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Chapter 14
The Borgeig Pump Scheme in Wartime Colonial Sudan (1942–1945): Social Hierarchies, Labour and Native Administration

1 Introduction

In *Living with Colonialism*, the historian Heather Sharkey argued that the study of colonial bureaucracy is an essential field of historiography because many early nationalist leaders and officials were educated for and "grew up" – professionally, economically, and politically – through it; they "shaped and were shaped by its system" (Sharkey 2003: 119). By examining how state-citizen relations are learned by those who later come to positions of power, studies such as these can capture historical continuities in governance: coloniality is not merely a question of inherited structures, but also of incorporated values of leadership and hierarchies in the distribution of power and resources (Quijano 2007). Bureaucracy as a practice for governing thus belongs to those historically grown institutions an analysis of which not only addresses the shortcomings of conventional periodisation (colonial/post-colonial) but also traces the long-term dynamics of relations among humans in changing areas of co-existence and rule (Sharkey, Vezzadini and Seri-Hersch 2015).

If we expand this idea to human-environment relations under colonialism, this area of study also touches on the broader problem of state-resource relations (Beinart and Hughes 2007). In Sudanese historiography, these relations have been associated with several wide areas of political contestation and research, such as water resource management and agricultural development. A number of major issues, including Nile water politics, have attracted a sizable body of scholarship, including historical works in which the notion of hydropolitics has linked them to political ecology (see, for instance, Tvedt 2004). This literature also addresses irrigated agriculture as a historically contested production site "at the junction between state, nature, and capital" (Bertoncin *et al.* 2019).

These are the general concerns this chapter ties in with. As a case study of an irrigation scheme in late colonial Sudan, it applies a general research interest in bureaucracies during that period to a specific project of agricultural food production. It approaches this production as a form of labour used to transform environments and manipulate plant growing processes so as to be aligned with human

https://doi.org/10.1515/9783110719611-015

nutritional needs. The question to be investigated here is how the priorities of this food production and the subsequent organisation of labour have been determined in the specific historical context the chapter studies, and by whom. This issue is also embedded in more general questions about the continuities between colonial and post-colonial rule. The chapter looks at how the aims and priorities of non-resident power elites were related to the aims and priorities of the resident population.

The specific case examined here is the Borgeig Scheme, a long-term residential government pump scheme in Sudan's Northern Province, in the northern part of the Sileim Basin.[1] The scheme was started by the (British) Sudan Government as part of the British Empire's so-called war effort during the Second World War, with the declared aim of producing grain for the armed forces and increasing the Sudanese population's self-sufficiency in food. It was born out of (previously abandoned) plans for the so-called Kerma Basin (today's Sileim Basin) that go back to before the First World War, when the area was one of the first to be considered for both private and public investment in irrigated agriculture under British rule (Allan and Smith 1948: 626–627; Ahmed 1970: 275–276). These plans were themselves a part of attempts to remedy the Anglo-Egyptian Condominium's heavy reliance on subsidies from Egypt by promoting commercial agriculture, while also fulfilling a growing need for cotton and self-sufficiency in grain (Kapteijns and Spaulding 1991: 95; Serels 2007: 65; Mollan 2008: 95–96).

The development of the Borgeig Scheme during and after the Second World War was also designed to implement a transition from a Native Administration board dominated by the local aristocracy to a tenant-elected Farm Board as part of a broader move towards "modern" self-administration that accompanied the transition to a Sudan ruled and administered by Sudanese ("Sudanisation"). But the transition was hindered by an aggressive rejection on the part of both the British and Sudanese authorities of the political demands of a growing labour and nationalist movement in the 1950s. The local aristocracy, in league with a growing merchant class, sought to co-opt this transition in order to maintain its grasp on senior administrative positions. These later developments will be alluded to briefly below.

The real focus of this chapter is on the transformation works carried out during the early years of the scheme (1942–1945), when forests and pastures were turned into irrigation canals and agricultural fields. The observations to be drawn from the documentary materials are guided by a study of the organisation of labour, specifically who was intended to provide it and who actually provided it, and under

1 The Sileim Basin is a stretch of low-lying land east of the Nile that reaches as far as Timinar to the south, about 10 kilometers south of Dongola, and Abu Fatima, the northern edge of Kerma, to the north. It is 73 kilometers in length and between 3 and 8 kilometres wide, an area of about 70,000 feddan (El-Dishouni 1989: 11). See https://www.google.com/maps/@19.3767659,30.4240926,81256m/data=!3m1!1e3.

what conditions, with a focus on the relationship between coercion and persuasion in the recruitment of labour, tracing the tensions of the negotiations on goal-attainment between the requirements of the War Supply Department and the requirements of local food security.

The core argument looks at how two sets of boundaries – the line between "external" (others') and "internal" (own) interests, and between the "proper" and "wrong" pursuit of these interests – shifted constantly between the actors involved. The successful manipulation of plants such as grains, legumes and fruit-bearing trees towards "good" yields may have emerged as a shared concern, but for whose benefit and based on whose directions it was to be achieved was a matter for negotiation that entangled both aspects – not always for the benefit and success of one set of actors. The case study emphasises this negotiation by describing how a large-scale geopolitical contestation, the British Empire's war effort as an ostensibly unified supraregional project, was simultaneously interrelated with, dependent on, and in conflict with local food production, which was also intended to serve the nutritional and other economic requirements of the population of the areas of production.

The specifics of this negotiation are observed here through one of its nodal points – mid-level colonial administrators, who had to translate between different circumstances and levels of interest, be they the Empire's war machine, the Sudan Government's leadership, the local aristocracy, grain traders, landowners, technical personnel, or farmers. This multipolar – albeit hierarchised – negotiation to organise food production is made visible by a corpus of communications represented by letters and reports held at the Sudan Archive in Durham as part of the official and private papers of Laurence Medlicott Buchanan (1906–1991), who was the District Commissioner in charge of the Meroë-Dongola district, which included the Borgeig Scheme, from 1942 to 1945.[2]

1.1 Nile Flood Control

Control of the Nile from source to delta was one of the founding elements of British imperial interest in North-East Africa (Tvedt 2011). While imperial counter-projects, whether Ethiopian or French, were successfully held in check during the first

2 See catalogue under https://reed.dur.ac.uk/xtf/view?docId=ark/32150_s147429914p.xml. An extended visit to the Sudan Archive in Durham and fieldwork in Borgeig was made possible by the Urgent Anthropology Fellowship granted to me 2016/2017; I thank the Anthropologists' Fund for Urgent Anthropological Research, the Royal Anthropological Institute and my colleagues at the British Museum for this opportunity. I also thank my hosts in Kerma and Borgeig, as well as local historiographer Abū Bakr al-Khayrī for their hospitality and generous sharing of information.

half of the 20th century, securing full control of the waters themselves remained an unfinished task. The Nile flood levels fluctuated significantly every year, and the consequences of this annual uncertainty were a constant subject of discussion, including among engineers, who mostly looked at the issue from an Egypt-oriented and/or irrigation volume perspective, and administrators and agriculturalists, whose ability to obtain good harvests depended on good water levels, meaning that they were neither too low nor too high. The extent to which both, control and output, could be achieved was a potential source of imperial pride as much as it was of "imperial anxiety" (Grinsell 2020).

The importance of the ultimate subordination of water uses to irrigation concerns in Egypt never diminished under British rule (see for instance Newhouse 1939) or even in early independent Sudan, as confirmed – contrary to the opinion of Sudanese experts (Abdalla 1971: 329) – by the 1959 Nile Waters Agreement. Projects in other riparian countries had already been considered and partly implemented in the decades preceding their independence, not only for local irrigation schemes but also for hydropower installations; however, their initiators rarely diverged from the instrumentalising colonial gaze on landscapes and people alike (see Shamir 2018 on Uganda's Owen Falls Dam). After the Second World War, this gaze shifted, albeit not without serious disagreements, towards establishing national economies out of the imperial construct of a united Nile Valley economy, a shift that as historian Alden Young has argued can be traced through the minutiae of financial planning (Young 2018: chapter 2).

It is also relevant to observe these shifts from imperial to domestic concerns in the late colonial period through the individuals who held positions at the points where administrative and professional responsibility was to be handed over to independent states such as Sudan. This might entail a detailed understanding of both the goals of and the ways of imagining and pursuing Sudan's hydrological and agricultural future, and by whom and for whom it would be secured.[3] It is at this stage that a closer look at the inner workings of local bureaucracies seems to be warranted, in order to examine, for example, to what end and in what way control over landscapes and people's labour force was sought to be established.

3 This has been attempted, for instance, by observing the professional training taking place at central academic institutions (e.g. Zetterstrom-Sharp 2020 on agricultural scientists at Khartoum University).

1.2 Governmental Pump Schemes and Sudan Studies

The foundation of large-scale irrigation schemes in Sudan, especially those devoted to cotton production, has received a great deal of attention in Sudan Studies: like few other enterprises, they represented the "direct involvement of the colonial administration in the capital accumulation process" (Shaaeldin 1984: 27). Through the British Cotton Growers Association and the Sudan Plantations Syndicate, these schemes also incorporated agricultural development in Sudan into the competitive dynamics of global trade and subordinated it to imperial interests in their products.

The historiography of irrigated agriculture in Sudan is dominated by the gravity-irrigated Gezira Scheme because of its size and economic, political, and social importance. In fact, the whole area around and immediately upstream of the confluence of the Niles has monopolised developmental imagination since the First World War and still forms the core of the so-called Hamdi triangle in which the centripetal political economy in the country has been entangled (Verhoeven 2015: 136).[4] The Gezira Scheme has therefore invited a wide range of scholarship; the study of administration-tenant relations, for instance, has been covered, from classical debates in agricultural development (see, for example, Bernal 1988 on coercion versus incentives) and emerging forms of governance (Clarkson 2005 on tenant elitism) to irrigation systems as actor-networks (Ertsen 2016 on human and non-human agency).

However, there are several reasons to look more closely at "smaller" – but still sizable – schemes as well. Large-scale irrigation in Sudan made use of a number of techniques that required different conditions in terms of design, finance, and tenancy, from those that depended on the annual Nile flood – basins flooded completely or with canal structures that used a water flow caused by gravity – to those that used the reservoirs that formed behind dams to provide constant irrigation through suction pumps. Depending to their position, size, and function, subsequent irrigation schemes had a different, though mostly significant, impact on the areas where they were implemented, be it their importance to local socio-economic history (on the Gash Delta, see Salih 1985), their origin in instances of large-scale displacement (on New Halfa see Sørbø 1985), or even their non-completion, reflecting the fate of political priorities over the course of decades (for example, plans for the Jonglei Canal, Collins 1990). Each scheme was to a different extent also relevant to local agricultural development, for instance as a pioneer – or invasive spearhead – of mechanised farming or new irrigation technologies (such as the

4 A map entitled "The Sudan main grain production belt" (Jefferson 1950: 9) illustrates how the colonial gaze had already established this perception of "core areas" rather than diversification and complementarity as principles of economic development.

pilot projects outside Gezira discussed in Jefferson 1950). Looking at various water schemes also makes it possible to underline the diverse reasons why such schemes were established in colonial and post-colonial times, thereby shedding light on the fine print between the broad lines of agro-political history.

The Northern Province rarely features prominently in historical works on irrigated schemes, and when it does, it is mostly with a focus on cotton-growing schemes (compare Simpson 1991: 103–105 and 105–111). However, the government pump schemes for food production that developed in this region count among the most consistent government commitments to agriculture, and as residential schemes, they offer insights into one of the most sustainable reorganisations of labour and everyday social life by government agents, who often promoted them as a way to gain privileged access to land and steady incomes. This is also significant because at the same time the region was experiencing some of the earliest instances of extensive private investment in agriculture in Sudan in the first half of the 20th century, in which the close interweaving of political favouritism and investment and trade opportunities prepared and foreshadowed the political economy of post-independence Sudan. During the 1920s, the slow introduction of mechanical irrigation pumps – because it was heavily regulated – brought some previously unavailable areas under cultivation, first in the form of pump schemes managed by the government or selected individual investors, and then through village-based cooperatives, which were supported by the authorities for a brief period in the mid-1930s (Serels 2013: 166–168).

During the Second World War, agricultural production fell heavily under the influence of the War Supply Department, which regulated the domestic circulation of grains, including a ban on exporting sorghum (Serels 2013: 173).[5] The scarcity of commodities in the context of a war economy allowed successful independent cultivators and traders to charge high prices, which in turn enabled them to accumulate capital. When restrictions on pump licences were lifted after the war, investment in new private schemes soared, mostly benefitting the land-owning elites and well-connected traders through arrangements with tenants that were heavily skewed to the formers' advantage while shifting the economic risks to the latter (Sikainga 1996: 97). Recurring food crises therefore still favoured a limited number of scheme-owners and merchants among the political elite, who benefitted from the subsequently high prices (Serels 2013: 176).

5 This was based on the Defence of the Sudan (War Supply) Regulations Act 1941 and the War Supply Movement of Good Restriction Order 1942.

1.3 Food Security in the Northern Province

According to the historian Steven Serels, by the 1920s and 1930s colonial officials were convinced that the Northern regions around the Nile were not able to feed themselves and were thus best served by "encourag[ing] outmigration to fertile rainlands in the Jazira, Qadarif and Qallabat" (Serels 2013: 164). Instead of improving local production, they pursued "government-owned large-scale commercial agriculture schemes and [. . .] the economic interests of a small group of indigenous elites" (Serels 2013: 164). Again in the 1950s, the geographer K.M. Barbour argued that the northern Nile areas were overpopulated relative to the amount of arable land and therefore generated a good deal of outmigration, with only a few sizable areas south of the Borgeig pump scheme still available for agricultural development (Barbour 1959: 254–255). This "scarcity" was due partly to the land ownership structures and inheritance mechanisms and the consequent fragmentation of land in the region, and partly to the long-term effects of land registration (Ille 2018). The sociologist Hassan Abdel-Ati has also highlighted the circumstance that the motivation to establish governmental pump schemes in the Northern Province was related as much to demands made by the higher authorities to the local administration to produce a certain output of crops as it was to the needs of the resident population during the frequent food shortages and famines (Abdel-Ati 1983: 112).

The Second World War crystallised this concomitance of external (non-resident) production demands and internal (resident) consumption needs. The external demands were clearly shaped by the so-called war effort, which included the contributions that were expected from the different regions of the British Empire. In Sudan, apart from soldiers, they entailed contributions to the Middle East Supply Centre, which distributed grain to the region's garrisons (Serels 2013: 171). An additional wheat production drive originated with a request to the Sudan Government to make the country itself self-sufficient in wheat (Sudan Government 1950a: 63). Accordingly, limits on exports as well as "a complex system of price controls, rationing and subsidies" were introduced, but this did not prevent inflation, especially as regards food prices, from reaching 71% in 1945 (Cross 1997: 238). When food production remained insufficient after 1939 due to low Nile floods and additional troop movements, cotton-growing was halted on all governmental schemes in the Northern Province and additional schemes such as the Borgeig Scheme, with 10-feddan holdings of government land in return for payment of an annual rent, were developed (Hewison 1948: 749; Serels 2013: 172).

Interestingly, these schemes were presented by colonial administrators primarily as a tool to combat local food insecurity. Walter Ferguson Crawford, the Governor of the Northern Province (until 1944), claimed that Borgeig and similar

schemes were "the best insurance against famine and distress in years of low Nile" (quoted in Hewison 1948: 752). This description of the scheme as an oasis in an area of scarcity was echoed in the 1948 Annual Report of the Sudan Government: "A good example of the ordered prosperity which can be secured for local cultivators by a well organised undertaking" with "conditions [. . .] probably unequalled anywhere in the country" (Sudan Government 1950b: 163). However, different assessments circulated in the Empire's administrative circuits, in which this kind of "overselling" of what the government would provide was problematised. During the later stages of the Second World War, the War Supply Department official R. J. Hillard, referring to soldiers returning home from the front in North Africa, remarked in a letter to Buchanan that "the locals are getting an exaggerated idea of 'standard of living' through their friends and relatives coming on leave from the armed forces for whom much too much luxury has been provided."[6]

Both positions reflect differing external projections of what an acceptable livelihood would have been for the "local population". Apart from appropriating the definition of what was sufficient for this population in terms of quality and quantity, the term "local" conflated a wide range of socio-economic situations in societies in which hierarchies were both reflected and challenged by the way in which schemes such as the Borgeig Scheme were organised.

1.4 Native Administration, Farms Boards, and Labour Recruitment

A closer look at administration-tenant relations in the northern government pump schemes reveals a tension between administrative conservatism and innovation, as they reflect in their own way the ongoing transition from Native Administration ("tribal" representation) to local government (municipal representation). In 1948, J.W. Hewison, who was Inspector of Agriculture for the Northern Province at the time, noted that the government schemes were undergoing – or it was intended that they should undergo – a gradual shift of responsibility from departmental staff to local farm boards, with [colonial] officials acting as technical advisers. He quoted John Douglas Tothill, Director of the Sudan Department of Agriculture and Forests (1939–1944) and editor of an influential handbook (Tothill 1948), who in 1942 outlined a general pathway for development towards agricultural societies formed

6 Letter from Hillard to Buchanan, 25 September 1944, Sudan Archive, University of Durham, UK, 797/6/153 (hereby SAD). He related this to the existence of flourishing black markets in the war areas, not to high salaries.

and led by tenants. The first step, Tothill asserted, could only be taken through advisory committees initially appointed by the governor and later elected by the tenants, which would be mostly "dominated by the Omdas and Sheikhs" (Hewison 1948: 751), the middle and lower levels of the Native Administration respectively. They would be "hopelessly inefficient" at first, and would have to be taught to be useful by a resident Agricultural Officer, as well as the Inspector of Agriculture of the province, or so the claim went. The Inspector of Agriculture would not have to stay on site once the committee was capable of managing the agricultural society alone and, as Tothill put it, "[t]he Government will remain as friendly landlord and as the provider and distributor of water" (Hewison 1948: 751).

The actual official line differed from Tothill's 1942 proposals with regard to the name, composition, and function of these societies, as it opted for so-called farm boards that were to be kept separate from local government. The tenants were to choose their members from among their own number, but their functions would be dedicated solely to executive management and finance (Hewison 1948: 752). As we will see in a later section ("The Enduring Power of the Local Aristocracy"), however, these institutional innovations did not mean immediate, or even medium-term, emancipation from Native Administration structures or, in the area under review here, from the dominant local aristocracy.[7] A conceptual change from Native Administration to local government, not to mention to self-administration, was not at all a straightforward path, especially in the view of long-serving administrators like Buchanan. In contrast, this change, as described in the 1937 Local Government Act, was seen by contemporary Sudanese politician Muḥammad Aḥmad al-Maḥjūb as a timely evolution from the direct central – military – rule established by the early Anglo-Egyptian administration to the indirect rule policies (Native Administration) carried out in the 1920s and early 1930s. He welcomed a new division of labour between central and local government on the path to independence (al-Maḥjūb 1945: 78–86).

These ambiguous views of Native Administration and local government are relevant here, as the recruitment of labour, especially for public works, was one of the central functions the British authorities allocated to the Native Administration leaders. In the words of the then Civil Secretary Douglas Newbold (1939–1945, quoted in Henderson 1953: 495), based on his self-identification as an agent of a developmental state: "Economic development of any community depends on the energy and derives from the consent of the individuals of that community. This consent and energy can only satisfactorily be engendered through the Native Administration authorities." Indeed, Article 10 of the Local Government (Rural

7 On "neo-traditional authority", see Vaughan 2010.

Areas) Ordinance of 1937 maintained the local authorities' right to enlist "able-bodied natives" to carry out public works for up to ten days a year (see the ordinance in Abushouk and Bjørkelo 2004: 251).

However, the development of the workforce in Sudan was not at all confined to closed communities and their authorities, whatever the basis for their leadership position may have been. In addition to the areas that were being urbanised, the large irrigation schemes attracted a significant number of labourers from several regions within and outside Sudan, including escaped slaves and landless indentured workers from other agricultural areas. This created, well into the 1930s, a contradiction between the official anti-slavery rhetoric and actual discouragement from freeing slaves and the maintenance of landless individuals as a reserve of cheap labour to serve the economic hierarchies established by the land-owning "agrarian elite" (Kapteijns and Spaulding 1991: 97; see also Daly 1987: 439–446; Vezzadini 2010). But shortage of labour occurred even in large government schemes, such as in the Gezira scheme from 1942 onwards, in part due to the different wage levels in different labour markets, which gave bargaining power to labourers who were able to circulate freely. It was the Local Government Ordinance that then made it possible to coerce workers into such schemes, at least for ten days a year (Sikainga 1996: 133), which hints at one of the ways in which "Sudanisation", the gradual transfer of administrative power to Sudanese officials, did not mean emancipation for everyone.

The Northern Province was not only one of the main instances in which modernised capitalist forms of production were intertwined with, or even based on, precolonial patterns of workforce exploitation; it was also one of the regions in which measures against forced labour, which were finally endorsed and increasingly implemented during the 1930s, had begun – alongside general economic changes – to "deprive" the land-owning classes of their main source of labour. In Dongola province, where the Borgeig Scheme would be commenced in the 1940s, officials were still trying to stop the flow of slaves outside the area in the 1920s. Nevertheless, landowning farmers had to rely more and more on family labour or sharecropping arrangements with the landless (Sikainga 1996: 104–105), which became the main form of contract farming in the second half of the 20th century.

There was also another dynamic that will only be touched on briefly in this chapter. In the mid-1940s, the hitherto mostly unrelated worker strikes began to converge into organisational structures that finally gave way to a nascent labour movement (Fawzi 1957; Cross 1997). Another driving force developed with the closer connection between labour issues and anti-colonial nationalism, which strengthened after the Second World War and became radicalised as a result of a backlash from the Sudan Government. The government's response was partly at odds with evolving labour policies in Britain itself (Taha 1970: chapter 3; Vezzadini

2017) and was far from being unchallenged, even within the colonial administration (Curless 2013). In general, these dynamics of "unwilling" labour, where government intentions diverged from what were legitimate demands in the eyes of those who were expected to carry them out, are revealing instances of the prevailing principles of governance. The killing of over 300 tenant farmers on the private Joda Scheme near Kosti on 19 February 1956 by the police forces of the young independent government is a case in point (Ali 1983; Madanī 2008), indicating how violent suppression of protest remained a legitimate tool for governing in the eyes of the ruling elites.

These strands of development form the context of this case study. While several of the dynamics outlined here also appear in the source materials, the primary value of these archival documents lies in the opportunities they offer to analyse how various kinds of "resistance" – including by forces of nature – were micro-managed at the mid-level of the colonial administration, where top-tier requests were translated into the locally achievable.

2 Colonial Officials and the Launch of the Borgeig Scheme

In January 1942, the Governor of the Northern Province communicated privately and confidentially to Buchanan that self-sufficiency in wheat was the order of the day, since Japan's entry into the war had escalated it and increased the Empire's demands for war contributions from its provinces.[8] In the years that followed, administrators in the Northern Province debated the issue of how to increase crop production, specifically wheat. They also prepared a more extensive campaign to expand cultivation and requisition agricultural produce from public and private schemes. At that point, British presence in the Northern Province had been strongly reduced, the District Commissioner and some agricultural inspectors being the only British staff between Wadi Halfa and al-Damir.[9]

The local administration of Meroë-Dongola district was composed of District Commissioner Buchanan[10] – who answered directly to the Governor of North-

8 Letter from Crawford to Buchanan, 7 January 1942, SAD 797/4/2.

9 Letter from Buchanan, 17 January 1944, SAD 797/6/11.

10 The following details are based on the catalogues and Sudan staff lists held at the Sudan Archive, University of Durham.

ern Province at al-Damir[11] – and Assistant District Commissioner (until January 1944 Sub-Inspector) Muṣṭafā Nadā Bey, an Egyptian, both of whom were based in Meroë. Below the District Commissioner came the position of "Mamur" (from the Arabic *maʾmūr*), which was held by Muḥammad ʿAbd al-Rāziq in 1943 and by Sharaf al-Dīn Muḥammad from 1944 on. Based in Dongola, the Mamur was supported by sub-Mamurs.[12] The sub-Mamur in Dongola, Nūr ʿUthmān, was directly involved with everyday business *vis-à-vis* the local government.[13] The Department of Agriculture and Forestry was represented by Inspectors of Agriculture, and a young Bachelor of Science, Robert F. Laing, was appointed in Kerma, and later in Borgeig in July 1943.[14] The Inspectors had Sudanese Agricultural Officers below them, and in Borgeig it was Muḥammad ʿAwām Nimr from Barkal until 1946.[15]

By means of a study of letters and reports from the Buchanan papers, the following sections reveal the preparatory works for new agricultural land that was intended to balance the required volume of crop contributions with local food security.

2.1 "Unused" Land

When the Borgeig Scheme was instituted in 1942, officials took care to create it without incorporating any private land, thereby preventing both compensation claims and subsequent fragmentation as the result of sales. This limited legal transactions to individual contracts signed with individual tenants, and land issues remained between the government agents as scheme managers and tenants (Hewison 1948: 749; Niblock 1987: 28–29). Accordingly, only those parts of the Kerma Basin that had

11 Sir Walter Ferguson Crawford (1941–1944) and then Christopher B. Tracey (1944–1948), while E.G. Evans and E.A.V. de Candole were their respective deputies.

12 In 1945, the position of Mamur was replaced by a second Assistant District Commissioner.

13 Nūr ʿUthmān had a background in Gadarif (letter from Buchanan to Crawford, 20 August 1944, SAD 797/6/110) and reached the position of Deputy Assistant Civil Secretary in March 1948. ʿUthmān had previously worked in Buchanan's office. When he was transferred to Dongola permanently, it was Daʾūd ʿAbd al-Laṭīf who took over his tasks in Meroë, including the "Borgeig problems" (letter from Buchanan to Nūr, 5 June 1943, SAD 797/5/91). Daʾūd ʿAbd al-Laṭīf, the founder of the Sudanese Tractor Company (SUTRAC) which later became one of Sudan's largest conglomerates under the name DAL, had been trained as sub-Mamur by Buchanan and worked with him in Wadi Halfa (letter from Buchanan to Crawford, 1 May 1943, SAD 797/5/74).

14 Robert G. Laing was later the resident Inspector of Agriculture, based in Argo; he became Senior Inspector of Agriculture for Blue Nile Province in September 1951.

15 He was then appointed Inspector of Agriculture in Kadugli, and in 1951 Gezira Tenants Adviser.

been classified as government land were included,[16] leaving out most, but not all, of the land that had previously been used for cultivation or pasture.[17] Administrators treated this as especially important in the Northern Province, which was one of the few areas of Sudan where the narrow category of individual freehold land, meaning land registered before the First World War, was applied (Adam 1965: 87–101).

This principle to include only "unowned" and "unused" land is not only significant as regards the otherwise prevailing pattern of agricultural colonial and post-colonial development through schemes that transferred peasants' land to state and private investors, leading to the centralised management of previously self-directed, albeit not necessarily economically independent, labour (Bernal 1988: 93). The approach taken in Borgeig was also an example of the colonial "attempt to restructure the perceived empty African physical landscape into a radically different, modern rational environment" (Ertsen 2006: 148), based on its own categories of proper land ownership and use.

Here, the "emptiness" of the targeted land referred solely to formal land registration and the observation that the older irrigation technology, *sāqiya*,[18] could not bring water further into these areas than land that was adjacent to rivers, suggesting a level of accessibility that was limited to the riverain population and their agricultural development.[19] However, these eastern extensions of the riverain settlements had already been used as pasture by the resident population,[20] and the basin was partly covered by a stretch of forest at the edge of the desert, a conservation issue that will be revisited below. In fact, a part of Kerma's eastern lands had had a recent history of cultivation with water from wells that had been documented when *sāqiyya* land was charted in 1912[21] and was still mentioned in a handbook entry on the Northern Province in 1948. It was the associated depend-

16 This classification followed the stipulation of the 1925 Land Settlement and Registration Ordinance that "waste, forest, and unoccupied land shall be deemed to be the property of the government, until the contrary is proved" (Art. 16c). This was taken almost verbatim from the 1840 Crown Land (Encroachments) Ordinance No. 12.

17 Letter from Buchanan, 17 November 1942, SAD 797/4/83.

18 These wooden installations lifted water from the Nile using waterwheels (*sawāqī*, sing. s*āqiya*) driven by livestock walking in circles. The term also denotes a category of land tenure that dominated the customary agricultural law in the Northern Province (detailed, for instance, in Ḥabīb 1997).

19 Sharif El-Dishouni (1989: 12), among others, has noted that the physical disappearance of this irrigation technology, which had been dominant for centuries, did not obliterate its presence "in the social relations and tenure arrangements under diesel-pump irrigation of the day".

20 Interview with Muḥammad Ḥusayn, Borgeig Scheme, Sudan, 30 November 2016.

21 This *sāqiya* map was seen by the author in the Land Office of Argo on 15 November 2016.

ence on fluctuating water levels that was problematised in that case, with a call for an intervention to establish "better" water control and thus "better" land use (Allan and Smith 1948: 624–625).[22]

In any event, the occupation of this space by a new settlement irrigation scheme meant a more profound transformation than simply from "wilderness" to cultivated fields, as it established new human-environment relations and redrew the boundaries between insider and outsider in the area. A long-lasting change in the landscape was brought about by the labourers who were recruited to clear the land, and a new long-term settlement was established by the scheme's tenants. These two groups were not congruent either with each other or with the resident population on the banks adjacent to the Nile.

2.2 Tasks and Technologies

The first task for the new scheme was clearing the land, as it was covered with trees and bushes, followed by levelling fields and digging irrigation canals. The aim was a clearly and uniformly organised agricultural space: the Kerma Basin had already been divided administratively into departments or branches (*qism*, pl. *aqsām*) during the 1910s, subdivided into irrigation units (*ḥawḍ*) of 640 feddan each and then into 64 plots (*tarbiyya*) of 10 feddan.[23] In the Borgeig Scheme, the plots were called *ḥawāsha* (from *ḥōsh*, courtyard), 250 of which were distributed during the first year of operation, divided into 4 quarters (*ḥāra*, pl. *ḥārāt*).[24] The 10-feddan plot was again to be uniformly divided into four parts: 1 feddan for residence purposes, 4.5 feddan for wheat, 2.25 feddan for sorghum, and 2.25 feddan for cowpeas (*lūbiyā'*, Vigna unguiculata) and sorghum (Hewison 1948: 750). The spatial reorganisation was thus intended to induce a major shift in vegetation: three kinds of crops were to replace the dominant *talḥ* tree (Vachellia seyal), a drought-resistant species used for incense and gum Arabic.[25]

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22 Other aspects, which cannot be discussed here for reasons of space, are Kerma's historical significance as the location of one of the world's oldest state formations and as an important archaeological site (Bonnet 2019), with a long recent settlement history, as well as the association of these eastern areas with morbidity and death among populations residing around Kerma (the author's own observation from fieldwork in November 2016).

23 "Kerma Basin: Criticism of Irrigation Works Executed and Proposals for New Works." Report by T. Yenidunia, 6 May 1913, p. 3, SAD 112/1/221. 1 feddan is an area of 70x60 metres, that is, 4,200 m^2 or 0.42 hectares.

24 Letter from Buchanan to Crawford, 7 October 1943, SAD 797/5/111.

25 This transformation was not without unintended consequences. One of the lasting environmental effects of administrative measures during this period was planting of a grass called *al-nāla* by

A first cutting campaign was already planned for February 1942,[26] and it was conducted over the following years under the supervision of an overseer, Omer Eff.,[27] and a resident forest administrator (*nāẓir al-ghābāt*) Ali Eff.,[28] in the presence of an Assistant Conservator of Forests and a Forest Ranger from the Forestry Section, the latter being in charge of processing and storing trunks. The wood itself was initially also needed to fuel the steam engine that pumped water into the canals,[29] and requests for new private schemes with wood-fuelled pumps were denied after January 1942 in the expectation that wood-burning pumps and boilers from the Sudan Plantations Syndicate would be used in the new government scheme and require all available wood resources.[30] The subsequent logging, although it was combined with immediate reforestation, depleted the forests around the village of Kodroka, as witnessed by an early tenant.[31]

The engine used for the Borgeig Scheme itself at the time of the launch constituted regression to the already technologically obsolete steam pumps, which had been discarded elsewhere. This reflected the wartime economy and the utilitarian rather than developmental origin of the project.[32] Given the limits on the supply of wood and the environmental effects in a region with sparse tree cover, the Nile Pumps Control Board required the swift replacement of all steam-driven pumps with oil-burning ones after the war (Hewison 1948: 758).[33] A similar technological backwards step was experienced when the canal was being dug using manual labour throughout. While this also reflected wartime economies, the colonial concepts of what kind of labour could and should be available were also at play here.

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the tenants. It was intended to stabilise the canals, which regularly broke up in many places due to erosion, and remains an ineradicable weed today (interview with Muḥammad Ḥusayn, Borgeig Scheme, 30 November 2016).

26 "Notes on Conservations Evans-Buchanan 13th.-16th. Feb." 13-16 February 1942, SAD 797/4/19.

27 Letter from Buchanan to Crawford, 1 May 1943, SAD 797/5/73.

28 Letter from Buchanan to Nūr, 17 January 1944, SAD 767/6/13.

29 Letter from Buchanan to Laing, 21 February 1943, SAD 797/5/35.

30 Letter from Crawford to Buchanan, 16 January 1942, SAD 797/4/7; letter from Crawford to Buchanan, 30 January 1942, SAD 797/4/8: 10.

31 Interview with Jaʿfar Suleymān, Borgeig Scheme, 30 November 2016. The village still hosts the Kodroka Forest Reserve, which had been established to hold back desertification in the area but consisted, as of 2016, almost completely of agricultural land.

32 The introduction of a wood-fuelled engine was wildly anachronistic, as it had already been rejected in 1922 for the Wad Al-Nau pumping station, the fourth station of the Gezira Scheme, in exchange for diesel oil engines, due to the "difficulty of obtaining coal or wood" (Allen 1924: 399).

33 This had happened by 1948, when the steam engines of Borgeig Scheme were replaced with two 350 brake horsepower (bhp) diesel engines to work two 36-inch pumps (Sudan Government 1950b: 163).

2.3 Sources of Labour

The initial administrative discourse around the Borgeig Scheme was mainly on the subject of the recruitment of labour. While there was no doubt about whether or not the works would take place once the administrative decision had been made, the material shows ongoing negotiations on who exactly would carry them out. Bearing the background of an authoritarian colonial state in mind, we see that this debate was an interesting balancing act between persuasion ("incentives") and coercion ("conscription"), and between internal ("local") and external ("imported").

The presumptions underlying the attempts at persuasion sometimes focused on the "evident" benefit of the scheme for the population to be recruited, and sometimes on the "adequate" payments and incentives offered: advertising for labour in Borgeig was, for instance, made part of the training of sub-Mamur candidates when they were sent across the whole district in May 1943,[34] as it was among the usual duties of the sub-Mamur in Dongola to organise labour and supplies for the Borgeig Scheme.[35] Additional sugar rations were also apparently earmarked for the Meroë-Dongola district "to attract labour".[36]

A radical shortage of labour soon shifted the focus to coercion, however, although this new policy especially targeted people who were already in prison. In January 1944, 150 prisoners were requested from Khartoum and sent to work for several months on wood-cutting and canal cleaning:[37] tellingly, a meeting on organising labour in late February 1944 was held inside the temporary prisoners' camp.[38] The presence of prisoners became much more permanent, however, and the Kerma prison camp was established under a Senior Prison Officer,[39] and in November of the same year, even more prisoners were requested by Buchanan from the Sudan Police HQ in Khartoum.[40]

In practice, persuasion could turn swiftly and fluidly into coercion, and vice versa: another group working on wood cutting at the same time as the prisoners were "conscripted Arabs", who also numbered about 150. They were to receive sugar through a retailer at the lower price of Pt. 20 per 1/40 of a sack (*ra's*) after

34 Letter from Nūr to Buchanan, 20 May 1943, SAD 797/5/86.

35 Letter from Buchanan to Crawford, 1 May 1943, SAD 797/5/73.

36 Letter from Crawford to Buchanan, 28 September 1943, SAD 797/5/102.

37 Letter from Crawford to Buchanan, 13 January 1944, SAD 797/6/6; letter from Nūr to Buchanan, 16 January 1944, SAD 797/6/8-9.

38 Letter from Laing to Buchanan, 9 March 1944, SAD 797/6/68.

39 Letter from Buchanan to Arthur Leonard William Vicars-Miles, Commandant of Police, Civil Secretary's Office, 23 August 1944, SAD 797/6/117.

40 Letter from Vicars-Miles to Buchanan, 26 September 1944, SAD 797/6/156.

15 days of work[41] and a relative high payment of Pt. 2 per cubic metre of cut wood,[42] but a year previously, Buchanan had already ordered that "if any imported workman refuses to work [. . .] [h]e will get a day or two in gaol".[43]

Variations in the harshness of the measures taken had partly to do with "higher forces" that either caused hindrances or encouraged moving forward: early 1944 saw Buchanan eager not to repeat the experience of the previous year, when by May 1943, six weeks into the works, only a quarter of the annual wood supply had been cut at Borgeig, when the work needed to be finished before the August floods.[44] By November, the workforce had to be increased due to an announced visit by the Governor-General in the same month, for whom Buchanan wanted to put on "a decent show".[45]

Buchanan's correspondence, especially with Governor Crawford, also shows broad divergences of opinion on how to find enough labour for the initial phase. The debate was mostly around whether to conscript labour from among the resident population or whether – to use colonial language – to "import" it. Crawford was critical of suggestions that labour should be enlisted, and asked what sort of work would be done by "unwilling conscripted labour".[46] Buchanan, on the other hand, challenged the Governor's reluctance to use compulsory local labour and called imported labour "a great nuisance".[47] In fact, he later claimed not to like having to use prisoners, and that he had felt forced to do so because of the lack of alternatives.[48] Nūr ʿUthmān, the Sudanese sub-Mamur in Dongola, was even clearer on the subject, claiming that the "scheme is for the welfare of the local people who are not appreciating this. It is to their benefit to let them work compulsorily".[49] He combined this with a report on 100 imported labourers who had recently arrived in Dongola and who were "Westerners".[50] Being "Westerners", he added, they were

41 Letter from Buchanan to Nūr, 17 January 1944, SAD 797/6/13. Meanwhile, resident cultivators had to sell barley or wheat to the government in order to be allowed to buy sugar at the same price, 1/20 of a sack for each sack of cereals they sold (Letter from Buchanan to Nūr, 17 January 1944, SAD 797/6/13).

42 Letter from Nūr to Buchanan, 2 December 1943, SAD 797/5/145.

43 Letter from Buchanan to Laing, 21 February 1943, SAD 797/5/35.

44 Letter from Buchanan to Crawford, 1 May 1943, SAD 797/5/73.

45 Letter from Buchanan to Vicars-Miles, 23 August 1944, SAD 797/6/117.

46 Letter from Crawford to Buchanan, 14 May 1943, SAD 797/5/84.

47 Letter from Buchanan to Nūr, 5 June 1943, SAD 797/5/91.

48 Letter from Crawford to Buchanan, 13 January 1944, SAD 797/6/6.

49 Letter from Nūr to Buchanan, 20 May 1943, SAD 797/5/86-87; also, letter from Nūr to Buchanan, 14 June 1943, SAD 797/5/93.

50 This is a term used by Central and Northern Sudanese for people from West of the Nile, especially from Darfur and Kordofan.

"always [a] men[a]ce to public security so [he] arranged a permanent Police Post (2 men) at Borgeig".[51]

Buchanan reacted with a political gamble while Governor Crawford was on leave, speculating on the fact that Deputy Governor Evans might reconsider. He asked Zubayr al-Malik, the head of the local government in Dongola, to prepare to take workers from among "[t]hose who have no other work" and "[o]ne able-bodied man from every Sagia in nearby communities" to work for the scheme for an entire month, subject to Zubayr's approval.[52] After some hesitation,[53] Evans offered to go against Crawford and gave assurances that the conscription of labour was considered by the Civil Secretary to be possible for ten days a year under section 10 (1) (j) of the Local Government (Rural Areas) Ordinance. He argued that the work was "for the benefit of the community", given that the function of the Borgeig Scheme was to be a safeguard during low flood years.[54] This illustrates how the definition of the scheme's purpose to provide local food security was linked with the option of coercing labour.

At the same time, the colonial apparatus had its own legal and hierarchical logic, which had to be adhered to by the officials. For instance, Buchanan referred to prosecutions according to the 1939 Defence of the Sudan Ordinance[55] when he threatened private pump scheme owners who had entered into contracts to provide wood but who "relaxed or refused to work or ask[ed] for a higher price than that fixed by the Government".[56] What sounded like a matter of a standing order had to be reviewed by the Labour Board, however, as his Acting Governor E.G. Evans had pointed out in the discussion on conscripted labour.[57]

It is important to note that the actual work – and the subsequent cultivation – was mostly carried out by people who lived nowhere near Kerma. Indeed, the completion report by F.H.R. Finlay, Assistant Divisional Engineer in the Projects Division of the Sudan Irrigation Department, who was in charge of designing and implementing the canal structure, listed four "sources" of labour for digging the canals in Table VIII: "Saidis" (*ṣaʿādī*, free workers from Upper Egypt, mostly from

51 Letter from Nūr to Buchanan, 20 May 1943, SAD 797/5/86-87.

52 Letter from Buchanan to Zubayr, 19 May 1943, SAD 797/5/85.

53 Letter from Evans to Buchanan, 11 June 1943, SAD 797/5/92.

54 Letter from Evans to Buchanan, 18 June 1943, SAD 797/5/95.

55 This law allowed the country's executive to enact emergency measures in case of threats to national security. It was upheld and amended – rather than abolished – not only after the war but also after independence in 1956.

56 Letter from Nūr to Buchanan, 2 December 1943, SAD 797/5/145.

57 Letter from Evans to Buchanan, 11 June 1943, SAD 797/5/92. It must be noted that the Labour Board's influence strongly fluctuated under colonial rule and was fully empowered only after 1945 (Cross 1997: 232–233).

the neighbouring Aliab scheme), "Departmental Labour" (workers recruited by the Irrigation Department from other regions), "Labour from A.&F." (workers recruited by the Agriculture and Forestry Department from other schemes) and "Conscript Labour" (local and non-local).[58] The extent to which these workers belonged to "the community" can only be interpreted if community is meant in a much wider sense: the district, the province, the nation, or the empire. Although what constituted a common benefit at any of these levels is debatable, an individual's decision not to take up a specific kind of work was treated as being due to ignorance and/or laziness. The paternalistic tone of the debate betrays a sense of entitlement to labour that ignored the possibility that contractual shortcomings, unattractive conditions, or simply a lack of interest in or doubts about this specific project may have been behind "unwilling labour", not to speak of the possible environmental concerns that were, as we have seen, not unfounded.[59]

2.4 Harvest Beneficiaries

This trend towards coercion continued when cultivation began. While the Buchanan papers say little about day-to-day interactions regarding the Borgeig Scheme, a disregard for the farmers' subsistence or even profit, combined with the presumption of deciding what was good for people, clearly emerges from remarks Crawford made when planning it: wheat would be part of the "great war effort",[60] and by the 1942/43 season all wheat was expected to be acquired by the government and compensated for by imports of sorghum (*durrah*),[61] as sorghum was "good enough" for the population.[62] In fact, he made his priorities clear when saying that "[w]hen I have got the wheat seed out of them [the people of Meroë-Dongola district] they can go to hell and make their own arrangements".[63]

It was now Buchanan who took the side of exchanges rather than extraction; he had already expressed the opinion that purchases would be preferable, as the

58 The report is held at the National Records Office (NRO) in Khartoum, File 11-1-22. I thank Abū Bakr al-Khayrī for sharing a copy. On Finlay see also https://reed.dur.ac.uk/xtf/view?docId=ark/32150_s1k3569437r.xml.

59 The colonial discourse blasted resistance to "orders" in this regard as "ignorance of the natives, their rooted objection to the introduction of any innovation and their confidence to their own superior wisdom" ("Kerma Basin" from 1912 Annual Report, SAD 112/1/35).

60 Letter from Crawford to Buchanan, 17 February 1942, SAD 797/4/22.

61 Letter from Crawford to Buchanan, 25 February 1942, SAD 797/4/28.

62 Letter from Crawford to Buchanan, 17 February 1942, SAD 797/4/22.

63 Letter from Crawford to Buchanan, 21 May 1942, SAD 797/4/34.

use of coercive measures was already at a high level.[64] In response to Crawford's second remark, he wrote back in protest that it amounted to "pure fascism" because from his point of view, cultivators had to be compensated for the crops that were taken from them so that they would not starve or be left "entirely in the hands of parasitic and lazy merchants".[65]

This correspondence illustrates once again how administrative argumentation, styles, and priorities could differ significantly between colonial officials, but apart from being another variation of the shifting boundaries between the purpose and benefit of production, and between local ("cultivators") and global ("war") interests, it also raises the wider question of the extent to which specific people and the food they produced were merely instrumental to lives other than their own. It is worth taking another brief look at the context of the scheme at this point in order to highlight the fact that the dynamics that potentially led to coercive pressure – by limiting the available options – were related not only to direct administration-tenant relations under war conditions, but also to the political economic framework within which crops were produced thereafter.

2.5 The Enduring Power of the Local Aristocracy

The Annual Report of the Sudan Government noted for 1948 that "[a] locally appointed farm board consisting of leading cultivators under[took] the day-to-day management of the scheme" (Sudan Government 1950b: 164). I will argue here that both "appointed" and "leading" are loaded terms that implicitly refer to government-subject relations marked by politically bolstered Native Administration structures.

When the Borgeig Scheme was first mentioned in the Sudan Government's Annual Report for 1942–1944, a farm board of this kind was already part of its administration, and was still intended at the time "to be assimilated gradually into local government administration" (Sudan Government 1950a: 62, 131). However, the status quo was the other way round, as the local government, the former Native Administration, already dominated both the administration and agricultural production of the scheme and of trade in the region.

When C.B. Tracey took over as Governor of the Northern Province in 1944, he planned an inaugural tour in October with a stop at Borgeig on 15 October.[66] His visit

64 Letter from Buchanan to Crawford, 1 February 1942, SAD 797/4/13.
65 Letter from Buchanan to Crawford, 25 May 1942, SAD 797/4/35.
66 Tour Plan, 9 September 1944, SAD 797/6/136.

included a tour of the Kerma prison camp and the scheme, which began at Laing's house at the landing site. The scheme's Omda and the Farm Board he headed were intended to be present.[67] The Borgeig Scheme's Omda was ʿAbbās Muḥammad. He had been proposed as Omda in November 1942,[68] and the decision was finalised in late December. He was the brother of Urṣud al-Malik and "half-brother of the present old Omda (Sh. Mohd. Mohd. Bey)" who had been in charge of the northern part of the Kerma [Sileim] Basin up to then.[69] This choice created a minor conflict, as the older Omda, who had a feud with his half-brothers, considered that the position should be his.[70] Accordingly, as suggested by Buchanan, Governor Crawford communicated in a letter to the head of the local government in Dongola, Zubayr al-Malik, that the appointed candidate was age-appropriate, while the old Omda was to remain in his position, which would be made more "important" because of the need for forest control.[71]

This brief outline of the most important positions in the area's local government illustrates a situation in which the local aristocracy, the al-Malik family, continued to hold "all political positions of the Native Administration in the Northern part [. . .] which coincides with the boundaries of their grandfathers' kingdom [. . .] until that administration was abolished in 1969/70" (Omer 1985: 17). Indeed, they did not just dominate general administrative functions: the status of these local government representatives was also reinforced by the favourable treatment they received in trade policies, especially through their participation in the Dongola Traders Board, intertwining local government with trade structures.[72] The trade board worked both as a profit-oriented venture and as a tool to implement the government's rationing policies during the war. Both positions – as government agents and as traders – also reinforced each other, for instance through the District Commissioner's insistence that the provision of retail licences to sell rationed goods should be made in consultation with the Omdas.[73]

This was embedded in the more general strategy of the colonial government to co-opt specific Sudanese leaders, or those whom it wished to be promoted as such, a process that also entailed personal likes and dislikes: Buchanan, for instance,

67 Tour Plan, 9 September 1944, SAD 797/6/136.

68 Letter from Buchanan, 17 November 1942, SAD 797/4/83.

69 The rest of the basin was organized into branches, which were headed by branch presidents. The Argo Branch was led from December 1943 by Muḥammad Ḥamad al-Malik, the brother of Zubayr al-Malik.

70 Letter from Buchanan to Crawford, n.d., SAD 797/4/97.

71 Letter from Crawford to Zubayr, n.d., SAD 797/4/98.

72 Until 1943, the board was under the sub-Mamur Nūr ʿUthmān. Daʾūd ʿAbd al-Laṭīf took over from him in June 1943 (letter from Buchanan to Nūr, 5 June 1943, SAD 797/5/91).

73 Letter from Buchanan to Zubayr, 27 January 1944, SAD 797/6/26.

saw the need to fill Omda positions with the better-educated in order to exchange the "prehistoric type" with one that was "at one with the 'intelligentsia class'".[74] At the same time, he came to distrust the established merchants of Dongola and elsewhere, who were "very much inclined to intrigue and to misinterpret even your best motives".[75]

The involvement of the local aristocracy in governmental pump scheme boards was an expansion of not only their previous role as Native Administration leaders in land registration procedures, but also their favoured access to capital, which they invested in private pump schemes, such as the farms of the al-Malik family around Dongola (Niblock 1987: 54). This privilege went back to positive discrimination by Anglo-Egyptian officials, who had exempted them from the prohibition against private investment in pump irrigation during the 1920s and 1930s (Serels 2013: 168). Subsequently, "the differential access to new irrigation technologies was turning some impoverished cultivators into the tenants of a small group of indigenous elites" (Serels 2013: 169). As a result, the public administration, private production, and trading of grain was dominated by the same local aristocracy, who defined the political economic context in which the tenants of the Borgeig Scheme found themselves.

After the war, an increasing internal and external drive towards Sudanisation was taken up by these same elites, who demanded preferential access to resources the colonial state had seized in the name of the war effort (Serels 2013: 171). In fact, it was again Zubayr al-Malik who became one of three representatives for the Northern Province on the Advisory Council for Northern Sudan, which was formed as early as 1943, marking the colonial government's attempt to organise "previous forms of collaboration" with "tribal leaders, merchants and moderate educated groups" (Abushouk 2010: 215–216) against the more radical pro-independence movement.

3 Conclusion

This chapter recounts some of the early developments of the Borgeig Scheme, a government pump scheme that was founded in 1942 and still exists today. It has used insights gained from private and public colonial documents to discuss some

74 Letter from Buchanan to Charles Stanley-Baker, Civil Secretary Office, 21 November 1942, SAD 797/4/88.

75 Letter from Buchanan to Ramadan Eff., incoming Mamur in Dongola, 20 January 1945, SAD 797/7/18.

of the aspects of labour organisation and governance that started to develop in the scheme. Heeding calls to engage more deeply with the inner workings of colonial bureaucracies, the chapter is based on an analysis of a specific archival collection, the Buchanan papers at the Sudan Archive in Durham, which represents the correspondence between mid- and high-level officials in the district in which the scheme was located.

The Borgeig Scheme was a radical socio-environmental transformation that was initiated to cover multiple kinds of "benefit" during the Second World War, mostly as a contribution to both the war effort and local food security. As a result, distribution measures related two staple crops, wheat and sorghum, in new ways to different populations, at the same time activating older structures for regulating production and trade and also creating new ones. Building on a colonial hierarchy enhanced by wartime legislation, the recruitment of labour for this purpose was anything but the clear-cut implementation of official orders, as with few exceptions the "local population", who were ostensibly the main beneficiaries of the scheme, failed to engage with it during these early years. At the same time, the initial structure of the scheme's administration confirmed rather than challenged the collusion of colonial administrators with politically favoured agrarian elites through land and trade policies.

Food production has been considered here as the reorganisation of labour to produce organic materials pertaining to the needs of human nutrition. This means not only transforming environments – in this case, for instance, deforestation, levelling fields, and irrigation – but also defining the specific benefits and how they are to be attained. Both imply a combination of decision-making and enforcement, which has been observed here as the variable application of persuasion and coercion to engage in specific kinds of transformative and productive labour.

If persuasion is understood as a non-violent influence on choice in the face of several options – with coercion as its violent counterpart – political measures will necessarily be a combination of both, and the source material reveals not only differing opinions among officials as to what combination would be preferable in interaction with whom, but also a situation in which limitations on both the persuasion and coercion of the resident population "forced" the inclusion of others, such as prisoners, whose choices were already limited because of their confinement. In fact, additional organisational efforts had to be made even then in the form of a previously unplanned camp to "contain" their agency.

This hints at the underlying uncertainty on whose benefit this work was to be done for. Its presumptuous pre-definition by officials as being "for their own benefit" was employed both as a justification for the persuasive element of recruiting the "local population", for instance by making preferential payments, and as a good reason for increased coercion. However, the choice was complicated by the

question of who was better able to achieve the desired outcome, and what level of persuasion and/or coercion would lead to it.

My analysis reveals another shift in the boundaries here, between internal and external. The war effort itself might already be perceived as the application of a maximum degree of "internal" – a purportedly shared interest in the Empire's endurance – but whether such an interest was shared or not was not instrumental to the debate between administrators. Rather, it was the status and extent of the local population's food security that was of variable importance, and the district's main decision-makers – the District Commissioner and the Governor – differed markedly in their assessment of what relationship between internal and external needs in this sense was acceptable.

The correspondence reflects a limited understanding of the variable composition and socio-economic structure of the population, with its focus on interactions with its ostensible representatives, namely the local aristocracy, first dubbed the Native Administration, and then local government. The official discourse fluctuated between a presumed patchwork of local communities whose energy could be harnessed through their "leaders", and the "free" labour and trade market colonial officials both worried about and exploited. However, the scheme also changed the composition of the resident population and formed new social categories and groupings, such as "tenant of an agricultural scheme". As a result, the emerging productive and residential community differed significantly from that defined in the colonial design, and shifted the meaning of "local" food security – or "benefit for the community" – in the process.

While the case study illustrates an emerging relationship between political economy and environmental transformations in late colonial Sudan, its place in Sudan's social history can only be hinted at based on the material presented. The Second World War imposed exceptional conditions, but the associated "war effort" stood in for the existence of externally defined priorities and needs to which food production – or labour in general – was subjected. The principle of subjecting demands for labour to externally defined priorities seems to be confirmed by the close relationship between the scheme's initial administration and the prevailing political elites, namely the Sudanese local aristocracy that dominated both Native Administration and representative positions in the increasingly "Sudanised" state apparatus, as exemplified by the al-Malik family.

However, the Borgeig Scheme evolved partly during and also after the Second World War from an ad hoc economic measure into a development instrument: with waning demands for the war effort, transforming modes of production to comply with "better" agricultural practices came to the foreground. The developing self-administration, through a tenant-elected Farm Board, also promised increasing autonomy when deciding what to produce and how. Indeed, the character of the

scheme changed in the decades that followed from centralised production planning of cooperative structures to individual enterprises, with fluctuating directions from and effects of government intervention.[76] If one looks at the broader context of agricultural development, therefore, the scheme can be considered either as an antipode, marginal note, or waning bulwark vis-à-vis the private – but often politically bolstered – large-scale investments that have taken over more and more tracts of land in independent Sudan.

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76 This transformation is the topic of an ongoing research project on the Borgeig Scheme led in cooperation with a resident historian whose family has included tenants since the inaugural years.

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