 1984), 56.

⁴⁴ Nene Mburu, *Bandits at the Border: The Last Frontier in the Search for Somali Unity* (Trenton, NJ: Red Sea Press, 2005), 60–2; Townsend, “Limited Options,” 20, 135.

⁴⁵ Mburu, *Bandits*, 60.

good rain or flood, and reveals the fallacy of contemporary discourses surrounding the region that cite conflict between pastoral and riverine communities as an age-old inevitability.⁴⁶

The balance offered by coexistence and interdependence, however, suffered under the oppression of colonial rule. The Tana's status as the colony's longest river marked it out as a site of possible exploitation early on, and indeed both colonial and postcolonial authors have continually narrated the riverscape as an unexploited Eden. That framing, of course, intentionally undermines generations of migration, trade, and integration into regional economies. In addition to barter relationships with Orma, Somali, and Wardei communities, Pokomo communities across the length of the river engaged in trade with coastal Swahili partners as middle agents in the ivory trade, and by the provision of grains or artisanal goods in return for cloth, beads, and iron goods.⁴⁷ Relations with Witu and Lamu in particular tied Pokomo communities to a much wider network of goods and services defined largely by equitable standing, despite claims to contrary by Swahili leaders during negotiations with the German and British in the late nineteenth century.⁴⁸ Community prosperity was further bolstered by trade with Arab merchants near Kau who offered pearls, cowries, and shells as mediums of exchange.⁴⁹ Archaeological discoveries around that town include Chinese and Islamic ceramic wares while so-called Tana wares dating back to the seventh century have been found along the coast of east Africa as far as Zanzibar, suggesting a much wider circulation within the Indian Ocean littoral.⁵⁰

With that said, the arrival of first missionaries and then colonial agents in the nineteenth and early twentieth century began to pull the Tana River further into an explicitly capitalist gravitational orbit. In the first instance,

⁴⁶ Much of the reporting surrounding intercommunal conflict in 2001–2002 and 2011 reflects that tenor. See, for instance, Aileen Andres, "Tana River Disputes in a Drying Climate," *Inventory of Conflict and Environment* 274, April 2013, <http://mandalaprojects.com/ice/ice-cases/tana.htm>, (accessed 7 June 2021).

⁴⁷ Miller, "Social Formations," 81.

⁴⁸ Miller has highlighted the ways in which coastal Swahili traders claimed the Pokomo as vassals during imperial negotiations, so as to maintain and expand their areas of control within the region (Miller, 87).

⁴⁹ Miller, "Social Formations," 81.

⁵⁰ Yanis Mokri, "Archaeology of a Rural Landscape: The Case of the Tana Delta in Kenya," *Mambo Hypotheses* (2019), 5–6. Further literature on Swahili archaeological projects on the East African coasts attests to the wider networks of exchange within the littoral. See Erik Gilbert, "Eastern Africa and the Dhow Trade," in LaViolette, Adria and Wynne-Jones, Stephanie (eds.), *The Swahili World* (London: Taylor and Francis, 2017), 378–387; Stephanie Wynne-Jones and Jeffrey Fleischer, "Ceramics and the Early Swahili: Deconstructing the Early Tana Tradition," *African Archaeological Review* (2011), 245–278; and Chapurukha Kusimba, *The Rise and Fall of Swahili States* (Walnut Creek: Altamira Press, 1999).

colonial administration brought tangible changes in the value of goods and labor through the medium of taxation. Trade and barter could no longer rely upon existing mediums of exchange, as poll tax ordinances were to be paid to regional administrators in cash rather than goods. As colonial administrators for Tana River tended to reside in Lamu or Kipini through the majority of the colonial era, Pokomo families were able to avoid these taxes relatively easily. Yet the changes in exchange value brought about by cash taxation nonetheless heralded a new era. Rather than the exchange of goods for equally valued necessities from other communities, some agricultural produce now had to be bought and sold for cash, while poorer individuals migrated to Mombasa or Nairobi to labor on construction projects. Production thus shifted from subsistence and tradeable goods to those crops that could be sold for the highest price, particularly maize, due to the higher earning potential and lesser labor requirements.⁵¹ With surpluses being deemphasized in favor of cash-earning produce for tax payments, critical emergency resources for low flood or rain years shrank.

The economic transition wrought by colonial rule quickly revealed the inherent failings of colonial capitalism. Exploitation relied upon clear and consistent production of goods, where annual yields could be predicted and revenue could be forecast reliably. However, consistency and predictability were qualities the river did not embody, and localized production amongst Pokomo communities reflected that variance. The near-entirety of Pokomo livelihoods revolved around mitigating the river's fickle nature, from the cultivation of plots in multiple locations and gradients to the planting of various crops at different stages of the water line. Such contingency stood at odds with European perceptions of good production however, leading to a growing stereotype of environmental impotence and unproductivity amongst the Pokomo. In casting riverine and delta villages in such a manner, administrators and agronomists justified the imposition of major development projects designed to exploit properly the economic potential of the river. Productive potential became the sole attribute by which the river and its populations were defined.

“Development”

Beginning in the 1930s, state officials began to take a key interest in not only taxing the region but also expanding its productive base. A 1934 survey by irrigation experts sought to identify areas for possible agricultural schemes

⁵¹ The shift to maize production particularly occurred in the lower Tana region due to changes in the river's regime following the construction of the Belazoni canal in the late nineteenth century, which diverted the river away from the lower deltaic area and towards Kipini instead. The recession of the flood from the prior course limited rice production, and forced growers to transition to primarily rainfed maize production.

along the river.⁵² Travelling the length of the Tana, D. G. Harris and H. C. Sampson identified numerous barriers that the river erected against its potential exploitation. Impervious soils, slow gradients, the tortuous course of the river and its oxbow lakes collectively appeared to be a series of guardrails against colonial objectives, leaving the flat *barras* (plains) on the far sides of the floodplain as the only conceivable locations for irrigation.⁵³ Even there, however, barriers arose due to the potential cost of canalization and pumping. As such, Harris and Sampson deemed the stretch of river upstream of Garissa as the prime region for development, while the middle reaches were considered to be far too expensive and unstable for any “system of agriculture of which permanence is a feature.”⁵⁴

These qualifiers contained an implicit acknowledgement regarding the sustainability of Pokomo river use, yet the balance of the report makes the case that irrigation schemes colony-wide must instead enforce settled agriculture and cash crops, rather than shifting subsistence.⁵⁵ They claimed that although “the African has, through centuries of experience, acquired a considerable knowledge [...] this knowledge is suited rather to shifting agriculture on rain-fed areas than to the artificial seasons and the permanent occupation of the land which irrigation imposes.”⁵⁶ Further, Harris and Sampson urged that any irrigation scheme should introduce “new methods of cultivation, new principles of land tenure, and indeed a whole new agriculture.”⁵⁷ In asserting the necessity, significance, and primacy of settled and irrigated agriculture over all else, the authors and their patrons in Nairobi and London further entrenched the erasure of non-extractive production along the Tana. Simultaneously, they sowed the first seeds of Pokomo political and economic marginalization in claiming that no form of economic development on the floodplains by the colonial state (irrigated or otherwise) could be imposed and that any assistance would be limited to healthcare and education.⁵⁸

Although no action was taken on the Harris and Sampson proposal or a subsequent proposal in a 1948 report, owing to the enormous costs involved in an irrigation project on the Upper Tana, the institutional priorities that both embodied continued to germinate throughout state attitudes to the floodplain.⁵⁹ The first sprouting shoots of those attitudes occurred in 1952,

⁵² Douglas G. Harris and Hugh C. Sampson, *Report on the Tana River Expedition 1934* (Nairobi, 1934). The National Archives, UK [hereafter TNA] CO533/446/3.

⁵³ Harris and Sampson, *Report*, 27.

⁵⁴ Harris and Sampson, *Report*, 27.

⁵⁵ Harris and Sampson, *Report*, 49–50.

⁵⁶ Harris and Sampson, *Report*, 59.

⁵⁷ Harris and Sampson, *Report*, 39.

⁵⁸ Harris and Sampson, *Report*, 27.

⁵⁹ Kenya Public Works Department, *Report on the Upper Tana River Irrigation Project* (Nairobi, 1948). KNA GH/28/12.

when a global rice shortage redrew attention to the region around Hola, home of the Zubaki subclan of the Pokomo.⁶⁰ Hola itself should be considered a perfect embodiment of the Tana ecosystem's overlapping and interstitial nature, as a multid denominational settlement divided between Christian, Islamic, and indigenous religious communities.⁶¹ The coexistent and mutually accommodating settlements around Hola belied the ordering rationales of colonial rule and gestured towards the resilience of indigeneity within the wider riverscape. Further, the choice of a developmental site there in the early 1950s committed the state to negotiations over both the economic framework for lease *and* the sociocultural significance of the riverine ecology there.

In response to the rice shortage, colonial officials in Nairobi sought to co-opt indigenous agricultural practices around Hola by channeling Tana waters in delineated rice paddies within one of the areas' numerous oxbow lakes.⁶² Initially leasing the land from Zubaki owners for a price based on the quantity of maize each could produce on the land they were giving up, officials constructed protective bunds and pumped water through a narrow channel to control the level.⁶³ Pokomo families leasing the land were given the option to labor on the project for a wage, potentially doubling the economic possibilities the scheme offered on the eastward bank. The agreement contained a quintessentially capitalist sleight of hand by the state however, as the earning potential of the rice they hoped to grow far outweighed the price of the maize upon which the agreement with Pokomo landholders was based. Profits were thus to be appropriated both financially and culturally from Pokomo knowledge and agricultural programs, yet for many around Hola the project appeared to be largely a net positive – if the minutes of local *barazas* (public meetings) are to be believed – due to the

⁶⁰ The name of the settlement was subject to change over the course of the late colonial period. Hola was the name given to the area by the colonial state and was used in official communications until 1960. Following the Hola Prison Massacre of 1959, correspondence referred to the community by the name Galole, taken from the Orma name for the area and a tributary of the Tana. This chapter will rely upon the terms used in contemporary official documents or correspondence with local communities, namely Hola (until 1959) and Galole (1960–1963).

⁶¹ That tripartite division places Hola in stark contrast to most other settlements long the river, which by the mid-twentieth century had wholesale converted to one of the two major religions. The indigenous settlement of Muji wa Walevu sat alongside the Christian village of Hola and the Muslim settlement of Laza. Robert Louis Bunge, *Pokomo Political Organization and History* (Nairobi: Institute for Development Studies, 1970), 13.

⁶² Ministry of Agriculture, Animal Husbandry, and Water Resources, *African Land Development in Kenya*, 214; Director of Agriculture, "Lower Tana Irrigation Agricultural Investigation," nd, 1. TNA FCO141/6502.

⁶³ G. H. Hilton Brown to Provincial Commissioner, "Irrigation Scheme: Hola," 25 March 1953, 1. KNA DC/TANA.RV/7/11; *African Land Development in Kenya*, 1.

additional income it provided that could help to pay off tax burdens or debt to local shop-owners, while requiring relatively little sacrifice of riverine land. The early “Left Bank Scheme” thus appeared to be a Venn-like middle ground between wholesale capitalist extraction and indigenous ways of knowing and living with the river, allowing Pokomo in the region to retain primary cultural ownership of their resources, in keeping with pre- and early-colonial experiences.⁶⁴

That overlap would soon be lost, buried beneath political and economic priorities as well as the ever-present environmental variability of the Tana. By the time equipment had arrived and been installed by European and African agricultural officers in 1953, the global rice shortage had ended, and the profitability of the scheme was in doubt.⁶⁵ Without the guarantee of profits from rice production, Ministry of Agriculture officials cut the scheme first in half to just thirty acres, of which ten would be used to test the properties of the riverine soil, and then again to fifteen in 1954.⁶⁶ The majority of landowners abandoned the project as it transitioned to this experimental phase, with the lack of viable and consistent income making a return to previous riverine production more appealing. In doing so, many around Hola withheld both labor and produce from the state after recognizing the inequity of the partnership. The state archives after 1953 are littered with arrests and official complaints about the rapid expansion of the existing black market trade in rice and other cash crops, as residents tried to avoid harsh colonial taxation which evidently offered little in return.⁶⁷ Simultaneously, the growing developmental state generated increased complaints from Pokomo residents to coastal politicians such as Paul Pakia and, later, Ronald Ngala regarding land theft and declining investment.⁶⁸ As if to justify those complaints, state officials for their part cautioned that no further promises should be made to Pokomo families around Hola about their involvement in future development projects, for fear that they would

⁶⁴ Such an arrangement had in fact long been suggested, dating back to the Kenya Land Commission of 1933. *Report of the Kenya Land Commission, September 1933* (Nairobi, 1934), 310.

⁶⁵ African is the terminology used by the state, rather than my own. It is unclear within archival sources from which ethnic groups these officers were drawn.

⁶⁶ This transition is discussed more fully in James Parker, “A ‘Juggernaut of Progress’? Irrigation and Statecraft in Late-Colonial Kenya,” *International Journal of African Historical Studies* 53 (2020), 347.

⁶⁷ G. H. H. Brown, Fortnightly Intelligence Summary, Tana River District up to 12th November 1953. TNA FCO/141/5859.

Tana River District Intelligence Summary, Period Ending 22 April 1956. TNA FCO/141/5859.

⁶⁸ Extract from Notes Made by Councillors at Meeting of the Tana River African District Council, March 1958. TNA FCO/141/6276; W. H. Thompson, Hola Settlement, 25 March 1958. KNA DC/TANA.RV/7/11.

preclude “other races and tribes” from projects in the area.⁶⁹ However, these instances demonstrate the ways that residents around Hola adapted their responses to state intervention using the new tools of political power, while also melding these tactics with the reinvigoration of longer-term forms of riverine trade and land claims.

The onset of the Mau Mau Emergency shifted political-economic priorities in the wider colony, while also raising the possibility for a more expansive and explicitly productive development project in the region. While the socio-ecological factors that had made the area around Hola seem so unsuitable for irrigation to Harris and Sampson had not changed, the presence of officers and equipment there drew the colonial eye ever more closely to the river there. With no promise of quick profit due to the colonial state’s own inability to anticipate the vagaries of riverine agriculture, officials swiftly transitioned to a more expansive and labor-intensive proposition that served dual economic and security purposes. As an economically marginal area, the Tana appeared to be the perfect location for this blend, and soon after the publication of the Swynnerton Plan in 1954, detention quarters were constructed on the westerly bank of the river abutting the Pokomo land unit.⁷⁰ Without the abundance of detained labor that the Emergency had provided, Provincial Agricultural Officer George Cowley warned that “it is unlikely that anything useful will ever be achieved there.”⁷¹

⁶⁹ “Letter from the Director of Agriculture to PC Coast Province,” 16 June 1954. KNA MSS/115/6/10.

⁷⁰ The Native Land Unit stretched 1 mile east and west from the center of the river, and included the reserves demarcated in vol. II of the *Laws of Kenya: Revised Edition* (Nairobi, 1948) 1188–1192. That demarcation arose out of the Kenya Land Commission report of 1932–1933 which refused to reserve the entire length of the riverine frontage of the Tana, as the Commission believed it shortsighted to reserve ‘the most valuable river in the colony ‘for the exclusive use and benefit of a small native tribe.’ Although ultimately gazetted as a D area (meaning no ‘race’ or ethnic group had privileges to it), large swathes of frontage were left out of the reserve as grounds for future development. *Report of the Kenya Land Commission*, paras. 1186–1195; Roger J. M. Swynnerton, *A Plan to Intensify the Development of African Agriculture in Kenya* (Nairobi: Government Printer, 1954). The Plan provided the funding and framework for a program of land consolidation, agricultural development, and pastoral improvement that he hoped would boost prosperity for rural smallholders by allowing them to both subsist off their land and produce for the cash crop economy. Anne Thurston’s *Smallholder Agriculture in Colonial Kenya: The Official Mind and the Swynnerton Plan* (Cambridge: University of Cambridge, 1987) gives a thorough overview of the decision-making process behind the Plan’s formation, and the role of negotiation between the Colonial Office and the Kenyan Government.

⁷¹ Letter from Provincial Agricultural Officer (Coast Province) to PC Coast Province, 24 December 1954. DC/TANA.RV/7/11.

Eighty predominantly Kikuyu detainees from central Kenya arrived in June 1955 and were immediately tasked with the digging the three-mile canal from the Tana to the future irrigated plots, constructing pipelines and accommodations, and delineating the extent of the plots themselves.⁷² These pipelines and canals stretched through the Pokomo reserve lands and into Crown Lands, meaning that there was no need to lease large tracts of land as had been the case on the Left Bank project. While there were likely pragmatic reasons for this, as it allowed officials *carte blanche* to impose the scheme as they pleased, it also suggests the possible unwillingness of riverine communities to lease their land or provide labor to the project following their previous abandonment in 1953. Simultaneously, discussions were underway amongst prisons and development officials in Nairobi as to whether any irrigation project near Hola could double as a resettlement scheme as well as a detention camp. Over the following years, officials solicited volunteers amongst the detained population to move permanently to Hola, where they and their families could reside and farm on and within irrigated villages.⁷³ Alongside this, the size of the irrigation scheme on the opaquely named Right Bank Scheme increased to over 1200 acres by the end of 1959.⁷⁴

Alongside the soon-to-be infamous Hola detention camp was a fully functioning water development project seeking to create profitability and a new hydrologic reality alongside existing riverine livelihoods.⁷⁵ Experimental *shambas* and tenants' plots were used by the Ministry of Agriculture to test a range of factors, ranging from soil salinity to fertilizer comparisons and drainage properties. Soon after, an abundant array of crops primarily geared toward sale and export were tested, with varying degrees of success. Cash crops ranging from colonial staples like groundnuts, cotton, and tobacco to greengram, sweet potato, and sorghum were planted across the experimental *shambas*, as officials sought to finalize exactly which of these products would best acclimatize to the local ecology.⁷⁶ Many indeed did not, leading to a variety of supplementary measures designed to keep produce alive, which included the planting of windbreaking citrus trees.⁷⁷ Nonetheless, the scale

⁷² Letter from ALDEV Executive Officer to the Commissioner for Prisons, 28 May 1955. KNA DC/TANA.RV/7/11. Initially ALDEV and the Ministry of Agriculture sought only 60 workers, this was expanded to eighty in early June.

⁷³ K. A. Hopf, "Hola Settlement: Selection of Settlers," July 16 1958. TNA FCO 141/6276.

⁷⁴ R. O. Hennings, "Hola," July 29 1958. TNA FCO 141/6276.

⁷⁵ Caroline Elkins, *Imperial Reckoning: The Untold Story of Britain's Gulag in Kenya* (London: Henry Holt, 2005), 344–7. The Massacre had been precipitated by a long-term strike by detainees in the Closed Camp, leading camp commandants to initiate a plan to force the "black detainee" population to work. The event followed weeks of nighttime beatings within the Closed Camps that had left many hospitalized.

⁷⁶ Agricultural Office, "Memorandum II," 7 February 1956, 1–4. KNA BV/19/213.

⁷⁷ A. Leslie, "Tree Crops for Hola," 5 August 1958. KNA RV/19/218.

of financing and ecological intervention on the Tana Irrigation Scheme dwarfed any assistance given to the Pokomo families living astride the river, and indeed actively undermined the strategies of resiliency and contingency on which they relied.

For the Zubaki Pokomo around Hola, the ecological failings of state agriculturalists were irrelevant in comparison to the socio-ecological issues caused by major irrigation works in the region. Archival sources are limited in their utility for understanding how the Scheme impacted Pokomo communities on a day-to-day basis, but community resistance and an awareness of prior forms of ecological engagement demonstrate a pervasive shift. Villagers petitioned the state continuously up to the end of 1959 due to the destruction of banana trees during construction work, trees that were vital for community resilience during times of drought and poor flooding.⁷⁸ At other times, these social changes brought violence and alleged disorder in nearby townships, as dispossessed or crop-poor individuals railed against incoming forms of exploitation.⁷⁹ These acts particularly targeted Arab traders who were deemed to be financially exploiting Pokomo in the region by artificially inflating the price of food in nearby stores following drought or declines in family production, or by refusing to pay the market rate for Pokomo maize.⁸⁰

Similarly, controversy arose in 1955 when it was discovered that some 325 acres of the prison encampment and irrigation project lay within the Native Land Unit (NLU) apportioned to the Pokomo community under the Native Lands (Trust) Ordinance.⁸¹ Despite nominal financial commitments to the local African District Council (ADC) in payment for this land, community leaders continually agitated for proper payment *and* for recognition of non-title forms of land recognition.⁸² In 1958, leaders of the ADC asked that Scheme officials recognize specifically the placement of beehives built on unoccupied riverine lands, a community symbol of a claim to territory.⁸³ Even though some of these lay within Crown land rather than the NLU, under traditional customs, unused land was available for any member or newcomer to cultivate. The ADC representatives went further, however, in stating that occupation and use rights extended to Orma pastoralists and the consumption of hinterland scrub by their stock. The ADC thus argued for a more capacious definition of indigenous land rights that acknowledged the symbiotic and

⁷⁸ E. C. M Green, "Compensation for Fruit Trees," 19 March 1959. KNA DC/TANA.RV/7/20.

⁷⁹ DC Tana River, "Memorandum Regarding Present and Future of Tana River," 24 December 1961, 3. KNA DC/TANA. RV/1/38.

⁸⁰ Tana River District Intelligence Summary No. 3/60, 2 April 1960, 1.

⁸¹ Report of DC W. H. Thompson to P. C. Coast, "Setting Aside of Land for the Hola Scheme," 26 March 1958, 1. TNA FCO/141/6276.

⁸² Testimony from Cllr. Paul Pakia, "Crown Land and Native Testimony in Tana River District," 1. TNA FCO/141/6276.

⁸³ "Crown Land Native Reserve Tana River District," March 1958. FCO 141/6276.

mutually complimentary ecosystem of the Tana for all communities that predated colonial annexation, and which served to protect access rights for multiple, economically and spatially distinct peoples.⁸⁴ These requests were rejected, and compensation was only given for the seizure of land that lay within the reserve.⁸⁵

The end of the Emergency and the slow return of Kikuyu detainees to their homelands following the Hola massacre in 1959 offered a brief window for change in the colonial calculations for the Tana River, a window that was ultimately barred by economic impulses. Rather than reorient perspectives on the river away from a single-minded drive to shoehorn communities into settled agriculture and capitalist production imperatives that the environment simply could not sustain, scheme managers instead took a business-as-usual approach that ignored state failings. Having tried in vain to convince detainees to remain on the project as tenants, or spur the migration of families from the “overpopulated” central highlands, project managers finally began to allow Pokomo families to tend the irrigated plots on the Tana Scheme.⁸⁶ By March 1961, 47 Pokomo had signed leases for the experimental *shambas* alongside 53 Kikuyu, yet, by this stage, the rigidities of colonial extraction had inescapably altered the material and social conditions of the river and forced many in the immediate region to either request plots on the Scheme or accept roles as informal laborers. Participation here was willing and it was sought, yet in taking a longer-term view of the river we can understand how that participation was made more critical by the generalized undermining of riverine agriculture as a source of production, trade, or growth.

The transition from colony to the Republic of Kenya in 1963 signaled widespread political and social change across the nation, as well as a rhetorical if not always pervasive commitment to African Socialism.⁸⁷ Rather than cutting losses on the scheme or reorienting its goals to more fully integrate new agriculture into the existing riverine social ecosystem, postcolonial scheme leadership instead fixated on enforcing the area’s integration into globalized western developmental paradigms. A 1962 report by the World Bank surveyed the length of the Tana and retained the conclusion that the river should host irrigated agricultural projects.⁸⁸ For the communities

⁸⁴ “Crown Land Native Reserve Tana River District,” March 1958. FCO 141/6276.

⁸⁵ Desmond O’Hagan, “Setting Apart of Land for Hola Scheme,” 31 May 1958. TNA FCO 141/6276.

⁸⁶ R. T. J. Filgate, Scheme Manager, “Report of the period 16th–31st March 1961,” 6 April 1961, 2. KNA BV/70/64.

⁸⁷ The political platform of African socialism built upon the work of Tom Mboya, and was most fully expressed in Republic of Kenya, “African Socialism and its Application to Planning in Kenya,” *Sessional Paper no. 10* (1965).

⁸⁸ Memorandum: Reference Present and Future Tana River Irrigation Scheme,” February 19 1962. KNA DC/TANA.RV/1/38.

reliant on the Tana, however, the promise of an egalitarian dawn were largely unfulfilled due to the region's continued marginalization. Between 1963 and 1966, the UN Development Programme and Food and Agriculture Organization surveys visited Kenya with the express goal of increasing agricultural output and the development of the export economy, while the British officials in charge of the Tana Scheme in particular remained consistent prior to the project's takeover by the newly formed National Irrigation Board in 1966.⁸⁹ In this manner, Hola was integrated into both national and global networks of production, which relied upon centralized guidance and the erasure of communal forms of governance and production. Simultaneously, dam construction at Masinga and elsewhere on the Seven Forks project upstream abruptly changed the flooding and flow regime of the Tana.⁹⁰

Both inside and outside of the irrigation schemes then, economic decision-making processes remained consistent with the colonial era, while the conditions faced by Pokomo and Orma communities within the riverine ecosystem fluctuated. Many residents from the closet three locations chose to take up plots on the Scheme, to the extent that there was a consistent waiting list for access, and as such we should consider these villagers to be participants rather than bystanders to the project.⁹¹ Yet that very fact reveals the damage done by the project; participation arose due to a lack of support elsewhere and the undermining of existing riverine agriculture via land annexation, river changes, and population growth. Relative to the riverine region at large, the Scheme dominated economic investment as villages along the middle Tana continued to rely on informal production and remittances from community members who had moved to Mombasa or Nairobi. Further, state investment along the Tana amounted to little more than piecemeal investments in education, healthcare, and infrastructure that were relatively insignificant in comparison to elsewhere in the nation. These were joined by a plethora of smaller irrigation projects geared towards subsistence production, allegedly liberating Pokomo villages from shifting agriculture and toward more consistent and reliable subsistence, despite the long-term proof that sustainable shifting approaches continued to be the most successful form

⁸⁹ Republic of Kenya, Irrigation Act of 1966, 6. The Tana Scheme managed in consultation with Dutch and Canadian corporations, most notably ILACO, as explained by J. A. Baarspul, "The Tana Irrigation Scheme: an Integrated Development Project," *Netherlands Journal of Agricultural Sciences* 19 (1971), 76–84.

⁹⁰ In recent years, this has also been demonstrated by: Crystele Leauthaud et al., "Characterizing Floods in the Poorly Gauged Wetlands of the Tana River Delta, Kenya, Using a Water Balance Model and Satellite Data," *Hydrology and Earth System Sciences* 17 (2013), 3059–3075; and John Maingi and Stuart Marsh, "Quantifying Hydrologic Impacts Following Dam Construction along the Tana River," *Journal of Arid Environments* 50 (2002), 53–79.

⁹¹ E. Khayumbi, "Tana Irrigation Scheme: Quarterly Report, July to September 1972," 25 October 1972, 8. Kenya National Archives, Mombasa [KNAM hereafter] ADC 4/17.

of production in the region.⁹² To demonstrate this point, as Patrick Alila has shown in his work on smallholder agriculture, those Rural Development Fund interventions failed to provide any of the social infrastructure necessary for these farmers, be that communal assistance, investment in resources and equipment, or marketing assistance.⁹³

These changes allowed some communities to flourish, however, as they took advantage of the arrival of newcomers by through the sale of goods into major projects. As a result, modes of production and distribution gravitated toward the major irrigation schemes along the river, whose tenants proved a fertile market for firewood, rice, and maize in return for remittances and cash payments.⁹⁴ The terms of reciprocity on offer here are interesting, in that tenant earnings from what was by 1980 predominantly a cotton-growing scheme were used to purchase those same goods and resources (maize, bananas, baskets, etc.) that had been previously bartered for or shared prior to colonial interventions.⁹⁵ The net contribution of economic development in the region, and the associated dispossession and social distortion it had offered to both Pokomo and Orma over the previous 30 years, essentially resulted in the continued circulation of preexisting resources. Simultaneously, the continued annexation of land for development and the changing regime of the river accelerated a reliance upon famine assistance, which had been introduced by the colonial state or the proletarianization of nearby villages.

For Orma communities, the forms of land annexation and market economics introduced by irrigation schemes altered patterns of epicyclical pastoralism. While some 60% of the Orma population along the Galole tributary near Hola remained engaged in nomadic pastoralism, tendencies toward settlement accelerated during the late-colonial era.⁹⁶ Under the twin duresses of drought and taxation, the 40% of families residing in villages and with smaller cattle holdings sold off their stock to meat merchants to buy subsistence goods or to pay debts to shopkeeper and tax officials. No longer self-sufficient in terms of food or labor, these families settled close to villages sent their remaining stock to remote cattle camps run by richer herders who employed generally younger men.⁹⁷ With fewer stock on hand these poorer members of

⁹² These projects received central government funding under the Rural Development Fund, and were thus separate from larger scale projects such as the Tana Irrigation Scheme. For instance, these are outlined in Ministry of Water Development, "Activities in Tana River Districts," 1982. KNAM DDS/1/62.

⁹³ Patrick Alila, "Grassroots Participation in Irrigation Agriculture in Kenya," in Ruigu, George and Rukuni, Mandivamba (eds.), *Irrigation Policy in Kenya and Zimbabwe: proceedings of the Second Intermediate Seminar on Irrigation Farming in Kenya and Zimbabwe held in Harare, 26th–30th May 1987* (Nairobi: Institute for Development Studies, 1990), 71–4.

⁹⁴ Townsend, "Limited Options," 174.

⁹⁵ M. M. Shambi, "Tana River District Review of Development," June 5 1980, 5. KNA UL/6/1.

⁹⁶ Ensminger, "Political Economy Among the Pastoral Orma," 26.

⁹⁷ Ensminger, 82.

the village were tied ever more closely to the market economy, while those who retained small numbers of stock on-hand were left far more susceptible to drought in the hinterland and disbarment from the Tana during dry season. With riverine production declining due to the growth of irrigation projects, and accelerating water shortages in the hinterland, pastoralists were forced into patron-client relationships to afford food. By interfering with preexisting reciprocal trade and access relationships between Orma and Pokomo, the state had undermined critical levers of pastoral life. Under these circumstances, only the richer herders could remain self-sufficient.

Ripples of Colonial Capitalism

What, then, was the point of the Tana Irrigation Scheme? During years of good production on the Scheme, the profits that accrued certainly benefited tenants, villagers, and the state. These years were few and far between, however, as tenancy costs and the price of equipment, fertilizer, and water meant that most residents struggled to break even in years of drought or poor pricing, such as in 1966 and 1967.⁹⁸ For the state, those years proved catastrophic, as the Scheme relied upon National Irrigation Board (NIB) subsidies to break even; annual reports from Hola in the late 1970s and early 1980s noticeably show that the Tana Scheme never ran a loss, by virtue of annual “Grants from Head Office” that matched the losses being made by the scheme.⁹⁹ Such was the inconsistency of the returns on the Scheme, and the terms of tenancy that allowed the NIB to pay whatever they deemed fit for cotton, that many in the surrounding communities felt that “the work just doesn’t seem worth it.”¹⁰⁰ Local residents responded by turning to informal labor or migration, which each offered seemingly better terms of engagement. By 1989, the Scheme housed 678 tenants on 867 hectares, and waiting lists for plots fluctuated throughout the period.¹⁰¹

That year however saw the rigidity of capitalized cash crop agriculture exposed at Hola. As had been prophesied by the contingencies of Pokomo livelihoods for generations and by colonial surveyors 65 years beforehand, heavy flooding and rains in the middle portion of the river dramatically altered the course of the river. Where intake canals and pumps had previously rerouted water into the irrigated plots on the Irrigation Scheme and to small scale *shambas* built by Pokomo families with Rural Development

⁹⁸ R. T. J. Filgate, “Tana Irrigation Scheme Annual Report for 1966,” January 25 1967. KNA ADC/4/17.

⁹⁹ For instance, for 1974–1975 the Scheme received a “Grant from Head Office” of K£43,975 to balance the accounts. National Irrigation Board, *Annual Report and Accounts 1974–5* (Nairobi, 1975), 32.

¹⁰⁰ Filgate, “Tana Irrigation Scheme Annual Report for 1966,” 4.

¹⁰¹ “Agricultural Current Situation Report,” 1989, 5. KNA UL/1/39.

Funding, a dry riverbed portended struggle. Changing course just above Hola, the redirection brought almost overnight destitution to the Tana Irrigation Scheme, as tenants departed and houses and machinery were left abandoned in an all-too-predictable demonstration of the deficiencies of colonial capitalism. The second half of the century had seen an increasing obsession on behalf of state and international investors to bind and constrict the land and waters of the Tana region, seeking to make them knowable and commodifiable in a way that would foster predictable yields and stable production platforms. All of this planning could not restrain the river's natural impulses, however.¹⁰²

Placing the imposition of extractive capitalist ideology alongside community-level associations with the riverine landscape reveals the deep fissures between those two positions, and the gravity of losses incurred by Pokomo and Orma pastoralists across the middle Tana. For Pokomo communities, the river's change in course drew it away from the small-scale irrigation works implemented over the previous decades. Further, changing flow conditions arising due to the upstream Kaimbere and Masinga Dams blocked the flow of fertile sediment downstream *and* abruptly shifted the flood regime of the river, both of which dramatically undermined the subsistence productivity of riverine agriculture and the contingent food sources it provided.¹⁰³ Downstream of Hola, the annexation of land for ranching projects, agricultural schemes (managed by the Tana and Athi River Development Authority also charged with the maintenance of the dams), and the Tana River Primate Reserve have all encroached upon the resiliency of riverine and pastoral communities.¹⁰⁴ Across the Tana's length then, the economic potentiality of the water and the electrical, agricultural, ecotourist value it embodies reduces the river to a tool of growth, as opposed to a living actor working in concert with regional communities.

That ideological imposition has, predictably, driven conflict in the present. As an arid region with sparse water supplies, Tana River county as a whole stands to suffer greatly from rising global temperatures and changes in rainfall patterns, while economic development projects like the Masinga Dam or the Bura and Tana Schemes further ecological change and drive a wedge between indigenous communities and their lands. These diverse impositions, and their geneses in colonial era planning documents, demonstrate a revealing continuity between colonial-era drive for production at any cost and the current state's economic goals. The Kenyan state's drive since

¹⁰² Scheme restarted in 2009 with the aid of investment by the Arab Bank for Economic Development in Africa and the Government of Kenya. <https://www.irrigation.go.ke/projects/tana-irrigation-scheme/>, (accessed 8 June 2021).

¹⁰³ "Agricultural Current Situation Report," 1989, 2. KNA UL/1/39.

¹⁰⁴ Community-level impact and resistance to these can be seen in Rebecca Smalley and Esteve Corbera, "Large-Scale Land Deals from the Inside Out: Findings from Kenya's Tana Delta," *Journal of Peasant Studies* 39 (2012), 1039–1075.

2001 to privatize trust and communal lands stands at odds with preexisting forms of indigenous collaboration.¹⁰⁵ The process of adjudicating and titling riverside plots has raised fears amongst pastoral Orma communities that their access to the river will be severely curtailed, while Pokomo communities fear the increasing instances of crop destruction by thirsty stock.¹⁰⁶ These overlaps will be especially prevalent, as rising temperatures and increasing incidences of drought reduce the viability of hinterland wells and tributaries during the dry season.

During times of particular climatic hardship, this antagonism has led to widespread violence, stoked by local politicians who play on communal fears of economic marginalization, as has been the case in 2001 and 2012.¹⁰⁷ With state investment increasingly dependent on political allegiances to the central government, intercommunal resentment is a potent tool for leaders seeking to entrench their own positions locally. Simultaneously, national actors have been notable for their absence from the region, reinforcing the perception that it is the economic resource potential of the river as opposed to the lives of constituents that state officials are concerned with.¹⁰⁸ In doing so, environmental and ecological hardships are weaponized by way of rumor and of enclosure.¹⁰⁹ Such is the level of competition: intercommunal cooperation has given way to distrust, with farmers claiming that “each group is fighting for ownership of the river” while defining access in ethnic terms.¹¹⁰ These conflicts, and their blossoming in the absence or unviability of historical famine mitigation strategies, such as hunting and gathering or flood recession agriculture, profoundly reveal the social consequences of ecological change in the region.

¹⁰⁵ Hilarie A. Kelly, “Orma and Somali Culture Sharing in the Juba Tana Region,” in Labahn, Thomas (ed.), *Proceedings of the 2nd International Congress of Somali Studies* 4 (1983), 34.

¹⁰⁶ Specifically, the Kenya Land Adjudication Committee 2000 sought to privatize riverine land and delineate property rights along the river.

¹⁰⁷ The political dimensions of these fears have been explored by Tsega Etefa in *The Origins of Ethnic Conflict in Africa Politics and Violence in Darfur, Oromia, and the Tana Delta* (London: Palgrave MacMillan, 2019).

¹⁰⁸ For instance, in 2001, Sheikh Ali Shee of Council of Imams and Preachers of Kenya criticized then-President Daniel Arap Moi for his failure to visit quell communal violence which had claimed over 100 lives. Quoted in “More Than 50 Killed in Tana River Clashes,” *The New Humanitarian*, December 11, 2001, <https://www.thenewhumanitarian.org/fr/node/197984>, (accessed 5 July 2022).

¹⁰⁹ Joseph Thompson, “The Role of Knowledge as a Driver of Cooperation: Addressing Resource Conflict in Tana River County” (unpublished MSc thesis, Wageningen University, 2016); and Joris Cuppen, “Making Peace under the Mango Tree: A Study on the Role of Local Institutions in Conflicts over Natural Resources in Tana Delta, Kenya” (unpublished MA thesis, Radboud University Nijmegen, 2013).

¹¹⁰ Fatma Mzee, quoted in Thompson, “The Role of Knowledge,” 24.

Ahead of the Kenyan General Election in 2022, the Tana River has returned to the national spotlight as widespread drought and water shortages have left the county in a precarious position. Across the district, thousands of stock have died due to water shortages, which threaten both human and non-human lives and livelihoods, and have seen Orma herders trek over 300 miles in search of fodder and water.¹¹¹ Food insecurity affects possibly 80% of the county population, and community members in Hola called on the County and National governments in September 2021 to relinquish control of their holdings on the Tana Irrigation Scheme so they can be handed back to citizens.¹¹² The move would allow residents to produce their own food for subsistence and for market, but has been met with pushback by officials. Instead, the national government has promised to invest close to eight million shillings in the Bura and Tana projects as well as smaller demonstration plots, where produce will be cultivated both for local consumption and market sale.¹¹³ The investment stands as part of a much wider promised investment in the county, as officials seek to make “Tana a destination for trade and investment” via developments in agriculture, aquaculture, the livestock trade, and industrial processing.¹¹⁴ In continuing to prioritize forms of public-private partnership such as irrigation schemes against a backdrop of drought and falling water tables, endemic resource conflict and stock losses are perhaps inevitable as long as communities themselves are barred from managing and mediating access to the river. However, community complaints and calls for restitution also signify the continuing vitality of Pokomo and Orma claims to land in the face of neo-colonial power structures, as well as the potent flexibility of the riverine livelihoods that persist.

Conclusion

In the long term, the impact of capitalist categorization and colonial subjugation on Pokomo and pastoralist ways of life have been manifest. In particular, those impositions have rendered endangered past ways of knowing and engaging with the environment, while also stripping both personhood and ecological vibrancy from the river at large through the demise of riverine

¹¹¹ NTV Kenya, “Tana River: Farmers Losing Livestock to Drought,” YouTube, 8 September 2021, 2:50, <https://www.youtube.com/watch?v=uwEEu8c-aPk>, (accessed 26 September 2022).

¹¹² Kenya Broadcasting Corporation, “Tana River residents want Hola Irrigation Scheme reverted to locals,” YouTube, 2 September 2021, 2:06, <https://www.youtube.com/watch?v=0qOJy0fZvmM>, (accessed 26 September 2022).

¹¹³ Kenya Broadcasting Corporation, “Government to revive irrigation schemes in Tana river county,” YouTube, 8 October 2021, 2:37, <https://www.youtube.com/watch?v=a4qkxcDw0MU>, (accessed 26 September 2022).

¹¹⁴ NTV Kenya, “Tana River steadily positions itself for development,” YouTube, 1 October 2021, 0:43–0:50, <https://www.youtube.com/watch?v=CuEbF7SfzyA>, (accessed 26 September 2022).

crops and the dispossession of communities from traditional river and forest lands. Within colonial archives, postcolonial assessments of the river, and current development discourses, the Tana is defined by its economic possibilities above all else. In describing its waters as primarily a source for irrigation, for building materials, or as holding a “high value” for recession agriculture, colonial capitalism and its descendants are made natural, inevitable.¹¹⁵ Under such conditions, the Pokomo and Orma communities of the Tana River are forced to align themselves with the commodification and exploitation of the riverscape in order to survive within a globalized and neoliberal economic system.

A historical analysis of the Tana must engage not only with current materialist assessments of its potential but also the temporal and geographic breadth of engagements with its waters, as well as the tributary-like understandings of its importance to diverse groups that coalesce into the whole. In encouraging such capaciousness, written texts and archives must be complicated by forms of indigenous testimony such as folklore *and* new interpretative tools stemming from fields of ecophilosophy and racial ecologies. Environmental historians have key perspectives with which to shape climate and environmental justice discourses on a global scale, yet the colonial archives, and our treatment of them, frequently, if not always, reifies capitalist interpretations of the environment that center its extractive potentials. Liberating this riverscape from economy-first analyses points a path forward for more equitable, sustainable, and symbiotic forms of resource use that recognize the mutual engagement between community and environment. Rehabilitating these environmental ethics on a local scale continentally is thus a key path forward for Africanist environmental historians in increasing the political and activist potency of our work.

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¹¹⁵ Lenneke Knoop, Francesco Sambalino, and Frank van Steenberg, *Securing Water and Land in the Tana Basin* (Wageningen, The Netherlands: 3R Water Secretariat, 2012), 18.

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