



Environment & Society Portal



The White Horse Press

Environment, Memory, and the Groundnut Scheme: Britain's Largest Colonial Agricultural Development Project and Its Global Legacy

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Global Environment 11 (2013): 58–93

In the late 1940s, the British state embarked on an attempt to convert about 12,000 square kilometers of bush land in remote regions of colonial East Africa into a peanut monoculture. The project, which became known simply as the “Groundnut Scheme”, constituted one of the largest colonial agricultural development initiatives in history, as well as possibly the most spectacular failure in this field. While the technical reasons for this are relatively well known, this article focuses chiefly on perceptions and memories of the Scheme, trying in particular to trace the different functions that were assigned to the social and ecological landscape of Tanganyika. As the Scheme was from the outset targeted as much at Western discourses and representations as at the actual situation in Tanganyika, three layers of context are distinguished, corresponding broadly to different geographical scales as well as specific groups of actors. On the imperial level, the project’s entanglement in British politics tended to obscure its geographic and historical specificities, transforming the transformation of Tanganyikan landscape into sets of statistical numbers, and ultimately into a largely decontextualized political buzzword. Secondly, in the framework of the international expert community, technological enthusiasm depicted East Africa as an “empty” region formable at will, despite scientific evidence to the contrary. Ironically, the mistakes and miscalculations resulting from this were so numerous and at times grotesque that they allowed a more general questioning of the basic tenets of agricultural development to be avoided. At a “local” level, the Groundnut Scheme should be understood in the context of attempts to reform the (post-) colonial social order through the modification of agricultural practices and the refashioning of the physical and ecological environment. In this sense, the project became a forerunner of the even larger Tanzanian “villagization” campaign in the 1970s. Different strands of memory of the Groundnut Scheme persist today, although their connection to the physical site(s) of the project is often tenuous. On the other hand, the Scheme did transform the social, physical, and biological landscape of Tanganyika, albeit in very different ways and in a much more limited fashion than intended.

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Stefan Esselborn

In the early spring of 1946, a man looked out of the window of an airplane flying over Tanganyika, the mainland part of today's United Republic of Tanzania. Since it was still the rainy season, the landscape stretched out below him would have been colored in a "rich, dark green", giving an impression of abundance and fertility.¹ But instead of fields and towns, he saw what must have seemed to him like endless stretches of empty bush. Tanganyika was known as one of the poor-



est territories of Africa, and neither German nor British colonizers had deemed it worthwhile to invest more than a bare minimum in infrastructure.² Whole regions were still completely cut off from any form of communications and were reachable only by foot. Tsetse flies carrying the deadly sleeping sickness made huge swathes of land uninhabitable for humans or domestic animals. While the airplane was droning onwards, an idea began to take shape in the passenger's mind. He started to wonder (if one accepts Alan Wood's dramatic rendering of the events) "whether this waste land could not grow oil crops, to the benefit of the margarine ration of the British housewife and the legitimate profits of the United Africa Company".³

The passenger in question was Frank Samuel, Managing Director of the United Africa Company (UAC). His flight over Tanganyika was part of a tour around the continent, looking for new sources of edible oil to supply UAC's "parent", the gigantic Unilever Corporation, which at the time provided three quarters of Western Europe's margarine and two thirds of the soap used in the British Empire. Once Samuel had returned to London, he approached the British Minister of Food with a plan: The British state should start growing *Arachis hypogea*, commonly known as peanuts or groundnuts, on a vast scale on "empty" land in Tanganyika.⁴ Things developed very quickly from there on. Within a matter of months, a scientific reconnaissance team was sent out to explore the feasibility of the scheme,

¹ This is the assumption of the agronomist A. Wild, *Soils, Land and Food: Managing the Land during the Twenty-First Century*, Cambridge University Press, Cambridge 2003, p. 141.

² The preeminent work on the history of colonial Tanganyika (by one of the first scholars to acknowledge the central role of nature in African history) is still J. Iliffe, *A Modern History of Tanganyika*, Cambridge University Press, Cambridge 1979.

³ A. Wood, *The Groundnut Affair*, The Bodley Head, London 1950, p. 27.

⁴ See D.J. Morgan, *Developing British Colonial Resources*, Vol. II of *The Official History of Colonial Development*, Humanities Press, London 1980, pp. 226-228 for a summary of Samuel's proposal. Samuel himself built his plan on a proposal solicited from Tanganyika's Director of Agriculture, R.W.R. Miller, which he enlarged and modified substantially.

headed by John Wakefield, an agronomist with 18 years of experience in Tanganyika. Having spent nine short weeks in East Africa, the so-called “Wakefield Mission” presented their final report in a paper dated September 1946. They had enlarged Samuel’s already vast design to encompass a total of 3.21 million acres (1.2 million ha), an area roughly equivalent to the US state of Connecticut, or a third of the surface of the Netherlands. This huge area, mainly located in three different sites in the Central, Western, and Southern provinces of Tanganyika, was to be cleared of bush and converted into 107 gigantic peanut fields of 30,000 acres (about 11,000 ha) each. Through one momentous injection of state capital, modern machinery, and human willpower, the hostile environment of Tanganyika was to be turned into a peanut monoculture. From 1950 onwards, the plans estimated a production of 600,000 to 800,000 tons of peanuts per year, offsetting the initial expenditure in two to three years.⁵ Out of haste as much as out of unwarranted confidence, the idea of a pilot project was deliberately waived, based on the argument that in such a novel undertaking nothing valuable could be learned with such a pedestrian approach.⁶ The official green light of the Cabinet was given in January 1947; in February, the first ships carrying men and machinery started landing in Tanganyika. It turned out to be the prelude to one of the most infamous disasters in colonial agricultural development. Only four years later, in the early months of 1951, the scheme’s operators conceded defeat and withdrew from East Africa.

⁵ “A Plan for the Mechanized Production of Groundnuts in East and Central Africa”, Command Paper (Cmd.) 7030, H.M. Stationary Office (H.M.S.O.), London 1947. Annual savings to the Treasury were estimated at £10 million, compared to a required total capital expenditure of £24 million. 27 of the 107 units were to be located in Kenya and North Rhodesia; before any work had been begun there, these plans were abandoned in 1949 because of the difficulties in Tanganyika (Overseas Food Corporation, *Annual Report and Statement of Accounts, 1949/50*, H.M.S.O., London 1950, p. 1).

⁶ As the Labour MP Ian Mikardo put it in 1950, “one can learn nothing very valuable about farming 100,000 acres by digging up a single cabbage patch”; House of Commons Debate (HC Deb), 18 July 1950, Hansard’s vol. 477, col. 2099; see also Wakefield’s response to a fellow agronomist deploring the lack of a pilot project in “Nature” (“Letters to the Editors”, in *Nature*, 165, 1950, p. 234).

The gigantic sum of nearly £36 million (the equivalent of roughly £900 million in 2011 prices) had to be written off. In spite of all these expenses, less than seven percent of the envisaged area had been cleared. Moreover, almost nine-tenths of it proved so unsuitable for crops that by 1955 it was no longer cultivated. As a supreme statistical humiliation, more peanuts were actually bought and imported to East Africa as seeds than the scheme ever produced.⁷

Agricultural projects rarely make newspaper headlines, but the groundnut scheme did. Unlike the vast majority of projects in the history of agricultural development, it could not be easily ignored by all but a handful of its contemporaries. Not only were thousands of human beings on different continents and in very different social positions directly affected by it, but because of its ambition and wide publicity, the project gained international notoriety and was widely discussed by many others. These discussions were sometimes heated, since they touched on a variety of contentious fields: the economic role of the state, colonial policy and race, the “development” of “backward” societies, the mechanization and industrialization of agriculture, and in the most general way even the relation between “Man” and “Nature” in the second half of the twentieth century. Tracing shifting perceptions on these issues in connection to the groundnut scheme is not only interesting in its own right; it will also help to answer some of the most puzzling questions surrounding the Scheme, which cannot be answered by looking exclusively at technical and economic factors:⁸ Why were so many mistakes made

⁷ Cf. Cmd. 7030 cit.; “The Future of the Overseas Food Corporation”, Cmd. 8125, H.M.S.O., London 1951; Overseas Food Corporation, “Annual Report and Statement of Accounts for the year ended March 1951”, H.M.S.O., London 1951; Matteo Rizzo, “What Was Left of the Groundnut Scheme? Development Disaster and Labour Market in Southern Tanganyika 1946–1952”, in *Journal of Agrarian Change*, 6, 2, 2006, p. 208.

⁸ Andrew Coulson, “Agricultural Policies in Mainland Tanzania”, in *Review of African Political Economy* 10, 1977, pp. 75-76, has a bullet-point style list of the Scheme’s seven main technical flaws. The best systematic overview is given by J.S. Hogendorn, K.M. Scott, “The East African Groundnut Scheme: Lessons of a Large-Scale Agricultural Failure”, in *African Economic History*, 10, 1981, pp. 81-115.

that seemed easily avoidable even to contemporaries? Why was such a flawed project undertaken in the first place?

Given that at least some aspects of the groundnut scheme are still widely remembered and referred to today, this focus on perceptions can be combined with a diachronic perspective. For the framework of the French nation state, Pierre Nora has invented the analytical concept of “lieux de mémoire” (“sites of memory”), which has since been adapted for a variety of contexts.⁹ As Indra Sengupta and others have pointed out, there are at least two aspects of the concept that merit special attention when thinking about a colonial “site” like the groundnut scheme.¹⁰ Firstly, in the colonial context sets of narratives tend to be more visibly fragmented and ambiguous, subverting Nora’s focus on the consensus-building “national” dimension of memory. Secondly, questions of space and place take on a new relevance, not least because of their centrality to colonialism itself.¹¹ Although the groundnut scheme was physically located in the Tanganyikan hinterland, it was targeted just as much at British political debates and global expert discourses, and was often more concerned with Western representations of East Africa than with the actual situation on the ground. Yet it would be a mistake to see the Scheme exclusively as a web of discourses. Certain characteristics of the Tanganyikan landscape as a complex ecosystem – including vegetation, soils, precipitation patterns – clearly played a major role

⁹ P. Nora, *Les lieux de mémoire* (3 vols.), Paris 1984-1992; cf. also Id., “Between Memory and History: Les Lieux de Mémoire”, in *Representations*, 26, 1989, pp. 7-24; for an overview over the field of cultural memory studies see A. Nünning, A. Erll (eds), *Cultural Memory Studies: An International and Interdisciplinary Handbook*, de Gruyter, Berlin 2008.

¹⁰ I. Sengupta (ed.), *Memory, History, and Colonialism: Engaging with Pierre Nora in Colonial and Postcolonial Contexts*, Bulletin Supplement, 1, German Historical Institute London, London 2009.

¹¹ According to Nora, *lieux de mémoire* have a symbolic function as well as a material dimension (Nora, *Memory and History* cit., pp. 18-24). However, I agree with Monica Juneja that his primary interest seems to be the symbolic, while the spatial dimension remains largely unexplored (Id., “Architectural Memory between Representation and Practice: Rethinking Pierre Nora’s *Les lieux de mémoire*”, in Sengupta (ed.), *Memory, History and Colonialism* cit., pp. 16-17).

in the unfolding of the drama (or possibly farce) that the project became. All of those who came into contact with the Scheme interacted with the social and ecological landscape of East Africa in some form – but their perceptions of it varied widely, and so too, consequently, did the sense they made of the Scheme.

In this essay, I will address separately three layers of context, representing the three main perspectives on the groundnut scheme, hopefully without losing sight of the interconnections: British imperial policy, colonial (agricultural) development, and the history of Tanganyika – or more precisely, the history of the three regions where the project took place. From the perspective of a historian working at a European university, the third perspective, while possibly the most fascinating, was certainly the most challenging. For a number of reasons that are themselves historical, the views and perspectives of ordinary Tanzanians are much harder to trace than those of British Members of Parliament, or of internationally renowned scientists. Nevertheless, this perspective seemed too important to be ignored. As it was not possible to conduct field research in Tanzania in the framework of preparing this article, I am all the more indebted to those who have.¹²

From Housewives' Hope to Political Quagmire: Great Britain's "Oleaginous Iliad"

The final parliamentary white paper endorsing the "groundnut scheme" had acknowledged that the plan "clearly involve[d] considerable risks", since no agricultural operation on a comparable scale had ever been tried before in such "remote and undeveloped areas".¹³ Moreover, direct intervention of the state on such a massive scale

¹² In researching the present article, different types of sources have been used, among them official reports and accounts by the OFC itself or various other bodies, parliamentary debates and newspaper articles, scientific articles and monographs, as well as some published memories. The "local" perspective had to be reconstructed from colonial sources or the secondary literature (see below).

¹³ Cmd. 7030 cit., p. 4.

was contrary to traditional British colonial doctrine as well as practice, and only a few years earlier the same proposal would probably not have been seriously considered. In 1946, however, the situation was different. A conjuncture of political, climatic, and demographic factors had resulted in a worldwide shortage of fats and edible oil. In Britain – a country that was still recovering from the ravages of the Second World War – this “oil crisis” was widely perceived as the harbinger of a neo-Malthusian “World Food Shortage”, with potentially devastating effects on a global scale. A substantial and immediate increase in worldwide agricultural production seemed essential, not only for already meager metropolitan fat rations, but for the stability of the British Empire as a whole.¹⁴ The Wakefield mission therefore concluded that an extraordinary situation required extraordinary measures: “Nothing but the most highly mechanised methods, on a vast scale never previously envisaged, will result in any appreciable amelioration of the presently disastrous food situation”.¹⁵

In addition, the design of the project was meant to make a political point. Clement Attlee’s newly elected Labour government subscribed to a Fabian vision of colonial development, which advocated a more proactive role for the state in the colonies, in the production of primary materials as well as in the provision of social benefits to colonial populations.¹⁶ By proxy of the publicly owned Overseas Food Company (OFC), which was supposed to be in charge of the groundnut scheme, the British state would not only ease the plight of the British working class, but also invest massively in an African

¹⁴ By early 1946, the British government had already called a series of urgent ministerial meetings to discuss the dangerous depletion of edible oil stocks in Britain, which had to cover 90 percent of her demands through imports; cf. Cmd. 6785 “The World Food Shortage”; D.J. Morgan, *Changes in British Aid Policy, 1951-70*, Vol. IV of *The Official History of Colonial Development*, Macmillan, London 1980, pp. 177-200.

¹⁵ Cmd. 7030 cit., p. 18.

¹⁶ P. Kelemen, “Planning for Africa: The British Labour Party’s Colonial Development Policy, 1920-1964”, in *Journal of Agrarian Change*, 7, 1, 2007, pp. 76-98.

region where the market had so far failed to do so.¹⁷ Even though the procurement of foodstuffs for the metropolis was clearly the most important consideration – after all, the entire harvest was to be consumed in Britain –, the white paper carefully pointed out all the benefits of the modern social policy it would bestow on Africans: new streets and railroads, better healthcare, technical training and skilled jobs, higher living standards, and even “proper” trade unions.¹⁸ In the eyes of the *New York Times*, the scheme amounted to an “extension of socialism to the British colonies”.¹⁹

Although a project of this scale had never been undertaken in Africa, the groundnut scheme seemed very much in keeping with the general mood of postwar development planning, and could point to famous precedents. “In its breadth of vision and the technical resourcefulness with which it plans to impose man’s will upon nature, it invites comparison with the Tennessee Valley Authority and with the far-reaching development schemes of the Soviet governments”, *The Times* pointed out.²⁰ Even more immediately present were the experiences and emotions of the Second World War, when the devastating impact of large-scale operations using central planning and

¹⁷ The haste had been so great that the scheme was started by the UAC as a managing agency. The OFC was set up in the meantime, officially created by the Overseas Resources Development Bill in February 1948, and took control of the management on 1 April 1948. The fact that the whole scheme was put under the supervision of the Ministry of Food, and not the Colonial Office, not only affirms the primacy of British interests in the venture but must also be read as a deliberate attempt to break with previous administrative traditions. Like the Tanganyikan government, the Colonial Office was deliberately bypassed because it was judged too conservative and “too slow to move”; cf. Wood, *The Groundnut Affair* cit., p. 49f.

¹⁸ Most of these benefits never materialized, and when the African workers took the rhetoric seriously enough to try a strike in 1947, it was suppressed by force (Wood, *The Groundnut Affair* cit., p. 81f.). In fact, the focus on Britain was so dominant that in retrospect the groundnut scheme can be seen as a late “Triumph of the [Joseph] Chamberlain view” of the late nineteenth century, perceiving the colonies merely as a source of raw materials to be exploited by the metropolis (M.A. Havinden, D. Meredith, *Colonialism and Development: Britain and Its Tropical Colonies, 1850-1960*, Routledge, London/New York 1993, p. 307.

¹⁹ “Nut Farming”, *The New York Times*, 6 February 1947.

²⁰ “A Plan for East Africa”, *The Times (London)*, 6 February 1947, p. 5.

heavy machinery had been amply proven on the battlefield. John Strachey, the Minister of Food who became the political “face” of the groundnut scheme, never tired of pointing out that what he called “Operation Groundnuts” was to be a peace-time equivalent of Britain’s biggest military campaigns. In the House of Commons, he read from his diary as a participant in the Allied landing operations in North Africa, when he had allegedly already asked himself: “What could not be done if an expedition of this scope could be fitted out, not in order, as this one is, to decide who should have the right to develop Africa, but in order to actually develop Africa?”²¹ The “swords-to-ploughshares” motto was to be taken literally. Since the enormous number of tractors needed proved hard to procure, hundreds of Sherman tanks were to be refitted into agricultural machines.²² Support for such a noble cause was not confined to the political left: Blowing Strachey’s trumpet, the conservative Member of Parliament Charles Ponsonby declared his party’s support for the great “battle of mechanised science against the forces of nature” in which the scheme was about to engage.²³ Following these grandiose descriptions, mobilization efforts for the project were a roaring success. Strachey repeatedly boasted that more than 100,000 volunteers had tried to sign up for the projected maximum of 1,250 jobs for “Europeans”.²⁴

The enthusiasm was to be short-lived. From the very beginning, the groundnut scheme had been presented to the British public as a numbers game, with one set of spectacular statistical promises following the next. But virtually the only targets that were ever easily reached (and surpassed) were those for expenditure. After the first year, Parliament – unlike some critical voices in the press – was still prepared to accept the astonishing conclusions of the first official review of progress in

²¹ HC Deb, 6 November 1947, vol. 443, col. 2034.

²² The refitting was done by Vickers, earning the vehicles the name “Shervicks”; Hogendorn, Scott, “Groundnut Scheme” cit., p. 96.; “East African Groundnuts Scheme Review of Progress to the end of November, 1947”, Cmd. 7314, H.M.S.O., London 1947, p. 5.

²³ HC Deb, 29 July 1947, vol. 441, col. 355.

²⁴ HC Deb, 12 July 1948, vol. 453 col. 877; Wood, *The Groundnut Affair* cit., p. 44.

late 1947, which could find “no more reason now than there was a year ago” to doubt the feasibility of the project – even though only five percent of the clearing scheduled for 1947 had been done, while the expenditure for the year had doubled.²⁵ In the second year, when 600,000 acres of peanuts should have been planted according to the original plan, not even 50,000 acres were cleared, and perhaps as little as 13,000 acres of this actually represented properly cleared and rooted former bush.²⁶ Problems of transport into the virtually roadless Tanganyikan hinterland had been badly underestimated; especially the hopelessly congested port at Dar-es-Salam in particular became a theater of “rampant disorganization”.²⁷ While the workers in East Africa vainly chased illusionary clearing targets, the first yields per acre also turned out to be substantially lower than projected, casting doubts on the agricultural as well as the economic foundations of the scheme and “knock[ing] the bottom out of all forecasts”, as one member of Parliament remarked.²⁸ Caught in the web of overblown expectations they themselves had created, Strachey and the OFC management started to focus less on sorting out the chaos reigning in East Africa than on keeping the lid on the full extent of the problems – at least until after the general elections in February 1950.²⁹ By then, the groundnut scheme had already turned into a highly politicized “scandal”. Strachey and Leslie Plummer, the OFC’s head, had become a liability for Labour and were removed from their posts soon afterwards.³⁰ When finally an independent working party was sent out in the summer of

²⁵ Cmd. 7314 cit., p. 9.

²⁶ The rest was either not yet cleared of roots, one of the most difficult and time-consuming operations, or former grassland which could simply be ploughed; Wood, *The Groundnut Affair* cit, p. 155f.

²⁷ Hogendorn, Scott, “Groundnut Scheme” cit., pp. 90-92.

²⁸ Crookshank (HC Deb 14 March 1949, vol. 462, col. 1751), commenting on the UAC reporting an average yield of 540 lb per acre for 1948, instead of the 750 lb that Cmd. 7030 based its calculations on.

²⁹ Wood, *The Groundnut Affair* cit., p. 199f., reports that the scheme’s employees in Tanganyika were complaining about “political sunflower”, i.e. the planting of this crop with the main goal of increasing sown acreages.

³⁰ Strachey landed softly, however, and, in an ironic twist that was not lost on contemporary observers, took over the Ministry of Defense after the 1950 elections.

1950 to look into the situation at Kongwa, the first site to have been developed, it could only certify the demise of the scheme in its original form, and recommend “that the project for the large-scale mechanized production of groundnuts should be abandoned”.³¹ In late 1950, the OFC admitted publicly that “the original aims of the scheme have proved incapable of fulfillment.” Following the insight that “mechanical clearing can be done, but it cannot be done at an economic cost”, the mechanized battalions were ordered to withdraw in early 1951.³²

For a while, the scheme dominated the public perception of “colonial development” in the United Kingdom, admittedly a topic otherwise largely ignored by most Britons.³³ But while the design of the groundnut scheme did expose the Atlee government to some accusations of colonial exploitation by their political opponents (in itself a delicate matter for a party of the left),³⁴ the situation in Africa was at best a footnote in the reaction to the scheme in Europe. The at times vitriolic debate focused above all on economic policy and the waste of public funds. In the Conservative Party’s manifesto for the 1950 election, the groundnut scheme served as a prime example of “socialist mismanagement”. Free marketeers especially liked to blame the public character of the OFC for the failure, conveniently forgetting the role of the UAC. Struggling to explain away the fiasco, Labour politicians pointed to “a petty campaign against this scheme ever since it was launched”, with the aim to “make East Africa a boggy

³¹ S.H. Frankel, *The Economic Impact on Under-Developed Societies*, Harvard University Press, Cambridge 1953, p. 143.

³² Cmd. 8125 cit., p. 10. The final decision to abandon the project was ultimately triggered by the fact that the OFC threatened to exceed the £55 million limit on total borrowing that was written into its founding law.

³³ A British poll conducted in mid-1949 found that 67 percent of respondents “knew something” about the groundnut scheme, making it “[a]lmost the only aspect of colonial development arousing any interest”, whereas “over half were unable to recall one single colony by name” (“Public ignorance about colonies”, *The Times (London)*, 22 June 1949).

³⁴ The Conservative Party’s accusations of “colonial exploitation” against Labour in the 1951 elections probably furthered the formation of an anti-colonial movement on Labour’s left wing, and ultimately helped prepare the party’s pro-independence turn in the mid-1950s; cf. Kelemen, “Planning For Africa” cit., p. 91.

with which to frighten the electors”.³⁵ As late as 1960, Labour MPs still complained about “those ageing young Conservatives who went from meeting to meeting shouting ‘Groundnuts’ every time any Labour candidate tried to emphasise to the electorate the need for expanding the development of the underdeveloped areas” – unfairly profiting, as Labour saw it, from the complete ignorance of voters about the actual situation in East Africa.³⁶

But as costly projects that achieved little were by no means restricted to one party, the damning verdict of “a new groundnut scheme” soon came to adorn expensive failures presided over by governments of all political colors – from the aborted development of the Blue Streak ballistic missile in the late 1950s, through the failed attempt to establish the DeLorean Motor Car Company in Northern Ireland in the late 1970s, to the introduction of the so called “Poll Tax” of the late 1980s, or the “Millennium Dome” built in Greenwich in 2000.³⁷ Largely stripped of its geographical and historical context, the groundnut scheme became shorthand for the waste of public money through large and overambitious projects, situated somewhere between tragedy and farce. Britain’s “oleaginous Iliad”, as the French geographer Pierre Gourou rather gleefully dubbed it in 1955,³⁸ was ultimately assigned a place in the nation’s memory on a par with historical catastrophes like “Dunkirk and all our other triumphant failures which we cherish so much more dearly than successes.”³⁹

³⁵ Hynd and Woods, HC Deb 14 March 1949, vol. 462, cols. 1747-1866.

³⁶ HC Deb 27 April 1960, vol. 622, col. 323. The argument for the economic incompetence of Labour governments based on the groundnut scheme can be found in Parliamentary debates as late as 1992; cf. HC Deb 27 October 1992, vol. 212, cols. 850-852.

³⁷ HC Deb 27 April 1960, vol. 622, cols. 211-345; HC Deb 19 February 1991, vol. 186, cols. 222-223; HC Deb 24 June 1992, vol. 210, col. 299; “The Dome: A Chamber of Spending Horrors”, *Sunday Business (London)*, 7 January 2001. A long list of further examples could be compiled, with entries as recently as May 2010 (“The Switch to Digital Radio is Folly”, *The Guardian*, 24 May 2010).

³⁸ P. Gourou, “Le ‘Plan des Arachides’: Une expérience d’agriculture mécanisée en Afrique orientale”, in *Cahiers d’Outre-Mer*, 30, 1955, pp. 105-118.

³⁹ R. Boston, “Video: It’s Eldoradogate”, *The Guardian*, 29 July 1993.

From Technocratic Dream to Developers' Nightmare: The Groundnut Scheme and the Expert Community

Labour Party politicians, however, were not the only ones to be embarrassed by the groundnut disaster. Although politics had undoubtedly played an important role in the conception of the scheme, some of Britain's most seasoned experts in African agricultural development had been a driving force as well – not least Wakefield himself and his mission. Worse, the project had initially been widely acclaimed by the large expert community associated with agricultural development.⁴⁰ After decades of battles against under-funding, over-caution, and the traditionalism of colonial administrations, the Malthusian urgency, massive funding, and military vim of the scheme must have looked like an immensely empowering prospect for many development planners.⁴¹ Up to the 1940s, governments had expected to finance colonial development initiatives out of the budget of individual colonies, which were notoriously short on cash even before the world economic crisis of the 1930s. The feeling of finally being granted the means to make a real impact was reinforced by contemporary economic theory, which claimed that the only ingredient missing for growth and “development” in Africa and other parts of the non-western world was sufficient investment.⁴²

The scheme's scientists had started by surveying and categorizing

⁴⁰ Cf. “British Colonial Development” in *Nature*, 160/4058, 9 August 1947, pp. 171-173.

⁴¹ For a similar reaction among the colonial bureaucracy see P. Johnston, “The Groundnut Scheme: A Personal Memoir”, in *Habitat International*, 7, 1-2, January 1983, p. 11: “All of us in the Tanganyika Administration serving in the Southern Province were 100% ‘groundnutters’. Here was a development project on a vast scale which could bring funds to the oft forgotten ‘Cinderella Province’.”

⁴² According to the Harrod-Domar model of economic growth, which was dominant in the late 1940s and 1950s, the main (or even sole) explanation of the absence of growth was a lack of investment, the so-called “investment gap”; cf. William Easterly, *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics*, MIT Press, Cambridge, MA 2001, esp. pp. 25-46.

their “raw material”. They divided the area into two blocks according to the two predominant types of soil they had found, “light sandy soils” and “red loams”.⁴³ The former covered almost the entire site in question in the Western Province around Urambo as well as two-thirds of the southern site at Nachingwea, areas that predominantly carried so called “miombo” woodland, a dry, widely spaced forest-savannah common to southern Africa.⁴⁴ The loams, possessing a higher percentage of clay, were covered with denser *miombo* in the south and with Rhino-Bush, Acacias, or Star Grass on the dry plateau around the Kongwa.⁴⁵ The different types of vegetation were discussed solely as a marker, however, soon to be wiped off the earth by modern technology. At the whim of little more than a thousand (white) men and their machines, the equivalent of whole counties and provinces would be converted into a gigantic peanut monoculture, including drainage systems, anti-erosion barriers and terraces. Roads, wells, and new towns for workers and administration were planned. At the research stations, different scientific disciplines would work hand-in-hand. The *British Medical Journal* dreamt about using the project for “the application of preventive tropical medicine on a scale never before attempted in Africa.” This meant not only building hospitals and health centers, but also eliminating “tribal medicine”, seen as an impediment to modern health care, with the help of specialized anthropologists. Eradicating trypanosomiasis and its vector, the tsetse fly, would require careful environmental micro-management; botanical experts were needed “to determine which species of trees must be cut and which must be allowed to remain.”⁴⁶ In an almost Catonian *ceterum censeo*, a reader of the same journal warmly welcomed the chance to dispose of “vermin” like elephants

⁴³ Cmd. 7030 cit., pp. 40-44. The report described a third type of soil (“Chipya” soil), found only in Northern Rhodesia.

⁴⁴ For a description of this ecosystem and its use by humans see B. Campbell, *The Miombo in Transition: Woodlands and Welfare in Africa*, CIFOR, Bogor 1996.

⁴⁵ Cmd. 7030 cit., pp. 40-44.

⁴⁶ “Groundnuts in East Africa”, in *BMJ*, 1, 4496, 1947, pp. 301-302.

and hippopotamuses in order to “starve out” the tsetse.⁴⁷

This purely developmental perspective overrode all competing visions of the landscape, including imperial conceptions of “empty” lands as a hunting reserve.⁴⁸ As Alan Wood relates, C.P.J. Ionides, a former Army officer, elephant hunter, snake-enthusiast, and local game warden who opposed the clearing of a particular region near Nachingwea, which he claimed was “inhabited by thousands of elephants”, was treated with disbelieving contempt by the Scheme’s experts. That he “seemed to think that it was a pity to drive out animals in order to grow food for people in Europe” exposed him to the “great indignation” of the OFC’s head, Leslie Plummer himself.⁴⁹ The scale of this brave new world was so overwhelming that even the comparatively minute part of it that was actually realized already made a lasting impression on visiting scientists. “One of America’s foremost agricultural experts”, overlooking no more than three of the scheme’s 107 planned “mechanised units” from a small hill, confessed to “experiencing the greatest thrill of his life because there was spread before him the largest continuous area of mechanized arable land in the world”.⁵⁰ Even scientists critical of the project expressed their satisfaction at seeing the primeval chaos of African bush replaced by “vast areas of good crops, well cultivated and clean”, arranged in a visual order that looked “modern” and efficient.⁵¹ In its neat and or-

⁴⁷ “The Game Must Be Destroyed”, Correspondence, in *BMJ*, 1, 4498, 1947, p. 388.

⁴⁸ For the connection between imperial hunting and early conservationism in Africa see J. MacKenzie, *The Empire of Nature: Hunting, Conservation, and British Imperialism*, Manchester University Press, Manchester 1988; W. Beinart, *Environment and Empire*, Oxford University Press, Oxford 2009, pp. 58-75.

⁴⁹ Wood, *The Groundnut Affair* cit., p. 145. Ionides himself was appalled by the intrusion of what he later called “a gigantic British Government folly” into his domain: “Tractors with chains were clearing the bush. There were tented camps and rows upon rows of concrete block houses. Nachingwea seethed with humanity, including 2,000 Europeans. It was frightful”; C.J.P. Ionides, *A Hunter’s Story*, W.H. Allen, London 1965, p. 113. On Ionides see M. Lane, *The Snake Man: Life of C.J.P. Ionides*, New ed., Hamish Hamilton, London 1988.

⁵⁰ Frankel, *Economic Impact* cit., p. 144.

⁵¹ Quoted by Morgan, *Changes* cit., pp. 54f. The blind faith in “visual order”

derly look, the model town Urambo in the west, built from scratch to accommodate the scheme's workers, was said to resemble "a boy scouts camp, run by an extremely efficient scoutmaster".⁵²

Nature, however, put up more of a fight than the "groundnutters" had imagined. Major-General Harrison, the scheme's "field commander" in Tanganyika, complained about "thorn bush about 15 feet high", of a density that "must be seen to be believed", interspersed with "enormous Baobabs, probably one of the most useless trees on the face of the earth". The soil beneath them was made up of a "solid mass of interlaced rubbery roots" that proved almost impossible to clear.⁵³ A large proportion of the scheme's tractors, bought second hand from all over the world, broke down in the demanding African conditions before even reaching the sites. Of those that did arrive at the peanut fields, up to 75 percent were out of action at times. The retrofitted tanks soon turned out to be ill-suited to this unforgiving environment and ultimately provided a "higher-cost alternative" for the Caterpillar bulldozers they were meant to replace.⁵⁴ New agricultural machinery ordered from North America kept running into stumps, roots, and jackal and aardvark holes. Because of its high clay and quartz content, the soil baked into a concrete-like mass during the dry season, which wore down standard ploughshares within only five hours. The window of opportunity for harvesting thus became very narrow, since "nothing short of pneumatic drills or dynamite could get the nuts out" of the soil which had not been harvested before the dry season started.⁵⁵ Soon enough, the ultra-mechanized groundnut scheme was forced

– or the "visual representation of efficiency" – is one of the central characteristics of "high-modernist" projects according to J.C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale University Press, New Haven 1998.

⁵² Wood, *The Groundnut Affair* cit., p. 124.

⁵³ D. Harrison, "Civil Engineering Problems of the East African Groundnuts Scheme", in *The Engineer*, 30 July 1948, p. 121; Wood, *The Groundnut Affair* cit., p. 177f.

⁵⁴ Hogendorn, Scott, "Groundnut Scheme" cit., p. 96, 89f.

⁵⁵ Ibid.; Wood, *The Groundnut Affair* cit., pp. 179-182, 235.

to follow the supposedly “lazy” African cultivators in working the soil during the rainy season only.⁵⁶ In their despair over insufficient precipitation and dying crops, the scheme’s scientists even experimented with artificial rainmaking, only to find that their magic was no less fault-prone than its African equivalent.⁵⁷

Warnings that environmental conditions forbade what the plan proposed to achieve were repeatedly ignored by the scheme’s planners. One of their most perplexing decisions was the selection of the arid region around Kongwa in central Tanganyika as the first site to be developed. Here, the Wakefield mission acted not only against local wisdom, which knew the area as the “country of perpetual drought”, and the explicit advice of the governor of Tanganyika himself. They also ignored the best available meteorological data, showing the region to be one of the driest in the whole country, with precipitation levels well below the required minimum for peanuts.⁵⁸ Instead, in addition to “aerial reconnaissance of many thousands of square kilometers”,⁵⁹ the experts seem to have based their decision primarily on digging up “one fortieth of an acre taken within a field of native-grown groundnuts” – a quite unconventional statistical sample for a gigantic industrial agriculture project.⁶⁰ Even on the

⁵⁶ “Again and again in England I had heard some pontifical panjandrum pointing out that one of the difficulties in developing Africa was that it was hard to make good workers out of the lazy Africans, who had been quite happy for centuries to tend to their shambas [fields] during the wet season, and do nothing all the rest of the year round. Now the sun and the rain and the soil of Africa were imposing exactly the same timetable on the latest invaders”. Wood, *The Groundnut Affair* cit., p. 182.

⁵⁷ Cf. the series of articles by D.A. Davies, “Artificial Stimulation of Rain at Kongwa”, in *Nature*, 167, 1951, p. 614; id., *Nature*, 169, 1952, p. 1001f; id., *Nature*, 171, 1953, p. 829; id., *Nature*, 174, 1954, pp. 256-258.

⁵⁸ Morgan, *Developing* cit., p. 228; Iliffe, *Tanganyika* cit., p. 443. One might even add a fourth, historical warning: Wood, *The Groundnut Affair* cit., p. 38, cites the accounts of a missionary who unsuccessfully tried to establish agriculture in the region in 1878, and had to give up for lack of water.

⁵⁹ Cmd. 7030 cit., 18f.

⁶⁰ John Wakefield, “Note on Agricultural Soundness of the Scheme”, quoted by Morgan, *Developing* cit., p. 248. A further example of this cavalier approach to data-gathering would be the preliminary rainfall data for Urambo, which was tak-

more suitable sites around Nachingwea and Urambo, the huge and uniform fields proposed by the architects of the groundnut scheme were simply not compatible with the ecological limitations imposed by nature. Agronomists of the Colonial Office already pointed out in 1946 that under East African conditions it would be next to impossible to select “very large blocks of land of such uniform topography and soil that they would be ideally suitable for development by mechanization”.⁶¹ Neither was the botanical lead well cast in this respect: because of its growing and ripening patterns, the peanut was generally not a good candidate for large-scale mechanized agriculture.⁶² The scheme’s own mission, sent to North America in 1946 to inquire about agricultural equipment, had recorded that even in the US – the very model of mechanized peanut production that the “groundnutters” wanted to transplant to Africa – mules were often preferred to tractors and field sizes were generally rather small.⁶³ A continuous peanut monoculture would furthermore provide a veritable field day for the rosette virus, a plant disease affecting groundnuts. This fear proved well-founded: the disease soon became so endemic in Urambo that cultivating peanuts was officially forbidden in the region for several years from 1953 onwards.⁶⁴

Unsurprisingly, the technical and scientific personnel of the scheme were haunted by its ignominious breakdown. As early as 1950, the scheme’s former head of information, Alan Wood, imagined his former colleagues “sitting by their firesides in a reminiscent mood”, wondering “if it really happened, or whether they merely dreamt in some idle moment, that a timber mill was sited before anyone had really counted the trees for the wood; that a pipeline

en almost 100 kilometers from the site (Hogendorn, Scott, “Groundnut Scheme” cit., p. 94).

⁶¹ Morgan, *Developing* cit., p. 248f., cites the report of the so-called Clay Mission, sent by the Colonial Office to investigate the peanut production in West Africa, commenting on the Wakefield paper.

⁶² Ibid. The OFC came to the same conclusion in 1951; cf. Cmd. 8125 cit., 10.

⁶³ Morgan, *Developing* cit., p. 253f.

⁶⁴ Morgan, *Developing* cit., p. 228f.; Hogendorn, Scott, “Groundnut Scheme” cit., p. 101.

costing £500,000 or more was built to take fuel, at a huge expense, to tanks set miles from anywhere in the African bush; that a railway was begun without anyone knowing exactly where it was going to in the end and that inspiring everything was a faith that you could grow groundnuts when you had not even bothered to inspect the ground”.⁶⁵ In search of explanations, many fingers were pointed at politicians. Echoing some of the scheme’s scientists, who had previously complained that “they never really had a chance to do their work properly”, technical experts in the Colonial Office blamed “extreme Ministerial pressure” for the fiasco.⁶⁶ On the other side of the Atlantic, in a 1952 meeting of the American Geographical Society, the peanut project served to exemplify what would happen if “the knowledge of specialists should be frittered away by the ignorance of politicians and administrators”.⁶⁷

The doubts raised by the crushing failure of the groundnut scheme – corroborated by similar experiences with the OFC’s “twin”, the Colonial Development Corporation⁶⁸ – caused British colonial development in the mid-1950s to backtrack to more conservative methods of agricultural modernization, focused on small, inexpensive pilot projects. In fact, the remains of the groundnut scheme itself were soon physically re-integrated into colonial agricultural development orthodoxy. After the abandonment of the original plans in 1951, a series of experimental schemes were started under the tutelage of the

⁶⁵ Wood, *The Groundnut Affair* cit., p. 151. Written in a popular vein, the book was widely read at the time of its publication, gleefully quoted from in Parliament by the opposition, and became a point of departure for most subsequent studies. Strachey and Plummer apparently tried to prevent its publication, but only managed to delay it for some months; cf. HC Deb 20 March 1950, vol. 472, cols. 1535-1537.

⁶⁶ “Groundnut Scheme ‘Disappointment’”, *The Times (London)*, 1 January 1949, p. 4; Morgan, *Developing* cit., pp. 306-308.

⁶⁷ “Changing Trend in Geography”, *The Times (London)*, 5 August 1952, p. 3.

⁶⁸ After some expensive failures in its early projects (the most famous of which was the so-called Gambian Egg Scheme), the Colonial Development Corporation (CDC) gradually abandoned direct production and switched to less risky endeavours – mostly giving out loans; see Havinden, Meredith, *Colonialism and Development* cit., pp. 283-298.

cautious Colonial Office, aimed at finding out how to make use of the already cleared areas. In the view of the *Official History of Colonial Development*, “the attempt to bustle Nature was abandoned in favor of an attempt to provide a viable pattern for African agricultural development”.⁶⁹ Largely unnoticed by the British public, these pilot projects were passed on by the OFC to its successor, the Tanganyika Agricultural Corporation (TAC) in 1955, and were ultimately taken over by the independent Tanzanian state in 1961. The World Bank, which replaced Britain as the main provider of outside expertise to the Tanzanian department of agriculture after independence, regarded the scheme in 1961 as “an expensive, but in the long run salutary, demonstration of the need for thorough research and experimentation before attempting radical innovations in tropical agriculture”.⁷⁰

The memory of the groundnut scheme raised the standing of pilot projects for a while and prompted the British state to abstain from primary production in its African colonies, but it only temporarily dampened the general enthusiasm for large agricultural development projects in what was soon called the “developing world”.⁷¹ In the wake of African decolonization in the 1960s and the enthusiasm sparked by the “Green Revolution” in India and Mexico, the “American model” of mechanized large-scale agriculture became, if anything, even more dominant around the world. Under these circumstances, agricultural scientists liked to present the groundnut scheme as an

⁶⁹ Morgan, *Changes* cit., pp. 247-248.

⁷⁰ International Bank for Reconstruction and Development (IBRD), *The Economic Development of Tanganyika*, Johns Hopkins University Press, Baltimore 1961, p. 23. A similar view of an ultimately useful if overpriced experiment was put forward by some of the scheme’s former scientists; cf. A.H. Bunting, “Methods of Land-Clearance for Agriculture”, in *Nature*, 174, 1954, p. 68f.; K. Melanby, “Post-Mortem on Groundnuts?”, in *Nature*, 185, 1960, p. 564.

⁷¹ See S.P. Voll, *A Plough in Field Arable: Western Agribusiness in Third World Agriculture*, University Press of New England, Hanover, NH 1980, p. 85 for an overview of similar project undertaken soon after the scheme. Whether the project discouraged investment in Tanganyika (as e.g. C. Ehrlich, “Some aspects of economic policy in Tanganyika, 1945-69”, in *Journal of Modern African Studies*, 11, 1964, p. 267, claims) is hard to decide. As J. Iliffe points out, “nothing suggests that much investment was ever contemplated” (Iliffe, *Tanganyika* cit., p. 442).

“exceptional case” for which it would be “unfair” to blame the profession.⁷² The scheme’s former chief scientific officer, the renowned agricultural scientist Arthur Hugh Bunting, still deplored in 1986 that the experience of Kongwa had scared developers in East Africa into conservatism. His plea for a return to more courageous approaches reads almost like a one-sentence summary of the Wakefield report: “The old ways won’t do; we must have new ones on a large scale”.⁷³

By the end of the 1970s, however, some development economists had revived the debate on scale in tropical agriculture, promoting a return to small-scale, labor-intensive “peasant” farming as a more efficient and socially equitable method of rural development.⁷⁴ J.S. Hogendorn and K.M. Scott, who investigated the groundnut scheme in 1981 for the United Nations World Hunger Program, concluded that the fundamental error had been what they called “the disregard of the Nigerian alternative”. By means of economic incentives combined with relatively moderate infrastructural investments, it would have been possible, they claimed, to make peasant farmers in West Africa produce the required quantities of peanuts, without taking any unreasonable risks and at substantially lower costs.⁷⁵ Their analysis drew on the fundamental critique of the groundnut scheme written in 1950 by Herbert S. Frankel, one of Britain’s most renowned development economists at that time. Directly after his return from Kongwa, which he had visited as a member of the Working Party sent by Parliament, Frankel had examined what he called the “theoretical considerations”

⁷² Quotes from H. Ruthenberg, *Agricultural Development in Tanganyika*, Springer, Berlin 1964, p. 47.

⁷³ A.H. Bunting, “The Groundnut Scheme”, in *Tanzanian Affairs*, 1 September 1986; online at <http://www.tzaffairs.org/1986/09/the-groundnut-scheme> (accessed 26 February 2012). Bunting had to resign from the scheme in 1951 after accusing John Strachey of lying. He held the chair for Agricultural Botany at the University of Reading from 1956 to 1982.

⁷⁴ See e.g. M. Lipton, *Why Poor People Stay Poor: A Study of Urban Bias in World Development*, Harvard University Press, Cambridge, MA 1977; A. Berry, W. Cline, *Agrarian Structure and Productivity in Developing Countries*, Johns Hopkins University Press, Baltimore 1979.

⁷⁵ Hogendorn, Scott, “Groundnut Scheme” cit., pp. 104-107.

behind Operation Groundnuts in two articles for the *Times*.⁷⁶ He found it a “surprising” idea to bet everything on maximum size; in his view, such an approach ran “counter to the accepted principle that agriculture is generally the least likely form of economic enterprise to yield considerable large-scale economies”.⁷⁷ Moreover, he took the scheme to task for its blind fixation on total mechanization, which had gone so far as to neglect from the outset every possibility that human labor might be an economically more viable solution for certain tasks. While large-scale industrial agriculture might be a good idea in general, this was not necessarily true for southern Tanganyika, an environment completely lacking in technical infrastructure.⁷⁸

Yet, at the same time, Hogendorn and Scott warned against extrapolating general conclusions from the experience of the groundnut scheme. While the fundamental question of whether economies of scale exist in tropical agriculture has remained a matter of debate to this day, the scheme is rarely mentioned as a pertinent example.⁷⁹ Most scholars seemed to doubt whether much analytical insight could be derived from “a project that had so many flaws that if it had not failed for one reason it would still have failed for several others”.⁸⁰ This perception might also explain the somewhat paradoxical finding that, while “in development circles [...] the groundnuts scheme is one of a handful of legendary failures cited as examples of

⁷⁶ The two articles appeared in the *Times* of 4 October 1950 and 5 October 1950, and were reprinted later with a new introduction in Frankel, *Economic Impact* cit., pp. 141-153.

⁷⁷ *Ibid.*, p. 145.

⁷⁸ *Ibid.*, pp. 145-146. In economic terminology, the project did not account for relative factor prices in Tanganyika.

⁷⁹ An exception is N. Johnson, V. Ruttan, “Why Are Farms so Small?”, in *World Development*, 22, 5, 1994, pp. 691-706, who include the scheme in their case studies chosen to demonstrate diseconomies of scale in tropical agriculture, “because it is generally viewed as the classic example of an ill-fated large-scale project”. For a very short overview over the discussion on economies of scale in rural agriculture see P. Woodhouse, “Beyond Industrial Agriculture? Some Questions about Farm Size, Productivity and Sustainability”, in *Journal of Agrarian Change*, 10, 3, 2010, pp. 441-443.

⁸⁰ Coulson, “Agricultural Policies” cit., p. 76.

what not to do”,⁸¹ the project received surprisingly little analytical attention.⁸² The prevailing memory of the scheme amongst development experts, then, seems to resemble that of a nightmare rather than that of a lesson learned. “It is fair to say,” conclude Hogendorn and Scott, “that no new economic principle was forthcoming from the failure. That is the saddest admission of all.”⁸³

“These Days of Great Prosperity”? Tanzanians and the Groundnut Scheme

Herbert Frankel’s reflections draw attention to a “factor” that had received only scant attention in the disputes surrounding the scheme in Europe and the United States: the inhabitants of East Africa. The peanut planners had deliberately decided to have as little as possible to do with Tanganyikans. The most difficult environmental conditions – preferably “uninhabited, tsetse-infected and waterless areas” – were to be chosen to avoid having to deal with any kind of existing land use by local populations, which was thought to be time consuming and politically problematic.⁸⁴ The main role the groundnut scheme wanted to assign to Africans was that of awed spectators. The white paper stated that “by far the most important long-term advantage of the scheme from the African point of view” would be that the project would provide an “ocular demonstration of the benefits of modern agricultural methods”.⁸⁵ Seeing the well-ordered groundnut fields, it

⁸¹ Scott, *Seeing Like a State* cit., p. 228.

⁸² Since Hogendorn and Scott observed a “surprising paucity of analytical studies” in 1981 (Hogendorn, Scott, “Groundnut Scheme” cit., p. 82), the main addition to the literature seems to be M. Rizzo, *The Groundnut Scheme Revisited: Colonial Disaster and African Accumulation in Nachingwea District, Southeastern Tanzania, 1946-1967*, unpublished dissertation, School of Oriental and African Studies, University of London 2004.

⁸³ Hogendorn, Scott, “Groundnut Scheme” cit., p. 108.

⁸⁴ Cmd. 7030 cit., p. 20. The fear of destabilizing “traditional” African societies by developing them “too fast” (and hence creating political instability) is a recurrent theme in British colonial development; for the late 1940s see e.g. Kelemen, “Planning for Africa” cit., p. 85f.

⁸⁵ Cmd. 7030 cit., p. 6f.

was hoped, would finally convince African cultivators to give up their supposedly hopelessly backward ways and adopt “modern” agriculture – a longstanding aim of colonial agricultural policy. Still, in spite of Frank Samuel’s claim that “no operation will be performed by hand for which mechanical equipment is available”⁸⁶, the original plans foresaw a workforce of up to 57,100 “Africans” for land clearing and agricultural operations alone. These workers were to be drawn from the “local populations” living in the vicinity of the three sites, as well as migrant workers from further afar, including northern Mozambique.⁸⁷

In the eyes of the groundnut scheme, all of these people, mostly independent farmers with essential survival skills, were reduced to “unskilled labour”. For the relatively small number of skilled and semi-skilled workers needed, a special (if short lived) training camp at Ifunda was set up to teach English, basic mechanic skills and tractor driving.⁸⁸ Quite a few African apprentices surprised their European instructors with an exceptional aptitude for handling heavy machinery after very short training periods. In general, ordinary Tanganyikans adjusted to the new conditions with a speed and swiftness that belied colonial prejudices about lazy and backward Africans.⁸⁹ Many Tanganyikans seem to have perceived the groundnut scheme as an opportunity rather than a disruption to their lives, and they were willing and able to use it to their own advantage.

In some places, the sudden influx of thousands of peanut workers and of huge amounts of money into virtually uninhabited areas led to veritable “gold rushes”, with all the concomitants. As demand for labor rose sharply, the bargaining position of workers improved.

⁸⁶ Quoted by Johnson, Ruttan, “Why Are Farms so Small” cit., p. 694.

⁸⁷ Cmd. 7030 cit, p. 23. Of these, 32,000 were to be employed permanently. The figures did not include workers needed in transport, shipping, construction of the port, railways, roads etc. Migrant workers from Mozambique routinely crossed into Southern Tanganyika to work on the sisal estates there; see Rizzo, “What Was Left” cit., p. 206.

⁸⁸ The camp was considered ineffective and was closed down quickly to save expenses; Wood, *The Groundnut Affair* cit., pp. 126-128.

⁸⁹ Cf. for a contemporary’s report Wood, *The Groundnut Affair* cit., pp. 77f., 126-128.

The colonial authorities' efforts to avoid "wage wars" between employers were only partly successful, and different contractors tried to attract workers by offering shorter working hours or by improving workers' living conditions. On the other hand, the sudden emergence of whole new towns in regions that had previously been "more densely populated by elephants, lions and other game than by human inhabitants"⁹⁰ led not only to an often dangerously close cohabitation of humans and wild animals, but also to social problems. Whilst the concerns of colonial authorities and local missionaries that increasing theft, alcoholism, and prostitution might bring about a general "dissolution of moral standards" were probably somewhat exaggerated, Kongwa in particular acquired a true "frontier town" reputation, making African workers reluctant to bring their families there.⁹¹

Not all the money was squandered, however. Colonial authorities reported that the surprising total of £100 was deposited at the Kongwa Post Office Savings Bank on the day of its opening. The economic opportunities were not restricted to those who worked directly for the OFC. A colonial labour officer remarked on the "large numbers of labourers [...] who do not wish to be employed for the simple reason that they can make quite a good living by selling their own produce i.e. chicken, eggs, fruit etc." at high prices to the scheme's employees.⁹² In 1952, the local newspaper *Habari za Nachingwea katika Kiswahili* ("Nachingwea News in Swahili") celebrated "these days of great prosperity" that had come to the region with the project.⁹³ Matteo Rizzo, retracing the biography of several "rural entrepreneurs" in the Nachingwea district, has pointed to the importance of these economic opportunities for his interviewees. Julius Mtenda, for example, on whom Rizzo gives the most details, built

⁹⁰ M. Rizzo, "Becoming Wealthy: The Life-History of a Rural Entrepreneur in Tanzania, 1922-80s", in *Journal of Eastern African Studies*, 3, 2, 2009, p. 225.

⁹¹ Wood, *The Groundnut Affair* cit., pp. 166-173. According to Wood, the bad reputation was primarily due to the "bad example" of Europeans.

⁹² Quoted by Rizzo, "What Was Left" cit., p. 229; cf. Wood, *The Groundnut Affair* cit., p. 76f.

⁹³ *Habari za Nachingwea katika Kiswahili*, 4 June 1952, quoted in Rizzo, "What Was Left" cit., p. 212.

up a small capital stock through wage labor in connection with the groundnut scheme. This allowed him to profit from the small-scale trading opportunities in the new groundnut towns, and ultimately to become a comparatively wealthy landowner. The unintended side-effects of the scheme thus made it possible for him to escape his poverty and lay the foundations of his subsequent career.⁹⁴

Others might have had a very different experience. Gregory Maddox has argued that in the arid highlands around Kongwa, the Scheme's demand for labor added to the pressure on the local Gogo people to leave their fields for wage work. This not only led to tensions within Gogo society – not least between absent male workers and their wives, who were left to tend to the fields on their own – but also drove down agricultural productivity, which aggravated local famines in 1947 and 1949/50 and ultimately contributed to the impoverishment of the Gogo.⁹⁵ While this dovetails with contemporary fears of the corrosive effect of wage labor expressed by the colonial administration, the significance of the Scheme seems to have consisted mainly in reinforcing longstanding colonial labor policies. For the Southern Province, Matteo Rizzo has even made the opposite argument: In his view, local peasants successfully integrated the new employment opportunities into their livelihood patterns as a fall-back for difficult times, thereby increasing food security. They worked for money if harvests failed, and went back to farming as soon as circumstances allowed – one reason for the high turnover rates of African employees that exasperated the OFC.⁹⁶ In the end,

⁹⁴ Rizzo, *Groundnut Scheme Revisited* cit., pp. 202-258. In total, Rizzo could locate “about eighty” persons (all of them male) in the Nachingwea area who profited from the scheme to accumulate a relatively substantial amount of capital (ibid., p. 149).

⁹⁵ G.H. Maddox, “*Leave, Wagogo! You Have No Food!*”: *Famine and Survival in Ugogo, Central Tanzania 1916-1961*, unpublished dissertation, Northwestern University 1988, esp. pp. 322-325; Id., “Famine, Impoverishment and the Creation of a Labor Reserve in Central Tanzania”, in *Disasters*, 15, 1, 1991, pp. 35-42; Id., “Gender and Famine in Central Tanzania: 1916-1961”, in *African Studies Review*, 39, 1, 1996, pp. 83-101.

⁹⁶ Rizzo, *Groundnut Scheme* cit., pp. 35-36, discusses Maddox's arguments

the extent of the specific contribution of the groundnut scheme to larger processes of economic transition remains hard to gauge, not least because of its very limited life span.

To many Tanganyikans, the whole project must indeed have seemed little more than a quickly passing mirage in retrospect. When the writer Evelyn Waugh visited Tanganyika as a tourist in 1958, the three original sites had already changed almost beyond recognition. He found the former headquarters, once housing over 30,000 men, abandoned and overgrown, the roads beginning to break down, and the train lines dismantled.⁹⁷ Virtually the entire area cleared around Kongwa had become grassland supporting a cattle ranch, since the precipitation had proved insufficient for anything else. In Urambo, agricultural production focused on flue-cured tobacco as a cash crop.⁹⁸ The only area in which large-scale peanut farming had survived at all was the south around Nachingwea – and even here the scale was incomparably smaller than initially envisaged.⁹⁹ Instead of the mechanized monoculture planned for, an increasing part of the cleared land was used for so-called “African tenant schemes”. In these, African volunteers were given smallholdings of around 10 to 50 acres of cleared land, including newly built housing and a small garden. A limited amount of mechanized assistance with activities like plowing, as well as seed, fertilizer, and insecticides was provided by the management for a fixed fee. In return, tenants had to plant, weed, and harvest, follow-

linking the Scheme to famines; Rizzo, “What Was Left” cit., pp. 231-235. Turnover rates of African employees on the scheme sometimes surpassed sixty percent per month; cf. Hogendorn, Scott, “Groundnut Scheme” cit., p. 92.

⁹⁷ In fact, he wrote that Kongwa was “difficult to find”; E. Waugh, *A Tourist in Africa*, Little Brown, London 1960, pp. 84-86.

⁹⁸ Ibid.; on Urambo see J. Boesen, A.T. Mohele, *The “Success Story” of Peasant Tobacco Production in Tanzania: The Political Economy of a Commodity Producing Peasantry*, Nordic Africa Institute, Uppsala 1979, esp. pp. 26-30.

⁹⁹ Fourteen state farms of under 1,000 acres on average – rather minuscule compared to the gigantic 30,000 acre “units” planned for by the Wakefield mission – were occasionally able to achieve rather satisfying peanut yields, but still operated at a loss; Overseas Food Corporation, “Annual Report and Statement of Accounts for the Year 1954”, H.M.S.O., London 1955, p. 12; IBRD, *Economic Development* cit., p.403.

ing – most importantly – a crop management program meticulously planned and closely supervised by the management agency. This close colonial control was meant not only to ensure that agricultural advice was heeded; it also had sociopolitical reasons. The explicit goal was to create a new class of “African yeoman farmers” that, it was hoped, would form the social backbone of the colony in the future.¹⁰⁰

In reality, meager returns, services charges, and intrusive management made the program quite unpopular with potential as well as actual tenants. In Nachingwea, more than 50 percent of the tenants left after only one year, and in the early 1960s the project was effectively wound down.¹⁰¹ In spite of this, the OFC’s tenancy schemes proved to be a direct forerunner of the “villagization” program, one of the central pillars of independent Tanzania’s interpretation of state socialism. In regrouping the rural population in so called “Ujamaa” villages – socialist cooperatives planned, constructed, and coordinated by the state – President Julius Nyerere and his Tanzanian African National Union (TANU) hoped to increase agricultural productivity, while bringing the notoriously dispersed majority of Tanzania’s inhabitants within the grasp of state bureaucracy. In its first Five Year Plan of 1964, the TANU explicitly embraced the World Bank’s “transformation approach” to agricultural modernization, prescribing a shock-modernization of cultivation methods through the resettling of peasants, explicitly modeled on the OFC/TAC tenancy schemes in the 1950s. Seven out of the 23 settlement schemes controlled by the Tanzanian Village Settlement Agency in 1966 had been directly taken over from the TAC and were located on ex-groundnut scheme land.¹⁰² Ultimately, “villagization” was abandoned in 1976, after it

¹⁰⁰ Overseas Food Corporation, “Annual Report and Statement of Accounts for the year ended 31st March 1955”, H.M.S.O., London 1956, p.163.

¹⁰¹ Even in Urambo, where a rewarding cash crop was found in tobacco, remunerations for the individual farmers remained low in spite of state subsidies to overhead managing costs; Ruthenberg, *Agricultural Development in Tanganyika* cit., pp. 80-89; IBRD, *Economic Development* cit., pp. 402-407; Boesen, Mohele, *Success Story* cit.

¹⁰² IBRD, *Economic Development* cit., pp. 129-140; Coulson, “Agricultural Policies” cit., p. 89.

had dangerously eroded the country's agricultural productivity and forced Tanzania to import large quantities of food the country could ill afford. For large parts of the population, the program had been a highly traumatic experience. In the "largest resettlement effort in the history of Africa",¹⁰³ the lives of an estimated five to nine million people were disrupted by increasingly violent resettlement measures, which in some cases included burning down whole villages to prevent its inhabitants from returning to their homes.¹⁰⁴ There was widespread resistance to resettlement, and to this day, "rural people all across Tanzania [...] tell tales of the enormous suffering it engendered."¹⁰⁵

Not unlike the groundnut scheme, villagization failed catastrophically, because it overemphasized human willpower and overestimated the possibilities of modern planning. While in some respects the approach was almost the exact opposite of the groundnut scheme, focusing as it did on small scale farming and manual labor, an argument can be made for at least some continuity in the mentality that informed both projects.¹⁰⁶ Both were based on the conviction that the sorely needed agricultural modernization of Tanzania could be brought about only by radical, large-scale, and highly centralized measures. Their common enemy was the "primitive ways of the African peasant", which were thought to be inefficient, wasteful, and even actively harmful to the soil.¹⁰⁷ While the groundnut scheme had intended to

¹⁰³ G. Hyden, *Beyond Ujamaa in Tanzania: Underdevelopment and an Uncaptured Peasantry*, University of California Press, Berkeley 1980, p. 130.

¹⁰⁴ Huge imports of food became necessary in the early 1970s. For an account of "villagization" see e.g. Scott, *Seeing Like a State* cit., pp. 223-247.

¹⁰⁵ J.B. Shetler, *Imagining Serengeti: A History of Landscape Memory in Tanzania from Earliest Times to the Present*, Ohio University Press, Athens 2007, p. 218.

¹⁰⁶ Scott, *Seeing Like a State* cit., p. 228, calls the groundnut scheme a "dress rehearsal for massive villagization".

¹⁰⁷ Some more extreme voices even saw the tsetse fly as a blessing in disguise, the real "trustee" of East African land who would at least keep it safe from erosion until it could be opened up to more enlightened methods at some point in the future. This thought can still be found in pamphlets of the UN Food and Agricultural Organization (FAO) as late as 1962; cf. H. Kjekshus, *Ecology Control and Economic Development in East African History: The Case of Tanganyika, 1850-1950*, University of California Press, Berkeley 1977, p. 175.

bypass local populations by “importing” a huge industrial farming complex directly from the industrialized countries, the basic idea of “villagization” was to uproot Tanzanian peasants, in order to put them in a position in which they could no longer refuse expert advice. Both projects aspired to re-mold the Tanzanian landscape into not only a new agricultural, but also a new sociopolitical system. In focusing on the latter aspect, they did not take ecological limits into account.¹⁰⁸

One main reason for this was their misreading of the relation of local populations to the land.¹⁰⁹ The historian John Iliffe has described pre-colonial Tanganyikans’ “struggle with their enemies in nature” – poor soils, drought, wild animals, diseases – in terms almost as martial as Strachey used for the groundnut scheme, and there is certainly no reason to idealize their harsh and mostly short lives as some kind of idyllic “community with nature”.¹¹⁰ Nevertheless, the historical role of humans in the creation of the East African ecosystems was arguably much bigger than colonial authorities had allowed for. Seemingly “primitive” and ephemeral methods like shifting cultivation, intercropping, or the mixing of pastoralism and agriculture were often the result of long adaption to and great familiarity with local specificities – and as such were in fact very efficient.¹¹¹ Moreover, much of the vast stretches of “empty wilderness” that were taken as proof of African technological inadequacy might

¹⁰⁸ H. Kjekshus, “The Tanzanian Villagization Policy: Implementational Lessons and Ecological Dimensions”, in *Canadian Journal of African Studies*, 11, 2, 1977, pp. 269-282; J. Shao, “The Villagization Program and the Disruption of the Ecological Balance in Tanzania”, in *Canadian Journal of African Studies*, 20, 2, 1986, pp. 219-239.

¹⁰⁹ A variety of very different groups were concerned. For Urambo and surroundings see R.G. Abrahams, *The Peoples of Greater Unyamwezi, Tanzania (Nyamwezi, Sukuma, Sumbwa, Kimbu, Konongo)*, International African Institute, London 1967; for the Kongwa region G. Maddox, “Environment and Population Growth in Ugogo, Central Tanzania”, in Id., J. Giblin, I. Kimambo, *Custodians of the Land: Ecology and Culture in the History of Tanzania*, Athens, Ohio University Press 1996, pp. 43-65; for a short overview of ethnic groups in the Nachingwea region see Rizzo, *Groundnut Scheme Revisited* cit., pp. 10-15.

¹¹⁰ Iliffe, *Tanganyika* cit., pp. 4, 6-21.

¹¹¹ Cf. esp. Kjekshus, *Ecology Control* cit.; Iliffe, *Tanganyika* cit., pp. 6-21.

actually have been a product of colonialism itself, as Helge Kjekshus has argued.¹¹² Due to the demographic decline caused by colonial warfare, exploitation, and the importing of various diseases, from rinderpest to influenza, local populations were no longer capable of exerting environmental control through settlements, cultivation, and fire-clearing.¹¹³ Between the late nineteenth century and the 1930s, large areas previously inhabited by humans were therefore “reconquered” by nature – “pigs, lions, bush and tsetse”.¹¹⁴

For the western Serengeti further to the north of Tanganyika, Jan Shetler has shown impressively how what was perceived as a pristine wilderness by Europeans is intricately linked to the collective memory and identity of the people that had lived on it for a long time. In her reading, the landscape is essential to the persistence of oral traditions, becoming itself part of a “text of history” that is experienced through walking the land and hearing the stories mapped onto its spatial extension.¹¹⁵ If the closing off of the Serengeti as a national park disrupted these traditions, the total refurbishment of the groundnut scheme sites might have had an even more drastic effect on those living close-by. Although the plan’s claim that “[i]n no instance would native rights or other interests be prejudiced by the location of the project” might have been legally accurate,¹¹⁶ it seems that the displacement of a significant number of people was only avoided by the Scheme’s early demise. As one colonial administrator remembered later, the area that the game warden Ionides had wanted

¹¹² Cmd. 7030 cit., pp. 41-43, repeatedly refers to “primitive methods”, the “small home-made ax and primitive hoe” to explain why supposedly fertile soils recommended for the Scheme were not being cultivated.

¹¹³ Kjekshus, *Ecology Control* cit.; Iliffe, *Tanganyika* cit., pp. 123-167. For a discussion of Kjekshus’s thesis see Beinart, *Environment and Empire* cit., pp. 189-199.

¹¹⁴ Iliffe, *Tanganyika* cit., p. 163.

¹¹⁵ Shetler, *Imagining Serengeti* cit.

¹¹⁶ Cmd. 7030 cit, p. 44. This claim was only made for Tanganyika. The land recommended for the never realized developments in Kenya and Northern Rhodesia also included Native Reserves; at least for Kenya, the Paper concluded that for this reason “difficulties [...] may be experienced”.

to preserve for elephants was also inhabited by humans: “[T]o many of us, there was great relief that the fold-up of the Scheme meant the abandonment of the greedily sought new land in the Liwale District, north of Nachingwea and known as ‘Block B’, particularly the fairly populous Kipule chiefdom. The specious argument that the Scheme would by its occupation eradicate the tsetse fly and thereby the endemic sleeping sickness in the area was no answer to the sturdy Wagindo who complained that the Angoni (spearhead of the Zulu advance northward) had destroyed many of them and their homes, that the Germans had then decimated them after the Maji Maji rebellion, and that the British were about to finish them off altogether.”¹¹⁷ Ultimately, the development of Block B never happened, not out of ecological concerns or because of the protest of the Wagindo, but – according to Alan Wood – because of logistical difficulties.¹¹⁸

What Remains of the Groundnut Scheme?

Thanks to modern communication technology, it has become easy to steal a glance at some of the private memories connected to the groundnut scheme. The photographs of former participants, shared and discussed online by their relatives and families, show a very peculiar vision of the project, centering on happy families, modern technology (cars, trains, tractors, new houses, and even swimming pools), and remarkably few black Africans.¹¹⁹ Insofar as these memories have become part of professional and private biographies and family stories, they form a parallel (if strictly separate) “white” equivalent to the “black” memories that Matteo Rizzo has recorded. Both seem to

¹¹⁷ Johnston, “The Groundnut Scheme” cit., p. 16. According to Johnston, the only displacements taking place in connection with the Scheme were those of two villages at Mtwara in the context of the construction of the new port in the Southern Province.

¹¹⁸ Wood, *The Groundnut Affair* cit., p.145.

¹¹⁹ Children and grandchildren of participants started sharing family photographs of the groundnut scheme, e.g. on the website www.flickr.com (accessed October 2012).

emphasize personal opportunities over the Scheme's shortcomings.¹²⁰ If in the context of family histories the groundnut scheme seems to appear largely as a fond memory, the relatively small group of the "veterans" themselves did not play a substantial role in upholding a public memory of the project in Britain.¹²¹

In the realm of collective memory, the scheme has been adapted into the British national folklore and popular culture – it was even granted a disparaging offhand mention in one of Ian Fleming's "James Bond" stories.¹²² Yet in the process, it has been reduced to its symbolic component and lost its physical basis. To mark the fiftieth anniversary of the groundnut scheme's abandonment in 2001, the London-based *Sunday Business* half-mockingly proposed the erection of a memorial to the project on the site of the so called "Millenium Dome" in Greenwich, arguing that the scheme "– had it been better remembered – might have saved us from building the Dome" in the first place.¹²³ No such memorial was ever built, and consequently, the scheme remains a British "lieu de mémoire" without a strong association to a specific place. This is to an extent also true for the global community of development experts, where the project seems to have an almost mythical status. While the list of very large agricultural development flops has grown quite long in the meantime, Hogendorn and Scott assure us that "somewhere in the collective memory of all food and agricultural scholars there lies

¹²⁰ Rizzo, *Groundnut Scheme Revisited* cit. Most of the descendants of European groundnut workers seem to recognize the Scheme as a "failure", but one Flickr user identifying himself as Paul Jackson commented: "My folks had a terrific time though and my sister was born there"; <http://www.flickr.com/photos/92943860@N00/353725428/in/set-72157605607627022/> (accessed July 2013).

¹²¹ One veteran, when asked by the Imperial War Museum's oral history project in 2001 if he had any memories of the groundnut scheme, replied with "only complete chaos" (IWM, interview with Kenneth Norman Thomson Lee, Catalogue number 21063, online at <http://www.iwm.org.uk/collections/item/object/80020095>).

¹²² Ian Fleming, *James Bond: Quantum of Solace*, Blackstone, London 2008 [1960], p. 98.

¹²³ "The Dome: A Chamber of Spending Horrors", *Sunday Business (London)*, 7 January 2001.

some recollection, however hazy, of the largest of all the projects, the ill-conceived, ill-managed, and unlucky East African Groundnut Scheme”.¹²⁴ As far as Tanzanians are concerned, not much evidence of a collective memory beyond individual recollections has been unearthed, and it seems safe to assume that events like villagization and sites like the Serengeti national park made a more pronounced impact on national as well as local memory.

In a reversal of Aleida Assmann’s thoughts, it might therefore be tempting to think of the groundnut scheme as a case of “history not taking place” – a story of what was planned but did *not* happen, how specific sites were *not* transformed into a repository of memory.¹²⁵ John Iliffe seems to take such a stance when he writes that the “real significance” of the project lay in its failure, as success would have made it a major obstacle for decolonization.¹²⁶ However, such a counterfactual view neglects the very real traces the project left in the landscape. In 1992, a survey conducted by the Institute of Resource Assessment of the University of Dar es Salaam found that “the Nachingwea arable scheme was completely abandoned. Most of the land was left unutilised, with a small area being used for subsistence farming. In Kongwa, most of the area is still a cattle ranch managed by the National Ranching Company with a small area managed by the Ministry of Agriculture, Livestock and Cooperatives as the Kongwa Pasture Research Station. At Urambo, the land has been taken by villagers for subsistence farming.”¹²⁷ Compared to what Frank Samuel saw from his airplane in 1946, the character of two of the three sites had changed permanently, if not quite in the way the groundnut scheme’s planners had intended. The possible exceptions are the “unutilized” parts of the Nachingwea site, which is located

¹²⁴ Hogendorn, Scott, “Groundnut Scheme” cit., p. 81.

¹²⁵ A. Assmann, “How History Takes Place”, in Sengupta, *Memory, History, and Colonialism* cit., pp. 151-165.

¹²⁶ Iliffe, *Tanganyika* cit., p. 442.

¹²⁷ According to A.S. Kauzeni et al., “Land Use Planning and Resource Assessment in Tanzania: A Case Study”, in *IIED Environmental Planning Issue*, 3, 1993, p. 32.

next to the world's largest protected Miombo forest ecosystem. At least parts of the area originally planned for seem to have been integrated into the Msanji Game Reserve created in 1994.¹²⁸

Yet as the area under cultivation in Tanzania has been continuously expanding since the 1950s, mainly driven by a population explosion from around 7.5 million in 1950 to over 44 million in 2011, the quantitative importance of the changes introduced by the groundnut scheme should not be overestimated.¹²⁹ In fact, Tanzania still has enough “underused” land to have become a target in the so called “new land grab”. Soaring food and energy prices in 2007/8 triggered a global run on arable land involving industrialized countries from China to Sweden, as well as various private multinational corporations.¹³⁰ In this context, the model of the groundnut scheme seems have enjoyed a remarkable return to popularity: In Tanzania, international agricultural companies have invested (and partly, lost) millions of dollars in huge, highly mechanized plantations growing *Jatropha*, an oil-producing shrub suitable for producing biodiesel for the industrialized world.¹³¹ This provokes difficult questions about

¹²⁸ R.D. Baldus et al., “The Selous-Niassa Wildlife Corridor,” in *Tanzania Wildlife Discussion Paper*, 34, 2003, online at http://www.wildlife-baldus.com/download/nr_34.pdf; R. Hahn, “Environmental Baseline Study for the Ruvuma Interface”, *Gtz Paper*, 2004, http://www.selous-niassa-corridor.org/fileadmin/publications/Ruvuma_Interface_Study_Institutional_Report.pdf (all accessed October 2012).

¹²⁹ Between 1990 and 2007, the population of Tanzania jumped from 7.5 to 40.4 million people; growth of the agricultural sector, which was up to 4.9 percent per year between 2004 and 2006, “has been brought about mainly by increases in cultivated area and crop diversification”; cf. World Bank, *Tanzania Country Brief*, World Bank, Washington 2009, here p. 10.

¹³⁰ L. Cotula et al., *Land Grab or Development Opportunity? Agricultural Investment and International Land Deals in Africa*, FAO/IIED/IFAD, London/Rome 2009; S. Borras et al., “Towards a Better Understanding of Global Land Grabbing”, in *Journal of Peasant Studies*, 38, 2011, pp. 209-216; A. Zoomers, “Globalisation and the Foreignisation of Space: Seven Processes Driving the Current Global Land Grab”, in *Journal of Peasant Studies*, 37, 2010, pp. 429-447.

¹³¹ “Tanzania’s Biofuel Project’s Promise Proves Barren”, *Mail & Guardian Online*, 10 March 2011, <http://mg.co.za/article/2011-03-10-tanzanias-biofuel-projects-promise-proves-barren> (accessed June 2011).

food security and about national sovereignty over land in what is still one of the poorest parts of the world. Moreover, in light of efforts to limit global carbon dioxide emission and rising concerns about dependency on fossil fuel, the general question of the efficiency of industrial agriculture becomes more complex still – especially with regards to biofuel production.¹³² In this context, it might be useful to remember that there once was a quick solution to a global oil crisis that ended up importing more peanuts than it produced.

¹³² T. Weis, “The Accelerating Biophysical Contradictions of Industrial Capitalist Agriculture”, in *Journal of Agrarian Change*, 10, 2010, pp. 315-341.