

THE SUDAN GEZIRA IRRIGATION AGRICULTURAL SCHEME: THE AGRARIAN NEOLIBERAL REFORMS IN THE SCHEME—A BREAK FROM OR RECONFIGURATION WITHIN THE GOVERNING COLONIAL EPISTEMOLOGY?

Ibrahim, Ibrahim¹ & Mohamed A. G. Bakhit (PhD)²

Cite:

Idézés:

Ibrahim, Ibrahim, & Bakhit, A. G. Mohamed (2026). The Sudan Gezira Irrigation Agricultural Scheme: The Agrarian Neoliberal Reforms in the Scheme—A Break from or Reconfiguration within the Governing Colonial Epistemology? *Különleges Bánásmód Interdiszciplináris folyóirat [Special Treatment Interdisciplinary Journal]*, 12(1), 29–54.
DOI <https://doi.org/10.18458/KB.2026.SI.29>



EP / EE:

This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

Ethics Permission / Etikai engedély: KB/2026/0014

Reviewers:

Lektorok:

Public Reviewers / Nyilvános Lektorok:

1. Gábor Biczó (Prof., Habil., PhD), University of Debrecen (Hungary)
2. Norbert Tórh (PhD), University of Debrecen (Hungary)

Anonymous reviewers / Anonim lektorok:

3. Anonymous reviewer (PhD) / Anonim lektor (PhD)
4. Anonymous reviewer (PhD) / Anonim lektor (PhD)

Abstract

Founded during Anglo-Egyptian Condominium colonial Rule (1899-1956) and continuing into postcolonial Sudan as the main development project, the scheme underwent significant governance changes, shifting from a centrally managed system characterised by a bureaucratic irrigation network and relatively well-functioning infrastructure to a more liberalised and decentralised system, as presented by the dominant literature. In this view, the reforms are regarded as a break from the inherited colonial logic, marked by the state's withdrawal and the transfer of risks and responsibilities to tenants, labourers, and local subsistence economies. Such accounts highlight a rupture with earlier forms of governance, often portraying the colonial system as more coherent and effective than the current one. However, this perspective overlooks how these changes conceal the persistence of an underlying colonial epistemological and governance framework that continues to organise, classify, and control land, labour, population, and nature. The scheme continues to

¹ Ibrahim Ibrahim (PhD Student). Affiliation 1: Doctoral School of History and Ethnology, Ethnology Program (Ethnography and Cultural Anthropology), University of Debrecen, Hungary. Affiliation 2: Social Researcher, Economic and Social Research Bureau (ESRB), Ministry of Higher Education and Scientific Research, Sudan). E-mail: ibrahim2025@mailbox.unideb.hu ORCID <https://orcid.org/0009-0001-9837-5219>

² Mohamed A. G. Bakhit (PhD). Affiliation 1: School of Social Sciences, Theologische Hochschule Friedensau, Germany. Affiliation 2: Department of Sociology and Social Anthropology, University of Khartoum, Khartoum, Sudan Email: Mohamed.Bakhit@thh-friedensau.de ORCID: <https://orcid.org/0009-0001-1337-2482>

be operated through a centralised hydraulic irrigation system, despite uneven recent conditions for its reproduction, functioning as a mechanism for regulating farmers and agricultural production. This is intertwined with the ongoing development of agrarian subjectivities within the tenancy regime, which recognises local Arab groups as political agrarian entities. Conversely, West African labourers and ethnic minority groups are marginalised and excluded subjects. The recent reforms reflect and deepen the logic of the colonial extractive economy, which prioritises technocratic scientific knowledge over local systems of understanding and indigenous needs. By combining long-standing ethnography with a Decolonial perspective and employing a methodological framework that integrates multi-sided ethnography with Decolonial critical literature, this approach enables scholars to trace how colonial epistemologies have persisted in hegemonic, reinterpreted, and contested forms across comparable Sudanese agrarian contexts and throughout postcolonial Africa.

Keywords: Sudan Gezira Scheme; Postcolonial Africa; Ethnography; Decolonial Anthropology; Agrarian Neoliberalism; West African (W.A.) Groups; Colonial Epistemologies

Discipline: cultural anthropology

Absztrakt

A SZUDÁNI GEZIRA ÖNTÖZÉSES MEZŐGAZDASÁGI RENDSZER: AZ AGRÁR NEO-LIBERÁLIS REFORMOK – SZAKÍTÁS VAGY ÚJRAALAKULÁS AZ IRÁNYÍTÓ GYARMATI ISMERETELMÉLETEN BELÜL?

Az angol–egyiptomi kondomínium gyarmati uralma idején (1899–1956) létrehozott, majd a poszt-koloniális Szudánban is központi fejlesztési projektként tovább működtetett Gezira-rendszer irányítási struktúrája jelentős átalakulásokon ment keresztül. A domináns szakirodalom szerint a korábban központi irányított, bürokratikus szervezett öntözőhálózattal és viszonylag jól működő infrastruktúrával jellemezhető rendszer egy liberalizáltabb és decentralizáltabb modell irányába mozdult el. Ebben az értelmezési keretben a reformokat a gyarmati örökségként fennmaradt logikától való elszakadásként értelmezik, amelyet az állam visszahúzódása, valamint a kockázatok és felelőségek bérlőkre, mezőgazdasági munkásokra és helyi megélhetési gazdaságokra történő átruházása jellemez. E megközelítések hangsúlyozzák a korábbi kormányzási formáktól való törést, és gyakran a gyarmati rendszert a jelenleginél koherensebbnek és hatékonyabbnak ábrázolják. Ugyanakkor ez a perspektíva figyelmen kívül hagyja, hogy a változások miként fedik el egy mélyebben meghúzódó gyarmati episztemológiai és kormányzási keretrendszer fennmaradását, amely továbbra is meghatározza a föld, a munkaerő, a népesség és a természeti környezet szervezését, kategorizálását és kontrollját. A rendszer – a közelmúltbeli újrateherelési feltételek egyenlenségei ellenére – továbbra is egy centralizált hidraulikus öntözési infrastruktúrán keresztül működik, amely a gazdálkodók és a mezőgazdasági termelés szabályozásának kulcsmechanizmusaként szolgál. Ez szorosan összefonódik az agrárszubsztívák folyamatos formálódásával a bérleti rendszer keretein belül, amely a helyi arab csoportokat legitim agrárpolitikai szereplőkként ismeri el, míg a nyugat-afrikai munkásokat és különböző etnikai kisebbségeket marginalizált, illetve kizárt pozíciókba helyezi. A közelmúlt reformjai egyúttal a gyarmati extraktív gazdasági logika továbbélését és elmélyülését tükrözik, amely a technokrata, tudományos tudásformákat a helyi ismeretrendszerekkel és őshonos szükségletekkel szemben részesíti előnyben. A hosszú távú etnográfiai kutatás és a dekoloniális perspektíva összekapcsolásával, valamint egy olyan módszertani keret alkalmazásával, amely a többszinterű etnográfiai dekoloniális kritikai irodalommal integrálja, ez a megközelítés lehetővé teszi annak feltárását, hogy a gyarmati episztemológiák miként ma-

radnak fenn hegemonikus, újraértelmezett és vitatott formákban a hasonló szudáni agrárkörnyezetekben, illetve tágabban a posztkoloniális Afrikában.

Kulcsszavak: Gezira-rendszer (Szudán); posztkoloniális Afrika; etnográfia; dekoloniális antropológia; agrár neoliberalizmus; nyugat-afrikai csoportok; gyarmati episztemológiák

Diszciplína: kulturális antropológia

Legibility and Racialised Knowledge in Colonial and Postcolonial Governance: The Gezira Irrigation Scheme

The Gezira scheme of Sudan, the largest agricultural development initiative in Africa, was founded in the 1920s under British colonial rule to supply cotton to the British textile industry. (Gaitskell, 1952) and, in the postcolonial period, from 1956 until the present day, was considered the backbone of the country's national development (Elkreem & Jaspars, 2025). Within the dominant classic and recent scholarly literature (Abashera, 2011, 2019; Abdelgalil & Adeeb, 2015; Barnett, 2019; Benson & Duffield, 1979; Bushara et al., 2006; Clarkson, 2005; De Waal, 2015; D'Silva, 1986; Duffield, 1983; Elkreem & Jaspars, 2025; Elshaikh et al., 2018; Gaitskell, 1952, 1955; Goenitz & Al-Saidi, 2020a, 2020b; Mahgoub et al., 2017; McLoughlin, 1963; Osman, 2015; Salman, 2010; Sikainga, 2010) It can be broadly characterised along two lines. First, it presents the scheme as a centrally managed hydraulic system rooted in modernist planning and state-led development. Second, it interprets the reforms introduced under the 2005 Act and its subsequent agrarian governance arrangements as signalling a break with this model, emphasising processes of liberalisation, decentralisation, and the state's withdrawal. While these perspectives highlight significant institutional changes, they share a common assumption: that changes in administrative structure reflect a transformation in the fundamental logic of governance.

However, this dominant perspective obscures the profound, ongoing colonial epistemological founda-

tion that has shaped the scheme from its inception to the postcolonial era. This foundation establishes a mode of governance that influences the Gezira structures of knowledge, the diverse agrarian subjectivities, and the administrative authority within the region among various actors. In fact, the scheme was created as a knowledge system based on classification and selection, which unevenly distributes economic resources, political representation, moral economies, and recognition. Building on this premise, this article argues that the changes associated with the 2005 Act do not break from this logic but instead reconfigure it. Although the visible structures of centralised control have been altered, the core principles of simplification, differential inclusion, and hierarchical recognition persist, now operating through decentralised and market-oriented mechanisms. The Gezira scheme functions as a site of colonial and postcolonial epistemological and governance knowledge, as well as the construction of subjectivity. This continuity in epistemological and governance aspects is a gap that needs to be addressed. Against this backdrop, the article raises the following questions: how these epistemological colonial legacies and lived experiences—how they are perceived, internalised, negotiated, and contested—persist into the postcolonial era remains central to this discussion.

While these earlier studies are invaluable and illuminate the agrarian economy and the scheme's institutional dynamics, they seldom regard the scheme as a colonial epistemological system that reshaped agrarian life, authority, and labour relations in central Sudan. As a notable exception among these

scholarly works, the work of Bernal(1997), in her work titled "Colonial Moral Economy and the Discipline of Development: the Gezira scheme and Modern Sudan," is one of the key anthropological texts on the scheme and offers our initial point of reference. Bernal analysed the scheme not only as an agricultural economic project but also as one that encompassed its moral and economic dimensions and impacts, demonstrating that it operates as a modernist developmental disciplinary system within postcolonial Sudan—using Foucault's terms—not only restructuring labour relations but also society and moral order imposed on peasants and labourers. Through what she called the modernist discipline of development, which persisted through postcolonial regimes, new moral-economic expectations and disciplinary regulations were established, fostering new work ethics that regulated the local population's time, labour, and production under new rules aimed at creating a modern farming category. Moreover, Bernal indicated that the governing logic of the Gezira scheme has been carried over to other agricultural projects and initiatives and has also influenced shaping the national economy more broadly.

Nevertheless, it is crucial to expand, develop, and refine this Bernal account, as it focuses only on the disciplinary order, colonial discourse, and the moral economy of tenants, while overlooking agricultural labourers' subjective moral worlds and the newest developments in tenants' social lives. It represents a traditional academic work that does not cover many recent insights and advancements. Also, it ignores the scientific and technical structures that support the scheme and its governance, which shape the discipline into a physically embodied system and a lived experience for tenant farmers and labourers. In the Gezira scheme, the irrigation infrastructure—particularly the canals—and how it is managed, regulated among farmers, and timed have created a specific category of farmers whose production, agricultural activities, and schedules depend on irriga-

tion regulations. In other words, the technical system of water engineering acts as an administrative mechanism through which colonial and postcolonial authorities control production and rural populations. These engineering, irrigation, and disciplinary practices reflect systems of knowledge about land, nature, and agriculture that make the population governable.

To address these limitations, I first expand this analysis by examining how the scheme functions within a broader system of agrarian governance, in which the colonial epistemological worldview has reshaped not only the farmer's moral economy but also land, labour, power relations between tenants and labourers, and overall agricultural production. Second, from an epistemological perspective, building on Bernal's concept of the Discipline of Development, she interpreted the scheme as an empirical manifestation of modernist scientific rationality. However, it does not account for the scheme's underlying structure, including the unequal power relations it generates and the ways of seeing that organise nature and labour within the modernist discourse of science and rationality. Using Bernal as the initial analytical framework, this article situates the Gezira irrigation scheme within debates about the relationship between colonial knowledge systems and governmentality (Foucault, 1978), demonstrating how the Gezira, like other development modernist projects, embodies a governing modernist scientific vision that redefines social life, nature, and agriculture based on principles of classification, simplification, mapping, and administrative regulation—aimed at making nature, land, and the population controllable and manageable. Furthermore, the article discusses what is omitted from Bernal's account of how irrigation engineering design and governance reshape agrarian management, influence agricultural outcomes, and involve potential differential risks associated with irrigation governance. Additionally, Bernal focuses empirically on tenants' lives through a case study of Wad Alabas

and examines developmental discourse. I expand this by exploring how that persistent colonial modernist vision continues to influence the lives of tenants, labourers, the engineering structure of irrigation, and administrative actors across multiple ethnographic sites within the original Gezira scheme and the Al-Manaqil extension.

To understand these issues, this article draws on various theoretical traditions related to colonial rule and systems of knowledge production. According to Foucault's (Foucault, 1978) The concept of governmentality, which serves as our starting point, holds that modern power structures are not only coercive but also productive of social and economic order and of subjectivities through categorisation and labelling. Additionally, Scott's (Scott, 2020) book: *Seeing Like a State*, illustrates how modern power, which he calls high modernism, involves the state using large-scale development projects to reshape social life through mechanisms of simplification, abstraction, and administrative procedures, thereby making nature, land, and labour legible and governable. While Mamdani (Mamdani, 2012, 2018) deepens this understanding by showing how modern power in Africa simplified African communities and economies—including the agrarian economies—through hierarchical racial arrangements embedded within the modern governance of African states, resulting in exclusionary ethnically defined states unable to establish inclusive national frameworks and thus contributing to ongoing armed violence on the continent, the system Mamdani called the Bifurcated System. Taken together, these perspectives help us see the Gezira scheme not only as an agricultural project but also as an epistemological site shaped by abstract, simplified categories and administrative procedures, thereby rendering nature, land, and the population governable and producing differential, ethnically stratified political subjects and economic actors with different moral economies.

Building on the previously discussed framework, the article examines, ethnographically and through

archival analysis, how the Gezira scheme's institutional structure, as a governance regime, is shaped by administrative regulations, procedures, and irrigation infrastructure. It highlights the mechanisms and procedures through which land, labour, and agricultural production are classified, managed, regulated, and supervised within the scheme. These mechanisms include tenancy regime regulations, irrigation schedules, and bureaucratic oversight procedures, which collectively establish the epistemological foundation through which land, labour, and agricultural production are made legible and governable. Methodologically, this article combines multi-sited ethnography as a method of data collection and decolonial anthropology as the analytical perspective to explore how these epistemological and constructed structures are dispersed across different sites in the scheme.

By reflecting on these mechanisms, this article presents the scheme not merely as a site of agricultural production but as a colonial-modernist epistemological space that reorganises and controls population, nature, and labour, thereby constructing a stratified agrarian regime within the Sudanese agrarian economy and the Gezira scheme.

The article is organised as follows: it begins by highlighting the main gap and providing justification in the introduction. It then outlines the methodological steps, followed by a discussion of the theoretical framework that situates the Gezira within broader debates on colonial rule and knowledge systems. The conclusion offers an ethnographic analysis that demonstrates how these colonial structures continue to operate and influence daily life and practices in the Gezira scheme.

Methodology

The Research Design and the Methods of Data Collection

A mixed-methods research design is employed to address the gap discussed in this article. It includes

ethnographic data collection, involving both institutional and everyday fieldwork with local tenants and labourers, as well as the state administrative machinery. Additionally, a quantitative approach supports measuring overarching trends in the study and the opinions of local actors involved.

The empirical data in this article are drawn from both primary and secondary sources. The primary sources rely on a comprehensive record of data concerning the Gezira scheme's social, economic, and political relations, as well as its developments, structures, and debates. The author conducted his fifth-year research at the Department of Sociology and Social Anthropology at Khartoum University as a supplementary project for the 2018-2019 academic year. This was an ethnographic study of social and economic differentiation within the Gezira scheme between local Arab tenants and West African labourers. Focusing on Um Aligour village, Hilat Bashir, and Banat villages, their surrounding labour settlements, and local state representatives, the research involved three months of ethnographic fieldwork in Al Manaqil agricultural extension. The main findings were then generalised to the Gezira scheme and Al Manaqil extension.

During the same academic year, the department organised annual field training for fifth-year students in the Gezira scheme, involving seven villages of tenant farmers and seven camps in Al Hasahia locality, eastern Gezira scheme, over three weeks, with daily evening analysis and discussions. Additionally, the researcher has completed an ethnographic article on the legal and social developments of the Gezira scheme, which is currently under review by a peer-reviewed journal.

Additionally, my master's supplementary dissertation (Ibrahim, 2021) at the Doha Institute for Graduate Studies, Department of Sociology and Anthropology, in Qatar, titled 'Rural Transformations and the Revolutionary Movement in Sudan, December Revolution 2018: the case of Gezira state and Al-Manaqil demonstrators,' covering 2019 to

2021, adopted a micro-sociological perspective and used methodological triangulation: questionnaires, intensive interviews, secondary sources, and scholarly literature. The non-random quantitative sample included 111 respondents, and 11 interviews were conducted to complement the statistical data. About 85% of respondents called for reform of the Gezira scheme. Reform was one of the three main reasons for participation.

Subjectivity and Positionality

I analyse the Gezira Act of 2005 from two perspectives: as an insider and as an outsider. The Gezira is where I was born, raised, and spent most of my life. However, I am also an outsider, as an anthropologist and sociologist trained to think reflexively, treating my subjectivity as a unit of analysis and observation. At university, I was taught to develop empirically supported arguments, setting aside my emotions and prior biases and perceptions to shape the core of my work. Consequently, I will keep this in mind throughout the writing process. Additionally, I will refer to authoritative texts on the scheme, which can serve as a relatively objective benchmark for assessing my work; readers are encouraged to consult these sources to ensure the analysis remains balanced.

Moreover, my anthropological-ethnographic approach utilises tools to gather evidence from lived experiences, with subsequent analysis and discussion grounded in that evidence—an epistemological advantage.

Analysis Strategies and Reflexivity

The methods of analysis include thick description, critical discourse analysis, and quantitative analysis, the latter conducted using SPSS. Drawing on extensive field data and initial engagement with issues and developments related to the scheme, this rich dataset supports arguments in policy debates concerning the Act of 2005. To prevent the reproduction of inherited hierarchical legacies, we

propose an integrative methodological approach that combines multi-sited ethnography with Decolonial ethnography. According to Leve (2022) the decolonial approach begins by deconstructing colonial conditions in knowledge production, which continue to influence the social and human sciences. Colonial knowledge systems depend on hierarchical relationships between researchers and those studied, in which the latter are dominated in the knowledge-creation process, and their voices are treated as mere anecdotes rather than as valid knowledge; as a result, local communities are often excluded. In response to critiques of how the term “informant” encodes and sustains colonial power dynamics, ethnographers have sought alternative language to describe fieldwork relationships. This article discusses one of the most common terms—“interlocutor”—and considers the implications of choosing a term emphasising voice and speech over embodied participation. “Interlocutor” appeals to contemporary scholars because it signifies respect for the people we work with and aligns with modern secular values. In fact, relying on colonial categories in academic literature obscures the complexity of real-world systems of identity, belonging, and everyday agrarian politics—spaces where people live, interpret, reinterpret, and challenge these hierarchies and the social and political inequalities they produce. According to Gupta & Ferguson (1997) and Marcus (2012) The ethnographic field is no longer confined to a single geographical site, as traditional Anthropology once suggested. Instead, it constitutes a network of dispersed sites. These sites are interconnected despite their differences, making it essential for researchers to investigate their connections. Moreover, field sites are not neutral spaces for data collection; they are contested and dialogical arenas—furthermore, the researcher’s positionality and social background influence access to or rejection of the field site. Therefore, the Gezira scheme will be understood as a dispersed network of locations, including villages, camps, canals, farms, administra-

tive centres, tenants’ unions, knowledge institutions, and neoliberal global entities.

Note: In the process of writing, I used the Grammarly editor solely for language improvement, while ChatGPT was used to translate some Arabic texts into English; all the ideas are mine.

The Colonial Knowledge Systems and the Development of Agrarian Governance Modes in Postcolonial African Setting, Sudan Gezira Scheme

To understand how the Gezira scheme functions as an agrarian governance model reflecting colonial knowledge regimes that continue to shape it through the postcolonial Sudan era, this article draws on various theoretical frameworks, beginning with Foucault’s (Foucault, 1978) concept of governmentality, Scott’s (Scott, 2020) ideas on legibility and simplification, and Mamdani’s (Mamdani, 2012, 2018) insights into colonial bifurcation and classification.

The concept of governmentality, outlined in Foucault’s influential work *Security, Territory, Population*, underpins the understanding of how modern power functions both as a productive force within social systems and as a regulator of behaviour. Foucault’s view of power is particularly relevant because it recognises that modern power operates not only through coercion and direct violence but also through administrative processes, disciplinary regulations, and practices. These establish regimes of knowledge, produce social order, internalise it, influence individual conduct, and shape subject identities. Productive power fosters systems of knowledge, constructs identities, creates specific interactions and behaviours, and moulds subject formation through various institutions and norms. Foucault’s theory illustrates that power operates not only through coercion but also through the creation of knowledge, which defines what can be known,

measured, and governed. In line with this view, the governance mode within the Gezira scheme employs both coercive and productive forms of authority. Coercive forces enforce the scheme's rules and regulations, while a productive approach seeks to regulate farmers' behaviour and organise daily agricultural routines via mechanisms such as a tenancy regime agreement, which allocates administrative authority, agrarian surplus values, political recognition, bureaucratic regulations, and irrigation schedules. Within this framework, the agrarian governance of the Gezira scheme produces specific, individual, and institutional agricultural practices and identities.

Although Scott's conception of legibility and simplification does not directly stem from Foucault's concept of governmentality, which highlights its productive role in transforming the social order, it complements and exemplifies that concept through state developmental projects aimed at legibility and simplification. Through what he calls high-modernist state development projects, he demonstrates that to manage and govern natural landscapes, along with complex social and economic realities and populations, the state must simplify and make them legible and understandable. The principle of simplification is implemented in practice through mechanisms such as cadastral surveys, maps, categorisations, and technical regulations that support contemporary high-modernist initiatives.

For Scott, legibility is the primary means by which the relationship between power and knowledge is expressed, thereby enabling a tangible system of governance. Legibility supports this system by simplifying complex realities into manageable formats, streamlining populations, spaces, and practices, and often erasing or marginalising social complexities. This governance framework operates through techniques of knowledge, classification, and ordering, transforming populations, identities, land, political economy, and space—beyond mere formal authority. By producing legible knowledge, social realities

are condensed into administratively understandable formats like maps, censuses, categories, and statistics, while aspects that remain unseen or unmeasured are excluded.

Classification and ordering methods categorise populations, land, identities, and resources into fixed groups that allow intervention (e.g., citizen/foreigner, productive/unproductive, legal/illegal). Administrative structures, institutions, rules, and procedures implement this knowledge—turning abstractions into everyday governance.

Territorialisation and spatial control involve recon-figuring space through boundaries, zoning, schemes, camps, corridors, or frontlines—crucial in both development and conflict contexts. Instruments of coercion and enforcement include police, the army, militias, taxation, forced displacement, and surveillance, all used to secure compliance without consent. Ideological justifications or legitimising narratives, such as development, security, modernisation, order, or salvation, serve to normalise domination. The political economy of extraction and distribution relates to control over labour, land, aid, rents, or violence-based accumulation that materially sustains the regime. There is also the suppression, incorporation, or management of local knowledge—vernacular practices are either erased, disciplined, or selectively co-opted when aligning with state objectives. However, Scott describes these limitations as unintentional oversights in the legibility process.

The Gezira scheme exemplifies where Scott's simplification and clarification are applied. Before the scheme's inception, the Gezira plain was shaped by the unpredictable seasonal flooding of the Blue Nile, during which pastoral and agricultural activities depended on a range of ecological factors. The colonial regime simplified this ecological plain into a managed landscape by constructing dams, establishing a regulated irrigation network, and implementing fixed irrigation schedules. Using modernised, homogenising discourse, colonial rule reduced the

local, diverse moral economies in Gezira into modern moral-economic considerations that serve its extractive aims, often at the expense of local meso regimes. In fact, the meso represents local experiential knowledge embedded in moral-economic expectations and commitments that maintain the balance between fulfilling subsistence needs and social obligations, which scholars refer to as the moral economy.

However, despite their importance in understanding the context of the Gezira scheme, Scott's outlined processes still do not fully capture the many layers of simplification. Mamdani fits well here through his Bifurcated system, as he is best positioned to highlight this oversight left unaddressed by Scott.

Processes of Ethnic Simplification and Legibility in the African context, Sudan

Mamdani's books offer a bold, insightful analysis of how colonialism simplified governance through an examination of its legacy. He explains how colonial rule established a dual system of governance: a divided power structure. This split system managed racial dominance through tribally organised local authorities, thereby reproducing racial identity among citizens and ethnic identity among subjects. This authority system, which segments the population into hierarchical ethnic groups, operates through mechanisms of indirect rule. While direct rule denied subjects rights based on race, indirect rule integrated them into a "customary" system of governance, with state-appointed Native Authorities defining customs. By harnessing authoritarian potential within culture and shaping it into an authoritarian form, indirect rule (decentralised despotism) set the tone for Africa. It involved legal and historical procedures whereby colonial authority manipulated and invented customs that, via the modern state, neither abolished nor eliminated traditional tenure but rather codified and froze it, restructuring land authority through chiefs and

indirect rule. While colonial rule allocated rights to political representation, authority, and land resources along ethnic lines, the main aim of economic and land governance was extraction for colonial benefit rather than serving local moral economies or subsistence needs. Here, colonial indirect rule entailed processes of simplification and legibility through the differential reorganisation of populations, granting some groups greater access to resources and authority, aligning them more closely with colonial aims, and enabling them to meet their needs and moral-economic expectations—usually urban populations—while marginalising other ethnic groups from political and economic systems—often rural populations.

While Mamdani describes the African state as a bifurcated political system, urban areas operate under modern governance structures that treat their populations as citizens. In contrast, rural governance remains indirect, with authority rooted in customary practices that manage and control the population, who are viewed as political subjects without recognition or representation. However, the Gezira scheme context refines Mamdani's dual system by noting that the rural subjects in the Gezira scheme are stratified rather than a homogeneous unit. Since its colonial inception, the Gezira scheme has revealed further differences within rural governance. It stratified the rural populations in Gezira by categorising them into distinct groups, recognising farmer tenants as farmers integrated into the scheme's governance system. Conversely, agricultural labourers were regarded as mere replaceable labour without political recognition or representation. This differential governance extended to their residence sites: farmers reside in villages, whereas labourers live in illegal settlements called Alkanabi, labour settlements (Elkreem & Jaspars, 2025).

The Gezira scheme, through processes of simplification and clarification, encompassed ecosystems, social relations, and economic relations, becoming a highly regulated system of agrarian governance.

However, this system is not entirely totalitarian and controlling. Building on Foucault's concept of counter-conduct highlights how tenants and labourers' practices tend to contest, negotiate, and redirect the ways they are governed; these practices range from everyday negotiations and refusals of regimes of conduct to overt collective protests. In the Gezira scheme, counter-conducts against the processes of simplification are not limited to everyday resistance or negotiation but also extend to collective public acts that challenge the scheme's persistent epistemological and administrative structures.

In the next section of the article, the reader will observe, through empirical and archival analysis, how colonial processes of epistemological simplification made nature, population, and land understandable. These processes established administrative control and reconfigured persistence over time, embodied in extractive agrarian economies. Moreover, it will demonstrate how this enduring structure is also challenged and negotiated through everyday practices and organised political acts of contestation, as seen in the participation of rural agrarian subjects in the December 2018 revolution.

The Analysis

Gezira Irrigation Scheme as a Governance Model: Processes of Simplification and Legibility

To understand how the Gezira scheme, as a modern form of power and a colonial modernist way of seeing, transformed agrarian life in central Sudan, it is essential to first examine the ecological and social landscapes of the Gezira plain before the scheme's inception. The analysis will then proceed as follows: discussing the scheme's hydraulic infrastructure and the processes of ecological simplification. Subsequently, it will analyse the administrative governance of agricultural production, the formation of agrarian subjecthood, the hierarchy of

production forces, and then conclude by examining the counter-conduct practices of tenant farmers and West African labourers.

Pre-scheme Gezira: Systems of Rainfed Agriculture and the Priority of Moral Subsistence Economies

This subsection of the analysis examines the Gezira plain, in the pre-scheme stage, focusing on its overall geographical location, rainfall, ecological conditions, agricultural practices, settlement patterns, and dominant social and economic organisations. Building on the invaluable classic works of Gaitskell (1952 and 1955) and McLoughlin (1963) and the recent work of Barnett (2019). It is documented that before the establishment of the Gezira scheme, the area was a sparsely populated clay plain between the Blue and White Nile, characterised mainly by scattered settlements and rainfed subsistence agriculture adapted to variable ecological conditions.

The Gezira is an Arabic word meaning 'island' or 'peninsula'. It appears in place names across the Arab world, notably in the name Algeria, which is an anglicised form of the Arabic *al-guzayir*, translating as 'the islands'. In Sudan, Gezira has a specific meaning: it refers to a large tract of land situated between the Blue and White Nile. Specifically, following the establishment of the scheme, it denotes the irrigated part of that region used to cultivate cotton, Sudan's main export crop. Some geographical and climatic considerations are worth noting: the central region of Sudan is characterised by extensive clay plains that extend from the Nuba Mountains to the Ethiopian border, and from the south-eastern Equatoria mountains to the confluence of the Blue and White Niles at Khartoum, stretching about 100 kilometres north to Sabaluka on the main Nile.

Barbour considers that this broad area of clay plains should be divided into northern and southern regions, given the diversity between the desert north and the woodland and tropical forest in the south. This division makes sense; from north to south, the

clay plain stretches roughly 1400 kilometres. Clay soils play a significant role in shaping Sudan's economy today.

Additionally, within this region, the Gezira Scheme holds exceptional importance. One notable advantage of this land is its relative affordability for irrigation, owing to specific properties of the clay soil. Being impervious, clay enables the construction of canals without the need for expensive concrete lining. Although some water seeps into the subsoil, the loss is minimal; it rarely penetrates more than a few centimetres deep.

The typical rainfall pattern, concentrated from late July to early November, allowed people to develop an economy based on cultivating *dura* (*Sorghum vulgare*) before irrigation was introduced. (Bernal, 1997).

Before the introduction of the scheme, the subsistence agricultural economy, which was the main livelihood, depended on subsistent agriculture and semi-nomadic herding of cattle and sheep. Drawing on McLoughlin (1963), in the period before the construction of the dams in the 1920s, the region's inhabitants, local Arab groups, shared social and economic activities with the nomads, semi-nomads, and rain-land farmers who now reside in the area. Usually attached to traditional economic behaviours, they were accustomed to forming relationships based on specific moral duties and obligations. These were rooted in economic and social systems that determined the main objectives of the economic activity.

Besides, during that pre-scheme phase, the local population groups were politically and ethnically stratified rather than homogeneous due to the processes of slavery and enslavement. Building on Sikainga (2010) the influential work of titled *Enslaved People into Workers*, which, who mentioned in it that during the re-scheme establishment stage in Northern and Central Sudan, described how local communities employed enslaved people—primarily from Western, Nuba Mountains, and

South Sudan, who are currently within the scheme—that were transformed into wage labour, and who had previously been employed by the local communities (ex-slave masters) to perform agricultural and domestic activities; after the arrival of British Condominium rule (1898-1956) in Sudan, due to increasing pressure from Western human rights campaigns and the needs of the colonial extractive economy for mobile wage labour forces, a law was passed to end slavery relations, and this is what occurred.

Even after the abolition of slavery and before the establishment of the scheme, those ex-slaves remained in a patronage relation with the local communities, which were economically and politically embedded in the local, rainfed, moral agrarian economy of dependence among communities, with no rights to local residential and agricultural land or local authority. However, despite the dominant structural constraints at that stage, here Sikainga affirms that these ex-slaves negotiated and resisted to secure better subsistence conditions, improved exchange relations, and even sought alternative relations. Therefore, the subsistent local actor was not unfamiliar with modern technology and the administrative regimes later brought by British colonial rule, the complex timing of processes, and the links among many small but equally important tasks. He was unaccustomed to detailed instructions about nearly every aspect of his economic and social life and lacked education in accounting or documentation.

To summarise and conclude this subsection, the Gezira region, prior to the establishment of the scheme, was characterised by dispersed rural settlements that adapted to seasonal ecological changes and the flows of the Blue Nile. The main livelihood was subsistence agriculture, supplemented by pastoral activities. These were socially rooted and aimed at meeting subsistence needs, social obligations, and moral responsibilities.

While the ex-slaves are part of a moral subsistence economy of dependence, they resist and negotiate to

improve their living conditions. These were the ecological and social conditions that colonial administrators aimed to transform through the creation of the Gezira irrigation scheme, which sought to establish their extractive agrarian economy and produce cotton through an exploitative capitalist mode of relations.

In fact, the establishment of the Gezira scheme in the early twentieth century was a key factor in reorganising the Gezira region, including the construction of the Sinnar dam and the development of an extensive irrigation network. It also became necessary for colonial administrators to convert Muslim nomads, semi-nomads, and rain-land farmers into tenants and wage workers through the tenancy regime, which served as a site of subject formation and simplification, as we will see.

The Colonial Irrigation Infrastructure and the Development of the Gezira Scheme

Drawing on Bernal (1997) Influential work, colonial administrators perceived the Gezira scheme as a force that transformed the Gezira landscape from an unregulated, backward, chaotic condition into a modern, Western-style, scientifically managed area for growing cotton and export crops. Consistent with Scott's idea of state-led simplification and legibility regimes, this transformation was driven by the construction of the Sinnar dam and the introduction of a regulated irrigation system, thereby replacing and simplifying the previous ecological variability and uncertainty.

Practically, the ecological simplification in Gezira involved gradually replacing traditional farming methods that relied on rainfall, the Nile's uncontrolled flows, and local experiential knowledge. These were replaced by more systematic and regulated agronomic and hydraulic engineering techniques. The dam served as the material and technical basis for the scheme's existence. Agricultural practices and knowledge systems came under the control of technocratic, standardised cropping systems; regula-

ted irrigation schemes for allocation and distribution; and administrative oversight. The Sinnar Dam, which spans the Blue Nile 250 miles south of the urban centres of the Three Towns (Khartoum, Khartoum North, and Omdurman), and the Gezira, covering an area of one million acres (just under 2,000 square miles), is irrigated annually with intensive cultivation (with the other half cultivated the following year). The landforms used in the scheme form an upside-down 'V' created by the confluence of the White and Blue Niles. (Gaitskell, 1952, 1955). Before the dam's construction in the 1920s, the region's people were similar in their social and economic activities to the nomads, semi-nomads, and rain-land agriculturalists who currently inhabit the neighbouring desert and the Central Clay Plains grazing and growing districts. Annual rainfall averages 6-8 inches in the Scheme's northern reaches, and up to twice that amount at the southern end. July and August are wet; rainfall is practically unheard of during the five winter months. Under these conditions, the pre-Scheme pastoralists and farmers survived rather more precariously than their extra-Scheme present neighbours, who may now enter the Scheme in picking season and be assured of both grain supplies and cash employment (Gaitskell, 1955). The transition to the hydraulic irrigation system was assisted by decades of research and experimentation. Long-staple cotton thrives on the clay soils deposited over the centuries before the Scheme by annual Blue Nile floods. The long dry season both kills pests and cracks the soil, making it less impervious and less prone to waterlogging. However, the high salt and low nitrogen content, combined with impermeability, inhibit root development in many crops. While dura (millet), pulses, wheat, onions, and some other vegetables will grow with proper care, certain others will either not grow at all or very poorly. These include dukhn, maize, sesame, groundnuts (oils), root crops of all kinds, sugar cane, and fruit and tree crops. Are trees of any kind difficult to grow? Hence, firewood costs are

abnormally high. The Kharif, the July-August rainy period, is the main food-growing season, as is the July-September rainy period. The Sennar dam, two miles wide, is approximately 18 miles from the beginning of the irrigated land (the nearest hydrologically feasible point). Within the entire Scheme are over 600 miles of main canals and 2,500 miles of lesser distributing canals. The gradual downward slope from south to north ensures an entirely gravity-flow system (no pumps needed). The Al-Manaqil Extension, another 830,000 feddans (thus almost doubling the size of the total unit), while utilising an enlarged Sennar dam system, will rely primarily on a new dam now under construction at Er Roseires on the Blue Nile near the Ethiopian border. Al-Manaqil agricultural extension was completed in 1963 as part of the scheme's gradual implementation and operation. In this irrigated development project, water is the key, not land. Irrigated development: water is the key, not land. Of the cultivated land (50 per cent of the total waterable annually), approximately half is devoted to cotton production and half to food crops, particularly dura and lubia. Dura is a staple in the Northern Sudanese diet, and lubia serves as livestock fodder. The northern parts of the Scheme produce Sakel long-staple, while the southern districts yield a Sakel derivative called X1730A (McLoughlin, 1963).

Administrative Regulation and Agrarian Governance

Supporting this hydraulic regime requires an Administrative Regulation and Agrarian Governance. Consequently, colonial administrators established an administrative body to oversee and manage irrigation, agricultural production, and rural life. This body inherently assumes the dominance of technical hydraulic knowledge over local systems of knowledge and experience; therefore, control is central, and local communities are recipients of orders and instructions. In this context, the practices of this

administrative organisation can be understood through the concept of governmentality, whereby agricultural production and the rural population in the Gezira were managed, categorised, and regulated through coordinated administrative oversight and institutional practices.

Building on Abashera (2019), the hydraulic system forms the material foundation of the scheme, which was always celebrated during the colonial and post-colonial eras as the greatest scientific miracle in the Sudan and in the world, on which the administrative apparatus operates to regulate agricultural production and the rural population. Through the coordination of irrigation schedules, crop allocation, and the supervision of tenant cultivation, colonial authorities organised agricultural production across the irrigated landscape. The Gezira Board oversees the scheme's technical and agricultural operations. They supply seed, transport from local collection centres, market the crop, maintain major canals, advance loans, conduct research, and keep the accounts. Their ginning operations are the largest in the world under a single organisation. Service costs are evenly distributed among tenancies, so despite varying levels of spraying, weeding, ploughing, and similar activities, each tenant pays the same amount to the Board. The Board employs about 3,000 workers year-round, with an additional 3,000 labourers during ginning season. The Irrigation Department provides wage employment for 2,000 people at any one time. This does not account for the total number of individuals who hold these jobs, as high turnover means that 8,000 people may fill these roles over the course of the year. Beyond crop marketing, the main issues in Gezira are technical and social. The technical challenges include crop research, disease prevention, and the development of new strains and varieties, among others. Social issues relate to the values, mores, and motivations of both tenants and resident workers, as well as the seasonal labour force of over 200,000. In any country, establishing such an agricultural scheme is of significant develop-

mental importance. In this sense, the administrative organisation of the scheme can be understood as a form of governmentality that regulates agricultural practices and rural populations.

The colonial Tenancy regime and the hierarchical, ethnicised simplification forms

Within this administrative framework, agricultural production in the Gezira Scheme was organised through a systematic system of tenancy and labour relations. The tenancy regime transformed the complex, socially rooted economic landscape of the Gezira prior to the scheme—where multiple subsistence farming activities by pastoralists, farmers, ex-slaves, and seasonal labourers, as well as flexible land-use relations, dominated—into two administratively simplified categories: tenants and labourers within extractive colonial capitalism. However, this socioeconomic simplification is not only in the sense Scott mentioned, regarding the exclusion of the meso and its embedded local moral economies, but also in other ways. (Sikainga, 2010), (Elkreem & Jaspars, 2025), (Duffield, 1983), (Mamdani, 2012, 2018). Insights reveal that agrarian governance in the colonial Sudan and the Gezira scheme, particularly since its inception, has been based on ethnic and political stratified classification and simplification, strictly dividing the Gezira's social forces into overlapping layers within a class-rooted, ethnicised, bifurcated regime. The cornerstone of the Gezira management system was a tenancy agreement outlining the rights and responsibilities of each of the three stakeholders. For a long time, it focused solely on cotton production, but from the 1990s onwards, it also included wheat. Other crops, such as groundnuts, sorghum, and fodder, were solely the responsibility of the farmers. The government provided the water and financing needed for cotton production; the Gezira Board offered central management and mechanised work; and the tenant farmers were responsible for other cultivation activities, irrigation, cleaning, and har-

vesting cotton. After deducting costs, the income was split as follows: 40 per cent for the tenant farmers, 40 per cent for the government, and 20 per cent for the Gezira Board (Salman, 2010).

The tenancy regime is the scheme's organising operational principle. It was not merely a legal contract within agrarian policies and arrangements but also a colonial construct: a way of seeing, knowing, and classifying, governing and managing the land, labour, nature, and population through a legible administrative logic. Colonial governance classified and rendered land, labour, and nature legible, simplifying the complex agrarian realities into standardised, measurable units of territory, production, and productivity that could be administered, disciplined, overseen, and taxed. It also defined tenant farmers as recognised subjects alongside the government and the Gezira Administration Board, while labelling labourers as full political subjects and as a transferable, replaceable labour force performing specific tasks, without political and economic rights, thereby denying them recognition as tenant farmers. This aligned with the colonial political economy, grounded in a colonial legibility of seeing, in which simplification and selective inclusion and exclusion are central to its policies and orientations, as Scott (2020) presents.

In the 1960s, during the post-independence era, the management of the Gezira scheme expanded its structure and framework by adopting a horizontal growth policy that included the addition of the Al-Manaqil Extension and an additional 830,000 feddans—almost doubling the project's size. By this period, over 700,000 people resided within the Gezira Scheme, including approximately 200,000 seasonal cotton pickers. There are 8000 officially registered tenants, with around 140,000 people—an increase attributed to the Al-Manaqil Extension. Tenants receive 40 per cent of the net proceeds; the government also takes 40 per cent, and the Gezira Board receives 20 per cent. Rent above the cost generates a surplus. The pricing system encourages

the use of cleaner, higher-quality cotton. Tenants are responsible for labour, particularly weeding and harvesting, as well as for maintaining field sanitation by burning cotton stalks and irrigating the fields. While the reported 30,000 tenants may actually number closer to 50,000, they also share the costs of spraying and fertilisers, which are supported by a general reserve fund. Besides that, population management and classification, the tenancy agreement in the Gezira scheme is the cornerstone of the Gezira management system and the primary means of seeing and classifying the population, thus a primary site of subject formation, through which the rights and duties of the main stakeholders, political recognition, and the distribution of agrarian surplus value are mediated. Agricultural labourers were excluded and marginalised, despite being essential to meeting the scheme's labour shortage—a pattern of agrarian politics in the Gezira scheme (McLoughlin, 1963).

Building on what was mentioned above, the tenancy regime exhibits internal contradictions: it not only structurally excludes agricultural labourers who are West African groups, most of whom are perceived locally as descending from exslave origins. However, tenant farmers, despite their inclusion in the tenancy agreement, have limited political participation that has developed over time, further restricted by the 2005 Act and the 2014 Act modifications, and persists in 2026. According to Duffield (1983), the Tenancy System, established in the 1920s, has become increasingly unsatisfactory as social and economic conditions have changed. Tenants still have little influence over what they produce and how they produce it.

Originally, tenancies were intended to be worked by the tenant and their family, but hired labour has always played a significant part within the scheme. Gezira tenants also began to organise collectively in the late 1940s, leading to the creation of an official representative organisation, the Tenants' Farmers' Union. At that time, what tenants chose to demand

is significant: they did not simply ask for a larger share of cotton profits; they also demanded participation in decisions about cotton production, grading, and sales, as well as the right to audit the scheme's accounts (Barnett, 1977).

Tenants gained a larger share of cotton profits, but they were unsuccessful in their other demands, which would have fundamentally altered the scheme's power structure. Colonial arguments against Sudanese participation in running the scheme were (predictably) phrased largely in terms of the dangers of inefficiency and poor performance that might result, which is the official opinion held until the day, reflecting what Scott called the Metis versus techne.

To this day, both W. A. migrants and Sudanese from the Western regions remain the primary labour force in these schemes, including the Gezira Scheme. Building on Duffield's (1983) work, Duffield estimates that around 1 million people, or 10% of northern Sudan's current population, are descendants of migrants from northern Nigeria or nearby regions, mainly Hausa, with minorities of Bornu and Fulani. They are primarily settled across a belt that includes Darfur, Kordofan, Gezira, Blue Nile, Gedaref, and Kassala. Known as 'Fellata' by the Sudanese, the term is rarely used by the groups themselves due to its derogatory connotations, particularly among the Takari community. In Sudan, capitalist expansion and political changes have reshaped Takari identity.

During colonial times, Hausa and Westerners were encouraged to settle, but now the 'Fellata', especially along the Niles, are viewed unfavourably. Sudan's nationality laws (1948, 1957) define citizenship by descent prior to 1897, thereby ignoring colonial influences. Many Hausa settlers were poor peasants, not traders, and, beyond pilgrimage, sought to leave Nigeria. According to McLoughlin, individuals from the Western region accounted for 11% of the Gezira Scheme's population of 201, including tribes from Darfur, French Equatorial Africa, Nigeria, and

other Western groups, as well as Sudanese and non-Sudanese West Africans and Belgian Congolese.

Abd-Alhadi's recent work indicates that, despite the lack of recent census data, West African populations in Gezira are the main agricultural labour force, as the 1963 World Bank report states that 40% of the total labour force are agrarian workers. There are no official figures on the number of Al-Kanabi in the scheme. However, estimates by the Kanabi Conference — a civil society organisation led by West African youth — suggest that approximately 95,000 Al-Kanabi out of a total population of 2,495,000 in Gezira constitute about 39%. Gezira has around 1,572 villages. The Al-Kanabi residents are mainly Tama (65%), Barco (25%), Alarenga (5%), and other Darfur tribes.

To conclude this subsection, prior to the reforms introduced by the 2005 Gezira Act, the scheme operated under a highly centralised system of irrigation and tenancy that tightly coordinated land, labour, and production. Water distribution followed a regulated canal hierarchy, while tenancy arrangements defined access to land and institutional recognition, positioning tenants as the primary interlocutors of the state and marginalising labouring populations. This system constituted an integrated form of hydraulic and administrative governance that simplified complex social relations and embedded ethnically differentiated forms of authority and belonging. Most importantly, the hydraulic governance regime is built on the modernist view that technical knowledge is superior to Metis systems. The 2005 Act is often seen as marking a break with this structure, introducing decentralised irrigation management and market-oriented reforms. However, in this article, the interpretation tends to argue differently, prioritising changes in institutional form over the underlying logics of governance. Ethnographic observations suggest that, despite these transformations, the core patterns of authority, differentiation, and exclusion persist, and irrigation still functions in the colonial way of modernist seeing.

The 2005 imposition of the authoritarian patronage-based neoliberal reforms

Numerous transformations gradually shifted towards imposing authoritatively neoliberal agrarian reforms within the scheme, implemented through patronage politics, which eventually led to a systemic decline of its agricultural system. Many scholars have interpreted these changes, given their highly destructive outcomes and their departure from the colonial-inherited scheme, institutional arrangements, and management, as a departure from the scheme's colonial logic.

Scholarly works by Elkreem & Jaspars (2025), Abashera (2011, 2019), Salman (2010), Ibrahim (2021), Barnett (2019), and Goelnitz & Al-Saidi (2020a) Those who have positioned the scheme so that the current developments represent a distinct stage, present their highly destructive outcomes and different institutional arrangements and manage the scheme's institutional developments and its subsequent destruction of the agrarian system.

According to Abdelgalil & Adeeb (2015) The study explores four major institutional changes: the joint account system (JAS), the individual account system (IAS), economic liberalisation (EL), and water users' associations (WUAs) within the Gezira scheme. Data on crop productivity and cultivated area were collected over 40 years, from 1970 to 2009, to examine the historical effects of policies on productivity in the scheme. The data were analysed statistically using SPSS. The results show that sorghum productivity and area have increased due to policy changes. Cotton productivity and cultivated area, however, exhibit a decreasing trend over time. Groundnut productivity presents mixed outcomes. The combined impact of IAS, EL, and WUAs yields positive results for sorghum but negative results for cotton. It can be concluded that changes in institutional policies and arrangements in the irrigated sector influence agricultural crop productivity. These studies assume a shift in the framework, with farmers and production forces integrated into a

globalised agrarian market logic rather than a solely stated scheme, resulting in independent farmers operating within diverse institutional and agrarian contexts. Liberalisation processes in the Gezira scheme started gradually in 1992 and culminated in a more radical legal and institutional breakthrough with the 2005 act. This act led to the complete replacement of government corporations by private-sector entities. Following the Gezira Scheme Act of 2005, farmers are no longer bound by specific crop rotation rules; the act guarantees farmers the freedom to manage productive and economic factors using art and technology to enhance productivity and profitability. The 2005 Act influenced crop rotation practices within the scheme, resulting in a decline in cultivated area, lower yields, and decreased profitability in recent years. It replaced the 1984 Act—adopted after the last major rehabilitation project in 1983—and the 1927 Gezira Land Ordinance/Decree, which required private Landowners to lease land to the government. In 1992, private banks began providing agricultural finance under the scheme, replacing the Bank of Sudan's interest-free loans. According to this act, responsibilities for farm irrigation and management, including fee collection and weed control, shifted to Water Users' Associations (WUAs). By controlling minor and field canals, the reform transferred responsibility for field irrigation from the government to farmers. Additionally, prior to privatisation, the government sold crops on behalf of farmers; now, farmers manage their sales independently, negotiating with private-sector parties. Private banks financed the scheme's agricultural operations, replacing the interest-free loans from the Bank of Sudan. However, some experts view this as a negative development due to the high cost of loans and increased interest rates.

In support of the governance logic break thesis, the most recent studies on the Gezira scheme's agrarian changes, building on the works of Abashera (2011, 2019) and Elkreem & Jaspars (2025), show

that the implementation of these neoliberal reforms was not grounded in the necessary technical capacities but rather in a patronage-based approach. These changes should be described within the broader context of the Sudanese economy or the Gezira scheme as a whole.

These policies were implemented not to boost the Sudanese economy but to empower the Islamised regime members politically and economically, often disregarding the principles of fair competition and technical standards when selecting institutions responsible for managing economic sectors efficiently. Consequently, these reforms have been described as "a total failure" because the mismanagement of the scheme's assets, the lack of regulation over crop choices, and the establishment of WUAs lacking the necessary capacity have caused "irrecoverable damage" to the scheme. The scheme faces severe sediment buildup in its irrigation canals, which could pose challenges for those responsible for its operation and maintenance. Moreover, these WUAs led to infrastructure damage due to a lack of expertise—for example, over-digging which demolished parts of the gravity system; failure to collect fees; and inadequate weed control or water management for different crops. As a result, service deterioration and delays have repeatedly occurred during the irrigation season. Additionally, infrastructure inspection and maintenance worsened after the government sold vehicles to employees who no longer wished to use them, and others lacked the necessary technical knowledge.

This thesis break has got its extension to the transitional government, deterioration was further reflected in the policies and initiatives of the transitional government (2019-2021), when, in 2021, the resigned transitional prime minister, Abdallah Hamdok, recognising that the scheme had been exposed to significant damage and transformations, thus, in response, launched a national campaign to rehabilitate and develop the Gezira scheme. (Elkreem & Jaspars, 2025).

However, by starting from and criticising them, we argue that, although their importance in describing recent liberalised developments is recognised, the colonial epistemic and institutional governance logics continue to persist, even as they appear to cause a break or rupture, which is the main contribution of this article.

The Gezira Scheme: Neoliberal Transformations as a Reconfiguration within Colonial Epistemological and Governance Logics

Although these changes seem to mark a break and a new phase in the scheme's development, moving away from colonial logic, much of the literature interprets the 2005 Gezira Act as a departure from the scheme's colonial institutional framework. The dominant literature adopts economic and policy perspectives, highlighting the disruptive effects of recent reforms and often viewing them as a departure from earlier institutional arrangements. While these accounts highlight important shifts in irrigation management, cost structures, and production systems, they tend to focus on the apparent breakdown or restructuring of the scheme. Ethnographic observations presented here suggest a different interpretation.

The introduction of the Water Users Act of 2005 and the assumed break from the colonial logic.

Despite the introduction of new institutional forms—such as Water Users Associations and market-based tenancy arrangements—the underlying patterns of authority, recognition, and exclusion largely remain colonial.

The Gezira Act of 2005 is widely regarded as a turning point in the organisation of the scheme, introducing a series of reforms that restructured both irrigation management and tenancy relations. These changes were framed in terms of decentralisation, efficiency, and market-oriented governance,

marking a departure from the centralised administrative model that had historically defined the scheme. That restructured both irrigation management and tenancy relations. A central component of the reform was the introduction of Water Users Associations (WUAs) (Goelnitz & Al-Saidi, 2020a), which transferred responsibilities for irrigation management from state authorities to localised groups of farmers, in line with the general trend of liberalising scheme governance. In line with this view, changes to tenancy arrangements and institutional oversight reduced the state's direct role in coordinating production, thereby encouraging greater autonomy among producers.

The reforms also promoted cost recovery, individual responsibility, and market-based decision-making, repositioning farmers as free economic actors operating within competitive conditions. Within much of the existing literature (Abashera, 2011, 2019; Abdelgalil & Adeeb, 2015; Barnett, 2019; Elshaikh et al., 2018; Goelnitz & Al-Saidi, 2020a; Ibrahim, 2021; Mahgoub et al., 2017; Osman, 2015; Salman, 2010). These reforms are interpreted as signalling a rupture with the scheme's colonial and postcolonial foundations. The shift toward decentralisation and market-based governance is often understood as dismantling the rigid administrative structures that previously organised production, replacing them with more flexible and participatory forms of management. In this view, the Gezira Scheme is seen as moving away from a centrally controlled system toward one governed by dispersed authority and market dynamics. While such interpretations highlight important institutional transformations, they raise a critical question: to what extent do these reforms alter the underlying structures through which authority, recognition, and access to resources are organised? As the following analysis demonstrates, the apparent dismantling of centralised control does not necessarily entail the disappearance of the governing logics that historically structured the Gezira Scheme.

To understand the broader contexts behind the persistence of the core elements of the colonial vision, one must consider two factors: first, the widely accepted formal and administrative view that technocratic hydraulic knowledge dominates Métis local knowledge systems, which cannot tolerate significant decentralisation of responsibilities. Second, the tenancy regime and its inherent differential political subjects and political recognition are arranged in a hierarchy that reflects the cultural legitimacy and crisis of nationalism inherited from colonial rule to the present.

The Irrigation system as continuity of colonial logic

The colonial epistemic continuity was especially evident in the way irrigation was governed. During the colonial period, the irrigation system was not just a technical hydraulic process for delivering water to farms but also a centralised governance strategy that made agricultural production more administratively managed, legible, and controllable.

The Gezira Scheme was established in the early twentieth century between the Blue Nile and the White Nile, benefiting from flat terrain that enabled gravity-fed irrigation at relatively low cost. The colonial irrigation scheme would fundamentally re-configure this ecological and institutional landscape. The tenancy regime did not merely reorganise agricultural production; it reconstituted the social relationship between land, authority, and cultivation. Whereas precolonial land access was embedded in lineage-based mediation and seasonal ecological adaptation, the Gezira Scheme allocated fixed holdings through written contracts and subordinated cultivation to centrally scheduled irrigation and crop rotation. Land was transformed into a measurable unit of production, and cultivators were reclassified as registered tenants within a bureaucratic system of control. This institutional shift separated land from customary authority and recast cultivators as contractbound subjects accountable to scheme manage-

ment. In doing so, the tenancy regime transcended customary land use and cultivated a new agrarian subjectivity structured by administrative recognition and economic calculation (Abashera, 2019; Gaitskell, 1955). While the 2005 Act introduced new institutional arrangements, such as Water Users Associations and later cooperatives, these reforms did not fundamentally alter the governing logic of irrigation. Rather, they redistributed certain managerial responsibilities while preserving the underlying system through which water continues to discipline agricultural activity, coordinate production, and maintain administrative visibility over farmers (Goelnitz & Al-Saidi, 2020a). This has been cancelled by amendments to the 2014 Act, under which the Ministry of Irrigation assumed primary responsibility for irrigation management in the scheme (Abashera, 2019). Despite that, according to Abashera, these agrarian reforms and the 2014 amendments have not resolved the disruptive effects of the 2005 changes, with farmers suffering from inconsistent water delivery times, crop failures, and canals that are not properly cleaned and maintained, focusing that the central control of water deprived the farmers of the traditional fixed timing of water, and thus the governance of irrigation became uncertain. Besides the central governance of irrigation, the hydraulic logic, and the inherited irrigation grid, the daily embodied practices of irrigation governance expose the unequal simplification and hierarchical structure that prioritises and recognises the Tenant farmer in water allocation and distribution. This is evident in the daily practices of the tenants and the labourers.

The Persistence of Hydraulic Irrigation Systems in Daily Practices

This section illustrates how the hydraulic colonial irrigation system continues to operate as a centralised governance mechanism despite ongoing patterns of unequal reproduction stemming from the patronage politics of the 2005 Act mentioned ear-

lier. It highlights scenes and events that show how irrigation remains centralised, even though some responsibilities have been transferred to the WUAs.

This reflects the hierarchical relationship between the *techne* and the *Miso* forms of knowledge, which cannot tolerate full decentralisation. A pattern emerges in the following interviews and participant-observation notes: the Water Users Association, in practice, acts as a gatekeeper with neither decision-making authority nor significant power. Problems with the timing of water delivery schedules arise from policy inconsistency caused by patronage-mediated policies that accompanied the 2005 agricultural reforms.

Moreover, the 2014 amendments to the Gezira scheme, which abolished the Water Users and shifted its responsibilities back to the Ministry of Irrigation (Abashera, 2019), are not merely technical policy changes or irrigation issues but also a reassertion of colonial technical logic. Across the interviews and the field notes, we will see how the irrigation system operates under the colonial logic of *techne* while excluding local communities and traditional knowledge systems. Below, when the farmers and the labourers talk, water not arriving on time, poor coordination, and central decisions ignoring the farmers' needs, and unfair distribution. They are not just describing technical irrigation problems of inefficiency, but also complaining and exposing a centralised regime that controls the whole of agricultural life through governance mechanisms of timing, administrative authority, and water allocation.

In early February 2026, the farmer Karar, aged 45, from Al-Manaqil extension, Um-Aligour village, about 40 kilometres south of Al-Manaqil, recorded a video in the social groups of the Al-Manaqil locality and the village, calling for help due to the excessive release of water, and said:

"...We are here at Um Aligour's main canal. We pray to God, who is the only one who can assist us (an Islamic Sunni Dua recited when harmed and unable to change

adverse situations). There is an irony in the release of irrigation water. By the time we need it, it is cut off. Even when we resort to water pumps to raise water to the crops, by the time we no longer need the water and just come to harvest our crops, the water is released too much, to the extent that even the roads to the crop fields are closed, the water is drowning the fields and spoiling our crops. What a painful reality..."

Interview in the West African camp of Sabag Ragad in Al-Manaqil agricultural extension, located around Um-Aligour village on the southern side, with a 37-year-old agricultural labourer in crop-sharing,

"... Nowadays, the Arab farmers cannot afford to pay us as agricultural labourers, as we have two casual wage shifts, one in the morning called Aldabawa, which runs from 9 am to 11 am, and the second from 1 pm to 6 pm called Aldubria. However, farmers lack the necessary inputs and credit to fund crop cultivation; therefore, we have now shared the crop cultivation process. However, we face the risk that the crop may fail due to uncertain water releases, sometimes too much, to the degree that it spoils the crop, or sometimes due to the late arrival of the water, the crop dries up, and we sometimes cannot afford to rent or purchase a generator to raise the water level from the canal when levels are low..."

In an interview with seven agricultural labourers in Alkuda camp in Alhasahisa locality, east of the Gezira scheme, they narrated that,

"...We use the pumping water generator to save our crops from the delay in water release, as the gatekeepers of the major canals in the locality release the water at their convenience, not when we need it. When a representative group of us call them urgently to release the water, they ask us to pay the administrative water fees first. Many times, after paying the fees, we must rent a machine to clear the secondary canals of grass and mud so the water can reach us..."

In 2021, in an interview with demonstrators from the category of Gezira scheme farmers, including the farmers' sons, some of whom were still linked to rural agricultural life in terms of their livelihoods and

others who had entered the modern bureaucratic sector of employment, all of them ranked their demands for participation into three main demands: the demand for a democratic regime as an alternative to the authoritarian regime of the Om Al-Bashir regime, 1989-2019. The second demand is to combat corruption, and the third is to reform the Gezira scheme. In the interview, the interviewees linked their participation to the development of the Gezira scheme, citing the application of the 2005 Act. To characterise the scheme's development, they described the state of the irrigation grid and its functioning as characterised by destruction and chaos. They framed what is going on in the scheme as chaos, noting that the farmers have the necessary capabilities to meet the needs of agricultural activity, as irrigation has been managed by private companies and the farmers' efforts, while both lack the technical know-how and financial ability to manage the scheme as it was before the 2005 Act, when irrigation and the maintenance of the irrigation infrastructure and canals were fully under the responsibility of the bureaucratic administration.

One farmer said that,

"Instead of the systematic, timely flow of water to crop fields, we are using pumping generators and tanker trucks to irrigate the far fields from the canals."

Another protester from Madani city, the capital of the Gezira state, mentioned that,

"... the late arrival of the water is not strictly scheduled; it sometimes arrives before or after we need it, and the control is not in our hands at the scheme administration..."

A woman from Madani city narrated that,

"... The scheme's infrastructure is deteriorating, as we must clean the canals and pay higher fees to the irrigation administration. Despite this, we sometimes use pumping generators to lift water to the field when water levels are low. Sometimes we contact the gatekeepers, but they do not respond promptly. Others have authority or connections to release water when needed ..."

In Abu-Digin camp in the eastern part of the Gezira scheme, Alhasahisa locality,

The scheme is in poor condition, and the irrigation canals show signs of neglect. The lack of technical expertise is compounded by the fact that secondary canals and subchannels are blocked by grass and mud, a problem that farmers and labourers must address. Even private companies hired by farmers and labourers (for crop sharing, input-cost sharing, and yield sharing) do not perform the work properly. We maintain the comprehensive revision...

Karrar's statements reflect everyday observations of researchers, as the researcher is in the study area where he was born and raised and where he still has familial ties. The release of irrigation water should be scheduled consistently to meet farmers' needs and cultivation levels. However, in practice, it is often inconsistent and centralised, not even in the hands of the farmers' associations. Releases are often arbitrary, either delayed until farmers have already found other solutions or timed when no release is necessary, such as during harvest, as Karrar recounts. Since the 2005 act, the Gezira scheme has commonly seen water pumped into crop fields by generators across the canals because the level provided cannot be directly transferred to the fields—the sub-canals operate in accordance with the scheme's design and the pre-2005 stage. This situation is also evident in various canals, such as those in Al-Hasashisa locality in eastern Gezira. In 2018, we conducted two weeks of ethnographic fieldwork as part of training at Khartoum University's Department of Sociology and Social Anthropology. The use of pump-generated water was also a common coping strategy in the canals of Al-Manaqil locality. In these cases, water pumping has become a daily cultivation practice because the controlled release of water remains unpredictable. However, that destruction is attributed to the uneven reproduction of the hydraulic irrigation system, a colonially inherited one.

The Patronage politics and the disruptive impacts on the irrigation agricultural system

Reflecting the scheme patronage politics and its disruptive impacts (Abashera, 2011, 2019; Elkreem & Jaspars, 2025; Goelnitz & Al-Saidi, 2020a), which represent the conditions that resulted in the uneven reproduction of the agrarian system, differing from how it functioned before the 2005 Act reforms. This is presented in the press, public discussions, and investigative reports, and in scholarly works as a rupture and a dismantling of colonial scientific logic. The problems and disruptive changes to the irrigation infrastructure have been reported in local newspapers, including Arakoba online newspaper (Ahmed, 2025). In 2012, an investigative report was published, as follows: The Gezira Scheme was established in the early twentieth century between the Blue Nile and the White Nile, benefiting from flat terrain that enabled gravity-fed irrigation at relatively low cost. It was governed by successive legal frameworks, beginning with the 1925 Agreement under the Condominium, followed by the Gezira Scheme Acts of 1950 and 1960, which expanded state control and incorporated Al-Manaqil Extension. Later reforms, including the 1984 and 2005 Acts, reflected broader political and economic shifts in Sudan and sought to address mounting structural and financial challenges. From the early 1970s, however, the Scheme entered a period of decline, driven primarily by deteriorating irrigation infrastructure. Poor maintenance of the extensive canal network led to severe siltation from the Ethiopian highlands, reducing water flow, increasing seepage and evaporation, and encouraging weed growth. The Sennar and Roseires dams also lost significant storage capacity due to silt accumulation, while competition between irrigation and hydroelectric uses further strained water management. Weak irrigation performance triggered a cycle of declining productivity, reduced farmer incomes, and insufficient maintenance funding, deepening infrastructural decay. Although numerous committees and donor-funded rehabilitati-

on efforts were launched, especially from the 1960s onward, these interventions failed to reverse the decline in the absence of sustained institutional and governance reform. Irrigation dysfunction thus became the central driver of the Scheme's longterm deterioration.

The most recent investigative report, released on 19 March 2025 by Independent Arabia Newspaper (Independent Arabia, 2025) states that after the Sudanese Army retook Gezira state from the paramilitary Rapid Support Forces (RSF), where the Gezira scheme is located, the state is now under its control during the current civil war in Sudan since 15 April 2023. Many urgent interventions are required, as follows. The committee tasked with writing a report on the scheme's losses and problems during the war reported that the irrigation systems require urgent maintenance to ensure irrigation of all targeted cultivated areas during the upcoming summer season, following the suspension of routine and preventive maintenance over the past two years. The committee's statement further explained that the war resulted in the loss of approximately 70 per cent of the Scheme's agricultural engineering machinery. At the same time, much of the remaining equipment was stolen or looted. Therefore, the upcoming summer season urgently requires the provision and rehabilitation of this machinery.

Based on the interviews, participant observations, and field notes presented above, the everyday operation of the hydraulic irrigation regime reflects a deeper political and structural transformation within one of the scheme's vital institutions: the irrigation institution. The principal pattern extracted from the interviews across the different sites presented, the Almanaqil locality cases, and the Alhasahisa locality cases is that the scheme's infrastructure deteriorated from excellent functioning to the worst. According to the interviewees, the scheme's irrigation history has been divided into two contrasting stages: one dating to the establishment of colonial rule in the 1920s, characterised by scientific irrigation, precise

and fixed schedules, and effective management that consistently met farmers' water needs. During this period, they argued that power was concentrated in the hands of professional, skilled technocrats. This stage ended with the application of the 2005 Act, which, for them, brought disastrous changes to the scheme, replacing skilled technocratic labour with private companies that lack the necessary know-how for the scheme's irrigation needs and, under the political regime of Alingaz (1989-2019), empowered their members at the expense of the scheme's efficiency and future. This transition has led to serious problems in irrigation, such as canals blocked by grass and mud, and water gatekeepers at the major canals were appointed from the villages with knowledge of how to operate them. Therefore, inconsistencies in the water schedule and release, which cast a negative shadow over the farmers and agricultural labourers in the scheme, and the irrigation system became a financial burden for them. Following the dominant literature on agrarian governance in Sudan, agrarian changes in the Gezira scheme indicate a pattern in which major changes are implemented gradually and peak with the 2005 Act, with policy reforms mediated through the political marketplace and personal networks, as presented by Alex Dewal in his famous book *The Real Politics in the Horn of Africa*. Through this politically marketised logic, agrarian governance and public resources are distributed along personalised networks rather than impersonal institutional arrangements. As the scheme's following of the 2005 act is based on political patronage, which left its management lacking the necessary technical know-how to run it, this sheds light on the agrarian governance of irrigation in the Gezira scheme and the situation of irrigation amid the mess of political patronage networks. The Gezira Scheme has experienced a significant decline in water management performance over the past few decades. This decline led to several institutional changes to put the system back on track. The main organisations involved in water ma-

agement at the scheme are the Ministry of Irrigation & Water Resources (MOIWR), the Sudan Gezira Board (SGB), and the Water Users Associations (WUAs). Different combinations of these organisations were established to manage the irrigation system. This pattern suggests inefficiencies in water allocation and low productivity.

The 2005 Act tenancy agreement: a continuation of colonial agrarian subjectivity

Besides challenging the decentralised irrigation governance thesis, the interviews and relevant literature also show that the 2005 Act has not significantly altered the core elements of tenancy agreements or their associated agrarian subjectivities, despite the limited transfer of responsibilities. Previous studies have focused more on the forms of governance resulting from the 2005 agrarian reforms and have highlighted their policy impacts on the agricultural system, particularly issues such as irregular water delivery and maintenance shortcomings. As a result, they do not reveal the persistent colonial structures that continued through these changes. The ethnographic statements discussed above confirm that, despite the farmers' association, control of irrigation remains a key tool of governance, as the pre-act situation persists.

Yes, no one can deny the highly destructive impacts on the agricultural system and the unequal conditions of reproduction caused by the patronage policies mentioned earlier, but this is not a break in the logic; rather, it can be seen as a reconfiguration within the colonial logic itself. This claim is also supported by the interviews, which show that the tenancy's main elements continue to function as both tenants and labourers, and as strict subjects within the colonial scheme's arrangements, as stated. While the dismantling and marginalisation of the relatively stable local subsistent and moral economies of the tenants and labourers (Abashera, 2019; Elkreem & Jaspars, 2025), but even the inherited system could relatively satisfy or prioritise

the local subsistent systems, as the colonial agricultural system was designed as an extractive, export-oriented scheme, treating the local system of knowledge and moral-economic considerations as backward and of a savage nature (Bernal, 1997).

Reflecting the principle of modernist simplification that marginalises the meso (Scott, 2020). In fact, the persistence and the reproduction of the differential agrarian subjects in the scheme are not detached from the nature of nationalism in the post-colonial Sudan, which is inherited from the colonial era. Drawing on (Abdelhay et al., 2016; Assal, 2014) that the Sudan, as a postcolonial country, is still functioning along the racialised political identities constructed in the colonial rule divide and rule policy. Sudan, as a multi-ethnic and religious country, should be governed through a multicultural and equal citizenship approach, but has been built along an exclusively ethnic basis, which is a key factor behind the country's long history of instability and wars. The country has been controlled by Riverine Ethnic Arab Northern groups, favouring Arab communities over other non-Arab groups, such as West Africans and Southerners. Along this general ethnified form of citizenship, it is no surprise that the tenancy regime persists and differentially excludes West African while including and recognising the local Arab groups.

However, what happened following the act of 2005 was the deepening of the modernist sense through the systematic erosion of the local subsistence and moral economies of the tenants and farmers in the interest of a harsh extractive economy led by free-market forces. Reflecting what Polanyi (2002) called the dis-embedding of the economy from society, this separation of economic activity from social and moral expectations is a consequence of the free-market economy. Therefore, the agrarian logic is not about quality but about degree, within the same colonial framework, but more severe on local communities and also accompanied by systematic patronage politics enacted by the Islamised

regime (1989-2019) to stabilise and sustain its regime through the economic empowerment and the Politics of Belly presented by (Bayart, 2009) where the resources and wealth are distributed along patronage networks and narrow, biased political and social networks and also echoes the Real Politics approach of De Waal (2015) where political loyalty is bought and sold as a commodity in the political marketplace.

The persistent colonial epistemological structure and the counter-conduct

The described colonial centralised hydraulic and governance structure that formulated the conduct of the population, in the sense of Foucault (Foucault, 1978) Concept and categorising them into distinct economic and political subjects does not mean being fully hegemonic and controlling, but also contested. These disruptive impacts and the disengagement of the economic from the social were harshly challenged through everyday forms of resistance and systemic public contestation and protest.

Tenants and labourers have contested these disruptive elements of the 2005 Scheme Act in the Gezira region through organised participation in the December 2018 protests, which called for reform of the Gezira Scheme. The everyday resistance practices have been documented through participant-observation notes collected during visits to the Almanaqil agricultural extension and the eastern part of the original Gezira scheme, particularly in Alhasahisa locality. Tenants in the villages of Wad Aaabas, Managza, and Abushinaib use discursive resistance as a form of counter conduct. They describe these changes brought by the 2005 Act with words such as: Destruction, Dismantling, Conspiracy, and Starvation. The primary concerns and demands behind these terms relate to preventing the loss of their agricultural land and protecting their subsistence and social commitments. In this context, the free market is viewed as an enemy of their subsistence economies, as market pressures threaten

to force them to sell their produce and thereby lose their main livelihood. Similar language is used in the villages of the Almanaqil extension, including Um-Aligour, Hilat Bashir, and Banat, to describe the changes to the Act, emphasising destruction and conspiracy, and demanding the dismantling of patronage politics in the scheme's governance to enable proper infrastructure functioning. Through interviews with tenants, they diagnose the scheme's problems as requiring the reform of irrigation infrastructure and a return to pre-2005 relations. This stance is understood as structurally rooted and reflected in the tenancy agreements. While the structural position of the West Africans led them to interpret the scheme's issues using language similar to the tenants', they also expanded their demands by reconsidering the tenancy regime, describing it as unjust. They both agreed to reject the liberalised agrarian transformation, as it would deepen their marginalisation and threaten their moral and economic economies. However, the counter-conduct also echoes the colonially based tenancy-stratified agrarian citizenship. They diverged over the position of the tenancy regime entitlements and their recognised actors. This divergence took a sharper form in the December Revolution 2018-2021 protests. According to Ibrahim (2021) The master's thesis examined the social forces in the Gezira region that participated in the revolution and the main demands they raised—concluded that the majority of the study sample, 111 respondents, chose the reform of the Gezira scheme as a main demand behind their participation in the protest. However, the tenants were incorporated into the famous Farmers' Union. At the same time, the West African organisations themselves, under the Alkanabi Congress, demanded the dismantling of the tenancy regime in favour of reconstructing a more inclusive one that included them. The divide in the public systems of resistance over the tenancy regime is one piece of evidence that could be taken to support the article's main claim that the 2005 Act has reconfigured the form of go-

vernance but not the logic of governance inherited from British colonial rule.

Conclusion

This article argues that the Gezira Scheme should be seen not just as an agricultural system but as a colonial epistemological construct that continues to shape land, labour, and population through persistent logics of simplification, differentiation, and control. Using Scott's concept of simplification and legibility, the scheme remains a project that renders complex social and ecological relations administratively manageable. Simultaneously, Mamdani's bifurcated governance framework, reflecting the country's crisis of nationhood, demonstrates how different forms of recognition continue to influence the positions of tenants and labourers. From a Foucauldian perspective, these arrangements serve as techniques of governing conduct, reproduced through institutional reforms and daily practices. The changes introduced by the 2005 Act, often regarded as a move towards decentralisation and liberalisation, are thus not a break but a reconfiguration of these underlying logics. Moreover, these structures are neither absolute nor uncontested: everyday negotiations and more visible acts of resistance—such as participation in the December 2018 revolution—constitute counter-conduct that challenges and reshapes governance. In this manner, the Gezira Scheme reveals the enduring nature of colonial modes of ordering, even as they are continuously contested and transformed.

References

- Abashera, E. (2011). *Gezira Agricultural Scheme In Sudan and Crime of Code of 2005*. Sudanese economist Association.
- Abashera, E. (2019). بعض قضايا الاقتصاد السياسي في مشروع الجزيرة الزراعي في السودان [Some Political Economy Issues in the Agriculture Gezira Agricultural Scheme of Sudan]. Musast Aligtisad Alsudani.
- Abdelgalil, E. E. B., & Adeeb, A. M. (2015). Impact of changing policies on agricultural productivity: A case of the Gezira scheme, Sudan. *International Journal of Sustainable Agricultural Management and Informatics*, 1(1), 49–60.

- DOI <https://doi.org/10.1504/IJSAMI.2015.069045>
- Abdelhay, A., Makoni, B., Makoni, S. B., & Mugaddam, A. R. (2016). The sociolinguistics of nationalism in the Sudan: The politicisation of Arabic and the Arabisation of politics. In *Language Planning in Africa* (pp. 112–156). Routledge.
- Ahmed, O. S. (2025, April 6). The Gezira Scheme and the Post-war Options. Alrakobe Newspaper. ([Link](#))
- Assal, M. A. (2014). Struggles of citizenship in Sudan. In *Routledge Handbook of Global Citizenship Studies* (pp. 196–204). Routledge.
- Barnett, T. (2019). *The Gezira scheme: An illusion of development*. Routledge.
- Bayart, J.-F. (2009). *The state in Africa: The politics of the belly*. Polity Books, pp.370, 2009, 9780745644370.
- Benson, S., & Duffield, M. (1979). Women's Work and Economic Change: The Hausa in Sudan and in Nigeria. *The IDS Bulletin*, 10(4), 13–19.
DOI <https://doi.org/10.1111/j.1759-5436.1979.mp10004004.x>
- Bernal, V. (1997). Colonial Moral Economy and the Discipline of Development: The Gezira Scheme and 'Modern' Sudan. *Cultural Anthropology*, 12(4), 447–479.
DOI <https://doi.org/10.1525/can.1997.12.4.447>
- Bushara, M., Omer, E., Elsir, S., & Ahmed, A. (2006, November 30). The Socio-economic Characteristics of Camp Inhabitants In *the Gezira Scheme: Some Empirical Findings* By.
- Clarkson, A. I. (2005). *Courts, councils and citizenship: Political culture in the Gezira scheme in condominium Sudan*. Doctoral Thesis.
- De Waal, A. (2015). *The Real Politics of the Horn of Africa: Money, War and the Business of Power*. John Wiley & Sons. ([Link](#))
- D'Silva, B. (1986). Sudan's irrigated subsector: Issues for policy analysis. US Department of Agriculture, Economic Research Service, International 277904, United States Department of Agriculture, Economic Research Service.
DOI <https://doi.org/10.22004/ag.econ.277904>
- Duffield, M. (1983). Change among West African settlers in northern Sudan. *Review of African Political Economy*, 10(26), 45–59. DOI <https://doi.org/10.1080/03056248308703528>
- Elkreem, T. A., & Jaspars, S. (2025). Sudan's catastrophe: The role of changing dynamics of food and power in the Gezira agricultural scheme. *Disasters*, 49(1), e12663.
DOI <https://doi.org/10.1111/disa.12663>
- Elshaikh, A. E., Yang, S., Jiao, X., & Elbashier, M. M. (2018). Impacts of Legal and Institutional Changes on Irrigation Management Performance: A Case of the Gezira Irrigation Scheme, Sudan. *Water*, 10(11), 1579.
DOI <https://doi.org/10.3390/w10111579>
- Foucault, M. (1978). *Security, Territory, Population Lectures*. At the Collège De France, 1977-78. Palgrave, Macmillan.
- Gaitskell, A. (1952). The Sudan Gezira Scheme. *African Affairs*, 51(205), 306–313.
- Gaitskell, A. (1955). The Gezira Scheme. *Journal of the Royal Society of Arts*, 104(4966), 67–86.
- Goelnitz, A., & Al-Saidi, M. (2020a). Too big to handle, too important to abandon: Reforming Sudan's Gezira scheme. *Agricultural Water Management*, 241, 106396. DOI <https://doi.org/10.1016/j.agwat.2020.106396>
- Goelnitz, A., & Al-Saidi, M. (2020b). Too big to handle, too important to abandon: Reforming Sudan's Gezira scheme. *Agricultural Water Management*, 241, 106396. DOI <https://doi.org/10.1016/j.agwat.2020.106396>
- Gupta, A., & Ferguson, J. (1997). Culture, power, place: Ethnography at the end of an era. *Culture, Power, Place: Explorations in Critical Anthropology*, (July), 1–29.
- Ibrahim, I. (2021, May). *Rural Transformations and the 2019-2021 Revolutionary Movement in Sudan: The case of Gezira state and Al-Manaqil demonstrators* [M.Sc. Dissertation]. Doha Institute for Graduate Studies.
- Independent Arabia. (2025, December 16). 'War of the Generals' undermines Sudan's largest agricultural project |. Independent Arabia. ([Link](#))
- Leve, L. (2022). Interlocutors: Language, Power and Relationality in Decolonial Ethnographic Practice. *Fieldwork in Religion*, 17(1), 47–61. DOI <https://doi.org/10.1558/firn.22603>
- Mahgoub, B., Mirghani, O., & Ali, S. (2017). Optimizing the cropping pattern in Gezira Scheme, Sudan. *International Journal of Scientific and Research Publications*, 7(2), 22.
- Mamdani, M. (2012). *Define and rule: Native as political identity*. Harvard University Press.
- Mamdani, M. (2018). *Citizen and subject: Contemporary Africa and the legacy of late colonialism*. Princeton University Press.
- Marcus, G. E. (2012). Multi-sited ethnography: Five or six things i know about it now 1. In *Multi-sited ethnography* (pp. 16–32). Routledge.
- McLoughlin, P. F. (1963). The Sudan's Gezira scheme: An economic profile. *Social and Economic Studies*, 179–199.
- Osman, I. S. E. (2015). *Impact of improved operation and maintenance on cohesive sediment transport in Gezira Scheme, Sudan*. Wageningen University and Research.
- Polanyi, K. (2002). The great transformation. *Readings in Economic Sociology*, 38–62.
- Salman, S. M. A. (2010). The World Bank and the Gezira Scheme in Sudan Political Economy of Irrigation Reforms. World Bank. ([Link](#))
- Scott, J. C. (2020). *Seeing like a state: How certain schemes to improve the human condition have failed*. Yale University Press.
- Sikainga, A. A. (2010). *Slaves into workers: Emancipation and labor in Colonial Sudan*. University of Texas Press.