

## THE ENVIRONMENTAL CONSEQUENCES OF INDEPENDENCE AND SOCIALISM IN NORTH PARE, TANZANIA, 1961–88\*

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**ABSTRACT:** This article draws on archival sources and oral histories to describe changing post-colonial land management in the North Pare Mountains of Tanzania. The independent state transformed colonial institutions but did not maintain colonial common property regimes for water source, irrigation and forest management. Farmers responded by encroaching upon and dividing the commons. After 1967, Tanzania's socialist policies affected environmental conditions in North Pare indirectly by increasing the ambiguity and negotiability of resource entitlements. The material, social and cultural legacies of these processes include environmental change, declining management capacity and persistent doubt about the value of 'conservation'.

**KEYWORDS:** Environment, socialism, conservation, Tanzania.

BIBI Amina was preparing to sow sweet potatoes in the wet soil next to the spring when I came to ask her opinion of 'conservation'. She rinsed her muddy hands in the water flowing into her field from a plastic pipe in a chipped concrete box next to a pile of boulders. Although the colonial-era springbox was still a popular local water source, the land around it had not been a conservation area for many years. 'Conservation!', she scoffed,

it is right here that the development agency is forbidding [us] to grow taro and sweet potatoes ... We did not agree with this idea but we obey the force of the government, and we are the ones who will be hurting ... Where will we farm if our land becomes a conservation area?<sup>1</sup>

The necessity, meaning and methods of environmental conservation are hotly debated topics in rural Tanzania. In both planning documents and village meetings, much of this discussion is ahistorical and centers on the issue of population pressure as the ultimate cause of environmental change. Yet historical analysis of the proximate causes of environmental change – especially political and institutional shifts – has more power to explain

\* Ethnographic and archival research for this article was conducted in Usangi Division, Mwanga, Dar es Salaam, Moshi and Arusha in 1997–8. It was supported by grants from the Wenner-Gren Foundation for Anthropological Research and the Fulbright program. Informants were selected based on their status as the managers and caretakers of common property resources, such as water sources, irrigation systems and sacred forests. Interview transcripts are available upon request from the author, Sociology/Anthropology Dept., University of Vermont, Burlington, VT 05405 USA. The author thanks the anonymous reviewers of the *JAH* for their perceptive comments.

<sup>1</sup> 'Bibi Amina' is a pseudonym. The author has changed or withheld informants' names to protect them from social or political repercussions. Bibi Amina is a widow in her seventies, interviewed in Usangi on 22 Oct. 1997.

whether the outcomes promote social justice and sustainability or immiseration and degradation.

The North Pare Mountains, where Bibi Amina lives, are currently experiencing a Malthusian environmental crisis, according to the German-financed Tanzania Forestry Action Plan – North Pare Project (TFAP). Although North Pare ‘used to be an area favourable to agriculture with large tracts of land covered under forest’,

in recent years land became scarce due to a high population pressure ... leading to an alarming degradation of natural resources, characterised by the cultivation of marginal areas and decreasing soil fertility as well as the encroachment and uncontrolled exploitation of the remaining forest reserves. Under these conditions, the traditional environmental protection measures and farming practises could not ensure the sustainability of the natural resources.<sup>2</sup>

A rather different account of the causation and context of environmental change appears in farmers’ statements that development agency staff recorded in the minutes of a 1997 land use planning meeting:

Environmental conditions began to decline because traditional customs were discarded. These had helped to prevent soil erosion and to conserve water sources ... after independence and the Arusha Declaration it was said that no one owned land, so the conservation laws died.<sup>3</sup>

Having used a neo-Malthusian perspective to define North Pare’s problems as a matter of population pressure on resources, the TFAP’s expatriate administrators have been promoting technical and bureaucratic solutions such as bench terraces and village land use planning committees. Although population pressure on resources is an important factor for understanding changing land use, it does not explain the timing and sequence of encroachment and degradation in North Pare. The key factors are political and ecological. Colonial political institutions had buttressed the conservation of common property resources in North Pare, therefore the political ambiguities that followed Tanzania’s independence turned many of these common property regimes into open access situations. The degradation that ensued was actually a political process rather than a natural ‘tragedy of the commons’.<sup>4</sup>

The narrative about population pressure, inevitable degradation and the search for new management institutions appears regularly in the media

<sup>2</sup> <http://www.gtz.de/themen/projekt.asp?PN=9821737&spr=2&land=Tanzania>. Accessed 24 Jan. 2003. The TFAP project is funded by Germany’s GTZ (*Deutsche Gesellschaft für Technische Zusammenarbeit*). Holland’s SNV (the *Nederlandse Ontwikkelingsorganisatie*) was also active in the Pare area throughout the 1990s in support of the Traditional Irrigation Improvement Program (TIP).

<sup>3</sup> Archives of the ward executive officer, Chomvu Ward, Usangi (hereafter WEO-Chomvu), CH/AR/12, ‘Ardhi, Msitu, na Maji’ file. ‘Conversation with farmers about the importance of soil erosion control in the Ndurumo river watershed, villages of Mshewa, Chomvu, Ndorwe, and Vuagha’, 19 Feb. 1997.

<sup>4</sup> The notion that economically rational actors will exploit common property and thus degrade it was expounded by Garrett Hardin in ‘The tragedy of the commons’, *Science*, 162 (1968), 1243–8. The explanatory power of this model fades when one considers that the people in Hardin’s scenario lack the culture, politics and social institutions that mediate all human–environmental relationships.

and in World Bank documents about Africa.<sup>5</sup> Recent work in Africanist environmental history, geography and anthropology, however, has challenged this familiar and often ahistorical mode of analysis.<sup>6</sup> A historical form of political ecology, the study of how power (in various forms) shapes human–environmental interactions, serves as a framework for much of this anti-Malthusian literature. Major themes include the linkages between imperialism and conservation, the biases inherent in colonial notions of scientific land management, the value of African land users' environmental knowledge and the diversity of pathways for agrarian change.<sup>7</sup> Understanding contemporary African landscapes, however, requires analyses that build upon this rich database of colonial change (and continuity) to explore the contemporary environmental history of post-colonial Africa.<sup>8</sup> This article draws on both local and national archival sources and oral historical interviews to delineate the changing political ecology of Usangi Division in the North Pare Mountains from Tanzania's independence in 1961 to the arrival of European conservation and development programs in 1988.

#### CONSERVATION AND ENTITLEMENTS IN COLONIAL NORTH PARE

North Pare is an enormous tilted block of gneiss with its higher edge to the west (see Map 1). The densely settled eastern slopes receive, on average, 1,290 millimeters of rainfall annually, and currently support over 600 people per square kilometer in many areas. Farmers in North Pare grow *arabica* coffee, vegetables, maize, beans and bananas in the cool highland zone, and many rely on plots of maize in the warmer eastern lowlands. Men have primary ownership rights to resources, so women usually gain access to resources through kin relations or marriage despite their disproportionate contributions to food production. Water is a major constraint on production, particularly since the area's centuries-old irrigation system went into decline over the twentieth century. Common property resources in North Pare include swamps, springs, rivers and a network of more than 400 sacred forests.<sup>9</sup>

For many former common property resource systems around the world, resource abuse and environmental change have ensued following the

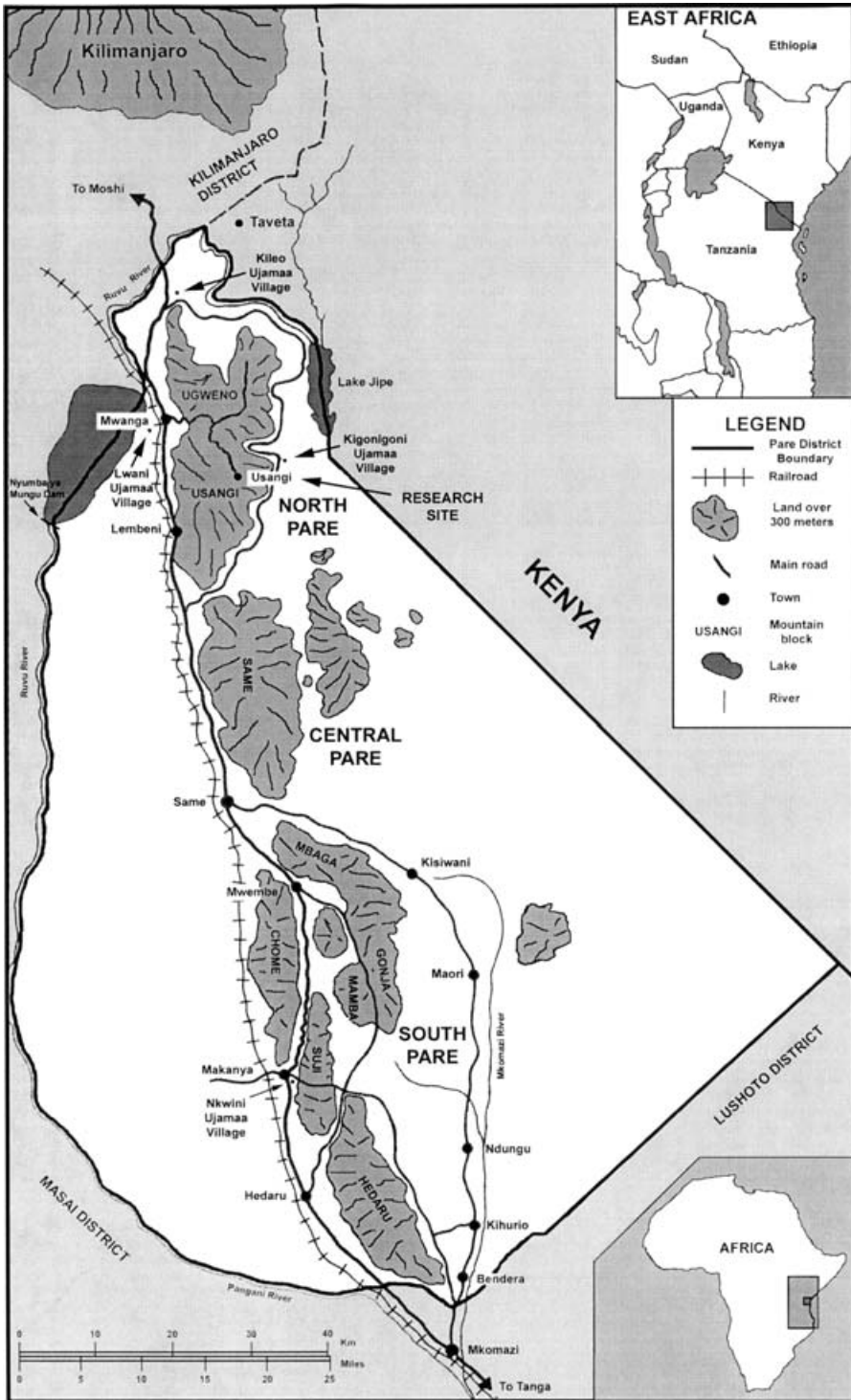
<sup>5</sup> E.g. Kevin Cleaver and Götz Schreiber, *Reversing the Spiral: The Population, Agriculture, and Environment Nexus in Sub-Saharan Africa* (Washington, DC, 1994).

<sup>6</sup> Terence Ranger, *Voices from the Rocks* (Oxford, 1999); Elias Mandala, *Work and Control in a Peasant Economy* (Madison, 1990); James Fairhead and Melissa Leach, *Misreading the African Landscape* (Cambridge, 1996).

<sup>7</sup> William Beinart, 'African history and environmental history', *African Affairs*, 99 (2000), 269–302; B. L. Turner, Goran Hyden and Robert W. Kates (eds.), *Population Growth and Agricultural Change in Africa* (Gainesville, 1993).

<sup>8</sup> Stephen Ellis, 'Writing histories of contemporary Africa', *Journal of African History*, 43 (2002), 1–26.

<sup>9</sup> Indigenous species comprise most of these forests, which range in size from ten hectares to solitary trees and include both lineage burial shrines and clan initiation areas. See Michael J. Sheridan, 'The sacred forests of North Pare, Tanzania: indigenous conservation, local politics, and land tenure', Boston University African Studies Center Working Papers in African Studies no. 224 (Boston, 2000). For an analysis of nineteenth-century irrigation management in North Pare, see Michael J. Sheridan, 'An irrigation intake is like a uterus: culture and agriculture in precolonial North Pare, Tanzania', *American Anthropologist*, 104 (2002), 79–92.



Map 1. North and South Pare Mountains, Tanzania.

breakdown of local institutions for resource access and control. The lack of management has led to open access situations and, in postcolonial Africa as elsewhere, many consequent state interventions have failed.<sup>10</sup> Much of the scholarship on African land tenure recommends co-management strategies that blend national and local management systems to resolve these problems, but few studies document the specific historical processes through which older forms of management became ineffective.<sup>11</sup> Recent work by Leach, Mearns and Scoones on 'environmental entitlements' offers the terminology for describing shifting land management in post-colonial Africa.<sup>12</sup> This approach focuses on the legitimacy of various social actors' claims to resources, the institutions that shape these terms of access and control and the consequences of 'mapping' these entitlements on to landscapes and societies. This mode of analysis is useful for its insistence on a processual approach to property relations rather than envisioning structures of rules and roles.

Planners in the administrations of both colonial and independent states have repeatedly tried to reshape the social maps of entitlement in Africa, but have met with little success. The planners often intend this re-mapping process to result in greater efficiency and rational organization, but many of Africa's mapping exercises have resulted in ambiguous lines, negotiable boundaries and arbitrary regulation. Why do states persist in these often disastrous efforts? In a recent review of state-led development schemes, James Scott suggested that elite bureaucrats find indigenous land use systems unacceptably 'illegible' and therefore in need of modernist transformation. In many cases, however, the new institutions and re-mapped entitlements lead to less 'legibility' for both planners and rural land users.<sup>13</sup>

Changing notions of authority and legitimacy are the keys to understanding the social construction and environmental effects of this ambiguity in rural Africa. Even if there is great continuity in the set of rules and practices that govern access to and control over resources (such as a patrilineal land tenure system), if the social logic of authority shifts, the rules may become irrelevant. When the authority and legitimacy of the social institutions that

<sup>10</sup> Cf. Daniel Bromley (ed.), *Making the Commons Work: Theory, Practice, and Policy* (San Francisco, 1992); Bonnie McCay and James Acheson (eds.), *The Question of the Commons: The Culture and Ecology of Communal Resources* (Tucson, 1987); David Western, Michael Wright and Shirley Strum (eds.), *Natural Connections: Perspectives in Community-based Conservation* (Washington DC, 1994).

<sup>11</sup> E.g. Steven Lawry, 'Tenure policy toward common property natural resources in Sub-Saharan Africa', *Natural Resources Journal*, 30 (1990), 403–22; Jean-Marie Baland and Jean-Philippe Platteau, *Halting Degradation of Natural Resources: Is there a Role for Rural Communities?* (Oxford, 1996).

<sup>12</sup> Melissa Leach, Robin Mearns and Ian Scoones, 'Environmental entitlements: dynamics and institutions in community-based natural resources management', *World Development*, 27 (1999), 225–47.

<sup>13</sup> The literature on African land tenure has shifted from a concern for rules and roles toward a focus on the ambiguity and negotiability of the social relations that constitute property in Africa. See R. E. Downs and Stephen Reyna (eds.), *Land and Society in Contemporary Africa* (Hanover NH, 1988); Thomas J. Bassett and Donald E. Crummey (eds.), *Land in African Agrarian Systems* (Madison, 1993); Sara Berry, *No Condition is Permanent: The Social Dynamics of Agrarian Change in Sub-Saharan Africa* (Madison, 1993); James Scott, *Seeing Like a State* (New Haven, 1998); and Kristine Juul and Christian Lund (eds.), *Negotiating Property in Africa* (Portsmouth NH, 2002).

confer resource entitlements become ambiguous, resource abuse can result from actors' strategies for negotiating these uncertain terms of access and control. Such an ambiguous process of entitlement mapping then affects political culture by changing perceptions and expectations of power, which then influences how rural Africans perceive their political institutions. This is precisely what happened in North Pare after independence swept away both the chiefs and the regulations they had enforced and turned the area's common property regimes into open access situations.

Although the proximate managers of land, forests and irrigation were usually male elders in colonial North Pare, the ultimate authorities were the area's chiefs. From 1936 to 1938, the colonial government introduced laws to regulate the use of land, water and forests in Pare District.<sup>14</sup> These laws imposed bureaucratic procedures on what had formerly been informal common property regimes. For example, proximity, gender and kinship had long shaped women's collection of drinking water from springs. Typical terms of usage stipulated that no one could collect water with a soot-covered cooking pot, that bathing and washing clothing were forbidden in the spring's eye and that water-loving tree species such as *Ficus* remain undisturbed to provide shade for the spring. These rules protected both the quality and quantity of the water, and male elders were careful to collect sanctions of beer, livestock or cash from offenders. The Water Conservation Rules of 1938 re-mapped these entitlements by empowering chiefs to collect fines for improper land use.<sup>15</sup> Similar laws empowered the chiefs to regulate the use of steep slopes, swamps, riverbanks, irrigation intakes and forests. Enforcement was selective; the chiefs enforced conservation measures that allowed them to impose fines on proscribed practices (such as cultivating riverbanks), but they rarely enforced measures that would compel Pare farmers to adopt new ones (such as constructing terraces). Many common property resources, especially irrigation systems and sacred forests, remained under the control of kin groups except when the elders needed the chiefs to sanction abuse. This amalgamation of management through kinship networks and pseudo-traditional hierarchies was, as throughout most of British colonial Africa, weak and unstable, but it did have one ecologically functional feature: it prevented farmers from abusing common property resources during a period of rapid social change.

The current residents of North Pare often think of the 1945–60 period as a sort of Golden Age, when progress was evident in new schools and rising standards of living. It was also a time when rising population density, accelerating male outmigration, booming cash crop production and the feminization of agriculture fostered social and ecological stress. In 1910, the population of North Pare was around 16,000 and arable land was relatively abundant at four hectares per person.<sup>16</sup> By 1961, the population had nearly tripled (there were 49,960 people living in North Pare in 1967), and colonial politics had allowed Usangi's two ruling clans to concentrate land so that the

<sup>14</sup> Tanzania National Archives (TNA) 38853/111/91, 'Pare soil erosion order', 14 Dec. 1936.

<sup>15</sup> TNA 19/6/1/98, 1938 Pare District Annual Report.

<sup>16</sup> Archives of the Evangelistic Lutheran Church of Tanzania, Northern Diocese, Moshi. Box of letters labeled 'Shigatini 1906–15', Hans Fuchs to Leipzig Lutheran Mission, 10 June 1910.

average farm size in the highlands was 1.325 hectares. 56 per cent of the arable land was held by just 13.5 per cent of the population.<sup>17</sup> Roughly 70 per cent of the adult men who claimed land in the well-watered highland were, however, labor migrants in other parts of Tanzania in the closing years of the colonial era. To maintain their entitlements, these men planted permanent crops such as coffee and eucalyptus while their wives produced food on increasingly fragmented plots without the benefit of male labor. Women responded to these pressures by adopting new cultigens such as cassava and developing a web of land loans in different agro-ecological zones.<sup>18</sup> Thus, the tension between these shortages of both land and labor was maintained by gender- and class-based divisions of labor and resource entitlement. These forms of social inequality did not lead to environmental degradation precisely because the colonial chiefs' patronage of the commons conserved sensitive areas. Changing post-colonial politics therefore changed ecological systems because they undercut the legitimacy of institutions that had regulated resource access. As was the case in many other African landscapes, the colonial map of North Pare farmers' entitlements proved to be a palimpsest.

#### POLITICS AT THE GRASSROOTS, 1961-7

The authority of the Pare chiefs did not collapse immediately after Tanganyika's independence on 9 December 1961. Although the chiefs continued to govern until the repeal of the African Chiefs Ordinance in January 1963, Tanganyika African National Union (TANU) party bosses consolidated their authority during this transitional period by controlling the agendas of all political meetings in Pare District.<sup>19</sup> The newly negotiable and divisible nature of what had been the colonial commons emerged at the first meeting of the Usangi Divisional Committee (which had replaced the Usangi Chiefdom Council without changes in membership or territory) in January 1962. Rather than having its usual half-day meeting, the committee met for three days to consider a 21-page list of children whose parents had requested portions of the Native Treasury to pay school fees.<sup>20</sup>

<sup>17</sup> For 1967 demography, see Ian Thomas, 'Some notes on population and land use in the North Pare Mountains', Bureau of Resource Assessment and Land Use Planning Research Notes no. 9 (Dar es Salaam, 1970). For a study of land inequality in colonial Usangi, based on documents collected by a former colonial chief, see Sabuni H. Sabuni, 'Land tenure system in precolonial and colonial periods and its effects on the economic and social development of the Usangi people in Pare District', University of Dar es Salaam East Africana Library (hereafter UDSM-EAL) (University of Dar es Salaam, 1977).

<sup>18</sup> Cf. K. F. Msangi, 'How trade and education have affected the way of life in a rapidly developing peasant community [Usangi]' (Makerere College, 1963), UDSM-EAL microfilm no. 204; William O'Barr, 'The Pare of Tanzania', in Mark Tessler, William O'Barr and David Spain (eds.), *Tradition and Identity in Changing Africa* (New York, 1973), 64. On agrarian change in colonial North Pare, see Isaria N. Kimambo, *Penetration and Protest in Tanzania: The Impact of the World Economy on the Pare, 1860-1960* (London, 1991); and Michael J. Sheridan, 'Cooling the land: the political ecology of the North Pare Mountains, Tanzania' (Ph.D. dissertation, Boston University, 2001), chs. 7 and 8.

<sup>19</sup> TNA 517/A6/5/11/316, TANU Pare district secretary to all TANU branch chairmen and secretaries, 16 June 1961.

<sup>20</sup> TNA 204/NA/8/2, Usangi Divisional Committee meeting minutes, 2-4 Jan. 1962.

TANU completed its takeover of the North Pare administration in 1962 and 1963. In September 1962 the headmen of sub-chiefdoms became village executive officers whose appointments were dependent on TANU membership rather than on clan affiliation. In the same month, local government officers declared that the Pare chiefs would maintain their ritual functions but would no longer receive government salaries.<sup>21</sup> On 19 January 1963 TANU formally declared the chiefs of Pare to be retired; in their place stood divisional executive officers, who would choose the members of new divisional committees.<sup>22</sup> Between June and August 1963 TANU set up village development committees throughout North Pare, and direct rule by TANU replaced indirect rule by the colonial state.

Although TANU adopted most colonial structures, the new administration did not have the moral authority that had supported the chiefs' regulation of the North Pare economy and ecology. As the chiefs became obsolete in the new social institutions, so did the common property regimes they had embodied. That this transformation took place during a period of drought and famine<sup>23</sup> probably accelerated, rather than caused, a process in which Pare farmers seized land that had been protected by the chiefs. Ngagheni, the swampy bottomland of Usangi valley, was a major target in the early 1960s. The swamp was a dense mat of *ngaghe* plants (*Cyperus spp.*), and the chief's administration had allocated areas for applicants to gather reeds for thatching houses. Although the valley bottom did have a few farms with maize, beans and sweet potatoes, most of the area was *ngaghe* and therefore under the chief's protection. During the coffee boom of the 1950s, however, metal roofing became increasingly popular in Usangi and the utility of *ngaghe* reeds waned. After the chiefs and the conservation laws they had enforced became irrelevant, farming women quickly divided this commons, as these accounts indicate:

[The management of Ngagheni] changed after independence because everything concerning the chiefs was rejected as 'colonial' ... No one understood the value of conservation, and everyone was all too happy to invade the grasslands and the springs and the rivers ... After the colonial rules were rejected, each farmer and each clan took the opportunity to expand their holdings. Each farm that was next to some *ngaghe* expanded to include the *ngaghe*, and each clan then parceled out the newly available land in small plots for everyone.<sup>24</sup>

After independence, the most successful farmers began to teach others about the benefits of terraces, but many families had already lost most of their workers because their children had gone to school. We women decided instead that we should strengthen our farming in the swamp because that area is wet enough to maintain crops year-round.<sup>25</sup>

<sup>21</sup> TNA 204/NA/8/13, Usangi Divisional Committee meeting minutes, 8 Sept. 1962.

<sup>22</sup> TNA 204/NA/8/36, Usangi Divisional Committee meeting minutes, 19 Jan. 1963.

<sup>23</sup> The total rainfall for the late 1960 and early 1961 rainy seasons was roughly half of the average rainfalls for these seasons in North Pare between 1931 and 1998. Rainfall data from records held by the headmasters of Shighatini Primary School (1949–89), Kilomeni Primary School (1931–94) and Lomwe Secondary School (1952–98).

<sup>24</sup> The informant was a chief's clerk, interviewed in Usangi on 23 Jan. 1998.

<sup>25</sup> The informant is a female farmer and an administrative officer, interviewed in Usangi on 24 Feb. 1998.



The invasion of Ngagheni began soon after independence ... People made plots in the springs and swamps because of the introduction of democracy ... Each lineage had its area in the valley bottom, demarcated by small drainage furrows. After independence drove out the chiefs and headmen, the conservation laws were gone too, so each lineage subdivided their Ngagheni plot to both men and women. Men didn't do much farming there, it was mostly root crops with the small hoe, so it's a women's area. I let them farm those areas to maintain my voters. I didn't stop anyone so I could keep their support ... Democracy therefore damaged the environment.<sup>26</sup>

These statements by informants in different social positions demonstrate that freedom from colonial rule also meant freedom from colonial rules. Exploitation of the commons was not caused simply by population pressure driving desperate farmers on to new lands. North Pare's endemic shortages of both land and labor interacted with institutional change, drought and political expediency to drain the Ngagheni swamp. Male outmigration gave female farmers onerous responsibilities for food production but few opportunities to manage resources until the invasion of these well-watered commons. Throughout North Pare women began to grow crops in the swamps, springs and riverbanks that had been protected under the 1938 Water Conservation Rules. This was a tenurial victory for the women of North Pare because this action created a new category of land to which women had legitimate entitlements through their labor. *Ngaghe* reeds are relatively rare in Usangi today, and the entire valley bottom of Ngagheni is now a patchwork of tiny plots (as small as three by five meter strips). A new cultigen of taro, *Colocasia antiquorum*, first appeared in North Pare in the early 1960s.<sup>27</sup> This crop allowed women to produce food on soils too damp for sweet potatoes, so the invasion of Ngagheni was a transformation of both agronomy and entitlements.

Other areas associated with clan property and the colonial social order also came under pressure. Sacred forests appeared more important as patches of fertile soil than as shrines for ancestors' skulls or venues for initiation ceremonies, and many male land users began to nibble away at their borders. Much of this encroachment pitted youths against elders. As one informant put it, 'young men said that the lineage forests were traditional things to be done away with, so they cut them and started to use the fertile soil. There were many arguments of youths against their elders about this'.<sup>28</sup> Even the Mshitu wa Kena, the largest and most sacred of the five initiation forests in Usangi, suffered. In the months just before and after independence, farmers reduced its acreage by 25 to 40 per cent. Chief Sangiwa II convened a meeting in early 1962 to redress the situation, but had to settle for a lopsided compromise. The chief, prominent local elders and TANU leaders walked around the forest's new perimeter and marked the border with *isae* plants (*Dracaena reflexa*, a plant used to mark lineage property at graves and farm

<sup>26</sup> The informant served on the Pare District Council (1966–81), interviewed in Usangi on 2 Dec. 1997.

<sup>27</sup> Informants could not agree on the origin of the new cultigen, which largely replaced the alkaloid-laden older variety of taro, but were unanimous on its timing. All interviews in Usangi, with an elderly male farmer and irrigation expert, 7 Nov. 1997, a male herbalist, 13 Nov. 1997, and a female farmer (age 58), 3 Apr. 1998.

<sup>28</sup> The informant is an elderly male farmer, interviewed in Usangi on 24 Oct. 1997.

borders).<sup>29</sup> Their actions legitimized the new farms but did not enhance the elders' entitlements to the remaining forest. The pace of encroachment on Kena and other sacred forests diminished several years later however when the central government gave sacred forest caretakers stronger rights by declaring that Tanzania's 'traditional areas' should be protected.<sup>30</sup> For many of the sacred forests in North Pare, survival depended on this re-legitimization of a pre-colonial social institution.

North Pare's other major type of common property, its indigenous irrigation system, did not experience the same sort of resource abuse at independence because it was still useful and not as closely associated with the chiefs. A more serious threat came from changes in the area's hydrology. As farmers began to grow crops in former conservation areas, they increased evaporation and decreased the ability of vegetation to intercept rainfall and inhibit erosion. They also dug canals to drain water from swamps, disturbed the soils in springs and removed shrubs that had protected riverbanks. Most importantly, the Ngagheni swamp no longer functioned as a storage area for the Mala and Ndurumo rivers, which carved new beds two or three meters down into the former swamp. The declining storage capacity of the Usangi aquifer also meant that these rivers exhibited more seasonality in their flow, which then made downriver irrigation much more difficult and labor-intensive. Colonial-era irrigation managers had made seasonal river intake structures from logs and stones, but the heavier flows of the 1960s broke intakes more easily, removed anchoring boulders and left ancient canals dry after the water level dropped. These changes severely curtailed the potential for highlands irrigation and undercut the government's promotion of cash crops in Pare's eastern lowlands.

While Pare farmers were changing their agricultural practices, the new administration was trying to coordinate, regulate and coerce them just as colonial development programs had done.<sup>31</sup> On 16 February 1963, in the first Usangi Divisional Committee meeting after the forced retirement of Chief Sangiwa II in January, the TANU leadership asserted its control. It decreed minimum acreages of maize, cassava and sweet potatoes, set a list of permissible cash crops for lowlands plots and required anyone with fewer than 500 coffee trees to grow half an acre of cotton and one acre of beans in the lowlands unless they had a large plot of another approved cash crop.<sup>32</sup> These meetings set the pattern for administrative coercion and farmer inaction in Pare. At the July 1963 meeting, the committee discussed the failure of Usangi farmers to plant the required acreages of cash crops in the lowlands as

<sup>29</sup> WEO-Chomvu CH/ML/08, 'Minutes of legal proceedings on forest encroachment', 26 Aug. 1984.

<sup>30</sup> I have been unable to determine if this directive, which sacred forest caretakers commonly cite in legal proceedings, was statutory law or a statement made by President Nyerere in a speech. My informants place the directive after Independence but before the Arusha Declaration, and several guessed it came in either 1964 or 1965.

<sup>31</sup> On coercive conservation during the British colonial period in Pare, see Kimambo, *Penetration*, 136–54.

<sup>32</sup> TNA 204/NA/8/43, Usangi Divisional Committee meeting minutes, 16 Feb. 1963. This order was even more coercive than the directives of the colonial state in the 1950s. The order specifically stipulated that it applied to 'those women who have no husband or are not attached to a man's compound and are therefore self-reliant'.

they had been ordered. Farmers said that they could not comply with the requirements because the time involved in walking the distance from Usangi to the lowland plots (four to eight kilometers and over 600 meters of vertical change) would have prevented them from doing any highland agriculture at all. The divisional executive officer was unsympathetic and instructed the committee members to compile lists of lazy farmers so that the government could fine them.<sup>33</sup>

In the early 1960s the farmers of Pare were largely unaware that the state would arrogate land rights to itself. Although in 1923 the colonial government had formally made all land in Tanganyika 'public land' under the control of the governor, from a farming family's perspective resource entitlements were shaped by more local social institutions, such as gender and kin relations, residence, patronage and informal contracts. The independent state formalized this pattern by investing land ownership in the office of the president and use rights in farmers' hands. Land matters in Tanzania have become quite muddled after decades of shifting strategies for rural development.<sup>34</sup> Both farmers and government officers in North Pare currently reduce the complexities of tenure in Tanzania to a simple formula: 'the crops you grow are yours, but the land belongs to the government'.<sup>35</sup> The principle that agricultural labor establishes legitimate entitlements has had ecological effects in North Pare because it has encouraged farmers to expand their farms by planting crops in former conservation areas.

Relatively clear lines of authority and entitlement systems became increasingly blurred and laws became ambiguous or arbitrary from 1961 to 1967. The transition to independence in Pare was therefore a step in an unfolding political and ecological process rather than a major watershed of ecological change. Although the colonial chiefs had a dismal record of compelling Pare farmers to perform certain land use practices (such as building terraces), they were often quite successful at preventing others (such as overharvesting reeds). The post-colonial government absorbed colonial administrative structures, but did not maintain the same entitlement regimes that had conserved critical areas of the North Pare ecosystem. With the legitimacy of both the political forms and the ecological functions of the landscape becoming increasingly negotiable, farmers responded to this ambiguity by dividing the commons. The failure of the central government and the local administration to articulate coherent resource tenure policies encouraged the invasion of common areas because every farmer knew that no matter what tenure policy emerged, rights in crops were relatively secure. National political change therefore shaped the course of localized ecological change.

#### UJAMAA: THE THIRD COLONIZATION

If Tanganyika's colonial government had attempted a rural development program as ambitious as the one pursued by the post-colonial state, there

<sup>33</sup> TNA 204/NA/8/44, Usangi Divisional Committee meeting minutes, 10 July 1963.

<sup>34</sup> For reviews of land law and policy in colonial Tanganyika and independent Tanzania, see Elizabeth Wily, 'The political economy of African land tenure: a case study from Tanzania' (Ph.D. dissertation, University of East Anglia, 1988); and Issa Shivji, *Not Yet Democracy: Reforming Land Tenure in Tanzania* (Dar es Salaam, 1998).

<sup>35</sup> Usangi divisional land use planning officer, 9 Dec. 1997, speaking to village leaders at a TFAP afforestation site in the company of the author.

is little doubt that the program would have served as a focal point for nationalist resistance. The Ujamaa strategy for socialist nation-building (*ujamaa* is the Swahili term for ‘familyhood’, or, more broadly, ‘socialist cooperation’) did not encounter widespread resistance, however. Tanzania never experienced a popular counter-revolutionary movement, even when the state forcibly resettled much of its rural population into poorly planned villages and pressured them to farm collectively on inferior soils.<sup>36</sup> Instead Tanzania was blessed with political stability, cursed with economic decline and saddled with an arbitrary and authoritarian state. It is for these reasons, one elder in Usangi told me, that Tanzania lags behind Kenya economically because ‘we have had three colonizations – Germans, British, and Nyerere – instead of Kenya’s two – British and Kenyatta’.<sup>37</sup>

Most of the evaluations of Nyerere’s grand experiment of using ‘African socialism’ to contain the class differentiation of the peasantry fell into two categories in the 1970s and 1980s. Neo-Marxists examined rural class conflict in order to explain why an ostensibly sensible policy did not take root among the peasantry. In direct opposition, neo-liberals attacked Ujamaa itself as being so profoundly uneconomic that it inexorably bankrupted the nation.<sup>38</sup> Although these approaches help to illuminate the economic and social processes that Ujamaa set in motion, they can reduce rural Tanzanians’ opposition to the policy to either their embeddedness in a ‘traditional moral economy’, or their pragmatic modernity as rational producers in a distorted economy. James Scott’s recent synthesis of the Ujamaa literature shifts the focus to the ‘visual aesthetic’ that Tanzanian bureaucrats used to evaluate smallholder agricultural systems.<sup>39</sup> Much of the Ujamaa literature describes abstract entities and homogeneous groups such as the state, market, peasantry and bureaucracy instead of examining the diverse experiences and strategies of rural Tanzanians as they coped with increasing state intervention. Studies of the environmental impact of socialism have focused on Ujamaa villages,

<sup>36</sup> Communal farming failed to increase yields in voluntary Ujamaa villages, so the government began to promote individualized ‘block farming’ on communal fields in 1973. With the Villages and Ujamaa Act of 1975, the government categorized settlements into ‘development villages’ (with corporate legal identity and social services) and ‘Ujamaa villages’ (with corporate legal identity, social services and collective production). A 1978 government report on villagization declared that none of Tanzania’s 7,800 villages were Ujamaa villages. See Paul Collier, Samir Radwan, Samuel Wangwe and Albert Wagner (eds.), *Labour and Poverty in Rural Tanzania: Ujamaa and Rural Development in the United Republic of Tanzania* (Oxford, 1986).

<sup>37</sup> The informant is a man in his 70s, interviewed in Usangi on 11 Feb. 1998.

<sup>38</sup> Cf. Micaela von Freyhold, *Ujamaa Villages in Tanzania: Analysis of a Social Experiment* (London, 1979); and Michael Lofchie, *The Policy Factor: Agricultural Performance in Kenya and Tanzania* (Boulder, 1989).

<sup>39</sup> Göran Hydén, *Beyond Ujamaa in Tanzania: Underdevelopment and an Uncaptured Peasantry* (London, 1980); Andrew Coulson, *Tanzania: A Political Economy* (Oxford, 1982); and Scott, *Seeing*, 223–61. A more gender-nuanced analysis can be found in Deborah Bryceson’s work on economic change and patron–client relations, *Food Insecurity and the Social Division of Labor in Tanzania, 1919–85* (New York, 1990). She argues that major effects of the Tanzanian state’s intervention in the economy were declines in occupational diversity and food security, coupled with increases in informal patron–client networks and women’s labor responsibilities. Increasing social complexity in food distribution took the place of agricultural intensification, so that the harder the state tried to regulate rural producers, the more it strangled itself.

Table 1. *Ujamaa villages in Pare District, c. 1970*

Village	# settlers	Communal production and acreage
Nkwini, South Pare	60 families	Intercropped cotton and maize on 34 acres
Gavao, South Pare	No data	No data
Lwani, North Pare	No data	Collective livestock herd
Kileo, North Pare	47 families	Cotton, 26 acres, reduced to five acres cotton in 1970
Kigonigoni, North Pare	250 people	Intercropped cotton and cassava

but political change also contributed to environmental change in areas that were relatively unaffected by villagization.<sup>40</sup>

### *The direct effects of Ujamaa in North Pare*

The mountains had little room for founding new villages; so many North Pare residents complied with their government's directives by working half-heartedly on token communal farms. For TANU activists and administration officials, the focal area for socialist development was the relatively arid and underpopulated lowlands. The development planners intended these Ujamaa villages to relieve population pressure in the highlands, where the population density in some areas had reached 378 people per square kilometer in 1967.<sup>41</sup> The local administration set up five Ujamaa villages (see Table 1) in Pare District between 1968 and 1970, but they failed to attract many settlers or boost production. Elders in North Pare described two sorts of problems in the mapping of entitlements that kept them away from the new villages. First, the core issue of village life, the disposition of income from the communal farm, varied from village to village. At Nkwini, for example, the farmers divided the cotton profits and the maize equally amongst the villagers; at Kileo, all of the cotton money went to public services such as the village school; at Kigonigoni the villagers used the money to build a village shop. The second problem was fear of arbitrary government actions to re-arrange entitlements. At Nkwini Ujamaa village, rumor had it that the government would seize the maize crop and distribute it to district hospitals and schools. The rumor at Lwani Ujamaa village was that the district government might sell the communal livestock herd. In North Pare, some men refused to join Kileo Ujamaa village because they believed that the government would collectivize all private property, including their wives.<sup>42</sup> Most non-villagers observed these inconsistencies, discussed these rumors and

<sup>40</sup> Helge Kjekshus, 'The Tanzanian villagization policy: implementation lessons and ecological dimensions', *Canadian Journal of African Studies*, 11 (1977), 269–82; and Michael McCall, 'Environmental and agricultural impacts of Tanzania's villagization programme', in John I. Clark, Mustafa Khogali and Leszek A. Kosiński (eds.), *Population and Development Projects in Africa* (Cambridge, 1985), 123–40.

<sup>41</sup> Thomas, 'Some notes on population', 10.

<sup>42</sup> N. M. Banduka, 'The aspects of establishing Ujamaa villages in Pare District, Tanzania' (Ph.D. dissertation, University of Dar es Salaam, UDSM-EAL, 1971) and the author's interviews in Usangi in 1998.

concluded that remaining in the highlands was far less risky than engaging the state directly.

For both Ujamaa villagers and non-participants, socialism introduced great uncertainty about the institutions that conferred resource entitlements. The new economic and political institutions created new terms of access and control, but did not conclusively erase older ones. The new institutions seemed idiosyncratic and state action an arbitrary and ever-present possibility. This doubt about which social relationships constituted property and the limits of their negotiability eroded the legitimacy of Tanzania's socialist experiment. The following narratives show how villagers in the North Pare plains retreated from the state-dominated economy into the informal sector and the depth of the climate of fear in the highlands.

Many villagers had come from Ruru, on the shore of Lake Jipe. Their houses were demolished and they were forced to come to Kigonigoni ... The government did not build new houses for them, it just ordered them to build their own shelters out of brush and leaves, and this was indeed the origin of the village name [*kigonigoni* means 'to walk in fear' in the local language] ... The shared property of the villages began to be sabotaged. The government vehicles started to be used for poaching and transporting smuggled goods because village government vehicles were not inspected ... Every Tanzanian feared for his life, therefore anyone who got the opportunity to steal from the government, saw that it was best to do so. All of the development projects became ways to oppress the people and enrich a few wealthy people.<sup>43</sup>

Most of the stories that I heard about the effects of socialism in the North Pare highlands, an area not affected by coercive villagization, described fear, frustration and distrust. The following are typical assessments of life in North Pare during Ujamaa:

We were afraid to own farms, houses, livestock and expensive goods, so no one invested in anything that could be taken away by the government.<sup>44</sup>

Ujamaa taught us not to share expenses because the leaders will just eat the money. It taught us not to cooperate.<sup>45</sup>

Ujamaa destroyed our economy. There was no transport, no good crops, no good seed, no fertilizers, and nothing in the shops. And it changed each year, with different arrangements for the sale of everything from cotton to maize. Each year there were new 'operations' that never built on each other, so we just kept starting over again without ever doing anything.<sup>46</sup>

In the North Pare highlands, the most significant direct effect of socialist policies was the government's takeover of nearly all social institutions (the major exceptions were religious institutions) and its inability to manage them effectively. The ensuing economic decline reinforced discontent and frustration, but the state's rigid control of nearly all forms of social organization kept its citizens' critiques unvoiced and disorganized. The major direct effects of Ujamaa in the North Pare highlands were economic stagnation, political centralization and a clear-eyed cynicism.

<sup>43</sup> The informant is a carpenter in his early 60s, interviewed in Usangi on 13 May 1998.

<sup>44</sup> The informant is a farmer in his 70s, interviewed in Usangi on 24 Oct. 1997.

<sup>45</sup> The informant is a retired politician, interviewed in Usangi on 2 Dec. 1997.

<sup>46</sup> The informant is a retired teacher in his 60s, interviewed in Usangi on 14 May 1998.

*The indirect effects of Ujamaa in North Pare*

Although North Pare's status as a densely populated coffee-producing region gave its farmers some insulation from the state's more coercive strategies for creating socialism, much of the current state of affairs in Pare results from indirect ecological consequences of Ujamaa-era politics. Village governments in the highlands mediated land disputes but only rarely allocated land, while villages in the lowlands distributed land to whoever could put it to use. Since independence, the local courts and administration in Pare have followed a policy-cum-practice of 'land to the tiller', which has effectively strengthened men's entitlements rather than enhancing the indirect entitlements of the women who till the land. The purpose was to boost agricultural production while retaining formal state ownership of land, but the results have included the continuing encroachment of former conservation areas, state coercion and legal muddles. Ujamaa policies usually affected men's control of land, water and trees, but rarely re-arranged women's access to these resources.<sup>47</sup> At times, however, the women of North Pare were able to draw on both socialist rhetoric and local cultural institutions to defend these entitlements.

Throughout the heyday of Ujamaa, the local government passed a series of agricultural by-laws to coerce Pare farmers to produce more food, but with little effect. Table 2 demonstrates the laws' variability and absurdity. If the 1975 by-law had been fully implemented, about half of the adults in Pare would have been in violation because there was not enough arable land in the district for each adult to farm five acres. In 1977 the district agricultural officer said that when he arrested 150 people in North Pare for violating the 1976 by-law, the local magistrate had simply given them a stern warning. 'If they were all imprisoned, as they didn't have the money to pay the fine', he said, 'production would have been jeopardized'.<sup>48</sup> The state's dependence on rural producers, unrealistic expectations and authoritarian management style combined to produce an absurd *status quo*. Farmers knowingly broke laws and hoped that the government would either change them or prove unable to implement them. They were usually right because their entitlements to crops were stronger and more legitimate than their responsibilities to the local government.

The story of Ngagheni swamp in Usangi illustrates this political and ecological process, and also demonstrates women's capacity for collective action to defend the indirect entitlements they had acquired in this area in the 1960s.<sup>49</sup> In the early 1970s, a local elected official began campaigning for the restoration of the colonial-era ban on farming this area. In 1975, he proposed

<sup>47</sup> I am planning a more thorough description and analysis of women's changing entitlements to land and labor responsibilities in North Pare as a separate publication. On 'land to the tiller', see Ringo Tenga, 'Land law and the peasantry in Pare District: a historical analysis' (LL.M. dissertation, University of Dar es Salaam, UDSM-EAL, 1979), 167. The distinction between direct and indirect entitlements is based on Amartya Sen, *Poverty and Famines: An Essay on Entitlement and Deprivation* (New York, 1981). In the patrilineal entitlement system of North Pare, women access land through kin and marital relations and therefore have indirect rights.

<sup>48</sup> Quoted in Tenga, 'Land law', 178.

<sup>49</sup> The women of Usangi are well known for their political activism. See Jean O'Barr, 'Pare women: a case of political involvement', *Rural Africana*, 29 (1975), 121–34.

Table 2. *Agricultural by-laws in Pare District, 1969–76*

Year	By-law	Requirements	Punishment and notes
1969	Cultivation of Agricultural Land By-laws of 1969	Cultivate a minimum of three acres per household; one for cash crops, two for food.	Tsh 500/= fine, six months imprisonment, or both.
1974	By-laws to Implement the Policy of 'Politics is Agriculture' of 1974	Cultivate two acres of food crops per adult. All land transfers must be registered.	Tsh 100/= fine, two months imprisonment, or both. Severe drought nationwide.
1975	Same District [ <i>sic</i> ] Development Council Cultivation of Agricultural Land By-laws of 1975	Cultivate three acres of food crops per adult, two acres of cash crops.	Tsh 500/= fine or 12 months imprisonment.
1976	Pare District Development Council Cultivation of Agricultural Land By-laws of 1976	Cultivate at least three acres per adult.	Tsh 500/= fine, two months imprisonment, or both.

Source: Tenga, 'Land law', 175–7.



conserving the area by setting the borders of a new primary school around Ngagheni. The women of Usangi reacted with a level of organization and ferocity they had not demonstrated since 1945 during the famous Mbiru protest<sup>50</sup> (and indeed, some of them now refer to their 1975 actions as ‘the second Mbiru’). In the words of one informant, the politician

had tried to prevent women from cultivating the small plots at Ngagheni, so the women cursed him completely, by removing their clothes, and he was very afraid, so he left them alone to continue farming there, and that is why we farm there until today.<sup>51</sup>

As the politician himself described the incident to me, 174 women surrounded his house and sang threatening songs to him. The oldest women of the group gravely bent over and displayed their genitalia to him. This was an extremely serious curse called *kufolotia*, which women in Pare have occasionally used to defend their entitlements. The politician quickly dropped the issue and the group of women paid a collective fine of a black sheep for threatening his murder. When I asked the politician why the local administration had been unable (or unwilling) to contain the women’s protest and proceed with its own agenda, he responded, ‘We couldn’t do anything against farmers because of the national policy that “agriculture is politics”’.<sup>52</sup>

Usangi farmers commonly cite TANU’s agricultural directives of the mid-1970s as the major reason for changing land use in Usangi. In 1972, TANU summarized its agricultural policy under the slogan ‘Siasa ni Kilimo’ (politics is agriculture). The policy was part of the party’s retreat from communal agriculture, and focused instead on technical means for increasing production.<sup>53</sup> Farmers throughout North Pare interpreted the slogan as a license to subdivide the commons further. This process accelerated in 1974–5 during a nationwide drought, when TANU initiated a campaign called ‘Kilimo cha Kufa na Kupona’ (agriculture as a matter of life and death) to mitigate food shortages throughout the country. Many of my informants in Usangi could quote Nyerere’s orders from radio broadcasts during this campaign. When the highest authority in the land said to ‘farm every place that can be farmed’ and to ‘farm even in water sources to get sweet potatoes and taro’, the farmers of North Pare expanded their production accordingly, as this quotation from a recent planning meeting indicates:

[Local conservation] laws were forgotten after ‘Siasa ni Kilimo’ and ‘Kilimo cha kufa na Kupona’ were announced throughout Tanzania, and because these directives were not explained adequately, people just went into the conservation areas, so today the word ‘conservation’ has no meaning.<sup>54</sup>

<sup>50</sup> The Mbiru protest opposed the colonial government’s plan to introduce a graduated system of taxation in Pare. Several thousand men began a peaceful sit-in at the district headquarters in Same on 4 Jan. 1945. On 20 Feb. 1945, roughly 500 women gathered in Usangi to demand that the district commissioner and the district chiefs resolve the dispute and allow their husbands to return home. These officials left their meeting without speaking to the women, so the crowd responded by stoning the DC’s car, forcing one chief and a sub-inspector of police to flee on foot, and holding the Usangi chief captive until nightfall. See Kimambo, *Penetration*, 95–117.

<sup>51</sup> The informant is a female farmer in her 40s, interviewed in Usangi on 14 May 1998.

<sup>52</sup> The informant retired from politics in 1981, interviewed in Usangi on 2 Dec. 1997.

<sup>53</sup> Coulson, *Tanzania*, 249. <sup>54</sup> WEO-Chomvu CH/AR/12, ‘Conversation’.

Agricultural officers in Usangi now say that farmers' insistence that they were simply following orders is a poor excuse for deleterious land use; but watershed degradation was a rational response in the context of Ujamaa. Under conditions of severe drought, a rigidly controlled economy and an authoritarian government, farming in conservation areas made good sense for short-term food security. These directives also had the important side effect of teaching the people of North Pare that government policies were contradictory, arbitrarily implemented and ultimately evanescent. The ambiguity of political structures and practices therefore had unexpected ecological consequences, such as contributing to the declining capacity of the Usangi watershed to retain water.

The management of other common property resources also changed during Ujamaa. North Pare's ancient irrigation system went into rapid decline after the Arusha Declaration. This was not simply because of the unusually heavy rains between 1967 and 1970, which destroyed many irrigation structures throughout North Pare.<sup>55</sup> Maintenance of the irrigation systems became increasingly inconsistent after 1967 because their status as kin group property made them seem like politically incorrect colonial relics. As one informant described the aftereffect of indirect rule in Pare in the context of socialist nationalism:

After Nyerere gave these directives that everything belonged to the village community, then even talking about things that belonged to the clan were seen as being against socialism. So we stopped protecting our clan areas and things became damaged.<sup>56</sup>

Protecting an irrigation reservoir from damage is quite simple; a manager simply removes the outlet plug for the duration of the rainy season. Why, then, have many of North Pare's irrigation reservoirs burst since 1967 and remained broken? Elders in Usangi often responded to my question with stories about women breaking irrigation taboos, but some gave more mundane explanations involving the local political economy. In the 1960s and 1970s, both political leaders and young farmers had their eyes fixed on 'modern' agriculture, and indigenous irrigation was all too 'traditional'. The 1975 Village and Ujamaa Village Act, which standardized local government throughout Tanzania, created village committees to regulate agricultural production. In the areas of Tanzania that had indigenous irrigation systems, this law formally shifted irrigation management from lineage elders to village sub-committees, and therefore dismantled legitimate social institutions and substituted newer, less legitimate ones.<sup>57</sup> Furthermore, the pace of male outmigration from northeastern Tanzania's rural highlands increased after 1967 because the government had nationalized plantations and mines, and

<sup>55</sup> Rainfall in 1967 was slightly above average, at 1,439 mm, but in 1968 the area received more than 2,000 mm. 1969 was an average year with 1,216 mm, but 1970 was above average with 1,626 mm. (Rainfall data are averages from three collection stations, see n. 23.) Irrigation in North Pare relies on both river intakes and reservoirs that collect water from springs.

<sup>56</sup> The informant is a male farmer in his 40s, interviewed in Usangi on 15 Jan. 1998.

<sup>57</sup> Raphael Burra and Kick van den Heuvel, 'Traditional irrigation in Tanzania, vol. I: A historical analysis of irrigation tradition and government intervention' (Dar es Salaam, 1987), 39, Archives of the Traditional Irrigation Improvement Program, Dar es Salaam.

many of North Pare's young men left the highlands to divide these new commons. The following quotations from interviews reveal this interlocked process:

The irrigation systems died from our own foolishness and our negligence. The leaders that came to power after independence didn't care about irrigation. They were youths who saw the irrigation works as things of the past, things that had been passed by the times.<sup>58</sup>

The Kwa Vuye intake 'died' because the major rain of 1966 damaged it in a flood, and it was damaged further in 1970. The old men tried to get the youths to help rebuild it, but they refused and the intake died. When we were young it was easy to cooperate. But now the youth just leave for the cities, and when they do farming, they do it for money.<sup>59</sup>

Most of these intakes died because of fragmentation. As the land was filled up, it just wasn't worthwhile to maintain them. The other problem is labor. Young people aren't interested in farming because there's no money in it, so we don't have their labor. That keeps us from working the land enough and building enough terraces. All of this is because of low crop values. The result is a labor crisis and an environmental crisis together.<sup>60</sup>

Throughout North Pare, neglected and broken intakes became precisely the sort of wet fertile areas that Nyerere had encouraged farmers to cultivate during the 1974-5 'Kilimo cha Kufa na Kuona'.

The sacred forests of North Pare also became more vulnerable to encroachment after the Arusha Declaration. These highly fertile conservation areas were associated with kin groups, so farmers with plots adjacent to a forest could justifiably cut a few trees to get richer loam, reduce the shade on their plots and demonstrate their anti-colonial nationalism. The Mshitu wa Kena initiation forest, for example, lost another quarter of its colonial-era area (of approximately 21 hectares) after the 'Kilimo cha Kufa na Kuona' campaign.<sup>61</sup> Sacred forests have become more subject to contestation because of post-colonial political change, as this account from a forest caretaker indicates:

The Kwa Mafuli sacred forest was cut by a Christian in the 1970s to get *malama ya chathu* trees [*Syzgium guineense*] to sell to carpenters. There was a water source below it, Kwa Katanga, which also had an irrigation intake. The source has dried up because the forest was cut. The cutter ... had several farms adjoining the forest that he intended to leave to his children ... The forest caretaker took the cutter to court but lost the case because the cutter said that he had planted the trees himself ... Forest caretakers have fewer rights than farmers because the judge at the divisional court is not a Pare, so he doesn't understand traditional law. The other major reason is that in the 1970s, the Tanzanian government was stressing the importance of agriculture, 'agriculture is politics'. So the farmer couldn't be in the wrong.<sup>62</sup>

<sup>58</sup> The informant was a colonial-era clerk, interviewed in Usangi on 23 Jan. 1998.

<sup>59</sup> The informant was the manager of this intake in the 1950s and 1960s, interviewed in Usangi on 31 Oct. 1997.

<sup>60</sup> The informant is an irrigation manager with eleven active intakes, interviewed in Usangi on 11 Nov. 1997.

<sup>61</sup> The informant is a local government official, interviewed in Usangi on 9 Mar. 1998.

<sup>62</sup> The informant is male elder in his 80s and a forest caretaker, interviewed in Usangi on 9 Dec. 1997.

While these management problems persisted in North Pare society and ecology into the 1980s, the Tanzanian government undertook a series of steps to reform the rural economy. These legislative actions were not, however, matched by administrative action. In 1979 the government separated Pare District into Same District (South and Central Pare) and Mwanga District (North Pare). This had little effect until 1982, when the central government passed the Local Government (District Authorities) Act to revive local authorities. The law gave district councils the power to pass by-laws, provided that the minister for local government and cooperatives approved them. It took the new district council two years to write by-laws for Mwanga District. The Mwanga District Council by-laws of 1984 empowered the council to ban cultivation, grazing animals and cutting trees in designated conservation areas. These areas were the same as those the chiefs had controlled – riverbanks, springs, forests and steep slopes. The by-laws set sanctions of six months' imprisonment or Tsh 1,000/= (about USD \$100 before the 1984 devaluation of the shilling). The minister for local government and cooperatives did not approve the by-laws until November 1986, and the government did not publish them until May 1987. They were rarely implemented until development agencies began pressuring the local government in the late 1990s. These by-laws are still in effect, and as of 1998 they protected a fraction of Usangi's water sources and sacred forests (but not irrigation intakes).<sup>63</sup> Some land users now violate these by-laws regularly, however, because the punishment has not kept pace with the decline of the shilling's value, and violators willingly pay the insignificant fine (in 1998 equivalent to USD \$1.55).

While the cogs of the legislative process were turning slowly in the 1980s, the government issued a series of directives too thorough to be implemented with the district's limited manpower. In 1984 the Kilimanjaro regional agricultural development officer wrote to all government officials in the region and instructed them to inspect all farms and close those that were in violation of conservation by-laws or lacking terraces.<sup>64</sup> Government officials in North Pare ignored this directive, probably because they were aware that this policy would have clogged the local courts, disrupted the local economy and ruined their political careers in Pare. In 1985 the central government issued the same commands to all ward secretaries in North Pare, with the same results.<sup>65</sup> In February 1988 the Mwanga district commissioner repeated these commands and ordered that everyone in the district had to surround

<sup>63</sup> Information on by-laws from the office of the Usangi divisional secretary, unlabeled file on local by-laws, 'Government notice no. 275, published on 15 May 1987, Mwanga District Council (Prevention of Soil Erosion and Water Conservation) By-laws, 1984'. The list of protected areas for the five villages of the Ndurumo river watershed (Chomvu, Lomwe, Mshewa, Ndorwe and Vuagha) contains 18 out of the 56 springs and 14 of the 92 sacred forests that I counted in those villages (WEO-Chomvu BK/CH/7, Local Government Act By-laws). This limited coverage reflects both the insignificance of some highly seasonal springs and tiny sacred forests and the efforts of Usangi residents to hide resources from the local administration.

<sup>64</sup> WEO-Chomvu 1984, 'Ardhi' file, Kilimanjaro regional agricultural development officer to all government officials in Kilimanjaro Region, 14 Nov. 1984.

<sup>65</sup> WEO-Chomvu, 'Ardhi' file, Kilimanjaro region soil conservation project officer to all ward secretaries, 27 Feb. 1985.

their houses with trees (and that government officers living in government housing had to plant ten trees each).<sup>66</sup> Finally, in July 1988 the government ordered each cell leader in North Pare to compel each household to grow five trees per year for the next five years.<sup>67</sup> Throughout this period the government officers and agricultural extensionists charged with implementing these policies in North Pare lacked the vehicles (or the fuel to run them) that they needed to reach the areas in question. Implementation was arbitrary and short-lived; so few farmers in North Pare altered their land use practices. The top-down authoritarian style of the post-colonial government had no real authority because it could neither implement its directives nor afford to decrease agricultural production by doing so. This is one of the major reasons that some residents of Usangi scorn their government as *upuuzi tu* ('just an absurdity').

The post-colonial government's attempts to manage resources in North Pare failed because the new social institutions were full of contradictions, short-term initiatives and shifting terms of access and control. The social institutions that had legitimately related resources to their users during the colonial era became political liabilities, so the area's forests, irrigation system, water sources and soil became caught up in ambiguous negotiations among farmers and planners about the meaning of these entitlements. None of these social actors could assert the authority of a particular social institution with any consistency and formerly ecologically functional common property regimes turned into open access situations. The ambiguity and erratic nature of post-colonial environmental entitlements have shaped notions of power and authority in North Pare and have left the cultural landscape clouded with mistrust and doubt. This history shapes current development programs because development agency staff members, government officers and land users often discuss the conservation of areas that were once common property resources without clarifying entitlements that have become ambiguous. As one woman exclaimed during a land use planning committee meeting that I attended in 1997, 'If you tell a person to conserve something, they do not know what you are talking about'.<sup>68</sup>

#### CONCLUSIONS: EMPTY POLITICS, AUTHORITY AND LAND USE

Although the direct effects of Ujamaa on North Pare were limited to unsuccessful settlements in the lowlands, institutional changes in the highlands and economic decline, it was the indirect effects that transformed the area's culture and ecology most significantly. The state's ambiguous, variable and lofty goals, as well as its arbitrary and uneven implementation of policy, created a political context in which the locally legitimate practices and norms of land use became mired in ambiguity. Nyerere's sweeping general

<sup>66</sup> WEO-Chomvu, 'Ardhi' file, Mwanga district commissioner to all ward secretaries, 22 Feb. 1988.

<sup>67</sup> WEO-Chomvu, 'Ardhi' file, Mwanga district natural resources officer to Chomvu ward secretary, 28 July 1988. Cell leaders (in Swahili, *balazi*) are the lowest level of the Tanzanian political hierarchy. These unpaid officials are responsible for mobilizing approximately ten households to comply with state demands.

<sup>68</sup> Author's notes from the Usangi Division Land Use Planning meeting, 19 Nov. 1997.

directives during the 1970s provided the farmers of North Pare with an incontestable normative framework within which they could pursue their own short-term interests. These changes coincided with ongoing processes of land and labor shortages based on population growth, female labor, male entitlements and labor migration. These contradictions also deepened distrust of the central government, the local administration and the validity of legal processes. In this stressed agro-ecological context, it was the ambiguous politics of land use in the late 1960s and early 1970s that eroded the underpinnings of the common property resource management regimes of North Pare.

Once the socioeconomic base had weakened, resource management of the commons collapsed because the ambiguous nature of authority during Ujamaa defined management based on kinship or chiefly hierarchies as 'backwards' or colonial, while the supposedly 'modern' state was unable to manage the same resources effectively. For the wetlands, irrigation systems and forests of North Pare, Ujamaa created open access situations indirectly and accidentally. The post-colonial transformations of land management in North Pare demonstrate that the area's current environmental problems grew from the problematic political relationship between rural producers and administrative officials and are not natural consequences of population growth and poor agricultural practices. A historical model that focuses on shifting institutions and ambiguous entitlements explains the types and course of resource degradation in North Pare better than the simple population pressure model espoused by the area's administrators and planners. It is likely that resource management in North Pare would be far different today if the government had not dismantled the social organization and cultural logic of local political authority. This is not to say that the area's agricultural ecology would be as it was before independence, but that irrigation would be more robust, food production more secure and the water table more reliable.

The experience of Ujamaa and socialism in North Pare also shows that the Tanzanian state's efficacy and authority declined inversely to its increasingly coercive and authoritarian practices. Property relations and the legitimacy and authority of social institutions are mutually constitutive processes, so ambiguity in the former led to doubt and mistrust in the latter.<sup>69</sup> Authority for resource management had been localized, so the nationalization of authority meant a decline in local social institutions' legitimacy and efficiency. With the social institutions that 'map' resource entitlements lacking both political and moral authority, resource abuse resulted. It was the political ambiguities and contradictions of independent Tanzania that damaged the area's indigenous common property management regimes even more than the government's direct actions. The tragedy of the commons in North Pare was a political one, and it is likely that this unfortunate historical process has many parallels throughout Africa.

<sup>69</sup> Christian Lund, 'Negotiating property institutions: on the symbiosis of property and authority in Africa', in Juul and Lund (eds.), *Negotiating Property*, 11–43.