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Land is
Coming up

W. OSTBERG

Land is Coming Up

The Burunge of Central Tanzania and Their Environments

by Wilhelm Östberg

Doctoral dissertation. By due permission of the Faculty of the Social Sciences, Stockholm University. To be publicly defended in Auditorium 3, House B, Frescati, Stockholm University, on Friday, December 1, 1995, at 10.00 a.m.

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Abstract

The Burunge are a Cushitic-speaking people living in the south-eastern parts of Kondo District, Tanzania. This is a study of how they relate to their land resource. Local forms of land husbandry is studied in a wide framework, including both social stratification and ethnic relations. Widespread poverty in the area turn out to be of importance for how natural resources are managed.

Burunge conceptions of how soils form, change and erode are documented. Land is taken to "have life" and to "rise up" from below. It is the life inherent in the soil, together with the equally life-giving rain, that makes crops grow. Soil rising up from below is considered to be of poor quality compared with top soil. Yet, the process in which different conditions and qualities mix is in itself seen as valuable.

Why the Burunge area has fared relatively well in comparison with neighbouring badlands is discussed.

To most Burunge the forest is an integral part of their world. Most Burunge hold that the forest brings rain and that run-off from the forest fertilizes their fields. Land is cleared in a way that makes it easy for the forest to regenerate. Currently the interior of the Burunge Hills is being settled, partly by immigrants from other communities. The process is analysed for both its ecological and its social consequences.

The interplay between outsiders' and local knowledge is an underlying text running through the book. Villagers have discussed the preliminary results of this study and dialogues with the local communities are commented upon.

KEY WORDS: Burunge, Rangi, Kondo District, natural resources, environmental perception, local knowledge, soil conservation, cultivation frontier, participatory studies.

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AND THEIR ENVIRONMENTS

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Stockholm Studies in Social Anthropology, 34
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Young girls with calabashes returning from a well.

Preamble

Each time we have returned to Goima we stop at the top of the small hill where the road enters the village. From here one looks down into a gully cutting through the village and the ascent up the other side to the old primary court. There a big Ficus tree provides shade for an open area. Small heaps of tomatoes, onions and fruit are for sale on the ground. Peddlers may have brought in dried fish from the river Bubu. People wait for the bus which passes daily through the village, or they just talk to one another and to passers-by.

It is said that the big Ficus beside the old court once sprouted from the enclosure that Damasi built for his father's livestock when he was still young. This was back in the nineteenth century.

Damasi grew up to be a rich man and the Germans appointed him as the first chief of the Burunge. The story goes that Damasi was acquainted with the Gogo chief of the time. Damasi accompanied him once to Mpwapwa, then the German regional headquarters. "There he got his *kofia* (cap, chiefly rank)".

This *moogimo* tree is the main landmark of Goima. It is seen from afar, and people take note of it. It sheds its leaves towards the end of the dry season to become bare as if it was dead. Then shoots appear at the tips of the branches. First they are reddish, then pale green leaves appear. After some time one hears thunder in the distance. The colour of the leaves becomes a deeper green. People say to one another that it is time to get the seeds ready. It cannot be as long as a week before the rains begin.

The tree is one of the places where ceremonies are conducted if the rains are unexpectedly delayed. The *hhapeeloo'ay* at Goima, the ritual

“owner of the land”, announces that “the guest is close. Why do you people not do what it is right to do?”.

During the drought in 1992 *Bibi Ula* Ninga got a sudden impulse to arouse the people to what was happening. That morning she had prepared gruel from the last bulrush millet she had left in the house. In the afternoon she walked to the centre of the village. At the big *Ficus* tree it was quiet. The peddlers were preparing to leave. One woman was selling cassava, another *zambarau*-fruits. *Bibi Ula* stood facing *Mugobei* hill, sacred to the *Burunge*. She lifted her hands towards *Mugobei* and cried out the names of past leaders, “*Damasi*, *Ninga*, *Khankhai*, we are dying. You used to be here, and we are left behind. Your grandchildren are here, why do you let us die? The country is dying. Why do you wait to save this land?” She prayed for rain, and she also turned to *Goima*’s current elders and to the *hhapeeloo’ay* *Aima Damasi* “What are you doing to make the rain fall? Is there a *hhapeeloo’ay* in this area, why do we have this problem? *Aima*, the land is dying.”

The two distinguished elders, *Joseph Silooti*, the last chief of the *Burunge* and *Mzee Mikaeli Muryinga Ninga*, *Bibi Ula*’s own brother, happened to be together at one of the small cafés in the village centre. There they heard themselves being rebuked for “doing nothing”, whereas the elders of past times had seen to it that there was food in *Goima*.

Bibi Ula prayed for rain and begged God for mercy. “God will hear if I cry out the names of those who used to manage these things in the old days”. She criticized the current elders for not bidding the people to pray for rain so that whatever it was that prevented the rain from falling could disappear. She cried out that the crops were dying, the food was finished in the stores and the leaders did nothing. The fact that she addressed the village notables was not simply a matter of metaphysics. Hunger was becoming widespread while some still owned goats. Those with resources were alerted to the plight of the poor.

“People say I am a bit peculiar, that sometimes I am not quite normal, but I said to myself I shall pray and God will hear me. Yes, I shall make a noise, I shall cry out to God and maybe the rain will fall. I shall

cry out at the tree so that our people can hear. I went there. I shouted, and indeed the rain fell."

When she had finished someone offered her a piece of boiled cassava. She walked off in the direction of Mirambu village, where she intended to ask for food. "What could I do at home when there was nothing left?" She did not get beyond the church before the first drops of rain fell. Soon it was a downpour. And it had been a clear day.

Later I asked *Bibi Ula* if she had not been afraid to cry out alone, in front of all the people at the centre? She laughed at my question. "No, my aim was only to plead to God. Even if I had met the nation's ruler there, I would have made a noise. At that tree Damasi, Ninga and others used to meet to discuss things. Even if I had been put in prison, I would still have attained my goal of asking for help."

One year earlier my friend Ndugu Huseni Mbaraku, the Executive Officer of the Goima Ward, had ordered two big branches of the Ficus tree to be cut since they threatened to fall on a row of houses where civil servants lived. Instantly there was an outcry from the Goima elders. Trees where spirits dwell cannot be touched, and definitely not without ritual propitiation. It was equally definite that the administration was not going to supply the required goat. The conflict escalated... We shall return to that story, when we reach chapter 4 where trees and forest dominate.

To the east, in the foothills of the Burunge Hills, lies the Catholic Church, an attractive pink and yellow building, and beside it is the dispensary where we have been given the use of a room.

Descending from the hill we pass the empty building of the Cooperative, and Bwana Pius's house with its concrete roof (!). We try to catch a glimpse of Mzee Paskali's compound to see if someone is at home. We reach the bridge and the dam which is silted up. In the 1950s people were able to draw water here. This is also the place where the road branches and we have to decide whether to go first to the village office or to the mission.

Goima is not a big place. Most of the houses are quite unassuming, and there are not that many of them. Suta Doo's shop is hardly recognizable if one does not know where to look. The mosque does not look different from any ordinary house along the road except that it is nicely white-washed and has neither vegetables, chickens nor a selection of odd things lying about. We pass young Gido's café with the usual crowd of *bao*-players and people hanging around. Is Mzee Mikaeli around? Someone has slaughtered and is selling meat. Is Thomas Chorray at home? The *hakimu*?

We have arrived.

Houses shaded by trees, a few people moving up and down the road, red dry soil, the tree where school-children last rainy season found a bottle containing "medicines", people queuing at the dispensary, the white *gorogoombimo* flowers against the barren ground, the faint but warm light from a few odd kerosene lamps when we return late to the village after a long day's work and it is pitch dark everywhere – the landscape has become familiar, and tinged with stories and personal recollections.

I first visited Goima in 1985. I was studying the consequences following on the expulsion of livestock from the Kondoa Eroded Area five years earlier. Goima was one of the villages which was supposed to have received livestock. Had the additional livestock in any way influenced conditions in Goima?

The moment I arrived I was drawn to the place: the blessed shade from fully grown trees, the primary court in its quiet decay, the jacaranda trees at the primary school, an unassuming but warm welcome at the village office, housed in an old grain warehouse dating from the colonial period. It is a circular building with an outside flight of stairs climbing up its wall. In good years people were supposed to climb these concrete stairs and pour some of their grain down into the store. During dry years they could collect famine relief from the same store - a good idea, but no longer functional just like the silted dam. As independence approached the authorities were no longer able to prevent people from cultivating and grazing livestock in the catchment

above the dam. Soil erosion followed and sediment filled up the dam. Nor was it any longer possible to persuade people to store grain collectively as a precaution against bad years. Instead, the store was turned into an office. Inside, the circular room is pleasantly cool; light filters in through the open door.

I had sat down to sign the visitors' book and explain my mission. Goima seemed so peaceful. I remember I had even thought I had heard water flowing through the village.

During the coming years I nourished a desire to return to Goima. An opportunity presented itself in 1991. I was soon to learn that no stream flows through Goima, but everything else proved as pleasing as I had remembered it. Except for the drought; 1991–4 were dry years in Goima, and life became difficult for many households.

That I am captivated by Goima is of course of no interest to other people. I mention it because it is in that mood, and in gratitude that I now try to report on some aspects of life in Goima village and its surroundings.

Gathering for a celebration below Mugobei Hill.

Introduction

The Burunge Hills of central Tanzania border on the 125,600 ha area known as the "Kondoa Eroded Area", which among conservationists holds the dubious reputation of being one of the areas worst hit by land degradation in Tanzania, and indeed in Africa (MAP 1). The Burunge area is considerably less degraded. Why? Therein lies the initial question and rationale for this study.

The physical conditions of the two areas do not differ enough to suggest immediate reasons why they have fared differently. The same crops are grown, albeit with different emphases, using roughly the same cultivation techniques. Livestock have been kept in both areas. Officers of the Ministry of Natural Resources working in Kondoa have suggested that "the Burunge worship trees, they respect the forest very much" as the reason why the Burunge area was apparently comparatively well preserved. Physical scientists with experience of Kondoa District have confirmed that the Burunge area was less degraded and that they could not see any immediate reasons why this should be so. Could it perhaps be that there were differences in the way the Burunge and the Rangi make use of their respective areas that could explain the difference?

Map 1. North-Central Tanzania with the Burunge Hills situated in the south-eastern part of Kondoa District. The Kondoa Irangi Hills stretch from the central parts of the district towards the north and northwest. Slightly less than 10 per cent of the district is taken up by the so-called Kondoa Eroded Area, a badly degraded area where comprehensive land rehabilitation activities have been tried out since the 1930s. In 1979 the area was destocked. To the east the Kondoa Irangi Hills are bounded by an escarpment below which Lower Irangi and the Maasai steppe are situated. Isolated hills dot the plains as is also the case in the southwestern parts of the district. North of Kondoa district, in Hanang, Mbulu and Babati lie the Northern Tanzanian Highlands. Map by Karin Weilow.

This study describes how the Burunge, and others living in Goima Ward including a steadily increasing number of immigrants from the degraded Kondoa Irangi Hills, conceptualize and relate to both their physical and socio-economic environments. It is an anthropological study, with some inputs also from the literature in development studies and natural resource management, which was carried out in the Burunge heartland in and around Goima village. The study draws on cooperation within a multi-disciplinary research group studying man-land interrelations in semi-arid Central Tanzania (Christiansson *et al.* 1991), run jointly by the Institute of Resource Assessment (IRA), University of Dar es Salaam, and the Environment and Development Studies Unit, School of Geography, Stockholm University. Throughout the book the notions of "soil conservation" and "sustainable production" run as an undertext. These are concepts not occurring in Burunge everyday experience. This study is therefore an attempt, with the help of people living in the Goima area, to try to free such catchwords from the engineering straitjacket that sometimes hampers organized soil conservation work. Soil is more than a material which harbours crops.

Joseph Mduma interviewing Mzee Paskali Saki

Arriving in Goima

Few believe that there is neutrality in anthropological field work, or in reporting on it. Ethnographers bring their autobiographies into the field (Rosaldo, 1984:192f.; Callaway, 1992; Okely, 1992). Gender studies have demonstrated that scientific knowledge is produced from a particular position. And so it should be. Pierre Bourdieu notes already on the first page of his celebrated *Outline of a Theory of Practice* that, when distance is allowed to grow into the cardinal canon of practice, the ethnographer finds himself or herself surrounded only by spectacles. This was never a risk in Goima. We were plunged head first into current local affairs:

I was introduced to the area by representatives of a Tanzania committed to development work. Dr Claude Mung'ong'o of the Institute of Resource Assessment at the University of Dar es Salaam kindly accompanied me to Goima for the first encounters. We were introduced to the divisional and village authorities by senior officers of the national soil conservation project based at Kondoa, the HADO (*Hifadhi Ardhi Dodoma*) project which for twenty years has been one of the major actors in the district, particularly since 1979 when livestock were expelled from the Kondoa Eroded Area (Mbegu & Mlenge, 1983; Östberg, 1986; Christiansson, 1988; Christiansson et al., 1993b; Mung'ong'o, 1995). The link with HADO was to become even more manifest when I was joined in the field by Mr Joseph Mduma, a forester with more than ten years experience of working with the HADO project. The association with the HADO project, with the IRA, and with developmental efforts in Tanzania generally, remained in the minds of at least people close to the Goima offices. Mr Mduma and I made no effort to escape that label. On the contrary, Mduma now and then lapsed into his professional role as a resource person for farmers in land and forest management.

As we were to study how the Burunge relate to their environment and how the land is managed, it was natural that some people were on their guard, associating us with the enforced removal of livestock from the Kondoa Eroded Area.

In Goima we stayed at the compound of the Catholic Mission. Although people knew that we were not employees of the church, I am sure many of them believed that we were associated with the mission, one way or another. Again, we did not openly contradict this. We attended mass and participated in other activities at the mission, and were anxious that our work should not in any way reflect unfavourably on the work of the church.

Another important avenue of access to Burunge realities was the late Joseph Bahe Silooti, the last chief of the Burunge. He immediately involved himself in our work. He was known by all and sundry, usually from personal contact but at least by reputation, and in his company we were welcomed far and wide. Most people took it that we were doing something that must be somehow beneficial to the Burunge since we were working with *Mzee Mtemi* (Mr Respectable Chief). Although this office had been abolished at the time of Independence in 1961, when Chief Silooti retired from public life, he was still often addressed as and referred to as *Mzee Mtemi*, and his devotion to the welfare of the Burunge was well known.

Mr Mduma and I were, I believe, identified as people with good relations with “leaders” in both Kondoa town and Goima village. At the same time we also did a few things that most members of this local “establishment” normally do not do. We participated in Burunge ceremonies and we walked into areas of the Burunge Hills where there were no roads. To my mind our introduction to Goima, and our credentials, were reasonably congenial to the work we undertook. In studying natural resource management in Goima division, we were intent on involving, with the help of interactive research methods (PRA/RRA, see glossary), interested government staff in our studies, as well as members of village councils, ten-cell leaders and other villagers. We also made it clear that we had a particular interest in Burunge history, since the latter had not previously been recorded in any systematic way.¹ Gradually we worked ourselves through the various echelons of the Goima social world.

Our “positioning” in Goima of course influenced what we were told and how people related to us. This has to be adjusted for, and doing so

is part of anthropological data gathering. With time we came to know people in different roles and situations and were thus able to “contextualize” both what they had told us and their projects of self-realization in relation to us. With many we of course dispensed with formalities to become ‘Joseph’ and ‘William’, with their concomitant more private experiences, emotions and processes, as commonly happens during field work.

“Rapid” and other studies

The total time spent in Goima Ward was limited to six and a half months, divided into five visits during the period 1991–4 and covering the different seasons of the year. Many aspects of kinship relations, household dynamics, clan histories, etc. are therefore not well known to me. The focus of this book is on how people in the Goima area and the Burunge Hills conceptualize and relate to their environment(s), in physical and socio-economic terms. Still a far-ranging undertaking, and so it should be; not because of anthropology’s classic concern with “whole” situations, which, with the development of the discipline, has come to appear as more and more practically unattainable, but because the “direction of social anthropological research is often determined as much by accident and serendipity as by theoretical considerations” (Kuper, 1970:15).

The information was deliberately sought out, even provoked, quite as much as it was patiently awaited by “just hanging around” according to the canons of participant observation. Apart from anthropology’s standard methods of participant observation and semi-structured interviews, we also used transect walks, map drawing, crop calendars, wealth and problem rankings, workshops, etc. which are all designed to actively involve people with local knowledge in the research procedure. I had had previous experience both of long-term anthropological field work and of more interactive types of data gathering, and also had an interest in trying to (con)fuse these two approaches, which have

much more in common than proponents at both ends would wish us to believe.

The move towards “rapid” and “participatory” methods of research, currently quite common in development-oriented studies, goes back to the 1960s when community development, particularly in Latin America, increasingly came to focus on local empowerment, social justice, and ethical codes. Since then the major development agencies have also become concerned that expert-driven approaches far too often fail. This has led them to cooperate increasingly with voluntary organizations, and they are looking for new ways of relating to local communities and to handing over the initiative to them. In this re-orientation Robert Chambers’ writings (for instance, 1983, 1988, 1992, 1993) have been influential in creating confidence in the view that Third World villagers are both able and well suited to take on some of the basic research needed to make development happen. At about the same time interest in “indigenous knowledge” proliferated, inspired not least by Paul Richards’ book *Indigenous Agricultural Revolution* (1985) which portrays West African farmers as innovative and systematic agricultural experimenters. In a detailed case study the following year Richards showed how Mende farmers in Sierra Leone isolated 2-3 new rice varieties with useful properties per generation (Richards, 1986:Ch.8). Currently, accounts of farmers’ home nurseries, crop trials and miscellaneous innovations have become standard reading in journals specializing in “indigenous technical knowledge” and in “people’s participation”.²

Both these major re-orientations in development oriented-studies may well have drawn inspiration from an occasionally somewhat heated debate, at least from the late 1960s onwards, on African vs. Western patterns of thought. One position is that explanation, prediction and control are central also to religious thought in Africa. If this is the case, should it then not be possible for farmers and professional researchers to cooperate? Those who hold that there is a continuity between ‘traditional’ and ‘modern’ world views share with, say a Chambers or a Richards, that their studies take off from the perspective of the actors.³

While admitting that when villagers study their own environment this may easily result in biased and rhetorical accounts (cf. Östberg, 1993), field researchers also experience that, when villagers share responsibility for both research goals and methods, new channels may open up to information not accessible through either social surveys or participant observation. Furthermore, the restricted focus and limited body of data collected during "rapid" or "participatory" studies make it possible to present the results to the community studied and other interested parties while the field work is still going on. Some of the findings reported here were scrutinized in local seminars, as well as during more informal gatherings, and this not only added to the validity of the findings but also created new data. Moreover, comments and reactions from government officials and project staff became important and integrated parts of the study. The dialogue around facts and interpretations provided a continuous cross-checking of information.

There are merits in both approaches, participant observation and PRA/RRA techniques, and they should not be looked upon as mutual enemies. In some ways they serve different purposes, produce different kinds of knowledge, have different impacts. An example could perhaps particularize the point. Wealth-ranking exercises, a standard ingredient of PRA/RRA, were conducted during an early stage of the field work. The results were surprising. About half the households in two villages studied were unable to subsist from the land they cultivated. This did not fit with the received wisdom on rural Tanzania, nor with my own early observations in Goima and Mirambu villages. However, similar results simultaneously emerged from other parts of Kondoa District as well as from village-level studies in Babati and Hanang Districts (cf. Mung'ong'o, 1995; Lindberg, 1991 and forthcoming; Loiske, 1995; also Lindberg *et al.*, 1995). This insight, at an early stage of the study, that poverty was more widespread than was generally recognized and that extra incomes were of crucial importance, had a considerable influence on how the work was continued. By contrast, the Burunge theory of soil formation and soil erosion, described in Chapter 3, could only be uncovered using a more conventional ethnographic method.

A bias towards the public

In this study names of villagers and villages have not been changed. When the identity of a person has been disguised, this is noted.⁴ A fair amount of the data on which this study is based was collected during formal interviews or discussions. Everyone was well aware of what was going on. But also for information that surfaced more informally, in conversations, while eating and travelling together with various people, while participating in ceremonies, etc., the source is acknowledged whenever possible. In a number of instances the text has been translated into Swahili and those quoted have been asked if they can accept that they are acknowledged as sources. Nevertheless, it remains a moot point as to how a field worker may use information that surfaces when both s/he and his/her hosts may have completely forgotten that a scientific inquiry is going on (cf. Dahl, 1993b:14). However, I am quite confident that only information which the "informants" are prepared to stand by, and will not be victimized for, is reproduced in what follows.

Finally, our association with development concerns, as well as our use of interactive research techniques, helped somewhat to bridge the juxtaposition of investigator and investigated. Without in any way implying having endured hardships during our field work or in any major way contributed towards better living conditions in the area, nevertheless people's problems of dwindling harvests, poor health services and mounting water problems were also our concerns. Any mutual involvement will, I believe, to some extent dissolve the intricacies of inquiry so intensively penetrated in recent theoretical preoccupations with 'reflexivity'. Having to face common practical problems helps.

After this perhaps too long account of the set-up for the field study, I still wish to say one or two things about the craft of ethnography.

Ethnographers, informants and texts

Recent discussions on "writing ethnography" and a seemingly widespread "sense of loss of ethnographic authority" have brought into

focus the subtleties in the intercourse between ethnographer and “informant”. It is as if “the field” was the time, the place and the people where the ethnographer has happened to show up, a specially constructed world. Kirsten Hastrup is one of those who has pursued this point, arguing that the encounter “defies our ordinary historical categories, and the field-world has neither a firm past nor a distinct future because its reality is intersubjectively constructed and depends on the ethnographer’s presence in the field” (1992:127).⁵ Hence the written ethnography should also include the ethnographer “because her presence in the field was the locus of the field-world”, and in fact we come to deal with a “world my writing creates”, where a scholar “writes others into objective existence” (p. 126). Finally: “Ethnographic texts are allegories; and the ‘ethnography’ itself is a metaphor for a world-out-of-time” (p. 128).

A logical conclusion from reflexive analysis appears to be that it is not possible to represent reality (*ibid.* p. 122; cf. also, for instance, Clifford 1986a:2,6,10), an attempt which Hastrup says is only epistemological confusion. “It is impossible to *know* fellow humans ‘as if’ they were truly objects of sort” (Hastrup 1992:125, emphasis in original).⁶ Tyler, similarly, denies that an ethnography can represent real world conditions (1986:128),⁷ and he has a grand alternative role for ethnography in the offing. If ethnography does not represent, he writes, it “evokes what can never be put into a text” (*ibid.* p. 138). We get “fragments of discourse intended to evoke in the minds of both reader and writer an emergent fantasy of a possible world of commonsense reality” (p. 125). “The reader and writer produce together a story of sorts” (p. 126). Here reflexive analysis has been carried so far that, at least to my understanding, it turns egocentric. What had begun as a valuable recognition of the subjective element in any research process seems to end in the capitulation of scientific work.⁸ If ethnographic particularism had put anthropologists at risk of becoming what Geertz (1984:275) called “merchants of astonishment”, they now seem to have turned into magicians.

It is easy to agree with the general argument of “reflexivity”, that the observer’s presence is part of the world studied and needs to be

taken into account, but this insight can obviously be pursued to the point where it seems to lose touch with the collective and public undertaking that anthropological field work, at least in African village environments, amounts to. The encounter between ethnographer and informant is only one in a range of endless other meetings, messages, policies, inadvertencies and interconnections during a period of field work. In this flow of events and multiple causations the ethnographer's presence is lightweight. And we can be confident that the local stage has been set since a long time back to cope with visiting ethnographers (cf. Hannerz, 1991:109f., 124f.). Regardless of the field worker's personal values and opinions, much of her/his interaction will be heavily influenced by inherited power relations, as Asad (1973:16ff.) pointed out more than twenty years ago in the volume he edited on *Anthropology & the Colonial Encounter*. Even if both the ethnographer's personality and his/her relations (in as many meanings of this word as possible) with the field situation will doubtless influence the resulting ethnography, there are many other factors which work at the same time to reduce the significance of supposedly unique encounters.

Even when formal appointments had been made for an interview, other people turned up and joined in the conversations. When checking agricultural practices and doing farm interviews we were usually surrounded by neighbours, children, passers-by, a ten-cell leader and a few other interested persons. Our questions were widely debated before a "correct" answer was arrived at. Interviews on Burunge culture and society invariably resulted in impromptu seminars.

Field work means continuous interaction, often of an unforeseen kind – bartering and buying, eating and feasting, planting millet and harvesting maize, conversations while travelling between homesteads, fields and villages. Meanwhile, other people's interactions go on, regardless of the ethnographer's raiding and provide unsolicited information. A lot happens outside questions and answers. Information passes via the routines, motions and silent messages that make up everyday life, and with experience field workers usually acquire some skill in making use of such data even if the "data" are of course filtered through them.⁹

It is an often repeated thesis that descriptions are partial and provisional rather than total and definitive (cf. for instance Clifford 1986a:7,18 or Sanjek 1991:622). But this is not the same as saying that there cannot be attempts at valid accounts of real life conditions. Studies of a particular "field" can be compared with those of other societies, and one study of an area with other research on the same place. Sally Falk Moore writes in an overview of anthropological work in Africa that, although field workers do interpret, "the question of verifiability and falsifiability surely should never be far from the surface in the ethnographic quest. There are more or less responsible interpretations" (Moore, 1994:82).

If ethnographies were only evocations, how could they ever be discussed? But they are. Anthropologists re-read their classics and offer new interpretations of the ways of the Trobrianders, the Andaman Islanders, the Nuer. They are not just discussing Malinowski's visions, Radcliffe-Brown's optics, or Evans-Pritchard's revelations. These field workers' descriptions can be used for alternative interpretations in the light of new findings, whereas ethnographies understood as allegories or as unique encounters would arrive at a dead end.

A real world

Goima still lies there, southeast of Kondoa town, with its manifold links to national centres, to international economies and global processes, whether someone writes about it or not. The Burunge make their living and understand their environment both independently and in relation to neighbours and settlers.

Any social analysis will be coloured both by the observer's skills of recording and by accidental circumstances. But agreements can be made on the conditions for cultural constructs, and within a framework of science it is possible to discuss how both the actors themselves and outside observers understand Goima realities. The analysis is not just one field worker's construct of how things are. Other observers can confirm or refute these particular interpretations. Residents of Goima

Division, as well as professionals knowledgeable about the area, have commented on some of the results reported here. These discussions had one and the same social reality as their object.

The study was carried out under the auspices of a research programme which cooperates with natural resource management projects. Their task is to support the efforts of local communities in finding sustainable production systems. Our research should be useful both to the communities where we work and, generally, to efforts to improve living conditions in semi-arid areas. Solemn words, but all the same an obligation agreed upon. It is not least from this perspective that the more extreme position of reflexive theory is unsatisfactory. Ethnographies which aim only to take account of encounters between field workers and "informants" are unable to support work towards improving marginalized people's control of their lives. This requires us to aim at valid descriptions of real life conditions.

Raiding local communities

Hastrup (1992:122) goes on to say that "the drama of fieldwork, as played out on the stage established between ethnographer and informant, implies a degree of violence on the ethnographer's part". Most field workers will probably have to admit to this. And as the data are processed the analyst will again exercise violence as external norms and values are imposed on people's lives. Finally, when the results eventually appear, they will normally not pass unnoticed in the communities studied (cf., for instance, Rabinow, 1977; Brettell, 1993). If such involvements amount to violence, it has to be stated that this particular study deliberately imposed itself on the communities where it was carried out, and involved as many people as possible to produce the data. We demanded people's time and attention. And as an analysis is now offered of local social stratification, for instance, we impose a pattern on what to many Goima people have been fragments of thoughts and experiences. This will add to the arguments, concepts and representations of reality available in Goima and thereby influence

people's social reality in ways which are difficult to predict. Such influences are of course not a one-way process of imposition. Different local actors will select what is useful to them, and ignore what is not. What field workers can do, and what I also have tried my best to do, is to make room for the voices and agency of those about whom we write.

People who were randomly selected as respondents in a comprehensive agricultural survey can to some extent be described as "informants". But many of these formal interviews soon turned into dialogues, in effect into an exchange of views on land management and related questions. Generally, we worked together with experts and lay people on the Goima situation. Sometimes strong feelings were expressed. Sessions when results were reported back to the communities led to continued discussions in the respective villages. During the study, as often occurs in human communication, we also solicited information on topics that appeared strange to the "informants". Some of the study methods introduced new ways of interaction between people. And we secretly observed behaviour, and happily listened to gossip. Certainly we intruded on people.

No one was forced to participate. But we did our best to persuade those who were selected in a random sample but who were reluctant to be interviewed to answer our questions. This resulted in at least some cooperation from everyone. With the vast majority of those selected by our samples we had both pleasant and useful encounters.

Our basic attitude was one of dialogue. We stated our interests and asked for cooperation. Some people were interested in joining us, others not. Those who became involved with us, of course, had their own overt and hidden agendas, not all of them sinister. We negotiated the terms of cooperation, sometimes openly but more often indirectly and in a friendly way. And many people were simply kind.

The multitude of opinions on Burunge culture, society and development, the farms measured and the beehives counted, the ceremonial and everyday practices observed, the conflicts encountered and the confidences given – out of all this material would it not be possible to capture what both an inhabitant of Goima and an outside observer rec-

ognize as real-life conditions in Goima, even if sceptical philosophers tell us that any description of necessity always remains partial (in both meanings of the word)?¹⁰ I find it more likely that we are discussing real-life conditions, and Goima people's diverse understandings of their worlds, rather than merely a construct by the ethnographer. We can analyse and present the data well, or not so well. How true the account is to "reality" is something to be debated and continuously improved upon, but not to be abandoned as just the ethnographer's construct. If it was this, then only the ethnographer would be in a position to judge how accurate a representation it is. By contrast, we have invited opinions from those described and have tried to reach a common understanding of what are valid accounts of their lives. When we aim at objectivity, such a stance, of course, still remains a subjective evaluation. But is not subjectivity at least reduced, when those who are described contribute to the generation of the data and comment on the findings? We are all unable to grasp reality in its totality. But what outsiders and insiders, scientists and lay people, are able to discuss together must approach a current understanding of, for instance, how natural resources are managed in the Goima area. What is accepted as knowledge thus emerges as the outcome of negotiations, in the villages as well as in distant seminars.

As the results of the studies in the Goima area are now published, the ethnographer/writer once more gets the final word. Yet, to the extent that the book is read, discussions may still resume about what constitute valid accounts of life in the Goima area. Subjectivity is reduced, as the writer's monopoly of description is sabotaged, for instance by making public the people, the places and the events discussed. As long as a dialogue continues, Goima remains in focus. We are not dealing merely with an observer's subjective view of Goima. The numerous informal debates in the field on how to find the right answer to a specific question, as well as our continuous observations, cross-checking of facts, general socializing and all sorts of unplanned occurrences, and finally the local sessions when the preliminary results were scrutinized, were all steps on the way towards understanding how Goima people understand their lives.

About the book

Throughout the book the focus is on how the Burunge relate to their land resource. We shall see how this depends on national policies as well as on rainfall. The issue connects with how the Burunge interact with neighbouring peoples as well as with how they adapt to widespread poverty. Land husbandry thus has a wide framework. Hence the subtitle became "The Burunge and their environments" instead of "Burunge land management".

The first three chapters concentrate on the Burunge themselves. Chapter 1 provides brief background information, while also allowing for a somewhat more detailed presentation of our data on social stratification. Chapter 2 gives an outline of Burunge subsistence. A few examples of "indigenous soil conservation" are discussed. Furthermore it takes account of the confrontation between local understanding of good land husbandry and soil conservation as introduced by a development project. The third chapter examines how the Burunge understand the processes of soil formation and of erosion. A Burunge theory of soils is presented.

Chapter 4 presents the forest as the energizing component of Burunge subsistence. In this chapter the wider society also make its imprint as immigrants clear vast tracts of forest to get land for cultivation. This will remain a theme for the rest of the book. Chapter 5 describes the contrasting attitudes to land of the Burunge and the immigrants, and in chapter 6 the colonization of the Burunge Hills is examined and its ensuing conflicts. Again, the theme of soil conservation is present, now in an attempt to discuss the question of how it happens that small-scale farmers may deplete the land resource on which they depend.

In the Conclusions the study is placed in relation to other research on land degradation. Whether there is a difference between outsiders' knowledge and local knowledge is also briefly commented on to round off a theme which has run throughout the book, namely, how the field researchers' understanding developed in dialogue with the local communities.

A glossary at the end of the book provides definitions and explanations of concepts used as well as translations of non-English words. Swahili phrases and words are given in *italics*, whereas Burunge and Rangi words or sayings appear in *underlined italics*. A few Swahili words – bwana (mr.), mzee (elder, respected person) shamba (field) – are so common in East African parlance, both in English and the vernaculars, and in this text, that they are reproduced in normal type.

The field work was conducted in Swahili. Mr Mduma has a fair command of the Rangi language. Any off-the-record contribution in Rangi could therefore be picked up and incorporated into the discussions. Whenever key Burunge notions were the subject of discussion (like, for instance, “land is coming up”), vernacular concepts and phrases were recorded and thoroughly discussed as part of the documentation process, and also with the aim of reaching additional understanding.

I

• The people, the area – and poverty

Three different topics are introduced in this chapter. It will first briefly touch on the Tanzanian experiences of rural development, before introducing background facts on the study area and its inhabitants. The chapter concludes with an analysis of social stratification, a factor of considerable importance for land use and many other aspects of life in the Goima area.

Tanzania and rural change

Tanzania holds a special significance for many who in the 1960s followed the transition in Africa from colonial rule to independence.¹ The country successfully negotiated the termination of foreign rule while some of its neighbours had to go through periods of open conflict. Today many Tanzanians describe their country as an island of peace in a region which has had its share of difficulties.

The three decades of relative political stability may be surprising given the fact that a few years after independence Tanzania abandoned the market economy it had inherited from the colonial period and opted for radical economic and political experiments. It wanted to develop “self-reliance” based not on foreign economic and political theories but on an African experience of communality. The political philosophy was summarized by the Swahili word *ujamaa*, which means family, kin, brotherhood, and which came to have an added meaning as the

Tanzanian expression of African socialism. Julius K. Nyerere, the first president of the Republic, explained the concept and its applications in several inspiring books and pamphlets which quickly gained international attention.

Tanzania's ambitions to improve living conditions and to create equality among its citizens were high. Health services, schools, water supply, agricultural mechanization, adult literacy – they should all be available throughout the country. The way of implementing this for that people to join forces in *ujamaa* villages, where the profits from communal farming could be invested in improved transport, village-owned grain mills, shops etc. Schools, roads, dispensaries and village offices were to be built by communal efforts. The egalitarian society was not to be restricted to the villages but was to reach into all corners of society. At a national level the policy therefore directed that financial, commercial and manufacturing enterprises were to be in public hands and these were consequently nationalized. Some agricultural estates became state farms.

However, it proved difficult to persuade farmers to move into the *ujamaa* villages. Many seemed to prefer to live dispersed, with fields and pastures within easy reach. The government's answer was to make the villagization policy compulsory through the so-called *Oparesheni Vijiji*. Not all parts of the country were equally affected, but in Dodoma Region villagization became a reality. In 1974 the process reached the Goima area and all those who had previously lived scattered in the Burunge Hills and elsewhere were compelled to move into a number of listed villages surrounding the hills at a distance of about ten kilometres from each other.

At about the same time the cooperatives were abolished in favour of parastatal crop authorities. The number of employees in the public sector escalated and government control over peasant agriculture and small-scale economic enterprises increased drastically.

The villagization process meant a total change of land use. Those who already lived in the places which were now to become villages had to share the land with a large number of newcomers. The land was divided equally. In principle, every family was to have a household

plot plus 4 acres of arable land. Many got their fields in one holding, others got pieces in different places. Some were able to influence where their fields were to be located, others could not. Large tracts of land were evacuated as they were situated too far away from the officially recognized villages, while new lands were cleared closer to the new concentrations of population. The ecological consequences of this major change have been surprisingly little studied (but see, for instance, Kikula, 1986).

The Tanzanian attempt at rural development initially attracted support from a number of countries. However, Tanzania ran into economic difficulties in the late 1970s for a number of reasons, and found it increasingly difficult to finance its programmes of rural development. In the 1980s everything seemed to be in short supply: maize, rice, sugar, kerosene, spare parts, diesel, clothes, soap, etc. Critics argued that few countries were as aid-dependent as supposedly self-reliant Tanzania. International interests, including the World Bank and the International Monetary Fund, demanded a reorientation of the Tanzanian economy. For a few years the government refused to comply, and produced its own plans for economic recovery, but eventually the country had reluctantly to accept the "structural adjustment policies" that many other countries underwent in the 1980s. Government expenditure was drastically reduced, trade and foreign-exchange regulations were liberalized, the currency was devalued, etc. – all with the aim of creating a market-oriented economy. As Tanzania complied with the demands of donors, external aid again started to flow into the country after having been reduced in the mid-1980s.

Economic liberalization was followed by a political reorientation as parties other than the ruling CCM party were allowed on the scene as from 1992.

The effects of the economic crisis and of the structural adjustment policies are very obvious in a village like Goima – there are virtually no medicines at the dispensary, miserable water facilities, poor standards of education, an immobilized extension service, etc. The administration has been drained of economic resources and at the same time has also become vulnerable to criticism from a new political opposi-

tion. Official Tanzania now appears very withdrawn compared with the situation one or two decades ago. But one may also note that, while Tanzania is one of the poorest countries in the world in terms of gross national product per capita, it does better on the welfare index ratings of the United Nations Development Programme than several countries with higher GNP/capita. Despite the country's severe economic difficulties the faint legacy of a policy of development for all its citizens is still discernible, at least in the international statistics.

The study area and its people(s)

Kondoa District is situated in north-central Tanzania. Kondoa town lies some 160 km north of Dodoma, the capital of Tanzania (MAP 1). The description of the physical characteristics of Kondoa District and semi-arid central Tanzania, as well as its problems of land degradation, can be kept brief since such information is available in a number of recent studies, for instance, Christiansson (1988), Christiansson *et al.* (1993b), Payton *et al.* (1993); Madulu (1994); Ngana (1992, 1994); Mung'ong'o (1995) and Yanda (1995).

In the east and south-east of the district are vast plains at about 1,200 metres a.s.l., forming part of the Maasai Steppe and the Central Plateau from which the Burunge Hills rise. Large areas of the hills reach altitudes of 1,400-1,500 metres, with higher hills reaching another few hundred metres. Goima and Mirambu villages are situated in the footslopes of the hills at about 1,400 metres. The rivers in this part of the district are all seasonal. The lack of water, and the erratic rainfall, are never far from people's thoughts.

The district contained 340,267 inhabitants at the 1988 census (Tanzania, 1991). The annual growth rate between the 1978 and 1988 censuses was 2.4 per cent, which would imply more than 400,000 inhabitants in the district by 1995. Population densities vary considerably. Dividing the 1988 population by the land area of the district gives an average of about 26 persons per square kilometre. By 1995 the fig-

ure is 30 per sq.km. Mung'ong'o (1995:55) estimates that, if forest reserves and severely eroded land are excluded, there are 102 persons per sq. km. in the Kondoa Irangi Hills. The corresponding figure for Lower Irangi he estimates at 68. A farm management survey carried out more than ten years previously calculated the average population density for Goima and the neighbouring divisions of Mondo and Pahi to be 29.5 persons per sq. km. (Tanzania, 1984, App. 1, p.3).

Building a house. The eldest son is putting up his new house close to his parents' tembe.

Goima Ward had 15,318 inhabitants in 1988, which may, using the 1978/88 growth rate of 2.4 per cent, be estimated to have risen to more than 18,000 by 1995. We worked throughout Goima Division, which also includes Chemba, Chandama and Mrijo Wards, but the study focused on two villages on the northwestern side of the Burunge hills, Goima and Mirambu, as well as on the interior of the hills. The 1988 census registered 2,382 inhabitants in Goima, living in 488 households, giving an average household size of 4.9 and a male/female ratio of 0.88. Mirambu had 1,454 inhabitants in 318 households, giving an average size of 4.6 and a male/female ratio of 0.89. In 1991 we

Rangi ETHNIC GROUP
 PLACE NAME
 DISTRICT BOUNDARY
ROAD

compiled a village roster for the two villages, in cooperation with the village offices, in which we counted 507 households in Goima and 350 households in Mirambu. No census data exist for the hills but Chapter 6 contains a table showing estimates of the number of households living in the various settlements there.

“Goima” is thus the name of the main village of the Burunge people, a ward, a wider administrative area including six more villages, and the even larger Goima Division where 46,711 persons were living in 1988; by 1995 this would be over 55,000 inhabitants.

It may be added that the mean age at marriage is 17.8 years in the district and that retrospective fertility data show a total fertility rate of 7.1 children per woman. A comprehensive demographic study, from which these data are taken, also established that demand for children was an important factor leading to early marriages in Kondoa (Madulu, 1995:8).

Today the Burunge are concentrated in an area between Chambalo in the south and Goima in the north. Some also live in the interior of the Burunge Hills. The Burunge chiefdom of the colonial period covered a wider area. In the south-west it reached Tumbakose, south of Gwandi (and therefore outside MAP 3 reproduced in Chapter 6). Moving north, the border passed through Makamaka and Jenjeluse in the west, and on to Jangalo and Mrijo in the north and east. In the south-east Mwaikisabe was the last outpost on the border cross-over to the Sandawe areas in the south-west. The Burunge claim to have lived in an even wider area in earlier times, including Mondo, Kondoa and Haubi, up to Kolo which was then in Alagwa country but is dominated today by the Rangi.

Map 2. The Burunge and their neighbours. Linguistically the Burunge are closely related to the Alagwa, while geographically separated from them by the Rangi, the majority group of Kondoa District. The district is truly multilingual: the Rangi and the Gogo are Bantu-speaking groups, while the Barabaig and the Maasai speak Nilotic languages and the Sandawe are Khoisan (click)-speakers. Map by Hans Drake based on Kiessling, 1994:11.

Linguistically the Burunge belong to the West Rift group of the Southern Cushites. The Alagwa, who live in an area stretching out north and west of Kolo, are linguistically closely related to the Burunge.

The largest group among the Southern Cushites are the Iraqw who live in Hanang and Mbulu Districts as well as the western parts of Babati District. The Gorowa, who live in Babati District in the vicinity of Mount Ufiome, speak a dialect of the Iraqw language (Greenberg, 1955:51, 103; Ehret, 1980:11, 72f., 80, 132; Kiessling, 1994:12). A proto-Southern Cushitic language is believed to have been the speech of the first agricultural peoples of Kenya and Tanzania (Ehret 1974).

The Rangi form the majority of the District's inhabitants. From their core area in the Haubi basin they have spread over the Kondoa Irangi Hills and beyond. Their traditional mode of production was agro-pastoral but since the destocking in 1979 of a 125,600 ha area surrounding Kondoa town (MAP 1) many Rangi find themselves without animals. Even before the expulsion only a minority owned livestock, perhaps a quarter of the households (Mbegu, 1982:4; Sawe et al., 1985:25). One third of the households in three divisions to which many livestock were moved in 1979 have been estimated to own livestock (Tanzania, 1984, app.1, p.4). Mung'ong'o (1995:109f.) writes that livestock ownership among the Rangi is complex and largely a preserve of the richer groups; it has an important function in patron-client relationships.

Kondoa District is exceptionally multi-ethnic. The Rangi are Bantu speakers, as are also the Gogo, Nguu and Nyaturu who have settled in the district. The Maasai, living on the eastern plains, are Nilotic-speaking, as are the Barabaig who live in various parts of Kondoa, not least in Goima Division. The southwestern part of the district is the home of the click-speaking Sandawe. And the Cushitic language family is, as already mentioned, represented by the Alagwa and the Burunge.

Rainfall

Goima people hold that no single factor is as important to their well-being as the rains. Any discussion about food, soils and changing living conditions starts and ends with the comment that "if only it rains..."

In Kondoa District the general pattern is that rain falls between November and May. Much of the rain recorded for a month comes during high intensity storms, while most days during the "rainy period" do not receive a drop of rain. The rainfall is thus erratic, often violent and generally inadequate for reliable crop production. Generally, for semi-arid central Tanzania the seasonal variability of the rainfall is of the order of 25 per cent, while the coefficient of variation for individual months and years can be considerably higher (Ngana, 1994:10; cf. also Mung'ong'o, 1995:42; Yanda, 1995:64f.). Christiansson (1981:32-34,174) has presented rather similar findings for the Dodoma area. The long dry season, which leaves soils and vegetation dessicated, is by contrast regrettably predictable. Evapotranspiration at Goima and Mirambu is high, about 1,700 mm/year. Dryland farming is possible but unreliable, and Burunge farmers adapt to this fact by being involved in many other economic activities, as will be described in Chapter 2.

Diagram 1.1. Average rainfall in Kondoa District, 1963/64–82/83 (mm.).

The precipitation is close to nil during the months June – September. The monthly averages correspond to an annual rainfall of 550 mm. Longer time series are available only for Kondoa town. Source: Records at the Kondoa District Planning Office.

Recordings for Goima village are available at the Tanzanian Meteorology Department for the years 1972–80 but are incomplete for most years. What little data are available point to figures well below 550 mm,² which is also the view held by Goima and Mirambu farmers. They were further unanimous that the years 1991–94, when this study was conducted, were drier than average in Goima and Mirambu, whereas the situation was not equally bad on the eastern and southern sides of the hills and in the interior of the hills (cf. also Yanda, 1995:78).

For Chandama village, 20 km. east of Goima, there are rainfall records for the years 1972–78 and incomplete records for the years up to 1991. The first period gives a mean annual rainfall of about 441 mm. Ngana (1992:5) has published a table of rainfall statistics for various stations in Kondoa District, in which Chandama is recorded as having a mean annual rainfall of 465 mm, with a variation coefficient calculated at 27 per cent.

For the study area we may thus conclude both that it is situated in a semi-arid environment and that reliable data on rainfall do not exist. The latter fact is more commonly the situation than is often recognized. In developing countries one rain gauge to several hundred square kilometers is common. They are usually installed with little consideration as to how representative a chosen locality is of a wider area, and seldom standardized as to how they are shielded from wind, etc. Often they are read with little care. For a discussion of soil erosion it would also be important to have information on rainfall intensity.³ The only data available for Kondoa District come from Kondoa town. Ngana (1994:12) compares these data with five other stations in Tanzania and concludes that Kondoa and Dodoma are exposed to very intensive rainfall. This fact, together with the long dry season, which leaves the land with little protective vegetative cover, inevitably contributes to Kondoa's soil erosion problems.

Soils and vegetation

The bedrock of the Burunge Hills consists mainly of gneiss. The upper hills are denuded, and weathered material has been deposited in moderately sloping pediments, giving the Burunge Hills the appearance of a geomorphologically old area.⁴ The hills are covered by *miombo* woodland and montane forest mixed with secondary vegetation in areas that have formerly been cultivated. The plains are characterized by bushed grassland with scattered trees, often acacias. Baobab trees provide a landmark here and there. Large parts of the plains are cultivated and also in the hills woodland and forest are currently being cleared for cultivation.

In Kondoa District the soils occur in catenary sequences, with thin, stony soils on the upper slopes, sandy soils on the pediments and clayey deposits on the valley bottoms (Christiansson, 1988:145). A generalized soil catena on eroded slopes in the north-eastern Kondoa Irangi Hills has been presented by Payton et al. (1992).

On the plains surrounding the Burunge Hills the soils are sandy with low water-storage capacity. Bulrush millet and different varieties of sorghum are grains well suited to this area. Towards the end of the dry season strong winds blow on the plains and soil whipped up by whirlwinds is a frequent sight. Flat depressions, *mbuga* areas, are also found on the plains. Their soils are clayey and in the absence of tractors, difficult to work. They provide important dry season pasture, however. – This is the general pattern. As one walks through fields and talks to the farmers about their experiences one comes to think of the area as a mosaic of soils and micro-environments.

This, then, is in brief a general outline of some of the important physical characteristics of the study area. We shall now go into more detail on the social stratification, which as the discussion unfolds in later chapters will turn out to be a crucial dimension of land management.

A history of poverty

Many households both sell and buy farm labour. When they have time to spare they earn an income by working for others, and when they need help in their own fields they may measure an acre for weeding or harvesting and pay someone to do the job. But it is more common for them only to work for others, and then not only when they have time to spare. 1991–4 were dry years in the Goima area and about half the households became dependent on day-labouring.

There are indications that poverty is part of their inheritance for many Burunge. For generations the Rangi have counted on the Burunge as farm labourers and herders. All middle-aged and elderly Rangi we asked remembered that during their childhood Burunge, both individuals and whole families, used to come seasonally to their villages looking for work. The Burunge themselves tell the same story. The first Rangi to settle in the Goima area found useful bridge-heads in the Burunge families they already knew as herdsmen and farm labourers.

Mzee Ramadhani Athumani and Joseph Mduma having tea at a café in Mirambu.

Local history tells of devastating famines when large parts of the population left the area. The Burunge claim to have relatives living in other districts whose forefathers never returned. They also tell of women and children being sold to other peoples in times of distress. In a fairly early description of the region Bagshawe (1925:63) singled out the Burunge as poor, claiming that many of them through poverty and famine had "become parasitic amongst other tribes and aliens" (ibid.p.64). He also picked up the theme of Burunge women being married by men from other ethnic groups, in contrast to what he saw as acceptable among other peoples in the area (ibid.p. 68).

In the Goima area the institution of *kibarua* (day-labouring) is a pervasive and constant reality. A significant number of households have to sell labour to survive. The economic realities behind day-labouring are of course its most important characteristic. But it also has a cultural dimension. It is common for those who buy labour to take a paternalistic view of their day-labourers. "*Tunawasaidia*" (we help them) is a phrase often used by rich settlers to describe the relationship between themselves and Burunge *vibarua*. This dependence is a constant stigma for the day-labourers. As our interviews progressed it frequently turned out that the periods they had been away on *kibarua* had been underestimated in the initial answers. They also found it difficult to admit how little they earned during the hungry seasons when day-wages dropped to almost nothing.

At Mwakisabe we had a long discussion with members of the village council. This is a Rangi-dominated expansion area some forty kilometers east of Goima village. Many Burunge come here looking for casual work. "Yes, we help them with work." The job-seekers could also obtain land to settle if they so wished, the land owners told us. But there is no permanent water source at Mwakisabe, and "the Burunge want easy solutions". The Burunge *vibarua* fulfil their contracts, get cash in the hand and leave. When the acute problem is solved, it is solved. A well-to-do immigrant in the Burunge Hills elaborates: "We are fortunate to have Burunge as neighbours here. They are always after casual work. There is not one Burunge, not a single one, cultivating more than six or eight acres here. Instead they do *kibarua*. They are

also the best ones. They work hard to be ready to go for their beer.” This is the language of frontier situations. It is, for instance, common for hunter-gatherers to be forced into subordinate economic relationships with those who take over their resources, and immediately they become stereotyped as uncivilized and unproductive (cf., for instance, Hitchcock & Holm, 1993). It is equally common for such cultural discrimination to continue even if the subordinate group happen to achieve some economic improvement (Horowitz, 1985:105–35).

From Mamire and Mutuka villages in Babati District it is reported that day-labourers support each other by providing a room for the night and information about where for the moment work is to be found. This is a network stretching as far south as Dodoma and Singida in the west and as far north as Arusha and Moshi “not of friends precisely, but people who are in the same situation, who are always looking for day labour” (Lindberg, forthcoming, ch.6).

The wealth-ranking method

Wealth rankings were carried out in Goima and Mirambu villages, based on a random sample of all households. The households had previously been interviewed several times in connection with an agricultural survey (not covered in this book) and were thus known to us. Some we also knew from general socializing. This gave us additional possibilities of cross-checking the results of the wealth rankings and also linking them to other data.

Wealth ranking is a technique for investigating relative wealth within a specific area, using criteria identified by the informants themselves. It thus reflects local conceptions of social differentiation rather than mere “wealth”.⁵ Within anthropology Silverman (1966) developed the method for a study of inequality in a central Italian community in terms of “prestige”. It is a rather precise exercise which aimed “not to place persons ‘correctly’ in each of the different strata, but to learn the principles by which persons are ranked /.../ the rules of making those placements” (p. 918). Our aim, in contrast, was to document the actual

distribution of households according to different categories of locally relevant criteria of social stratification. Consensus about placement was thus important to this study. More in line with Silverman's work, Hannerz (1976) ranked occupations in the Nigerian upcountry town of Kafachan, and Gerholm (1977:24f.) explored the hierarchical society of Manakha, a Yemeni town, using ranking by cards as one important entry point. This method helped him understand how norms relating to social hierarchy were in fact in acute conflict, although this could not be openly admitted in the local society. His findings report ambiguity and manoeuvring whereas earlier studies had given a much more rigid picture of social hierarchy in Yemen (p.108).

More recently wealth rankings have become widely used in studies linked to development projects. In particular, contributions by Barbara Grandin (1983, 1987) and McCracken *et al.* (1988:30f.) have convinced practioners of the method's potential.

The rankings were made with the help of cards bearing the names of the sampled heads of households. Nine people in Goima and ten in Mirambu were asked to conduct the exercise. They had all been selected because of their detailed knowledge of the respective villages as well as their personal integrity. They were both elderly and young, men and women, Burunge, Rangi and Iraqw and the ranking occasions were spread out over the different seasons to reduce bias, owing to nearness of the harvest, etc. The data were processed according to the procedure outlined in Grandin (1988) and Guijt (1992).

By and large it was not difficult to get the rankers to understand how to do the work, although initial misunderstandings, followed by having to start all over again, did occur now and then. A couple of the contributors also felt uncomfortable with the idea of ranking their neighbours, but gained some confidence after we talked the matter through one more time. When the results were presented later on in the villages it was not possible to identify individual households.

A random card was picked from the heap, which in the case of Goima village consisted of 51 cards and in Mirambu of 44 cards, representing in both cases about one tenth of the households. The rankers

were asked to describe the selected household in general terms. From this starting point it was usually easy to go on to discuss how the next household compared with the first. Gradually criteria for ranking the households emerged. When several people were present consensus was quickly reached on what the correct ranking should be, whether live-stock in someone's compound belonged there or somewhere else, etc.

The sessions lasted at least two hours, with many rearrangements until the informants were satisfied that all the cards were in the "right" pile and that one pile did not need to be split, or alternatively merged with another one. When we concluded the exercise by summarizing the information in a simple bar graph the rankers were surprised and delighted with the work they had done.

It turned out that a household's ability to reproduce itself and improve its standing, its *uwezo* (strength, ability) or its *nafasi* (lit. space, but here rather its possibilities), was crucial to how people ranked others. It was notable how the word "poor" (*maskini*) was avoided. The rankers preferred a phrase like "those who lack strength" (*hana uwezo*). I happened to get a personal illustration of this on one occasion when I was just about to leave the area having completed a period of field work. An old man asked me for a little *posho* (pocket money for beer). I had already spent what money I had on me so I jokingly turned my pockets inside out and told him, "Look, Mzee, everything is gone, I have turned *maskini*". He did not appreciate my choice of word, and insisted that instead I should state exactly what the situation was, namely that I was without cash for the moment. People who know what lack of food and genuine poverty entail do seem cautious when using such words.

I mention this not only as an anecdote about mistakes in the field but also to make a methodological point. In an already classic statement on the "invisibility of the poor", Chambers (1983:22) observed that one of many reasons why investigators often fail to learn about the rural poor is their own politeness and timidity. One study of rural change in Tanzania avoided the term "poor" because of its "connotations of destitution or indigence" (Booth *et al.*, 1993:58). In a review of that report we argued that it had in fact failed to include the

poorest (Lindberg *et al.*, 1995). The problem is in no way restricted to studies of rural conditions in Tanzania. Okali *et al.* (1994:105ff.), in an overview of participatory research in agriculture, conclude that overall the poorest are excluded. Even projects specifically focused on the poorest, or particularly disadvantaged groups, are easily usurped by people other than those targeted. While this is not very surprising – poor people are linked to those who are better-off, and why should these passively accept that outsiders should reshape socio-economic conditions? – it is something to guard against when designing research. RRA/PRA techniques, such as, for instance mapping and ranking exercises, by no means automatically identify the poorest of the poor (Pretty *et al.*, 1992). Neither can one rely on information from village authorities to estimate the number of the poorest. When the roster for Goima village was compiled, and various records in the village were consulted (livestock taxation, famine relief, health records), the village officials were asked to identify households in each of the thirteen village sections (*vitongoji*) who were unable to support themselves. They came up with six households (corresponding to 1.2 per cent of the total), whereas the wealth rankings put the figure at 17 per cent. Goima officials thus underestimated this group by a factor of almost 15, as compared with the villagers' own evaluation of themselves and their neighbours.

It can, of course, be objected that people deliberately presented us with an exaggerated picture of the poverty in their area in the hope that we might be able to make foreign aid money flow their way. The opposite alternative, that they tried to hide poverty in order not to disclose the adverse sides of their lives, must also be considered, although it may perhaps seem less likely judging by the results.⁶ We did pay attention to such possible biases. We were present during the scoring procedure and could follow both how the criteria utilized emerged and how specific rankings were made. Since we knew quite well a number of the households that were ranked, we could determine how they compared both to the criteria used by the rankers and to the specific scores they were awarded. Now and then we challenged the rankings. Sometimes this led to further elucidations. However, the most

important test of the wealth rankings' validity came when we reported the results to gatherings in the villages studied. We shall return to this experience after the results have been summarized.

The wealth rankings disclosed that no fewer than half the households in both these farming communities are unable to support themselves from their land (at least not during the dry years of the early 1990s) as detailed below.

Goima

The average number of wealth groups utilized by rankers in Goima was six. The first group, constituting about two per cent of the households, were "the rich", "those who can do anything". The second group was characterized as "those who have resources" to fall back on, those who "always have", who can afford to hire a tractor and to employ casual labour. They often have cows and small stock. This category constituted close to 12 per cent of the Goima households. All salaried people (teachers, civil servants) who happened to have been included in the sample were ranked in this wealth group.

The third group, making up a third of all households, were those who are "of average ability", who "harvest enough to feed the family throughout the year". They sell crops or animals to meet their other needs. Some may hire a tractor for ploughing, particularly if they have an extra income of some kind (running a café, being a craftsman, etc.).

The fourth group, at 35 per cent of all households, are those who are poor but manage to eke out their living by working as farm labourers whenever an opportunity occurs. Prolonged drought or sickness in the family will easily make their situation desperate.

People in groups five and six are those who have to ask relatives and neighbours for help, which they receive in varying degrees. The final category is made up of those who are without reliable help from others. These two groups, the poorest of the poor, constituted almost 17 per cent of all households in Goima.

A majority, 27 households out of 51, cannot support themselves from their land, in other words, the crops they produce do not last throughout the year. They have to supplement with what they can get by working for others. One of the better-off farmers described them as “those who live from others’ granaries”.

The 51 households had a mean household size of 4.8 persons. Households in the first three groups were larger (mean 6.1) than those in the three poorer groups (mean 3.7 persons). Of the 246 people registered in the ranked households a majority, 146 people, lived in households of independent means.

Diagram 1.2. Wealth ranking, Goima village 1991–3. % of households.

The horizontal axis indicates locally identified wealth groups. White and coloured columns indicate the important distinction of whether a household is dependent on kibarua work or not. The three left-hand groups, representing less than half the number of households, can support themselves from their fields. The three groups to the right range between poor and destitute.

Just over 75 per cent of the ranked households were recorded as Burunge, whereas the Rangi made up almost 16 per cent. The remaining around 8–9 per cent belonged to other ethnic groups. These proportions are not evenly distributed over the different wealth groups. The Burunge are clearly under-represented (at about 52 per cent) among the three better-off groups, whereas the Rangi are over-represented (at 25 per cent) as are the “other groups” (at over 20 per cent).

For the three poorer groups the pattern is the reverse. The Burunge are over-represented (at more than 85 per cent), whereas both the Rangi and the "other" groups are under-represented (at about 7.5 per cent, respectively).

The immigrants are thus doing far better than the indigenous group.

Mirambu

The overall picture for Mirambu village is rather similar, with the exception that fewer salaried people live in Mirambu than in Goima (which is the divisional headquarters).

The average number of wealth groups identified here was five. The first group, the rich, is of about the same size as in Goima and contains a similar type of persons ("could afford to buy a maize mill, perhaps even a tractor"). The second group are "those who have resources", "better than average". They do most of the farm work with the help of casual labour, they hire a tractor when necessary, and they have reserves to solve any problems that may turn up. They often have eight to twelve cows plus small stock. Together these two groups represent less than 10 per cent of the households.

Close to 41 per cent of the households are described as "people of average ability". They have a few cows and some small stock. Most of them cultivate by hoe and they can afford to compensate a working party of neighbours for their efforts as well as to pay for occasional hired labour. Some hire a tractor from time to time. Their harvests last throughout the year and they also have a surplus to sell.

The fourth group cannot live on what they produce and need to undertake casual work to feed their families. They lack resources other than their own labour power. They are "poor but with ability", they "survive because other people have resources". This is the group struggling to fend off starvation during poor years and hoping to better their conditions during good years. It is a highly vulnerable situation.

The fifth group is made up of those who can only manage with the help of others. "They go to sleep hungry if they are not helped." These last two groups make up half the number of households in Mirambu.

The households were evenly split between those who can live off their farms and those who are unable to do so.

The mean household size was 5 persons. Households in the first three groups were larger (mean 5.3) than those in the poorer half (mean 4.6). Of the 218 people registered in the ranked households a majority, 117 people, have enough food at home to last them throughout the year.

Diagram 1.3. Wealth ranking, Mirambu village 1991-3. % of households. The horizontal axis indicate locally identified wealth groups. The households in Mirambu are evenly split between those who can support themselves from their fields and those who cannot. The two right-hand groups were ranked as poor and dependent respectively.

In the Mirambu sample the Burunge made up 84 per cent of the households, whereas the Rangi constituted 15 per cent and one per cent belonged in the category of other ethnic groups. As in the case of Goima, the different groups turned out to occupy different socio-economic positions. The Burunge made up only about 68 per cent of the better-off half (as against an expected 84 per cent), whereas the Rangi numbered about twice as many (32 per cent) as in the whole sample.

The lower half was made up entirely of Burunge households.

The most important finding of the wealth rankings in Goima and Mirambu villages – that about half the households were not able to support themselves from their fields – agrees well with studies undertaken during the same period in other parts of Kondoa District (Mung'ong'o, 1995: ch.7), in Babati (Lindberg, 1991, 1993 and forthcoming, ch.6) and in Hanang District (Loiske, 1995: ch.3). In Mvumi Division, Dodoma Region, Holtland (1994:55,89) found that the harvests were not sufficient even for the better than average farmers but had to be substantially supplemented with off-farm income. Alternatively, people were underfed.

Wealth ranking in the hills

When the villagization policy of the mid-1980s was no longer so strictly enforced as before, some Burunge families left the villages to move into the Burunge Hills. Immigrants from other areas soon followed. The process is described in Chapter 6, but the results of the wealth rankings carried out in the hills will be dealt with here to keep all the data on social stratification together.

Lists of the households living in the hills were not compiled, for reasons detailed in Chapter 6. The wealth rankings therefore had to be carried out in a different manner. We used the “beans game” (Schaefer, 1992). A small heap of beans was put on the ground; each bean was said to represent a household. We picked a bean and suggested that it represented a particular household known to all present. The rankers were asked to describe that household just as in the case of wealth ranking with cards. Other beans/households were added and compared with the first. Gradually piles started to emerge depicting the different wealth groups. The discussions proceeded by adding information on whether some people had moved from one wealth group to another, which group was growing particularly fast, etc. By counting the beans we also got a figure for the number of households living in the respective communities. We had such figures (provisional and changing as

they were) from other sources as well and we used these to check that the rankings were not finished before all the households were included.

Rankings were carried out in Chioli and Madah, the two largest communities in the hills. They are described in Chapter 6. In Chioli fifteen men participated in three different sessions and in Madah ten men contributed during three sessions – apart from occasional passers-by who joined in for a shorter or longer time. They were of Burunge and Rangi origin and ranged between twenty-five and sixty years of age. The criteria used to delineate the wealth groups differed somewhat from those used in Goima and Mirambu. Livestock ownership played a bigger role here in how people evaluated each other. Similarly, a household's potential, whether it was moving ahead or not, clearly influenced the evaluation. This had not been very prominent in the villages. Both these criteria were particularly emphasized by Rangi informants. It was also noticeable that the rankers in the hills were less knowledgeable about households from other ethnic groups than was case in the villages. Rangi informants were prepared to put some Burunge households into lower categories than the Burunge rankers did. This may be related to the value placed on livestock ownership, since Barabaig and Iraqw households – livestock keepers in the hills – were not similarly down-graded. Burunge rankers, for their part, had a corresponding tendency to rank some Rangi households lower than their Rangi counterparts did. The comments offered were that “they have only come recently” or “he is still young”, reflecting both a factual reason why a household might get a low score and the cultural and social values guiding the evaluation.

Moving on to the results, it was a different picture that emerged. People cultivate more land and have more livestock, but what particularly influences their well-being is the fact that the fields yield about five times as much as in Goima and Mirambu. The richest group is much bigger than in the villages, reflecting both that people with resources are attracted by the possibilities virgin lands offer and also that the returns to invested labour are high compared with the situation in the villages. In the hills a solid majority of households have no difficulty in providing for themselves, while the number of households

forced to undertake casual work to get food is smaller than in Goima and Mirambu. This still means, however, that between a fifth and a quarter of the households are poor.

However, the number of poor in the hills is larger than what is disclosed by the wealth rankings. In both Chioli and Madah one encounters an indeterminate number of young immigrants without resources, who have not formed households of their own. They have come in search of work and hope to be able to clear land for themselves. This group was not included, since it was households that were ranked.

Nevertheless, it remains a fact that the newly opened-up areas produce good harvests. Food is enough for a larger proportion of households. Many farmers hope that their situation will get better year by year, which is not a common feeling in the villages. It is interesting to compare the figures for Chioli and Madah given below with Mung'ong'o's finding (1995:99) that half the households in an older settlement area, Lower Irangi, were ranked as poor. One can speculate that as yields go down more and more people are unable to support themselves on their land and they therefore become dependent on *kibarua* incomes, which in turn makes it more difficult for them to look after their own fields. Land degradation creates poverty which again leads to land degradation... There are at present considerable differences between the rich and the average people in Chioli and Madah, and as the exploitation of the land continues one can foresee that the group of the poor will increase towards the level Mung'ong'o found in Lower Irangi and which also corresponds with conditions in Goima and Mirambu.

Just as in Goima and Mirambu, the Burunge are over-represented at the lower end of the scale, while the immigrants dominate the upper end in both Chioli and particularly in Madah.

Chioli and Madah rankings

In Chioli 18 per cent of the 99 households estimated as living there were ranked as rich, which in this community meant that they possess

between 30 and 200 cows plus small stock and that they cultivate at least 15 acres using their own plough and draught animals. They hire farm labourers and also have property elsewhere. They buy finger millet from their neighbours and sell it to outside markets when the price is high.

The second group, representing 13 per cent of households, plough 10–15 acres, and have some 10 cows. They can afford to hire farm labourers and they may have some involvement in trade.

The third group is the largest, at 37 per cent of households. They have no difficulty in making ends meet. They plough their fields, but they rarely cultivate as much as 10 acres. They do not have their own oxen; they either pay for the service or cooperate with someone from the first two wealth groups. Like the other two groups, some of them also have land and a house elsewhere. And they are moving ahead! Those at the lower end of the group are on their way up and those ahead of them aim to join the second wealth group by extending their fields or buying livestock.

Group four, 23 per cent of households, cultivate some 2–3 acres and have to fill in with *kibarua* work, or whatever other options they may have, to make ends meet. The last group, 9 per cent of households, are dependent. By and large they are old and/or disabled.

More than twice as many households (234) are estimated to live in Madah as in Chioli. Here a well-off group, constituting about 23 per cent, or more than 50 households, cultivate between 15 and 40 acres. They plough with tractors or oxen. They have between 10 and 40 cows and small stock. They regularly employ day-labourers.

The next group, at 11 per cent of households, plough between 5 and 10 acres. They produce a surplus big enough to cater for their cash needs, for clothes and other expenses. They never do *kibarua* work.

About 47 per cent, or 110 households, make up the third wealth group. They cultivate between 3 and 7 acres. Usually they do not own draught animals themselves, but they may still have a small number of livestock. Sometimes they do casual work to get extra income, but they produce their subsistence without difficulty. As in Chioli, many house-

holds in this group feel that they are improving year by year. They may be able to afford a bicycle or a radio.

The fourth group, 9 per cent of households, undertake more casual work but as long as they are in good health and nothing dramatic happens in the family they are able to manage. Still, their harvests do not carry them through the year. Perhaps they are a little less ambitious than their neighbours in group three.

Diagram 1.4. Wealth ranking, Chioli 1994. % of households.

The horizontal axis indicates locally identified wealth groups. The three left-hand groups, representing more than two thirds of the households, can support themselves from their fields. The two right-hand groups need additional support, either non-farm incomes or support from others.

Diagram 1.5. Wealth ranking, Madah 1994. % of Households.

The horizontal axis indicates locally identified wealth groups. The three left-hand groups, representing just over four-fifths of the households, can support themselves from their fields. The fifth group consists of households dependent on others for their survival. In Madah 10 per cent of households fall into this category.

The fifth group, 10 per cent of households, are the old and disabled and those who do farm but lack strength, and therefore need help from neighbours and relatives.

How accurate are the wealth rankings?

The households ranked in Goima and Mirambu villages were randomly selected. In the communities in the hills all households were included in the rankings. But the informants ranking the households were subjectively chosen, for their detailed knowledge of the villages and their personal integrity. We tried to vary the age, gender and class of the informants, and an element of chance also entered the ranking exercises as passers-by joined in. Nevertheless, there was a subjective bias concerning who would make reliable informants is there. How can we know that the wealth rankings give a reasonably accurate picture of social stratification in the villages when the informants were subjectively chosen?

"Triangulation" is one standard answer to this problem (Denzin, 1970:301ff.), i.e. using multiple methods in the study of the same object. We had a number of ways of cross-checking the results of the wealth rankings. The findings were compared with data from a detailed agricultural survey and from more than six month's participant observation. But such options are not to hand when wealth rankings are undertaken as part of a "rapid rural appraisal". What one always can do, however, is to report back the results to the communities concerned and ask for opinions.

People were clearly moved by the results. Those who participated in the presentations of the results absorbed their implications and went into probing discussions about the causes and consequences. It was obvious to me that they immediately recognized the reality depicted in the columns. Also well-to-do farmers, who exploit the helplessness of the farm labourers, were, in their role as members of the community, troubled about the situation. Seeing people from quite varied backgrounds, but knowledgeable about the villages, being personally

affected, turning inwards during the presentations, and then thoughtfully commenting on the diagrams, with no lapsing into rhetoric, became for me proof that the wealth rankings were accurate representations of reality.

One criterion of truth thus became that those concerned “united” themselves with the findings. They threw themselves into the problem of skewed wealth distribution in their communities. They experienced the findings at a more personal level than their respective material positions would have predicted. I took it that they for a moment lost their separate identities to recall a more fundamental existence, to recognize that, as members of one and the same community, they were related to each others’ predicaments. A few quotes from the discussions on the results of the wealth rankings illustrate the point:

– Other peoples move upwards in the wealth groups, the Burunge slide downwards. We have seen this happening. But it is not inevitable. It is what people do themselves. The Burunge used to be capable, now they depend on other people’s resources.

– How is it that you have lived in a house with a *mabati*-roof and now find yourself in a *tembe*. How does it feel?

– These columns have taught me something. They have been like a lesson to me. This encourages me to call a meeting of the elders to discuss these issues. Some say they have become poor because of cattle diseases. But cattle disease affects everyone; there is no difference. Others say that drought is the problem. No. These things exist whether it rains or not. It is not drought that has made many people poor. These figures did not surprise me. We knew it. This is just the way it is.

– When during colonial times a law was passed to reduce the number of livestock in the district, Goima was exempted because there was no land degradation here. Do you think the government would have accepted that if there had been gullies here? At that time the land was healthy, and people lived off it. Now they can no longer do so. These figures are correct. This is the true situation.

When I became convinced that the wealth rankings were giving a correct rendering of the current situation I not only judged from what

people said but also took account of the way they reacted to the data. I discovered that I was also going through the same process. For a time we all experienced the existential pain of living in a divided world, as they do every day in Goima and as we did during the field work. Some of us possess water, food and material security, and others do not. I could recognize also in myself what they expressed. The systematic information about social stratification gained through the wealth rankings was at the same time a new insight and an already known fact to both the villagers and the field researchers. As everyday interactions go on, one may well pay only scant attention to underlying patterns. But when the results of the wealth rankings were there for everyone to see, the participants in the village seminars recognized their truth, and their implications hit us all.

Unni Wikan (1992) has argued that “resonance” is an important quality in understanding others. “Being in the world and acting on it” (p.471) helps the field worker to reach towards the intention behind words. To uncover meaning is not as important in cross-cultural interpretation, Wikan maintains, as to understand others’ intended effects, the purpose beyond the words. The analysis gains in weight when measured in “a world that we and they take for real”, because it is there that misinterpretations are “punished” (p.474).

Summing up

This chapter started with a brief sketch of the far-reaching changes that Tanzania has undergone during the recent decades. The last fifteen years have been characterized by grave economic problems and the nation continues to struggle with these. The current policy to remedy the situation is experienced in a rural area like Goima as deteriorating social services and an incapacitated administration. In the study area poverty is widespread and social stratification pronounced. As the discussion continues, these factors will prove to be of consequence for current land management, as are, of course also the physical characteristics of the area which have been briefly outlined.

Playing bao

2. The land, the fields and indigenous soil conservation

In this chapter we shall first get to know how many Burunge perceive their land to be vast and resourceful, while at the same time it is being rapidly settled by immigrants. Burunge patterns of subsistence will be touched upon before examining how two farmers successfully manage their sloping fields, while emphatically denying that they are undertaking soil conservation.

The second part of the chapter relates how Burunge land husbandry and soil conservation initiated from outside came into conflict in one village. A number of farmers were determined to defend current land-use practices against new forms of land preparation. These farmers and the project staff obviously held conflicting opinions about how land should be managed.

The chapter ends on an ethnographic note, when Burunge concepts of conservation and land quality are discussed in an effort to provide a cultural background to the resistance the conservation project encountered.

“Land is for everyone”

The Burunge envisage their country as an almost endless expanse of land where anyone may cultivate as much as his own strength permits. *Oaymo da hida sliimaa*, the Burunge say, “a field is for everyone”. Or

dageemo sliimaa gu hida sliimaa, “every place is for everyone” (literally “all the places are for everybody”).

In this “everybody” women are not normally included, but in principle they too may claim a virgin area. Indeed, we did come across a few cases of women who had hired young men to go and clear forests so that they could obtain new land to cultivate.

When we asked Dosa Bura, a man in his forties who lives at Daraba above Mirambu village, to explain how he understands the common phrase “land is for everyone”, and if this also includes the immigrants, he made the point that everyone works in the fields, and everyone gets food to eat, and therefore land is not sold. If you go past someone’s house you may eat there. However, if you have sold land you would no longer eat at the buyer’s house. And furthermore: “The land will eat you. It will swallow you. When you die, it is the soil that harvests. The soil will swallow us, and there is no need to sell land.”

Land is taken as part of existence, as simply what is there. It is not a commodity, although land sales do occur (cf. Chapter 6). The Burunge are divided into a number of different sections.¹ If you want to cultivate outside the area where your group belongs, permission to do so should be sought. This will, however, almost invariably be granted. In such a case it is proper to approach the *hhapeeloo’ay*, the “owner of the land”, who grants others the right of settlement and cultivation in an area in agreement with the wishes of those who live in the area. He, or in some cases she, also has a key role in ceremonies connected with the rains and the fertility of the land. The *hhapeeloo’ay* should be descendant from the first settler in an area, i.e. the person who performed the ceremonies connected with the first settlement. Today the *hhapeeloo’ay’s* influence over land distribution is minimal, and how the office is handed over to a new incumbent differs somewhat in different parts of Burunge country. Still, they have their significance in providing a bridge to times when land was abundant, new clearings were regularly made and life was less disturbed.

By cultivating a piece of land one does not, in traditional Burunge thinking, infringe on the rights of others any more than we all do when we breathe and thereby use oxygen that others could have used. There

is no reason to deny your neighbour what you do not make use of yourself. Boundaries appear dysfunctional when the basic orientation of the mode of production is to capture the strength of newly cleared land. While you cultivate you harvest the forest with its virgin soils, its trees where spirits dwell and bees produce honey; all this wealth, this strength is there to guarantee that life goes on. By not denying others the Burunge also confirm that they are not being self-assertive and bent on conflict, important qualities to the Burunge who describe themselves as a restrained, quiet, gentle people.² When immigrants started to flow into Goima Division they could thus count on permissive attitudes towards obtaining land, while the Burunge became the victims of a mode of subsistence which was becoming less and less feasible.

That immigrants now control most of the land in Goima Division is attributable to political reasons beyond the influence of the Burunge. But also at a more private level many Burunge have allowed Rangi to use their land. Given their conviction that land is abundant and soil fertility continuously replenished by the strength of the forest, it is perhaps not so surprising that a number of Burunge relinquish land to the immigrants. What is lost will, somehow, be regained. In such a world of increasing resources one need not be over-protective. Mary Douglas (1978:130f.) has suggested that one reason why the Dinka of the Sudan hold rather permissive attitudes compared with their Nuer neighbours may be because the Dinka are convinced that their livestock are all the time increasing while the Nuer believe the livestock population to be static. Subsisting on a regenerating resource paves the way for feelings that it is always possible to start afresh. Such thoughts come easily to many Burunge. Despite appalling living conditions, many of them still maintain that their resources, their forests and their land, are immense.

Easy access to the means of production helps to turn the Burunge individual into an autonomous being, at least as long as s/he is in good health. When problems appear, whether declining harvests or expanding neighbours, the solution that springs to mind for many Burunge is to move.³ It is possible to withdraw, without losing important assets.

This is one reason why Burunge country appears to be a peaceful area, and why many Burunge so easily say about themselves that they "do not like quarrels". Since it has historically been easy for the Burunge to get access to fields, pastures and forest, strong and lasting relations with others, either alive or dead, do not of necessity develop. Networks tend to be comparatively idiosyncratic and without systematic commitments.⁴ This has a bearing on the somewhat indifferent attitude many Burunge have about the future, in sharp contrast to the immigrants who are settling in their area anxious to secure confirmation of their rights to land and with their minds set on planning for the future. But to the Burunge land is a means of providing for the family, not a precious resource to be handed on to future generations. Why, then, quarrel over a piece of land?⁵

When droughts strike many Burunge have no store of grain and no ready network to turn to for support. Instead, many put their hopes on "someone" offering them contract work or even food in a spirit of generalized rather than specific reciprocity. The Swahili verb to describe this process is *hemera*, which means looking for food either in exchange for work, goods or money or as a gift.

The trust many Burunge have in abundantly available land, and a regenerating forest, thus tends to have its counterpart also in social life. In times of need it is hoped that "other people" will be as accessible as are their land and their forests. One can ask those who have done better for a helping hand, one can swap work or honey for food, and one can look for *baridi mpya* (literally "new coolness"), the renewed health of a new field. The Burunge expect things to change. Good soils turn poor, a healthy house will become "hot" with sickness. They abandon what does not have "coolness", "health". Planning for tomorrow is one option. But another is to solve problems as they appear. And there is always the trust that life will return, soils will recover.

Discussing the plight during droughts one also encounters a certain pride in being able to find social means of survival. Looking at it from the other end, a well-to-do immigrant who regularly employs casual workers expressed this as "some people keep food in others' stores". He told us how Burunge come round suggesting different work that he

ought to get started on when food is becoming scarce in the area. He feels under an obligation to have work to offer on such occasions, which will coincide with the time when payments will be particularly low and he himself has something to gain.

Land is everywhere

The Burunge share with many other peoples the conviction of living in a world of unlimited resources. In the 1970s in Keiyo-Marakwet District of Kenya I had professional reason to express my views on population growth, the imminent land scarcity and the threat of soil erosion. Will the next generation really be able to cope?

- The government can give them new land to cultivate.

- And where exactly should that be?

A sweeping gesture out over the Kerio Valley, pointing in the direction of the Tugen Hills: “Anywhere...”

The Keiyo-Marakwet peoples were once slash-and-burn cultivators. Today they cultivate their fields permanently, they irrigate some of them, and the pressure on the land is mounting. But at least in the 1970s they felt their supply of land could never be exhausted. “The government will show the landless where to cultivate.” It was not that people at the time had confidence in a government that would look after the interests of the common man, but they regarded land as so abundantly available as to be enough for all.

Van Beek (1993:52) reports that the Dogon of Mali envisage their country as a “seemingly endless emptiness, a sea of uninterrupted yellow or green gently undulating land”, while in actual fact their area nowadays is filled with settlements. But the “hard fact of diminishing resources has as yet not been culturally accepted” (Van Beek and Manga, 1992:67). However, the way the Dogon offset environmental pressure, by working harder (*ibid.* p.72), is, as we shall see, different from how the Burunge choose to cope.

Livestock-keeping people, and gatherers/hunters, tend to view the bush as infinite. It has always been there, and the horizon is boundless.

But many settled people also see the world with similar eyes. As we stood on a rock high above Mirambu village looking out over the plains I heard the same confidence in abundantly available land expressed. The cultivation stretched to the next village. I tried to engage the interests of the village secretary and the ten-cell leader who accompanied us: "Look, all the land is already cultivated. Where are the children to cultivate?"

– They will have to clear new land.

– And where will that be?

– Anywhere. There is land beyond Mwaikisabe. South of Songolo there is plenty of bush... There is land enough.

At least during the dry years 1991-94 the harvests were pathetically small for many Burunge. A large number of them became destitute and were forced to leave the area for longer and shorter periods to find food elsewhere. But they felt their land to be rich. If God only sends rain, they will harvest again. Land is plentiful.

Subsistence farming

A comprehensive survey of the farming system was carried out with a random sample of households in Goima and Mirambu villages. The results will be reported elsewhere. Here we concentrate on the themes of land husbandry and soil conservation and therefore, provide only a sketch of the essentials of farming in the Goima area.

The men clear the forest and take turns with the digging. The women usually burn the debris before planting, and are more involved with the harvest than the men. The winnowing also falls on them. But most activities engage both men and women. It is common to see men and women working side by side in the fields.

Drought-tolerant bulrush millet and sorghum are cultivated. Red sorghum is used for brewing beer, an important ingredient in the economy of many households. Finger millet is grown for home consumption, and some households plant larger quantities for the market. Maize

is not a suitable crop for Goima Ward in view of its water requirements. It is, however, grown by many households since it is much appreciated as a food and is easier to market than bulrush millet. Yields are poor, however, and sometimes the crop dries up completely. But many hope for the year with good rainfall when it will do well.

Many households plant kidney beans and cowpeas, while some also plant pigeon peas and green gram. Of the many "small crops" like tomatoes, onions, pumpkins, castor, water melon, groundnuts, etc., innumerable combinations exist. All households use a green *Qancanaru* (*Sesamum angustifolium*) which germinates spontaneously in cultivated fields. It is commonly used also by other peoples of the region and is known as *mlenda* among Bantu speakers.⁶ *Mchicha* (*Amaranthus* sp.) is cultivated by most households and prepared as like spinach – as in many other parts of Tanzania. Despite half a century of government propaganda, cassava is not widely grown. Sweet potatoes are slightly more popular, and the leaves make a useful relish as do cassava leaves and the fresh leaves of young baobab trees.

Hand hoes remain the agricultural implement commonly used by the Burunge, although some use oxploughs and still fewer tractors. The immigrants usually plough with oxen or tractor.

Communal work groups are called in to help with some of the planting, weeding and harvesting. The poorest households may fail to do so as they cannot provide the beer or food needed to compensate the neighbours who come to work. In 1994, after a number of consecutive dry years, many were in that situation.

When an invited party sets to work considerable energy is released. Challenges and dust fly in the air. Individual whims, inspiration of the moment as well as the influence flowing from the reward for the work, the beer, ensures that the work is often conducted in high spirits. For encouragement, a calabash full of beer is present in the field, and another one is sometimes sampled at the compound before setting out for the fields. And at home still others wait for when the work is over. Between a third and a quarter of the beer will be awarded to neighbours and passers-by who take no part in the work. It is taken for granted that those who share the beer but missed the work had a valid reason for

doing so, and relations between people go beyond the day's work. If one failed to turn up today the relationship remains and will be reciprocated later.

The working party is a social event. It can be difficult for a host to make people follow detailed instructions about how ridges should be arranged. These get lost in the general conviviality and the common ambition to get the work done. A detailed farm plan, if the host were to have one, would be filtered through what those present find as a challenge, or entertaining, or easy work – or too much work.

A host will often think more in terms of how much can be cultivated than exactly how it should be done. Many Burunge invite some 20 people for a working party and expect to get about two and a half acres cultivated. If it turns out that s/he gets less than half that area done, it is acceptable to save about half the beer for a new working party the following day. This will, however, take a somewhat different form. It will be dominated by women and children, usually from among the immediate neighbours.

Blaikie & Brookfield (1987:74) advise that it is useful to study the social relations of production in which land managers operate if one wants to understand their decision-making environment. We may therefore conclude that the relative ease of access to land in Burunge areas has its correspondence in the fact that the land owners does not have an absolute monopoly on what actually happens on his/her land. Neighbours who come to "help" are not ordered around. Similarly the work done by children of the household is often not supervised in any great detail.

The different attitudes between the Burunge and the Rangi with regard to agricultural work can be noted in the working parties. The Rangi often divide up the work to be done so that everyone knows what is expected and when the participants move in a line it constitutes a frontier of working hoes pushing each other forwards, whereas a corresponding Burunge formation easily breaks up into various interventions.⁷ Burunge groups work in short-lived bursts of competitive hoeing, which after about a quarter of an hour is interrupted for a while. Then there is another intense campaign and another rest.

Burning the fields before the rains is a work mostly done by women. Here a group of young boys give a helping hand.

A Rangi host declares what is to be achieved, while his/her Burunge counterpart will discover afterwards if s/he has got a reasonable area cultivated. – This is, of course, a description of stereotypes. In practice the work teams are often mixed. You invite your neighbours in and they will be Burunge, Rangi and perhaps a Gogo or a Nguu, and this, in combination with the personality of the host, the environment in which the field is situated, and a host of other circumstances, will determine how the work will actually be carried out. There are, however, historical reasons underpinning the somewhat haphazard organization of Burunge working parties. Traditionally the Burunge did not cultivate at the time of planting but merely made holes for the seeds in newly cleared land. Many still do so, at least in parts of their holdings. Intercropping has the consequence that weeding is best done individually, even when a working party has been invited.

Planting is done as soon as people feel confident that the rains have started. One major difference between well-established, stable households and poor and dependent ones is the ability to plant in rhythm

with the rains and thus make as much use as possible of the season's rain. Should the rains be delayed so long that the crops wither, replanting is done as soon as "reliable" rains have returned. During the recent dry years, however, many households have not had seeds for more than one planting (at best). And yields are very low, as is true of Dodoma Region as a whole.

One important feature of any agricultural practice attempted by the Burunge is the wish for it to be concluded quickly so that one can do something else. A standard response to why they do this or that farm operation is that "it makes work easy" or "you get ready quickly". This can, of course, be interpreted as a handy way satisfying inquisitive outsiders. It wards off further questioning. However, the answer points to an important characteristic in semi-arid areas: that it is crucial to time activities to unreliable rainfall. People "chase the clouds". That farm operations can be completed quickly is important for good results. Furthermore, many farmers are often late with their own farm work because they have been forced to work for others when their own food reserves ran out. Time is short.

The farming tradition

The Burunge have traditionally practised rotational bush fallow. After a few years of cultivation yields will decline, weeds become a burden, pest attacks build up; then it is time to allow the forest in again to save the situation, while the farmer enjoys virgin soils somewhere else. As long as land was abundantly available, this was an efficient and sustainable form of agriculture. As the Burunge became drawn into the national economy, and immigrants took over "vacant" land, the system could no longer be upheld. But the forest remains important to the way many Burunge think about farming and also how they organize their subsistence. Deliberate soil conservation (terracing, the systematic supply of organic material to cultivated fields, etc.) is not characteristic of their fields. Instead, the relative absence of environmental degrad-

ation has resulted from a combination of having only small herds of livestock, if any, and the flexible and diversified extraction of resources. They farm, but beekeeping is an even more important source of income for many households. They keep livestock, but casual labour is a far more common undertaking. And they gather food from the fields and the forest, and they hunt.

The main features may be listed, and they may not. The case studies in this chapter and throughout the book demonstrate that farmers, even when they share economic position, educational experience, etc., may go about their work rather differently. What they do will also change over time, with the rainfall as well as with changes in the wider polity.⁸ Therefore, when characteristic features are summarized we impose a uniformity that contradicts the essence of Burunge farming, which is to adjust to circumstances and to do a bit of everything.

- The soil is not tilled before planting, but at the time of the first weeding. When the first rains hit the fields, less soil is carried away than would be the case if the soil had been turned. On the other hand, if a farmer does dig before planting the cultivation will in any case not be deep both because s/he is in a hurry to “chase the clouds” and because many are of the opinion that for crops to do well the seeds should be planted at a shallow depth.
- Weeds did not have to be considered much as long as forest fields were cultivated for only about two years and the tillage was light. “Untidy” fields economize on labour and are less vulnerable to splash erosion and sheet wash.
- The field is supposed to return to the forest and consequently stumps and roots are not removed. This helps bind the soil, even when the first rainstorms fall in a newly cultivated field.
- The cultivated fields are also comparatively small, leaving surrounding areas with vegetation that can act as a filter against erosion. Small fields also increase the chance that more people live closer to their cultivation, making it less necessary to clear the bush to keep out wildlife.

- Different crops are mixed in the same field. They mature successively, thus prolonging the period that the field has a protective cover. This also keeps out cattle from grazing and trampling the fields. Organic material remains, enriching the soil.
- The mixed crop is less exposed to attack from birds than monocropped bulrush millet. It is therefore less urgent for the Burunge to clear the surrounding bush where birds hide, and the ground is less easily eroded. Many Burunge also regard it as unavoidable that some part of the harvest is lost to vermin.
- Some farmers use cultivation ridges which can reduce erosion.
- Instead of keeping large herds of cattle, many Burunge farmers use honey for some of the purposes served by livestock (as cash, for labour mobilization, famine relief, marriage payments and other social obligations). Beekeeping is in many ways beneficial to the environment. It reduces the wholesale clearing of forests, increases pollination and has among the Burunge counteracted forest fires – contrary to popular belief.

A field before planting. It is surrounded by bush and stumps are left in the cleared field. Once the field is fallowed the forest will quickly regenerate. By contrast, most Rangi destump the fields in order to be able to plough with oxen or tractor.

. Some Burunge produce wood products or clay pots and many do a bit of petty trade. They buy tobacco, salt, fish or vegetables and barter them for grain. They slaughter a hen or a goat at a place where beer is drunk and sell the meat. They may barter antelope meat for grain or take eggs to town, firewood to a market centre, etc. Some keep small amounts of livestock, and most have experience of casual work. During dry years many of them have had to become accustomed to subsisting on next to nothing.

Many Burunge have been oriented towards subsisting from the fields rather than accumulating wealth. Even as their agriculture changes to become more market-oriented many Burunge are still not very extractive, for the sad reason of limited ability: small herds, few ploughs and scarce water. Notwithstanding this, it is also a fact that, while many Burunge rhetorically accept the superiority of the immigrants' *kilimo cha kisasa* (modern agriculture), in practice they show evidence of a different evaluation. Burunge cultivation retains what Marshall Sahlins more than twenty years ago pointed out as one characteristic feature of a domestic mode of production, that it is that it is restrained in material objectives and "not organized to give a brilliant performance" (Sahlins, 1972:99, Ch.2 *passim*).

Thus, it is characteristic of Burunge farming to allow the land to revert to forest to regain its fertility (and soil structure), to work the land warily, to cultivate relatively small fields, to do farm work quickly in order "to chase the clouds", and to grow a wide variety of crops. These features are not equally characteristic of other peoples of the region. Before the expulsion of livestock from the Kondoa Irangi Hills, the Rangi used manure in their fields, and today composting and mulching are fairly widespread. Many Rangi households have been able to integrate different ecological zones into their farming, and new practices have developed in relation to changing circumstances in a way that is not encountered among the Burunge. Farming among the Rangi is more ambitiously directed towards producing a surplus from the fields (Östberg, 1986:25, Ch.4, p.87; Barr, 1994:91ff.; Mung'ong'o, 1995:Ch.8). The similarly Bantu-speaking Iramba of

Singida District also systematically apply manure to their fields. They have been able to sustain high human and livestock densities on poor soil: "continuous cultivation of the fields originally cleared by the matrilineal ancestors and cultivated and fertilized by descending generations is a dominant theme among the Iramba" (Lindström, 1987:3, cf. also p. 21f., 63f., 155f.). Integrating manure into the farming system is equally important among the Cushitic-speaking Iraqw of the Kainam area, whose conservation farming has proved itself sustainable on fairly steep slopes for more than 200 years (Thornton, 1980:59; Loiske, 1995:4, 23f., 29). Among the Gogo manure is carried to the homestead fields and spread by working parties, and some crops, like tobacco, are planted in old deposits of dung (Rigby, 1969:29,32f.). Holtland (1994:34, 52) states that manure only came into use after government campaigns in the 1950s and finds evidence that the Gogo have not been very used to handling manure, while Rigby (1969:43) provides indications that it belongs to traditional agriculture.

The conclusion to be drawn from such comparative notes is not that the Burunge are bad farmers, but that they have developed a system in which the forest continuously replenishes nutrients and conserves water. Furthermore, many different economic activities combine to support the Burunge community – albeit for far too many households at too low a subsistence level. The mode of production has been relatively forbearing towards the environment, while both the Iramba plateau (Lindström, 1987:21) and the Kondoa Irangi Hills, manuring notwithstanding, have experienced severe soil erosion.

As we now focus more directly on the conservation theme, we shall see this underlying orientation of Burunge agriculture in practice.

Poor husbandry?

It is not unusual to see cultivation ridges in the area arranged along the slope, gullies cleared of all vegetation, manure burnt instead of applied

to fields, etc. However, on closer inspection not all these arrangements are as bad, from a soil conservation point of view, as the first impression suggests.

Many farmers are of the opinion that water running from the forest into a field brings fertility from the forest soils and generally from areas upslope. Such water should if possible be used, and not diverted away from the field through a cut-off drain. If a field borders on rocks, which is likely if it is situated on the upper pediment slopes, some farmers arrange the cultivation ridges along the slope on the steep parts of the field, where there is a high risk that ridges across the slope may break during heavy rain. However, the ridges along the slope often continue only up to the point where the slope levels out. Here it is easier to disperse the water and allow infiltration. The ridges can then be arranged across the slope with less risk of breaking. Another design is closely spaced ridges, slightly curved, with a channel in the middle that allows the excess water to pass down slope to be collected in ridges across the slope on almost flat land (FIG.2.1). Thereby the much wanted water, and sediments, are carried to the fields while at the same time reducing the risk that the seeds are lost.

It thus appears obvious that the intention of many farmers is to modify run-off rather than to prevent it outright. That they adjust their farming to processes of soil erosion and sedimentation can be clearly seen in the Kondoa Eroded Area which is gradually being rehabilitated.

Fig.2.1 Closely spaced ridges with a waterway in the middle on a somewhat steeper section of the field succeeded by ridges across the slope further down. Only a few cases of this arrangement were observed and the steepest field was on a slope gradient of 11 per cent. Not drawn to scale. Drawing by Hans Drake.

Here the erosion processes have altered the landscape and the farmers have had to abandon the upper pediment mid-slopes, which were formerly the preferred cultivation zone, to follow the soil down to the lower footslopes where they now cultivate in alluvial deposits. Studies in the Haubi and Mwisanga catchments have shown that these widely cultivated sandy soils have low fertility, poor water-holding capacity and contain little organic matter (Payton *et al.*, 1992:72ff.; Payton & Shishira, 1994:92, 104ff., Yanda, 1995:25ff., 99f., 103). A ground cover with vegetation is now developing in the Kondoa Irangi Hills. However, the grasslands are in the early succession stages and succession is slowed down because of the degraded soils (Backéus *et al.* 1994:335). Yet, a study of the cropping system in the Haubi basin concludes that the sand fans are productively cropped, at least in a short-term perspective, which says something in favour of the local farming skills (Barr, 1994:91,94).⁹

Indigenous soil conservation

A few farmers have tried an arrangement of ridges vaguely reminiscent of a fishbone pattern (FIG. 2.2) to lead water, and sediments, to different parts of their fields. The ridges may break in one place or another, but those who try this method claim that there is still a good chance that the water will be trapped further downslope in the field.¹⁰

We came across only a few examples of this style of ridging. In these cases the labour had been provided by the family. The farmers were not strikingly successful, although their harvests were adequate to carry the families through the year (which, we may remember from Chapter 1, was not the case for half the households in Goima and Mirambu villages during the dry years 1991–94). They were reluctant to talk about the design of the ridges apart from the very general remark that they found them useful. One encounter, when we happened to be in the company of the village agricultural extension worker, was particularly unproductive. Afterwards, when we were on our own, the *Bwana Shamba* could not hold back his scorn, anxious to draw a line

between textbook knowledge and peasant ignorance, saying that the farmer's attempt was "a nonsensical thing. Nobody taught him to do it like that." He did not want to be associated with this method of land preparation which he found "messy", thereby giving voice to the stereotype that many educated people, as well as many immigrants (a group to which he himself belonged), have of Burunge farming as being "backward".

Here he was echoing sentiments among extension staff that have been recorded throughout Africa. They date back to the colonial period (Hudson, 1992:10). Nevertheless, agricultural extension work remains "an instrument for marking social distinctiveness and hierarchy" (Pottier and Nkundabashaka, 1992:151). There is no support, Amanor (1994:29) argues, within the agricultural and development services for the farmers' own spirit of innovation.

Fig. 2.2. Sketch of a field on 8–2 per cent slope, not drawn to scale. The cut-off drain at the top of the field is a very simple structure. During periods when the run-off is modest the ridge is opened to allow some of the water to enter the field. To the right and at the bottom are neighbours' farms. Drawing by Hans Drake.

The rhetoric may have taken a turn towards participation and dialogue but practice changes more slowly. Small wonder; writers and conference organizers have everything to gain from promoting new perspectives, whereas for development practitioners a participatory approach in reality means inviting more people to share the available funds.

We asked a few of the neighbours of the farmer cultivating with ridges in a “fishbone pattern” what they thought of his field (FIG. 2.2). They confined themselves to the comment that everyone does according to his/her own preference – the standard answer among the Burunge to any question on agricultural practices. For their own part, they found the arrangements involved too much work. It is easier to dig ridges either across or along the slope, they said.

So, not much of a response. Generally, Burunge farmers hesitated to comment on what other Burunge do or do not do. The tacit understanding seemed to be that one should not find merit or fault with a neighbour’s work. However, some found it easier to have an opinion when they were making the comparison with how immigrants set about their farming. In this case the evaluation was often negative, pointing out that the new neighbours were too drastic when clearing new land and that their crops “somehow” appeared to gather strength from their own declining yields. (We shall return to this point in Chapter 5.)

A few days later we returned to this particular farmer but this time not accompanied by the agricultural instructor. We had in the meantime learnt that he had taken the farmer to task a few years previously for his obstinate ridge design. The complaint, and the lesson, were, of course, that in order to arrest the overland flow of water, the ridges should be arranged across the slope, along the contour. The farmer had followed this advice, not because he had experienced problems with sheet erosion but because he had understood it to be a government order. “It is the law. If I don’t follow what the agricultural instructor says I can be taken to court.” The following season the crops had dried up, we were told, and the farmer decided to return to his own design, even at the risk of running into a conflict with the agricultural instructor. As the

conversation unfolded, it became evident that to him constructing many short ridges was an agreeable way of organizing the work. It quickly rewarded him with a sense of having accomplished something. He was better able to see, and feel, the progress of the work as compared with when he had struggled with long ridges across the entire field. But the main reason for his stubbornness was that he was convinced that his design was a better way of handling the water flowing on to his land, which is situated on a slope ranging between 2 and 8 per cent. If the rains are heavy, the combination of short ridges leading on to a long ridge across the slope manages to arrest the flow of water. If, on the other hand, the rains are light, the infiltration of water takes place throughout the field instead of concentrating towards the ridges. Therefore, he argued, his own criss-cross pattern made more moisture available during dry years.

For the "fishbone" farmer, if we may call him so after his fishbone-patterned ridges, it was important to catch moisture for crop growth as widely as possible. The rationale underlying the standard advice from the extension service is different, however. In the first place it is directed towards preventing water from carrying soil away from the field, and secondly to preventing the water from moving so that it infiltrates. The farmer, by contrast, is not afraid to lead water over his field to fertilize the land and to deposit sediments and moisture in particular places. This contradiction characterizes much of Dodoma Region as a whole. Coarse sandy soils have poor moisture retention properties and this is an important factor reducing crop yields as also, of course, is loss of soil. Yet, the extension service has little advice to offer regarding rain water management in cropped fields.

Another factor is the import of nutrients via run-off, continuously alluded to by the farmers. For many Burunge water moving through the field is a blessing. It brings life (cf. Chapter 3). In particular, water coming from the forests is considered to have "strength".

The "fishbone" farmer had reason to defend his alternative when challenged by the extension agent. He obtained harvests and there were no traces of dramatic breakdowns of the ridges. He said he had not

experienced mass movements on the slopes following saturation of the soil. All in all, he felt his system worked.

Knowledge and ignorance

The reasoning behind the “fish-bone pattern” of ridges was not volunteered by the farmer. He remained hesitant about discussing his farm practices. And indeed, why should he expose himself? He was doing something unusual and could therefore not discuss farming experiences within the safe idiom of “tradition” as is usually done. Furthermore, since he was harvesting during a drought, there was also the risk that less successful neighbours might suspect him of witchcraft. Better to say as little as possible. This may be obvious enough in relation to outsiders, but it also has inward bearings. Studies from Burkina Faso, Cameroon, Mali and Togo point out that farmer experiments are seldom the topic of group discussions, while other studies in Niger and in Zimbabwe suggest that information on farmers’ innovations may flow, but according to established networks (Okali *et al.*, 1994:109, 133f.). From Zaire Fairhead (1993:194) reports that Bwisha farmers have no forum for open discussion of their ethnoscience. Detailed explanatory agricultural discussions are rare outside the family or friends. Among the Kalenjin peoples of Kenya farmers are not anxious to publicize it if they try new varieties in their fields and neither do people comment on their neighbours’ work (cf. Östberg, 1987:46f.), just as they are reluctant to do so in Burunge areas.¹¹

Had we not on other occasions overheard farmers talking about the fertilizing quality of the run-off, and therefore been able to introduce this topic during our discussions with this particular farmer, one important aspect of why he arranged his ridges in a fish-bone pattern might easily have escaped us. Certainly a pre-set questionnaire would not have brought out the intricacies of how this farmer goes about his work (and where indeed a lot more remains to be understood). Data on how land is prepared for planting, a seemingly straightforward issue, turned out to be facts that could not just be collected but rather emerged as the

result of continuous interaction between informants and investigators. And yet surveys continue to be carried out, in battalions and at considerable cost, and results are tabulated and pose as knowledge of the world of small-scale farmers, while in fact the discussion remains locked up within the outsiders' own categories.

As we walked over fields in the company of farmers or took turns at digging ridges, observations and interview answers came to mingle with impressions of how farmers behaved and reacted. In such situations the balance between extracting the farmers' insights and imposing our own thoughts on their work is, of course, a delicate issue. However, the same process is in itself also a corrective; as the outsiders' competence to interact improves, simultaneously the acquired "knowledge" gains in reliability. Sometimes we passed judgements on various arrangements, not too unlike the agricultural officers often ridiculed for criticizing farmers for faulty agricultural practices only because these may not fit handbook knowledge, in order to test our familiarity, but also hoping that our comments would give rise to a dialogue. With this particular farmer, the strategy did not work. He simply became suspicious that we nourished sinister plans for his land.

Even in agricultural research programmes, ostensibly designed to provide farmers with direct benefits, it has proved difficult to achieve their genuine participation (cf., for instance, Biggs, 1989). And even when cooperation is established, there are still stumbling-blocks. Significant differences have been registered in results from on-farm trials in which researchers participate as compared with when farmers devise and modify tests themselves (Amanor, 1990:6). If one therefore has to travel along a somewhat meandering track towards understanding farmers' explanations and conceptualizations, it is not surprising that their experiments and innovations are often overlooked by outside observers. In an agricultural office we encountered a rather similar view. We told a senior agricultural officer how some of the Burunge farmers move water around in their fields and infiltrate it in tied ridges of sorts. Did they perhaps have a point? The answer was instant: "I never read about that anywhere."

As we now move on to visit yet another field, and to meet another farmer who has found ways of coping with soil erosion, we shall again be reminded that there still are lessons to be learnt in situations where at first glance only disorder and neglect are apparent.

“I used to do better”

When *Bibi*¹² Nanu Ninga turned up in our random sample of Burunge farmers it was certainly not to her delight. When we suggested a joint walk to her land, followed by a discussion *in situ* of its characteristics, she grew even more uncomfortable. It took a good deal of talking to explain why the logic of a random sample made us insist on learning from her rather than from any other of her neighbours. Her grandchildren enjoyed our visits, however, and using them as battering-rams we managed to break her protective guard somewhat, although she remained of the opinion that it would have been far better if we had talked to her 45-year-old son who cultivated the field just beside hers.

As we eventually walked around her well-kept land, situated on an average slope of almost 11 per cent, we became as full of enthusiasm as she was of excuses. Where we saw clever arrangements, she unhappily noted that she had now grown old and was too weak to do a proper job. And everything had been much better, she assured us, when her husband was still alive. Yes, life was certainly better then, but we learned later, when we cross-checked the details with her son and a few neighbours, that her fields had in fact looked much the same.

What we saw was the following. Her land bordered on rock outcrops. She had left some fifty metres of bush between the cultivated field and the rocks, to allow some of the run-off water to be trapped and infiltrate before it reached her cultivated area. A simple diversion ditch just upslope of the cultivation led most of the excess water into a well vegetated waterway where a few meters on each side were left uncultivated and the waterway was full of debris and fully grown bushes. Here she also kept a wild cassava-like plant which does not develop

edible tubers, but has leaves which are used as a relish. Since the plants are never dug up, they provided some protection against soil erosion.

During the early part of the season she had left the upper part of her field uncultivated (again she was full of excuses for not having "cleaned" the land properly before the rains...). Here later on she planted finger millet, which has a relatively short maturation period and is intolerant of water-logging, and furthermore was not a particularly important crop for her. It is less attractive to monkeys and warthogs than maize and potatoes, for instance. The upper part of the land thus acted as a filter against wildlife but also against soil erosion during the early rains, with their high erosivity. Another conservation consequence of this treatment was that, by "being late", she avoided having to burn the crop residues before the rains on the steeper parts of her field.

In the main part of the shamba she mixed a wealth of different crops; red and white sorghum, bulrush millet, maize, pigeon peas, beans, groundnuts, green gram, pumpkins, calabashes, castor, water melons, sweet potatoes... The planting density was fairly low. Like many other Burunge farmers she apparently wanted to have empty spaces, to facilitate both movement in the field and replanting. This is also a well-tested way of coping with low moisture availability (Hudson, 1992:121; cf. also Barr, 1994:77, Holtland, 1994:49). Some species were cultivated on flat ground, others on ridges. Pumpkins had been planted in ash heaps. Wild vegetables were found here and there, and the general impression was of a hotchpotch of almost everything that can be grown in a semi-arid environment.

The early planting she did without turning the soil. Ridges and additional crops were added at the same time as she weeded the first crops.

Bibi Nanu Ninga's contribution

Trying to describe the conservation strategy behind her farm work, something she herself finds a preposterous idea but which to an out-

sider appears a perfectly reasonable thing to do, one may note that she intervenes as little as possible. She grows many different crops in her field, and she plants continuously, so that throughout the growing season there are crops in different stages of maturation, below, on and at different layers above the ground. The handbook statement that good crop management can be up to ten times more effective in reducing soil erosion than engineering structures like terraces (Hudson, 1981:209) comes to mind. The natural vegetation is used to protect her land from soil erosion by both wind and water and to facilitate infiltration. Having a comparatively good vegetation cover, she counteracts the dessication of her land. She mixes cultivation on ridges and on flat ground, and all in all the result was that there were no significant signs of soil erosion in her field, although it is situated on a comparatively steep slope.

Her field provides clues as to why the Burunge hills are, relatively speaking, little degraded. Apart from the different farming techniques already discussed, one more fact should be noted. She did not use all the land available but left a buffer zone for the infiltration of run-off water at the upper end of her land, and she also left vegetation growing on the sides of the waterway. In practice, this means that she allowed vermin a share of her crops. It was not all that important for her to maximize output. A more commercial orientation would have led her to clear the whole area, plough it before planting and grow one or two crops, in rows and with fixed spacing between the plants. However, this way the land would have been considerably more exposed to soil erosion, as indeed is the case now that market-oriented practices are becoming more and more prominent in the area.

Listening to those who are silent

Another conclusion one can draw is methodological. It was not all that easy to get access to her field. To learn about local conservation practices one has to spend time in fields away from roads and projects, and make assiduous efforts to meet people other than those identified as

successful farmers. In an already classic statement about how some rural conditions remain systematically unperceived, Chambers (1983, Ch.1) listed six major reasons why investigators often fail to learn about the rural poor. These are the roadside biases, the project orientation, the elite contacts (male, progressive farmers, leaders), the tendency to make observations only during the dry season, the researchers' avoidance of poor people out of both politeness and cowardice, and finally the professional biases that make researchers concentrate on matters directly associated with their own specialities. All these factors work against giving *Bibi Nanu Ninga* a chance to contribute to our understanding of Burunge land husbandry. Her field requires a bit of effort to reach, and does not at first sight give the impression of being particularly well tended. She has never been visited by an agricultural instructor, and she lives a somewhat withdrawn life.

Bibi Nanu Ninga certainly does not regard herself as "a soil conservation farmer" or as somebody whom others can learn from. Even as we approvingly pointed out different practices in her field, she emphatically denied that she had a particular purpose behind the arrangements. This may of course be true in the sense that her "farm plan" amounts to the outcome of her continuous decisions throughout the cultivation season and over the years, constantly changing according to the vagaries of weather, health, food, money, social relations, etc. Richards (1989:40) makes the point that a crop mix "can only be interpreted by reconstructing the sequence of events in time /.../ [and is not] an attempt to implement a general theory of inter-species ecological complementarity". They are a "sequential adjustment to unpredictable conditions" (1993:67). His reasoning provides one clue, though far from the only one, to why *Bibi Nanu Ninga* should not be interested in discussing her farm arrangements. If they are the result of a completed performance rather than of a blueprint for action (Richards, 1989:40; 1993:65ff.), they do not lend themselves easily to discussion. If we wanted to learn from her, we would have to find another way than interviewing her. This conclusion leads to putting in a word of caution

on the current enthusiasm in development work for research techniques like “analytical games” and “ranking exercises” (McCracken *et al.*, 1988:25ff.) where informants are asked to rank preferred tree species, various farm inputs, constraints in labour calendars, etc. Useful as these techniques may be, and I have happily utilized them for this study, they still tap an expressed, manifest way of knowing while neglecting other of *Bibi Nanu Ninga’s* insights. If her farming is largely a “sequential adjustment”, its essence will not be captured by ranking exercises.

Purpose or no purpose behind her farming, during the dry years 1991–94 she did produce crops, although her harvests were small, while the agricultural instructors and many of the progressive farmers who had joined the crop development scheme “Global 2000” (with monocropping, fixed spacing, application of chemical fertilizers and pesticides) failed to do so. That the minimum tillage and intercropping practices of African small holders produce reliable and relatively speaking good yields is increasingly coming to be recognized. Richards (1985:43, 66f.) has summarized the factors involved. Barr (1994:75f.), discussing farming on sand fans in the Haubi area of the Kondoa Irangi Hills and drawing on studies in similar settings, argues that mixed cropping may produce substantial increases in yields compared with monocropping (cf. also Holtland, 1994:50).

Bibi Nanu Ninga’s achievements are recorded here in admiration, but also with a slightly guilty conscience. After all, she accepted us on to her land only after persuasion. What made her reluctant we can only speculate about. Maybe it was just that she felt uncomfortable with strangers whose intentions she could not fathom. Maybe she feared we were in a position to impose restrictions on her way of farming. Whatever her worries may have been, it was as if our visits, however well-intended, reduced her confidence in her own way of doing things. No assurances that we had come to learn from her could disguise the fact that the visitors must be the experts, while local knowledge remains amateurish. Our four-wheel drive vehicle, our inclinometer and notebooks, our confident and friendly relationship with leaders and extensionists spoke a language of power.

Since she did not know what we wanted to hear she largely remained silent, and we never got to know her own motivations. We found conservation qualities in her farming. Whether she agrees on that point or not we shall never know. For us to come to understand her way of knowing her land would have required our working for prolonged periods together with her and her grandchildren in the fields, internalizing the work rhythm of the different processes, how these relate to each other, how seeds, soils, rainfall, time and implements interact... She spends a lot of time in her field, going there early in the morning virtually every day, even when there is no obvious work to do. She gets satisfaction from her land, apart from the food it provides for her. What questions might have disclosed how her farming operates? Our questions were framed in a different way of thinking. Was she not in fact quite right when she suggested that we should instead talk to her son? Not that he knew more about Burunge farming but because he was better oriented in the world of the visitors. Well, we did talk to the son, and it was agreeable, but it did not bring us any closer to her silent knowledge.¹³

Contrasting ways of knowing

These two succesful farmers, *Bibi Nanu Ninga* and the “fishbone” farmer, were both intent upon telling us that it is we who know, and that we should not ask them how things are. They defended themselves by professing ignorance. During the encounters it looked as if Joseph Mduma and I were the “experts”, associated as we were with the administration, the HADO project and “modern ways of farming”. It was our world that provided the setting where we met. It was evident how their “ignorance” was produced by the power relations between us. But we who superficially had the upper hand remained in fact ignorant. We did not penetrate their way of knowing. We hoped to be accepted as students of Burunge farming but we were treated like agricultural experts.

It was not only that it was an unequal encounter. We in fact did come with exploitative intentions. We were collecting knowledge. Although we said that it would be good (in exactly what sense?) if Burunge history and living conditions were recorded, these two farmers would not personally benefit from our altruistic mission. What, in their eyes, could we be looking for? They knew that their fields produced too little food to give them a secure and comfortable life. Why did we ask them about how to farm?

Despite our detailed and repeated explanations of why and how we were carrying out the farm survey, many times Joseph Mduma and I asked ourselves what we were doing, when, for instance, we asked farmers about harvest figures, knowing full well that their stores were empty after the failed rains, and when we inspected poorly weeded fields together with farmers who had just returned from long periods of casual work far away from home to earn food for their families. If at times we felt uncertain about the benefits of our work, many more of the farmers must have wondered what it all was about. In the encounters with *Bibi Nanu Ninga* and the “fishbone” farmer and many others, it looked as if either there must be a hidden motive behind our work or we must be ignorant to the point of stupidity. Under these circumstances it was not easy to bridge two different ways of knowing to arrive at an honest dialogue. We worked on this every day. We learnt that we could not just go and pick up knowledge about how the Burunge relate to their environments. Instead, this knowledge had to be created between them and us.

Incidental conservation

The examples of good land husbandry we came across in the Burunge areas did not consist of elaborate constructions, such as can occasionally be encountered among the neighbouring Rangi (cf. Östberg, 1986: 37ff.), but rather details intended to ease work or improve yields, and which also helped to conserve soil and water, as the case studies above have shown.

It is not uncommon to see slightly meandering ridges on almost flat land. People say "it just happened that way" or that it is "something the children (=ignorant people) did", and indeed it easily happens that ridges get unintended bends, particularly when dug by a "working party" where the socializing gets into high spirits. When we suggested that the meandering shape reduced the speed of the moving water and increased the infiltration, people agreed, but with no particular enthusiasm. No one found it very interesting to pursue the topic. This practice does, however, fit well with the notion that run-off brings fertility to the field (see above). A contrary opinion was also encountered, although it was much less widespread. A few farmers argued that run-off never infiltrates but just passes over the ground. It is only the raindrops that are able to penetrate the soil and be of use to the crops. It is tempting to link this with the Burunge notion that rain is male and, as will be related in the next chapter, the origin of everything alive after an initial impregnating rainfall. These farmers distinguished between rain, which is good, and moving water, which is bad. If that is the case there is not much point in preparing water-harvesting structures.

On moderate slopes, ridges of sweet potatoes or beans could be found at the upper and lower ends of a field, placed there to trap the rainwater, often with the intention of getting an additional crop at the end of the rains or making a quick start once the rains return the following season.

Most farmers dig cultivation ridges across the slope, but these are not developed into permanent structures, combined with infiltration ditches or *fanya juu* terraces. "Too much work", people would say if asked, and a village agricultural instructor would understandingly nod his head, while stereotypes of the Burunge as drunkards more interested in traditional dancing than modern farming are seemingly confirmed. This, however, is an answer that begs the question. The Burunge are much in demand as casual labour since they have a reputation for being hard working, and struggling to get the work done as soon as possible. Even if most people would not enjoy spending long days terracing fields, particularly not in the dry season's hard soils, some effort during the slack season could still provide the infiltration

ditches which outsiders find so absolutely essential in these arid lands. Drawing on the experiences discussed above, we may, however, suspect that, since farmers do not do this, there must be reasons behind it. This became evident when a soil conservation initiative landed on a Burunge village in mid-1994.

Unfortunate timing

For several years now, Kondoa District has been the beneficiary of a US\$ 4 million integrated rural development project, KIRDEP, financed by the Netherlands (Mattee *et al.*, 1992:74,78f.). So far most of the activities have centred on setting up the project at the district headquarters and on supporting the integration of the various departments in Kondoa town. But the time had now come for field activities in Goima Division. These encompassed support for schools, water development, women's groups, etc. In this study only the land management activities in one Burunge-dominated village will be discussed.

1994 was a bad year to start. The harvest had failed, after three previous bad years, and the overriding concern was to obtain food and water. A few better-off farmers welcomed the opportunity to get outside help with improving the quality of their land, while the poor needed incomes more than anything else. In this situation conservation support would go to the better-off, who at the time could count on having an unlimited supply of cheap labour to hand. This, then, was the situation when the conservation offer was made.

An expert group on village-level communication, the "Participatory Village Appraisal" (PVA) team, had been sent from Kondoa town to find out what the problems and needs of the selected village were. Their report included soil conservation as one of the issues people had raised. Word went out to the extension staff in Goima Division that they should expect requests from farmers to have infiltration ditches measured. It was now up to the extension staff to show that they were worth their salt by capturing the conservation interest expressed.

When we talked to members of the village council it became obvious that the soil conservation component of the support for the village was of little interest to them. But after fifty years of government soil conservation initiatives in Kondoa District local leaders have of course learnt the lesson that this is not something to be said publicly. And at the same meeting they had been promised cement and iron roofing sheets for their school as well as a water reconnaissance survey. They had to play their cards well.

Some farmers were more outspoken. They were downright hostile to the idea. In the village nothing seemed to confirm the PVA team's conclusion that the villagers had been asking for support to conserve their fields. This is far from an unusual occurrence in soil conservation projects. Norman Hudson, a highly experienced observer of the international scene, concludes, from a study of 35 soil conservation projects (more than half of them in Africa), that few projects include sufficient participation at the planning stage, especially at the village level (Hudson, 1991:8) while conservation projects remain a common component of rural development.

In this particular case it emerged that it was basically two affluent farmers, immigrants from the central parts of the district, who were behind the request. One of them told us that he was now eagerly waiting for the Kondoa experts to come and work on one of his fields where he thought better water management could be helpful. When we informed him that the village extension worker had been trained for this task he was full of disbelief, and insisted that he had been promised help from Kondoa town. This turned out to be an important part of the deal for him. At least two reasons may lie behind this. Hosting staff from the district offices would demonstrate a personal ability to obtain resources, and it would also strengthen the image of this farmer as someone who was practising modern farming. The town experts were not only to peg out the contours for infiltration ditches, they were also to affirm that here was someone in tune with national developments.

For some time nothing happened. The extension staff waited for the anticipated requests from farmers, which were not forthcoming. The

rich farmer waited for experts to come from Kondoa town. They did not turn up. And all the villagers waited for KIRDEP to solve the water problem, hopefully by employing them so that they could earn money and obtain food.

Introducing conservation

Then the ideal guinea pig showed up. A Burunge farmer, of average standing and with one of his fields situated on a slope in the middle of the village, expressed interest in infiltration ditches (the term used by the project for tied ridging combined with channel terraces on the slopes). His field would make the perfect demonstration plot. The Goima coordinator for land management issues rushed to the place together with the village extension worker, measured the ditches, and grabbed hoes and shovels to help the farmer get started with the digging. When the sun reached its zenith they agreed to meet early the following morning to continue with the work. The farmer assured them that by then he would already have done a good part of the remaining work.

The extension people rejoiced. There was still time before the rains arrived. If only others would now follow suit, there was a good possibility of having a number of fields "conserved" before the cultivation season started.

The following morning they met a disheartened farmer among damaged ridges. A neighbour had allowed his livestock to pass through the construction site. However, the damage was not too bad, and they got going on repairing and extending the ditches.

That evening the animals again passed through the field on their way home from grazing. When they came again the following morning the farmer rounded up the animals and told the herdsboy to inform their owner that he could come and collect them. If the farmer was to have a chance of solving the problem, he had to prove whose animals had caused the damage, and he therefore kept the animals at his compound so that they could be publically identified.

When the livestock owner received the message he did not come to collect his animals, but instead set out for Goima primary court to file a case against his neighbour for the theft of his livestock. This was a clever move; instead of having to answer as to why he had damaged someone's property, he now had the upper hand as the plaintiff. And there we were: the first attempt at soil conservation resulted directly in a local conflict, and threatened imprisonment for the pioneer.

Resisting conservation

As the days passed rumours went round the village. We were told of how the conservation farmer, with the help of his "Kondoa friends", had opened a case against one of the villagers (which was not true), that the reason why "the Government" advocates soil conservation is that it wants to profit from fines as structures may be accidentally be damaged, and furthermore that what are now presented as voluntary initiatives will soon be converted into a law forcing everyone to dig structures.

These attitudes are not unique to this village; they chime with local suspicions about "those who decide" or "those with power" in many places. Blaikie (1985:90), like many others, has noted that land-users have often had good reason to see soil conservation as a symptom of oppression by various elites. And in Tanzania there is a long history of local resistance against conservation initiated from outside. The experiences of the nearby Kondoa Eroded Area have recently been documented by Mung'ong'o (1995: 45f.,71,75). Another example comes from the Uluguru Mountains (Young and Forsbrooke, 1960). Yet other case studies are available in Rapp *et al.* (1973) and Coulson (1981). One argument raised here, which is specific to Kondoa District, was the claim by some villagers that the conservation structures were only the first step towards compulsory removal of all livestock as had happened in the neighbouring "Kondoa Eroded Area" in 1979 (see the Introduction). The fear was that once the conservation structures were in place, they would be used as an argument to destock the area.

We were told of the many difficulties that would follow when people are unable to move as freely in the area as they are accustomed to do. The ditches would bring strife among people, "and the Burunge do not want quarrels. We are quiet people. This new thing will lead to legal cases." Some also recalled how, during the colonial rule, they had been forced into "communal labour" to dig contour bunds which in turn had forced some livestock owners to move in order to avoid the risk of being fined if their animals damaged the structures.

The concrete arguments that circulated in the village do not quite provide an explanation for the opposition. Rather, this was based on a diffuse understanding that the intervention had been too drastic, for the land itself and for village life. The new structures interfered with how people envisaged their village, its space, its labour organization, its peace. They feared that the infiltration ditches might pave the way for further changes beyond the control of the village, imposing, for instance, new land-use and tenure relations.

In this they were quite right. Once someone has got conservation structures in his fields – or has planted perennial crops or trees – it becomes more difficult for others to make use of whatever communal rights may simultaneously adhere to that land. Free grazing of crop residues in harvested fields is one example. The fact that many Burunge farmers cultivate on ridges does not affect post-harvest grazing since the ridges are re-dug each season. Permanent infiltration ditches would be a different matter altogether. They would put an end to post harvest grazing, at least by others than the farmer who controls the land. Land becomes more private and this is one reason why many wealthy farmers favour (although they less often practise) soil conservation, particularly if a development project pays for some of the costs of conserving one's land. The construction of the very first infiltration ditches revealed how people's interests in the natural resources of the village diverged.

It also demonstrated that outsiders think they know better. The way people had been cultivating up to now was announced as being inferior. This hurt, and people defended themselves by saying that the ditches had all the adverse characteristics detailed above. A somewhat

similar reasoning, but in an inverted sense, could also be traced to the farmer who wanted the structures. These had not been proved capable of improving his yields, but they were emanations from an economically more powerful world; maybe they could bring a share in the wealth of the powerful outsiders.

The infiltration ditches were no neutral devices of agricultural technology. They also took on the form of being statements about the relationship between the centre and the periphery.

Why did it go wrong?

The first point to note is that there was nothing wrong with the individuals involved. The technical work was in the best of hands. The extension staff were experienced people who were competent at their work. They had, however, been largely kept outside the planning process, which was instead controlled by staff based in Kondoa town. Nor were those opposing the conservation initiative reactionary traditionalists hostile to everything new. The people we talked to were responsible men (not women in this case), well integrated into their community. They honestly feared that the conservation structures would lead to misunderstandings between neighbours, and with regard to their suspicion of the authorities' ulterior motives, they felt they had previous experiences to back them up.¹⁴

Secondly, it was a mistake to arrive with ready-made solutions. Both the problem and its remedy were known and understood by the project management (so they thought), and this fitted their own needs perfectly well since they now got a chance to report to the overseas donors that their project was involved in local soil conservation work – precisely what would be appreciated in Europe.¹⁵ The infiltration ditches were a perfect solution, for the project staff. What they did not ask themselves was whether the local understanding of the “environment” was the same as theirs. It was not.

The cultivation ridges already in use fulfil some of the requirements of infiltration ditches, particularly if they are fairly closely spaced.

Farmers in this area are not convinced that contour bunds would produce yield increases big enough to compensate for the cultivation area lost – and even less for the labour invested. Not one of the structures put in during the colonial period has been maintained. A trial in Mvumi Division of Dodoma Rural District did not produce yield increases close to the contour bunds. The agriculturalist responsible has speculated that the conservation of moisture may not be very great on sandy soils (Hoitland, 1994:110). An argument of relevance here is that the physical properties of the soil are at least as important as the nutrient supply for good yields. When silty material is washed away by sheet erosion the remaining soil will become less water-retentive. Soil erosion would thus increase vulnerability to drought (Richards, 1985:60).

Whatever the truth about the usefulness of conservation engineering for increased yields in this particular village, it remains a fact that two ways of relating to the land came into confrontation. The project understood soil conservation as a technicality in land management, and had a ready solution which could be “adopted” by the farmers. Some of the villagers, however, regarded the farm of the conservation pioneer as being an integral part of the village, at the same time as it was used to produce food for one specific family. It was part of the village’s communication network, and constituted a semi-communal grazing area once the harvest was over. The project had deliberately chosen to make agreements at an individual level (“responding to farmers’ requests”), whereas their activities came to be evaluated from a much wider, communal, perspective.¹⁶ Some of the villagers did not grant the individual farmer the unconditional rights over his land that the project had taken for granted.¹⁷ They responded from an agro-ecological and social perspective.

Cohen (1993:33) argues that “expert outsiders are almost bound to be wrong, not because they are technically deficient, but because extraneous expertise is insensitive to the modalities of local knowledge”. Outsiders cannot know ‘as we know’. Cohen proves his point using case material from Whalsay, Shetland, but his insight also helps us to understand how the first infiltration ditches were received in a Burunge village.

Thus, a number of Burunge villagers did not share the project's manipulative attitude towards their lands. Ontologically they were part of that environment and felt that the infiltration ditches interfered with how life was lived in their village. The worries expressed demonstrated that they did not accept being subjected to an outside world view, an 'environmental managerialism' that was not theirs. To a number of villagers the infiltration ditches represented something more than mere tools of supposedly good land husbandry. They touched on how the Burunge experience their environment, their relations with outsiders as well as what they consider to be good farming.

A natural condition

Most Burunge do not see soil erosion as a particularly urgent problem, and neither are they worried about diminishing soil fertility. When the harvests are below expectation this is explained by insufficient rainfall rather than by exhausted soils. When, for instance, we had tried to establish how decisions to abandon fields and open a new clearing were made under the traditional system of long fallows, the reason given was rarely that the soil had become "tired". Instead, people mentioned sickness, quarrels, mounting problems with weeds, someone's personal preferences, bad climate, etc.¹⁸ Burunge land is conceptualized as good and abundant, and this conviction is not easily compromised.

Gullies, to mention a very visible form of land degradation, are taken to be natural features of the landscape, not to be too alarmed about. "I will see how it behaves", says Chere Soma, a farmer in his thirties about a depression in a field he cleared a few years ago in the Burunge hills. It is a natural waterway and he intends to let it have its way, while he will cultivate the remaining parts of the field.

It is not only that many Burunge find land degradation problems not particularly urgent, some also argue that soil erosion is "natural" and cannot be arrested. They have seen dams constructed during the colonial period burst, releasing water which destroyed the areas below. Water has enormous power, and any attempt to stop a gully will sooner

or later fail, they argue. Better to let the gullies have their way.¹⁹ To bring home this point one farmer said that gullies grow just like people do. First they are “children” and not so difficult to handle. But then they mature, they become “men”, and are dangerous to tamper with.

We are not to take these statements literally. Someone who talks about gullies as “children” and “men” will be perfectly able to explain how these gullies developed as land was cleared in the catchment areas above and so on. But the way of talking about the maturing gullies reflects an attitude towards processes in nature; it is in the order of things to grow. It is also a pointer in relation to induced change that extension staff as well as development projects need to take into account.

One may leave things the way they are even if one is well aware of the threat of soil erosion. It may be as wise to move away as to try to stop a gully. To fight the gully will not only mean work and expense, but will also introduce the risk of increasing the problem by misdirected measures. It will often also lead to conflicts with neighbours who will have to change their cultivation practices, if a gully reclamation is to stand a chance of success. It will very likely also mean criticizing people living further up the slope for not having protected a catchment area, and so on. Why not just let the gully have its way?

Erosion and sediment. Erosion in cultivated fields on a slight slope. The small cultivation ridges have been broken by run-off water. Sediment covers the soil.

When some of the Burunge reacted against the soil conservation initiative, their opposition was linked to a feeling that the infiltration ditches were too drastic an intervention. They said that the structures “destroy the land”, which is exactly what they are intended not to do. But a basic tenet of Burunge land use is not to do too much and these examples of agricultural engineering definitely fell into the category of doing a lot.

Hot and cool conservation

When the Burunge speak of good land, they think of it as undisturbed and calm. Nothing is in conflict, the land is at peace. Such a place can be described by the word *hh'oi*. A simple translation is “good”, but it also carries the connotation of being exceedingly good, a blessed place. If one says in English that it is “so good”, with an emphasis on both words, something of the lustre of the Burunge word *hh'oi* is invoked.

In praise of a good area people may say *hhape da hh'oi*, the land (place) is so good. If one insists on being told what characterizes this good land, apart from the obvious fact that it should be fertile, one may be told that the land has “health”, that crops continue to grow even during a drought when they wilt on other land. If one asks, as field researchers do, why this is so, one is not given comments on the soil's moisture-holding capacity, or degree of organic content, but is told that *daqati caaqwadosi da hh'oi*, this place has good coolness, not only coolness, but good coolness²⁰.

Coolness does not merely refer to temperature, but rather indicates that something is properly cooled, a ritual state reached when bad influences have been removed. Basic to a Burunge understanding of good conditions is that there is not too much of anything, not even of what is “good”. Even positive characteristics can turn harmful when exaggerated. The most desirable state is reached when different qualities mix in a balanced way.²¹ This is an important quality of good soils. In the next chapter this point will be reiterated.

When people cultivate the land they should not use too much force, disrupting the natural state of the forest land on which they live. The traditional method of cultivation was, we may recall, to plant in the clearing where stumps and trees remained, and to turn the soil only at the time of weeding. When land has been cultivated a few seasons it becomes "hot", "by the work of the hoe", and should be rested. Then the forest will regenerate it.

The Burunge say that the land has become "tired", as do many other African peoples, to express that yields are decreasing. Writing about the Sukuma-Nyamwezi of Western Tanzania, Per Brandström (1990c:4) links this "tiredness" of the land to how the Sukuma-Nyamwezi talk about human infertility. Something has gone wrong, and a quality which has been lost must be restored. In the case of human beings "contra-infertility rites" (Turner, 1967:12) are performed, while fallow applies to unproductive land. The Burunge make the same association between land productivity and sexual procreation. In the next chapter we shall return to this point.

When a number of Burunge say that bunds, terraces and other conservation structures "destroy the land", what they mean is that one should not unduly disturb the land. Such a sense of how to relate to land cannot easily be expressed in convincing arguments, not by the Burunge themselves nor by a visiting ethnographer. Their dialogues with the agricultural extension staff therefore often come to dwell instead on more tangible points like "too much of the field is taken away from crop production", a point understood by everyone although not much in line with Burunge cultivation practices, which are not geared towards maximizing yields in this area of, still, comparatively abundant land resources. But the argument has the advantage that it may bring an intrusive visit to an end.

3.

“Land is coming up.” How soils form, change and are lost

As the intense tropical rains hit the slopes of the Burunge Hills, soil is carried away and washed down the cattle tracks. Watercourses fill up with muddy reddish-brown water. Soil is being carried away, “maybe even as far as Dar es Salaam”, a farmer notes as we stand looking at a roaring stream, where, during the long dry season, there had been nothing but a dry river bed. That soil is being eroded and transported away from cultivated fields is a fact that escapes no one living off what the soil provides. Yet, the Burunge have a lot more than this to say about the life of soils.

This chapter presents Burunge views on how soils form and how they “die”. A basic assumption is that land has life. The discussion in the previous chapter about attitudes to land degradation is continued. Signs of soil erosion do not create much alarm in Burunge country. Reasons for this are provided. The interpretation of Burunge thinking on soils presented here has been scrutinized in local seminars; these discussions are taken into account. There will be space also for a few comments on how Burunge thinking about soils relates to government-initiated soil conservation work in the area.

What follows is not an exercise in “indigenous soil classification”, a field of study which is attracting increasing interest (Dialla, 1993; Niemeijer, 1995). Here the focus is rather on how the Burunge relate to soil as an element in the landscape, and in their lives.

Soil from heaven

– The rain brings soil. Do you not get soil stains on your clothes when you are out in the rain? The rain contains soil and sand.

The rains are thought of as originating from the sea. “The sea boils and that is how the rains come about.”

Now, before proceeding further we should first note that to the Burunge everything emanates from God. Nevertheless, despite a few excursions into cosmology, we shall still try to retain a focus here on natural resource management. It is therefore only in passing that we now note that life flows from God and that it is God’s will that the rain falls. Taking, then, a more restricted view on resource flows, the Burunge hold that rain emerges from waves in the sea, and since waves carry soil particles, these are carried up into the rain clouds and brought inland. “The clouds you see above us now will be rain clouds somewhere else. Long ago people believed that rain comes from the sky, but then people travelled as far as the coast and saw the sea. They came to understand that the rains originate from the sea. In fact, when we pray to God for rain, this is because in the old days people thought that the rains came from the sky”.

Fig. 3.1 New soil is continuously being added to the land surface by wind-transported material, by rainfall containing soil particles and by decaying organic material. Soil also rises up from below. Many Burunge put more emphasis on how soil is added to the land surface rather than eroded from it. Drawing by Karin Weilow.

– But how can people in semi-arid central Tanzania possibly maintain that their soil originates from the sea which they have never seen? These cannot be authentic ideas!

They very well can. Kondoa District has been part of trading networks with the coast since a long way back. The caravan trade flourished in the middle of the nineteenth century and came to influence life in Kondoa District (Christiansson, 1981:160; Mung'ong'o, 1995:59f.). Burunge oral traditions tell of their origins in Ethiopia and of long migrations and interactions with other peoples far back in time. The Misambala clan claims, for instance to share a migratory history with the Sambia people of Tanga region. The Burunge area is not an isolated enclave. But even more important: traditions change without thereby becoming any less genuine expressions. The caravans brought Islam as a dominant cultural force to Kondoa District, while later on Christian teaching and public education also came to influence how people understand themselves and their environment. When we attempt here to document a Burunge understanding of soils it is current concepts that are of interest, rather than historical reconstruction.

Soil erosion and the way soil is added to the land are two processes which are linked to each other, according to Burunge thought. Once the soil has reached the sea, it is again moved by waves. As these break, soil particles may be extricated and be carried away by the rains formed by the waves. "If it rains heavily, it results in thick layers of soil, if the rains are poor the soil layers become thin."

Responding that one becomes wet rather than "soil-stained" when out in rain, I am reminded that one may occasionally see a tree growing on top of another tree. "Now, where does that tree get its soil to live from, if not from the rain?"

And someone else chips in: "Have you not held a hailstone in your hand and allowed it to melt? Do you not get small particles of soil left in your hand? There you can see that the rain contains soil."

Wind also carries soil. During the dry season whirlwinds carry soil high up into the sky. It will eventually come down again. "This is why you find soil even high up in the mountains."

Apart from soil falling down from the sky, it also forms continuously on the ground. Trees fall down, they rot and become soil. Similarly with grass, old crop residues, the remains of a fire, household waste. New soil is continuously being added to the land.

– When you dig you sometimes find black soil after a few feet. This is what remains after people’s fires. This is where people used to have their houses, their kitchens. This is where the surface of the soil used to be.

Soil from below

Soil, then, is thought of as being continuously added to the land, but soil also rises up from below.

Together with three Burunge middle-aged men and their village secretary, who is a Rangi of about 40 years of age, we were out on a long walk. We had passed two big gullies and were discussing how they had developed. They pointed to the bottom of the gully and told me that there the soil had risen up from below. Risen up?

It became quite obvious during the ensuing long and detailed discussion, that this was exactly what they meant. They were not talking metaphorically about how lower-lying soil layers are exposed when top soil is washed away. No, “land had come up”.

That became the starting point for a number of interviews and discussions about the notion of land coming up. But while this idea is widely held, not all Burunge subscribe to it. Those who have been much exposed to the agricultural extension service relate the textbook version of soil erosion, as do many young people. However, those who share the soil scientists’ understanding of erosion processes did at the same time also believe that “land had come up” in one particular context: rising graves – circumstances we shall turn to shortly. But Mama Jema Khankhai, a farmer in her late sixties and one of the pillars of the Catholic Women’s Group in Goima, stuck to the scientifically accepted explanation as the one and only cause of erosion. Shaking her head, she

said, "People who believe that soil rises up are just silly. You can see why we Burunge lag behind in development... No, the only thing that can make me say that land has come up is that manure has been added so that the soil has increased in strength. Then you can say that the soil has come up. But that was not what you meant, I think."¹

Ants had invaded an area where a grave was situated. It was decided to dig up the grave and get rid of the ants. The dead are buried at a depth of almost a meter and a half. As the grave was dug out, the bones were encountered after about half a meter. "The land has come up", people concluded.

When a trench for the water pipe at Goima centre was dug, and a grave was encountered very close to the surface, the same conclusion was obvious: "The land has come up." During our interviews other examples of graves encountered at shallow depths were recalled and mentioned as evidence that the soil must be moving up. Indeed, it appears such an obviously reasonable explanation! We found it more and more difficult to insist that an entire metre of soil must have been eroded and transported down the slope...

The fact that one may encounter old utensils when digging was also taken as proof that land is coming up. The soil had moved up and items from old settlements remain at lower layers. "We are higher up now than people were in the old days."

Soil is, as we all know, found in different layers, each with its own characteristic colour. This is, some Burunge say, because it was formed at different times. Mzee Daudi Hanga of Mirambu village explains:

– When rain falls, the water sinks into the ground. It reaches a point where it cannot reach further down. The water accumulates there, forming a soil layer as it dries up. This layer will be stained by the colour of the water, which in its turn will depend on the soil surface it met. Maybe people had been burning bush, then the soil layer becomes black. Maybe people were making a beehive and a lot of red wood was scattered on the ground. Then that soil will be red. Maybe the rain met

decaying plants, or just dirt, and eventually a brownish or a greyish soil layer will form down below.

The soil layer moves up, and next time it rains a new soil layer will form below the one that was last created. In this way, new layers of soil are continuously being formed. They rise up towards the surface and will have different colours. Soil that has reached the surface is distributed to different places by moving water.

Land has life

Soil is thought to have an innate quality of wanting to rise to the surface, “like seeds germinating”. *Hhapee yo’o slafida*, the Burunge say, land has life, this is the explanation of why it “comes up”.

Land is what brings life to plants. “If you cut a branch from a tree, it is dead. But put it back into the soil and it will grow again. It draws its life from the land.”

Water also has life. Seeds germinate when they get moisture and reach out for soil. “Human beings cannot live without water, we get life from water. Two things come together to produce life, water and land”.

Life is not in the seed that is planted, but in the land which receives the seed.

The notion of land having life is linked to how the Burunge explain how the world was created. God made everything, the Burunge say. Heaven and earth, the sun and the moon, man and animals, the land, mountains and plains, everything that exists is God’s work. “God went around constructing his place”. At first nothing grew on the land. Then God brought life to his creation. Mzee Simba Khoe of Itire area close to Goima village explains how it all happened: “God urinated and this brought everything which is in this world. When the drops fell on the ground trees sprouted. So did millets. Animals were created, and people, and snakes... Everything came about in this way. After that

downpour everything which is on earth came into existence. It was not here before."

There Mzee Simba halted, his concentration increasing. We had been talking for at least an hour. Now he fell silent for a moment. I looked up from my notebook, waiting. His eyes full of laughter, he concluded: "Do you know what blood is? Yes, what is blood? What is saliva? Water!"

Mzee Simba Khoo outside his house in Itire. Discussing how land "comes up" from below.

We laughed. It was a moment of relief. Just then I found nothing more to ask about. The explanation, the evidence, lay in the spontaneous association of God's urine with other liquids, the sudden combination, as it did also in Mzee Simba's chuckling satisfaction with the formulation that had just dawned on him. For Mzee Simba these four short sentences were obviously charged with meaning. Their significance could not have been carried further by questions how or why. At least I did not believe so at the time. They were immediately illuminating. He had reached a field of associations to which the notion of "land is coming up" belongs, together with the ceremonies carried out to

evoke rain, and the procreation of life. Analysts have been able to show how in many African societies concepts of human fertility have counterparts in agriculture and in religion (cf., for instance, Jacobson-Widding and van Beek 1990 *passim*). It was a privilege to experience how this insight spontaneously struck one of the actors.

Writing about the Borana, a Cushitic-speaking people of Ethiopia and Kenya, Dahl and Megerssa (1990:25) describe water as one "vital fluid" similar in meaning to milk and semen. They make the point that the Borana find "the benignancy of divinity" expressed in rain and other conditions necessary for their subsistence, and "one can select almost any item [of the chain from rain to milk and semen] and see it as symbolizing the whole chain of fertility".

Heaven is male, earth is female. The way seeds germinate and crops grow is, the Burunge say, the same as how man and beast reproduce.² Blood, saliva and water are of one substance, as are tears, milk, semen and urine. During an interview on land-use practices with a small group of elders the conversation came to follow such lines of thought and two of the elders expounded further on the issue:

"Crops germinate the same way as chickens are born. The water of the cock gives life. The stomach of the hen gives life. Water and blood are mixed to give life. So it is with ourselves, is it not? We do not know what is inside women. But they bleed. And we know about ourselves. I dream I am with a woman and I may find semen on my bed. Semen is mixed with the blood of women, this is what happens."

"Yes, the hen is the earth. The cock plants in the hen the way we put seeds into the ground. The hen has life, like the earth. But on her own she cannot produce. There is a need for the water of the cock, just as a woman needs the seeds of a man. They need to meet. The earth needs rain. The hen needs the cock."

Again, on a different occasion, when we were discussing how long it takes for soil to regain its fertility in a fallowed field, we were told how dry leaves decay and give fertility to the soil. The leaves, and the rains, become like "health" to the soil. But how can a dry leaf, something which is like a piece of paper, produce soil fertility?

– Look at the leaves early in the morning, there is moisture on them. It is the heat of the earth which creates this moisture. Then there is the strength³ from the leaves... these two attract each other, they are forces meeting. It is like a man and a woman.

– What is man, and what is woman, here?

– The earth is the woman, the rain is the man and the leaf is the child, which is life for the soil.

When we later followed up Mzee Simba's insight, it turned out that the Burunge not only trace their origin from a cosmic intercourse between Heaven and Earth, but continue to subsist from the same life-giving process. On a few occasions we ventured to bring up this issue with small groups of women, and the same notions emerged. Earth is female, heaven is male. Land contains life, and so does rain. The seeds germinate and grow by drawing life from soil and water.

When water flows over land it becomes fertilized (cf. Chapter 2). However, as we have seen earlier, not all subscribed to this view. Some argued that the overland flow passes quickly and never percolates so that it can be of real use for crop growth. It is only the penetrating rain drops that produce the moisture that sustains vegetation. The association with the original cosmic intercourse is close. It is only, some farmers insisted, raindrops that have "the strength to get inside". When this line of reasoning came up in discussion it was argued that the "strength" (*nguvo*) of the rain drops makes rainwater infiltrate far better than the overland flow, even, for instance, in planting pits.

Land losing life

Land may also lose its life. It is normal for cultivated fields to become "tired", as was noted in Chapter 2. They are allowed to regain their fertility. When this does not happen and they are no longer able to produce, they "die".

The Burunge describe things that no longer serve their purpose as "dead". This can be said of a pot failing to hold liquid, of a stool with a

broken leg, etc. If the pot or the stool is repaired, it gets “life” again. A tree which is cut down dies, but when you make a post out of it and fit it in your house to support the roof, that post becomes “alive”.⁴ In the same way degraded lands, which can no longer fulfil their function of producing crops or grazing, “die”. Interestingly enough, we heard it said about rehabilitated gullies in the Kondoa Eroded Area that they had “died”. As they were rehabilitated, i.e. lost their characteristic of being “dead” land, they were said to have died”.

Severely degraded areas are talked of as “hot”. Explaining this notion Mzee Mikaeli Muriyanga Ninga made the association of direct sunshine killing soils. This is one reason why land dies when the forest is removed; the land becomes exposed to the sun and dies. Eroded areas are, Mzee Omari Kumbi explains, “like heat from the fire”. Obviously one cannot expect anything to grow under such conditions. In discussing the history of one depleted area, the late Joseph Bahe Silooti’s words took on eschatological dimensions:

– People have cut down the trees. This is what makes everything die. The animals disappear. There used to be rhinos there, antelopes, elephants, giraffes – many of them! Now they are gone. When we were children there was bush in that very place.

People grew in numbers and they cleared the forest to cultivate. Without trees nothing grows. First the animals die, then the people. The soil dies. It no longer has the strength to make the grass and bushes grow. Nothing living will remain. The power of the sun turns the soil into ash.

There will be no wind, which is the breathing of the trees and of the grass.

God will remain, but His world is diminishing, He becomes solitary. Well, where should He go?

The incident reported in Chapter 2 when a number of villagers resisted an outside conservation initiative, had its roots in the fact that the farmers related differently to their land as compared with the external project’s way of thinking. In this chapter we learn that an important truth for the Burunge is that land has life. Many peoples in other places

and times think the same. An interesting example of a confrontation similar to that between the Burunge village and the KIRDEP project comes from the Venezuelan Andes. One of the reasons why small-scale farmers resisted mining exploitation there was because they believed their soils would be depleted by the extraction of mineral deposits kilometers away because “the earth contains the force which makes things grow, and it must be complete in order to provide the force necessary for food production. Plundering any part of the earth (or soil) subsequently weakens its strength and capacity for production – its fertility” (Lindh de Montoya, 1993:335). Although we did not hear this explicitly stated it is reasonable, given the documentation provided in this chapter, to believe that when the Burunge say that infiltration ditches “destroy” the land they mean that they harm the life of the land.

Interpreting soil erosion

While sheet and rill erosion are noted, some features of sedimentation appear to be less readily observed by most people. When asked to identify the original soil surface of an eroded river bank, the top layer in the soil profile was usually pointed out, even when this consisted of sediments that had buried the top soil. In terms of practical activities sedimentation is taken note of, however. One distinguishes between different kinds of sandy soils. *Sehhinai* is sandy soil which is not suitable for cultivation, as in dry river beds. *Hhasia* is deposited sandy soil which is useful for growing sugar cane, sweet potatoes, mangoes and cashew nuts, for instance. Some farmers use such fields and may also plant elephant grass to stabilize the area. (In Chapter 2 it was noted that farming in the eroded Haubi basin is common on such soils.)

The impact of splash erosion is imperfectly understood by most Burunge. The fact that soil pillars may develop on eroded surfaces is explained as being because the surrounding soil has been washed away. It must, people reason, have consisted of looser material, or have been trampled by livestock and the soil particles thereby loosened and subsequently carried away by moving water. However, damage done by

rain hitting unprotected soil is never mentioned as a possible explanation.

When a stone crowned the soil pillar, its weight was said to compact the soil underneath, and thereby make it less susceptible to sheet erosion. That the stone also protected the soil from the impact of splash erosion was in no instance suggested. This is perhaps not very surprising, since the specific role of splash erosion was only becoming recognized by soil scientists in the 1940s.⁵

That decomposing organic material is of importance for soil formation is a matter of course to all Burunge. None, however, suggested that the weathering of rocks also contributes to the process.

That different soil colours may sometimes give an almost chequered impression to an area is said to be due to the fact that water transports soils to different places, and also that soils of different colours rise up from below. Generally subsoils are red but then again it is also held that soils can be coloured by different circumstances during their formation, as related above.

The top soil is fertile, people say, because it is being enriched by decaying grass, leaves, crop residues. The soil below is less fertile. "Therefore it is good if there is a vegetative cover that prevents the soil from being washed away during the rains." The reasoning behind this last remark was that "then everything remains in place, and the poor soil below is not moving up."

Checking the facts

When we thought we had acquired a fairly reliable documentation of Burunge ideas about soil formation and soil erosion we arranged both informal discussions of this topic and more formal local seminars. A booklet in Swahili (Östberg, 1994a) summarizing what we thought we knew was distributed in the area. Many turned out to be interested and intrigued by this topic.

The agenda for the meetings was simple. Joseph Mduma introduced the subject briefly and I took notes. The discussions were allowed to take the direction the participants chose. We made a point of making our interjections as few and as short as possible. After a few hours of focused discussion the event was rounded off with snacks and time for chatting together whenever that was possible to arrange.

A meeting was arranged at Igunga, a village where we had not worked, and where therefore we had previously not discussed these matters, with seven elders who were not known to us. Many bystanders, and a few extra interlocutors, joined in. The elders enthusiastically entered into a detailed discussion of the different stages shown on a poster we had made of FIG.3.1 and generally of Burunge views on this topic. During a prolonged and intensive discussion the contents of the drawing were endorsed, while one more important element was added.

All agreed that “land has life” and has the quality of rising towards the surface, but it was added that this faculty (*nguvo*, strength, power) is like breathing. In the soil below, at a depth of about three meters, there is heat, which pushes the soil upwards. The land breathes out. This heat from below contributes to crop growth as it meets the coldness of the rains. Two things are needed for crops to do well: heat from below rising upwards and the coolness of the falling rain.⁶

The heat from below is described by the same word, *hameeriya*, as the heat one experiences in the shade, or at night. This “heat” is in fact also coolness, heat that has been cooled by shade. It is a good heat, supporting plant life. The burning heat of daytime, by contrast, the heat from above, *ileema*, kills the crops.

The elders insisted that the crops do not need sunshine. Even if there were clouds for weeks on end, the *hameeriya* from below would still provide the heat needed by the crops.

To the description of the Burunge conception of how soils behave these elders thus added a further dimension, temperature. This surfaced when Mzee Husseni Daa provided an example of how “land is coming up”. He said that where people and livestock frequently pass along a slope a gully will form, but if the track is moved to a new place the

gully will fill up again. "This is because there is strength (*nguvu*) inside."

– What is that strength like?

– It is like breathing out. The heat of the land pushes the soil upwards. The land is breathing to rise upwards. There is heat inside and obviously it must rise upwards.

The rain cools the heat rising from the land. This can be observed during the rainy period (although the process itself is continuous) when steam rises from the land after rains "like breath when you exhale."

We had in fact encountered this particular point long before but had failed to grasp its significance. Richard Jumbe of Goima village, a farmer in his mid-thirties, had told us how rain infiltrates the soil and cools the land. "The land steams with the heat, the steam rises up and is released. The soil accompanies the rising steam." At the time we could not quite figure out how it worked and just entered the point in our notebooks. Now we came to appreciate how his description was anchored in Burunge conceptions.

Everything must mix

The Igunga elders went on to explain how crop growth depends on a balance between heat and coolness. "You cannot be out in the sun all time. You must get into the shade. It is the same with soil. It must be cooled down." The coolness of the rain cannot reach down to the heat of the soil below. Therefore the heat must rise up so that plants may grow. Without heat everything dries up, as it will if it is not cooled by the rain. It must be useful heat, the heat of the shade.

We have already touched on the fact that fertility results when hot and cold mix; this was given as the reason why dry leaves on dry ground produce moisture. On that occasion the elders emphasized that male and female forces were involved but mixing hot and cold was invoked on other occasions. It was mentioned that even when the rains are delayed for a couple of weeks one may still encounter moist soil.

This is, people argued, because the heat of the day and the cold air of the night “give life to the soil” so that it becomes moist.

For proper crop development not only temperatures must mix but also different soils. The mellow fertile topsoil needs the support of the soil below. It is the soil layer down to a depth of 30 centimeters that is useful. Below that the soil is “not good”. But if these soils mix, “light from above and heavy from below”, it becomes “like manure”. The crop obtains nutrients and the roots are able to establish themselves successfully. It is the balance which is important. “You must mix to get strength.” Different soils and different temperatures blend to create favourable conditions. This is how the world is made. Good things turn bad, something bad has its opposite which makes it good. Good and bad things mix. “Everything must blend.”

The experience of encountering the bones of buried people at shallow depths seems to have deeply influenced how the Burunge understand their land. Not that this happens very often, but the cases that do occur are reported and commented upon. We brought up the issue of “land coming up” with a group of some ten men and women resting after working in a field. One of the men categorically denied the idea. He said that the phrase was to be understood as an abstruse way of talking, *fumbo tu* (just a riddle, only mysterious words). One of his counter-arguments was that in the old days the dead were not buried as deep as nowadays. This was immediately dismissed and the sceptic fell silent as the discussion continued. It was said that what makes the graves rise is God’s power. Scrutinizing this in more detail they explained that people have life, they die and are buried. This entails that the land eats Man.⁷ It gets life so that other people may cultivate and have food. Corpses are the “meat of the soil”.

That “land has life” proved to this group of farmers to have two different meanings, the life of the fertile top soil, “life for food”, and the life of the deeper soil layers which is the “life of eating people”. Again, it is good that these mix.

- What, then, if the dead were cremated, as in India or in Europe?
- That is *mwiko* (taboo). Then there would be no harvest.

The notion that the soil of graves has life may perhaps also be linked to the fact that the Burunge address their dead at their graves. The dead make themselves known to the living. A dead relative may appear in a dream asking for “clothes, food and drink” which will necessitate a ceremony at the grave where a goat, sheep or hen is killed and beer is poured on the grave. Sickness may also indicate that dead relatives are complaining. If so, a diviner will ordain that a “ceremony of the name” be carried out, including the offerings just mentioned.

Views of the Establishment

The pamphlet on Burunge soil science was also discussed during one of the “reporting-back” meetings with a group of village leaders in Goima.

They found themselves in agreement with the descriptions of how soil is added to the land surface. They scrutinized at some length the “land coming up” argument, which they were familiar all with. They did not accept the idea, but neither did they ridicule it. They tested it on its merits. But, surely, stones cannot germinate (see below p. 111). These come to the surface in someone’s field because of soil erosion and for no other reason. They cautioned that perhaps it is partly a question of using different language. People unfamiliar with soil conservation terminology may say that “stones are growing” without necessarily meaning it literally, but to indicate that stones have been exposed.

It became a long probing discussion. The leaders agreed with the assumption that “land has life”. Soil gives life to the crops. It is important to look after the land. They remembered the time when it was still easy to traverse the part of their village through which a natural waterway passed and where later a gully had developed making it necessary to build a bridge. This was also where a dam had silted up. And it was more than six meters deep, they noted. In such places the land “has died”. In the light of the foregoing discussion, the statement was not to be taken simply as a metaphor.

A retired agricultural instructor, who now lives in his Burunge home village, took us to task for having published incorrect facts. He told us that what was described as soil coming up is in fact the deposition of soil eroded from higher sites. The comment showed that he had read the pamphlet as a textbook. Its title, *Imani za Waburunge...*, i.e. *Burunge Views...*, and the fact that it describes how the Burunge conceptualize these processes, had escaped him. This reaction was more common in connection with another pamphlet, on land use (Östberg, 1994b), which contains a number of value judgements about the future of the Burunge Hills, but which a number of readers took to be facts despite clear “warnings” in the text. Anyway, the former agricultural instructor had no other objections to the contents, perhaps a somewhat surprising fact, but he insisted that the section on “land coming up” was not correct: “There you made a mistake”.

We also got comments from a few readers who had gone through higher education. Two secondary school-leavers (this is a rare species in Burunge areas and we only managed to get detailed comments from two people in this particular category) were both puzzled and amused by the booklet. They were careful to point out that they themselves did not subscribe to all the opinions recorded, while at the same time they were enlivened by the fact that the Burunge had developed this elaborate, although supposedly wrong, theory. More than anything else, they appeared uncertain about how to react to the text.

A student at a theological seminar found the analysis piquant. “Strange that people can believe like that...”. He did not find it worthwhile to try to penetrate what he considered a dated worldview. A college student who was spending his holiday at home noted that the reason why one is not supposed to cultivate close to graves is because if the vegetation cover is broken the soil may rise bringing the bones to the surface. He did not quite agree, but found it a sound practice. The observation that hail contains minute sand particles was to his mind a convincing argument for the rains adding new soil to the land surface.

A similar argument, also reported in the booklet, is that one gets sand in one’s hair when out in the rain. This was accepted by all those

we asked. They agreed that when it rains the soil mass will increase. There was also general agreement that degraded land and gullies are “dead land”. A diploma-level student added that in the old days land, and the forest, had life. In a Burunge context this is not only to be understood as a metaphor but also taken as a factual statement.

Was it a real test?

FIG. 3.1 may give the impression of a closed system where different processes concur to produce a self-perpetuating system of soil circulation. The discussions in which we took part did not give the impression that this was how the Burunge themselves interpreted the drawing. People focused on various stages of the drawing rather than on the totality. Even if contradictory ideas or facts were introduced in the discussion this did not necessarily mean that the general conception was challenged. Therefore it did not appear particularly difficult to hold what could be interpreted as contradictory views.

Both the three-hour-long, intensive seminar in Igunga with elders with whom we had no prior relationship, and the various other meetings and encounters which are only briefly summarized here, convinced me that FIG.3.1 gives an adequate representation of how many Burunge conceptualize the processes of soil formation and soil erosion. Even to those refuting, for instance, that “land is coming up” the concepts and reasoning were both intelligible and familiar. Moreover: what is said in one situation does not necessarily have to be defended in another. Different explanations may belong to different contexts. Not a startling point, to be sure, but one that is little considered in social surveys registering “people’s views”.

People held different opinions and why indeed should they not? Is any worldview ever watertight? In an article on African cosmologies Anita Jacobson-Widding (1991) emphasizes the dynamic potential of the African folk models. Given that, as well as the widespread familiarity we encountered when the documentation of Burunge thoughts on soils was presented locally, it is safe to conclude that they have a

“compulsiveness” (Asad 1986:145f.) justifying their acceptance as a Burunge soil science.

The assumption that land has life supports the observation that land is rising up from below or that “dead” sticks root when stuck into the soil, etc. Such processes underpin a trustful attitude towards the environment: there is not much reason to worry about soil erosion. Things will work out.

With this we may proceed to some implications for planned soil conservation activities in Burunge areas.

Indigenous theory and outsiders

When hearing Burunge people say that soil is rising up, and that land has life, two statements from the Kondoa Eroded Area seem to take on a new significance.

In 1950 Henry Fosbrooke⁸ photographed a badly eroded field in Bonga village (Haubi area in the Kondoa Irangi Hills) and his caption reads poignantly: “the shamba that grew stones” (cf. Östberg, 1986:15). The photograph depicts a field where the soil was gone and only quartz pebbles remained. Fosbrooke’s laconic comment is in all likelihood a direct quote from local farmers, and indeed the phrase is occasionally heard also today as people refer to what the Kondoa Irangi Hills looked like before the expulsion of livestock. In the light of the Burunge concept of “land coming up”, the statement should not only be understood as a metaphor of soil erosion, but as a description of what people perceived to be happening in at least some of their fields.⁹

The second statement, which is currently almost a catch-phrase in the Kondoa Hills, is *ardhi imerudi*, “land has come back”. Since vegetation now appears to have successfully colonized the formerly badly eroded area, many farmers are of the opinion that the Kondoa Hills are rehabilitated, and some argue that the livestock expelled from the area in 1979 should now be allowed to return. In the new multi-party political situation the opposition can use this as a ticket to win votes. One

party, CHADEMA, which has a fair following in Kondoa District, has written restocking into its local agenda (Mung'ong'o, 1995:148).

When a number of people tell the HADO project, and the district's politicians, that "land has come back" this is certainly a political statement. They want to influence the future direction of land rehabilitation activities in Kondoa. But the phrase can also be interpreted literally. People may well mean that soil has in fact come back. New soil has fallen down from heaven as well as risen up from below. "Land has come back" suggests one way in which people understand the dramatic ecological change they have witnessed during the last fifteen years. Plant ecologists and soil scientists (Backéus et al., 1994:335; Payton & Shishira, 1994:90, 116f.) take a different view, however: Land is not yet back. The natural rate of soil formation in this sort of environment is slow.

Like the Rangi the Burunge also take an optimistic view on soil formation. All whom we confronted with this question were of the opinion that the land resource is being replenished rather than lost. After Joseph Silooti had given thought to this question, he said "The land increases all the time. A lot of the soil being carried away (by moving water) in fact ends up in depressions in the landscape, in old conservation ditches etc. and is thus not lost, only transported. Erosion is also arrested by the grass cover. But think of all the leaves the trees shed, and of the firewood being burnt, the household waste... It can only be in areas where all the trees have been cut down that erosion occurs faster than what the soil is being added."

Differing perspectives

The extension staff and (many of) the farmers approach the situation from opposite angles. The professionals are alarmed at the prospect of a finite resource being lost, while the farmers find the process quite "natural" (cf. Chapter 2).

When we pursue the "causes" behind an apparent indifference towards land degradation, it may be wise not to lose sight of the con-

text in which the questions are asked. First, when people emphasize that the soils are good, they are in fact not so much talking about particular pieces of land, but rather declaring that Burunge country is good. Secondly, when someone insists that everything is alright, even when confronted with an obviously bad piece of land, we are allowed the privilege of recognizing people who are defending themselves against outsiders, people who do not want to be caught having made mistakes. There is a telling Swahili phrase to describe this, *wanadharau*, they are oblivious to the situation, or they set themselves above what they know may well be true, but which they do not want to discuss. By denying what we outsiders formulated as problems in their fields, they kept us at bay. What could, if one so wished, be taken for ignorance was in fact resistance, in Scott's (1985) words, one of the "weapons of the weak".

In Chapter 2 it was noted that the Burunge traditionally planted before the rains by digging a hole in cleared but not tilled land. Cultivating the land was cautious and was reserved for the first weeding. "When you weed you also turn the fertile top soil down so that the crops will do well." By waiting until the first weeding to dig the fields Burunge farmers made their farms less susceptible to erosion. Extension staff working in the area may thus come across "conservation farming practices". However, the underlying reasoning is different. The extensionist says: soil fertility is declining because the subsoil is being exposed, while (at least some of) the farmers s/he talks to hear: soil fertility is declining because the subsoil is rising up from below.

Many Burunge are suspicious of ploughing by tractor because it brings up subsoil of poor quality. Tilling may be important to help the roots penetrate successfully, but it must not be overdone. The zero-tilling tradition is not forgotten. But when people discuss this issue they also emphasize that in the old days people cultivated in the forest, in recently cleared land. The soil characteristics were different, requiring less tilling, and less weeding – and indeed the implements used were lighter, more brittle.

A reason for “zero tilling” that remains important is to “chase the clouds”. The soil is difficult to prepare before the rains, and once the rains are on, it is important to get the seeds into the soil quickly. Planting without tilling is one solution. The farmers doing so are economizing on work and making sure they will not lose seeds, rather than attempting to conserve the soil.

In this way one may contrast “modern” and “indigenous” arguments. These different ways of knowing exist, but are rarely expressed. Apart from a few encounters, directly or indirectly arranged by us, neither extension staff nor farmers remembered ever having discussed local perceptions of soils or indigenous conservation with each other. Burunge thinking remained unknown to the outsiders. A few senior members of staff had a genuine curiosity about the analysis presented here, whereas village-level extension workers were less interested.

Implications for development work

Finally, now, a few thoughts about practical application, without, however, going as far as to make specific suggestions. (For these see Östberg, 1994b and 1994d.)

The Burunge regard their country as much better preserved than the neighbouring Kondoa Eroded Area. Nevertheless, there are land management problems also in the Burunge Hills that need to be addressed. But other issues are even more pressing. The Burunge worry about the widespread poverty, about the severe water supply problems throughout the dry season, as well as about the rudimentary medical and other public services. And on top of this, they feel that their country is being taken over by immigrants, and they look upon themselves as the losers left behind in development, who will eventually perish as a people. In this situation extensionists preaching the general virtues of soil conservation may just as well whistle in the wind. Our own attempts at discussing soil conservation issues in

general often resulted in nothing more than a mixture of rhetoric and “don’t knows”. Natural resource management is part of a much wider situation. Any attempt to influence land management therefore has to start in cooperation rather than in extension, as most commentators now agree but which is less commonly put into practice.

The Burunge perceptions of soil erosion, and soil formation, as discussed in this chapter, have not previously been documented. It seems extraordinary that, with the long experience of soil conservation work in Kondoa District, local understanding of erosion processes has not yet been recorded. Or, it is not at all extraordinary, since this is seldom done anywhere else either.

Often the project management is so deeply immersed in day-to-day problems that it is beyond their reach to study systematically the processes they are influencing. But an outside partner, who is directly influencing many people’s lives by contributing funds to a land management project, could, and should, take on such a responsibility. Throughout this book it is demonstrated that many Burunge experience problems of soil erosion differently from the way visiting conservation specialists do. Mung’ong’o (1995) has recently argued that fifty years of conservation efforts in the Kondoa Eroded Area have demonstrated that the Rangi prefer other ways of approaching problems of land degradation to those advocated by the administration. It then falls on outsiders to be informed about the alternative understanding (cf. Christiansson *et al.*, 1995).

This chapter has presented a Burunge understanding of how soils form, change and erode. Burunge soil science builds on the assumptions that soil has life, that land remains “good” until unduly interfered with, and that soil fertility is promoted when there is a balance between hot and cold influences. There has also been reason to reflect that outsiders easily fall victim to believing that they are communicating, when in fact there is only verbal agreement. Furthermore, outsiders would do well to learn the Swahili word *dharau*. If this, at first glance, seems exotic, Swedes may recall author Sara Lidman’s account (in her novel

Den underbare mannen) of the encounter between professionals and locals, at the time when the railway reached the interior of north Sweden:

“drog Lidstedt upp en karta, och den var så finådrig att dess like inte fanns i Lillvattnet. Och Didrik svalde sitt hån. Dem visste mer än han, dessa herrar! om hans hembygd!

det var smärtsamt, förnärmande och utestängande, detta deras kunnande.”

(Lidstedt produced a map, and it was so finely veined that its equal was not to be found in Lillvattnet. And Didrik swallowed his scorn. They knew more than he did, these masters! about his native place!

it was painful, insulting and exclusionary, this knowledge of theirs.)

4. Trusting the forest, losing the forest

The Burunge tell a story of a man whose son was born while he was away looking for work. As his wife was preparing beer at home it so happened that the child crawled towards the fire, fell into the boiling beer and burnt himself. She asked the domestic animals around, the dogs, goats, cows to hurry to her husband to inform him of what had happened. They did not grasp the point. Only the wild helmet guinea fowl managed to get the message through.

There are variations on this story told by the Alagwa, Gogo, and the Iraqw. In each the family is reunited. In the Burunge version it is the husband who returns, whilst it is an expelled son in the Alagwa and Iraqw versions. The messenger is always an insignificant animal of the wilderness. And here lies the second moral of the tale: if domestic resources fail the bush may still solve the crisis.

The theme of this chapter, then, is the way the Burunge regard the forest as giving strength to people and land. We shall also consider the thoughts and feelings of the Burunge as large tracts of forest are cleared to make room for immigrants from more crowded areas, and for a market that continuously demands more and more crops.

Trees are important to the Burunge in many ways, as homes for both beehives and spirits, for instance. But also in this chapter on forests the themes of soil conservation and land husbandry will run through the text as undercurrents guiding the discussion.

However, let us first of all give at least a brief summary of the story.

The story of Mandooya

When the child had burnt itself the mother asked, "Who shall we send to the father to tell him the news?"¹

She called the hen and it agreed to go. "When you arrive what will you say?" The hen answered "Kókókókókókó". She then tried the dog, the goat, the cow – they were all eager to help but at the wife's question she only got "Guuhghuhghuhghuh" and "Mee/eemmee/ee!" and "Hhumbuu hhumbuu" for answers. The hyena's answer was an intricate one: "Huuhuw, Islam is difficult", but still not the one that solved the wife's problem. The guinea fowl said "Cáxáxaxaxa" and so they also were dismissed. But when she asked the helmet guinea fowl to find her husband and tell him that his son had burnt himself, they told her that they were wild birds and so they would sing a song informing him that they had been sent by his wife. Ah, at last. She promised them white sorghum and milk, and off they flew to find her husband.

When Mandooya received the message he told the helmet guinea fowls that it had taken him five days to reach where he was. "We will give you something to travel by." The following morning they tore feathers from their wings and fastened them to his arms, and he flew off with them. The story goes on to tell how they arrived, entered the house and how the helmet guinea fowls eventually tore the feathers from Mandooya, and: "Mandooya now sat with his son on his right." On arriving one of the son's sides had already become better. The other side still needed some time to heal. Mandooya was generous and paid the birds. He gave them a big container full of white sorghum when they left for the steppe. "Then we are the birds of the wilderness." And there the story ends.

Praising the forest

The story of Mandooya reassures us that the bush still possesses strength when domesticated life proves helpless. As long as the forest is there, life will return even if droughts bring suffering.

Bwana Bira lives at Kinando together with his three children who are between four and twelve years of age. The two daughters go to the well for water, grind flour and cook and keep a watching eye on their young brother. The nearest school is too far away for them to attend. Bwana Bira makes grain containers for sale. They are made of bark from *Brachystegia* sp. and hold five to eight bags each. "They are not like sacks. You will have great-great grandchildren before they wear out."

The walls of their *tembe* house have not been plastered and wind and dust blow right through it. There is shade but no privacy. Still, once inside one feels it is a home, a place at peace. One of the daughters is at work at the grinding stone, a small fire is lit, Mzee takes a nap in the heat of the day. The Tanzania that is struggling with "structural adjustment" economic policies, AIDS-campaigns and debates about the future of the union with Zanzibar, seems far away.

The family's small fields at Kinando are surrounded by forest: "Forest is what we want. It is food. You are not alone. You are not poor. You stay with your children. They get food. You rest. The children have food. They rest. All strength (*nguvo*) comes from the forest. If you have nothing in the house you cannot stay there. You must go away in search of food. You cannot receive visitors. But in the forest you clear your fields. You plant. It is like that, just like that. You have fields. You harvest. You eat. You are at home. Nothing is bad. If twenty people settle in one place, it becomes white (=cleared, devastated) like Songolo (a village a few hours' walk from Kinando)."²

We had come to interview Bwana Bira about the history of Kinando and the origins of one of the Burunge clans. The greetings finalized, we sat down to talk. This was when Bwana Bira gave voice to his unsolicited praise of the forest. When he said "you are at home" it sounded like "you are at ease" more than anything else. It is difficult to imagine a more ramshackle house than his, yet as we sat there we all felt well, looking out over the forest and the Burunge Hills, a world of no boundaries. Of course it is difficult to protect the fields from baboons, warthogs, antelopes and birds. But they harvest, and they eat.

Bwana Bira speaks of the health of the undisturbed forest, and that the forest is immense. In the current strife over land resources in Goima Ward it would seem logical that the Burunge should claim that they have cultivated in every inch of the hills (as in fact they have at one stage or another) in order to defend their customary rights to the land. Kinando itself has vast areas covered by thickets and secondary acacia vegetation telling of previous cultivations.³ But instead their recollections emphasize that the forest was “everywhere” and nearby were elephants, antelopes, lions and rhinos. In their minds this undisturbed, ideal state persisted up to the time of villagization when large tracts of forest were cleared to make room for immigrants from other parts of the district and new concentrations of population.

Burunge understanding of what constitutes a forest has little in common with forestry's technical definitions of woodland, montane, mountain forest, etc. Referring to one and the same area it may sometimes be called *pori* (wilderness), *milimani* (up the mountains) or *msituni* (in the forest) depending on the context. A few isolated trees, if they are trees of ritual significance, can make a “forest”. The initiation ritual, for example, takes place in the wilderness regardless of how “wild” the area used is. Mzee Bira definitely feels that his home is in the forest, while it is also true to say that he lives surrounded by a few fields and neighbours. And forest. We here follow the Burunge practice of mixing up woodland, forest and mountains as is suitable. The authors of a comprehensive report on “gathered foods” in Babati District aptly ask their readers to see “forests where there are but few or no trees at all” (Lindström & Kingamkono, 1991:132) as they report on how “wild vegetables” are gathered along roadsides and in gullies in the middle of cultivated areas.

A forest way of life

The forest is a provider. But then again one can never be sure of harvests because so many other factors have an influence. In the first place the rains, of course. Or sickness may strike during intensive work

periods, or elephants may pass through the area playing havoc with cultivated fields, or somebody may use evil "medicine" which harms people, animals or crops, or... But even without being haunted by adverse events, some are provided for, others are not. Harvests are unpredictable, like the game of the forest.

As we wandered in the Burunge Hills our companions sometimes remarked that "there they got a lot" or "those did not get a thing". Never did they comment on the farming arrangements, whether crops were well tended or not, or anything that smacked of agronomy. They talked of the harvests as if they were booty. Whether people will harvest or not appeared to be a question of the same degree as whether bees will colonize a beehive. After all, who can know if it will rain?

Many Burunge families like to live surrounded by forest, giving the homesteads an appearance of being embedded. Beehives are closeby.

One makes preparations for a hunt, and beehives are baited, but the outcome, the meat and the honey, cannot be taken for granted. Similarly what one harvests will depend more on the rains than on the amount of work done in the fields. If the yields are poor you move. Harvests can thus be said to be hunted, and you "get" or you don't. In

our eyes many Burunge appeared as much forest people as cultivators, although they always describe themselves as “farmers”, frequently adding “since a long time back”.

Many Burunge want to have their homesteads surrounded by forest. Certainly neighbours are appreciated, and needed. When we crossed a path in the forest we were always told to whom it led, and when we passed deserted homesteads we were likewise told who had lived there, and to whom they were related. The forest is inhabited, each place is associated with those who live there, or who have lived there. But it is also good to be at a little distance from others. A settlement should not be allowed to become “white”, i.e. open, cleared of trees. One reason stated for this is that the bees need shade, flowers and water. Some Burunge express it as “livestock and bees are competing”. The immigrants clear and bring in livestock and the honey disappears because “in open areas only grass grows”.

The Gorowa, a Cushitic-speaking people of Babati District, share with the Burunge a trust in the forest providing. Trees are procreative and bear fruit, or in Gorowa parlance “children” (Talle, 1991:16). The Iraqw, closely related to the Gorowa, appear much further removed from the Burunge way of thinking of the forests as an abundance and a strength to live by.⁴ Thornton (1980:209) writes that clearings mean that “useful land is created out of useless space”.

Making use of forest fields

The Burunge who cultivate in the forest do not want to impose themselves on nature, or on other people. Their hope is to stay well, “to rest”, as Bwana Bira said. And they see no reason to conserve particular fields. Such opinions came easily to middle-aged and older people but the forest also contains young settlers. Like their elders they certainly appreciated the quality of the land, *hata kukiwa na jua mashamba yata kuwa baridi* (even when there is sun the fields remain cool), and like them they did not invest much in soil conservation.

They differ, though, in that they also mentioned that life could be somewhat lonely, cut off from village activities.

In fields cultivated for only a few years we came across soil erosion. In one field, situated on a 10 per cent slope, cultivated flat, rills had appeared. The farmer was a man in his early twenties. He had on an earlier occasion told us that there were no signs of land degradation in his fields, but what about these rills now? The discussion dwelt for some time on whether the sand on top of soil was "just nothing" or indeed an emerging problem, and then he concluded by saying "Even if I eventually abandon this land, I have harvested, and I have made money. I can afford to move, I will be able to buy myself what I need." So, money counts. As the market economy gains a foothold in the forest things begin to change. The hope of this young man was not in the first place to have a sustainable farm at this particular spot, but to get a harvest. And since the fields should in due course return to the forest, why worry about rills?

Another young man told us, as we prepared to leave his compound high up in the small burgeoning settlement of Unjui, and he accompanied us to the border of the clearing, that next time we came, we would "meet fields everywhere here". The bush was to be transformed, the problems of monkeys, antelopes and warthogs were to be overcome. He was a newcomer to the hills, and he shared the common view that resources were there to be used. His attitudes were those of a villager.

As we got out of earshot our guide, a middle-aged man from Goima village, said that *wanawinda mali* (they are hunting wealth). These young families endured a bit of loneliness and inconvenience in order to improve their economy. The Burunge in the forest are made up of both Bwana Bira and young people trying to improve their lives.

Conservation as life goes by

Fields may lose their fertility, people grow old and die, but new generations are born, trees regenerate and new forest grows up to be cleared. Mzee Bira at Kinando explains:

From a platform high up in a tree, children guard a maturing crop against vermin.

"If the harvest is not enough, you move. The soil does not produce any longer. It has become light. It was heavy, but it has become light. This is due to the *kazi ya jembe* (the work of the hoe). It makes the soil change. The longer you cultivate the lighter the soil becomes. You move. If you add cow dung the soil becomes heavy. That gives a good harvest. But we have land. We do not use manure. We move to a new field."

The forest promises virgin soils and peace. With the passage of time any place will turn bad. Sickness or death will come, harvests decline, people become many and start to quarrel. The place that was good will lose its "coolness". This is when many Burunge find it easy to move. Such an orientation does not encourage care for a particular piece of land. The place itself is not all-important, as is the case in many European farming traditions which nurture a love for land developed through strenuous efforts from stony ground or infested swamps. Here the opposite obtains: an abundance of arable land which is comparatively easy to clear. If tomorrow it turns out not to provide the food

and health you hoped for, there is always another place to try, leaving the fields to revert to forest and to new fertility.

Rigby (1969:118f.) provides a case study from a Gogo area northwest of Dodoma town where a household leaves an area because the land has become exhausted to return to an area they deserted twenty-three years before, for the same reason. The bush had regenerated and was suitable for the clearing of new fields. This could have been a verbatim account of Burunge experiences. Rigby adds, however, that this homestead owner's reference to exhausted soil is unusual among the Gogo. Instead it is the search for grazing, or to avoid famines or witchcraft accusations, that is the reason given for why a household moves.

The first answers most Burunge gave to the question as to why someone had moved were usually that they "wanted to move" or "longed for new land", or that they had moved away from sickness or "problems". As we pursued the discussion, declining harvests turned out to be behind the first two answers. Therefore the material provided by Rigby appears familiar from a Burunge perspective, and it is tempting to conclude that, while people's stated reasons may not overtly refer to land husbandry, the effects of the readiness to move, by both Burunge and Gogo households, may still be labelled a conservation strategy. When households moved residence to get new "health", the forest simultaneously restored fertility to the depleted fields. Changing his focus from individual households to a more aggregated level, Rigby also writes that the "search for bush to clear for new fields explains to the Gogo the evident cyclical rise and fall of population in specific neighborhoods" (*ibid.*) – and the Burunge and Gogo experiences appear to coincide.

Burunge stubble-fields, with their heaps of debris, and trees left standing here and there, provide an image of the regenerating forests. The immigrants, by contrast, destump in order to be able to plough. They do not move on. And, many Burunge add, during the dry season the Rangi cut green wood in order to have dry firewood ready for the cultivation season. Few Burunge plan the year that carefully. It is rare

to see stacks of firewood next to a Burunge house, whereas it is a common sight in Rangi areas – and in any case many Burunge object to the idea of cutting living trees for firewood.

The Burunge attachment to forests has played a role historically in keeping their hills better preserved than the Kondoa Irangi Hills. The woody biomass stored nutrients and moisture. The forest provided shade and preserved soil structure through its root mats. In fully cleared land, in contrast, the soils are subjected to desiccation by the sun, leaching by rain, and erosion by wind and water.

Close to nature?

The historians David Anderson and Richard Grove (1987:4) write that “much of the emotional as distinct from the economic investment which Europe made in Africa has manifested itself in a wish to protect the natural environment as a special kind of ‘Eden’ /.../ The desire to maintain and preserve ‘Eden’ has been particularly pronounced in eastern and southern Africa /.../ portrayed as offering the opportunity to experience a wild and natural environment which was no longer available in the domesticated landscapes of Europe.” The local population have alternately been regarded as the destroyers and the preservers of this environment.

Given the emphasis during recent decades on “Green development” and “Ecological living” in the West, many of us have come to nourish hopes for ecological utopias (cf. Dahl, 1993a:4,7). This may easily make outside observers infer that living in an ‘Eden’ means actively and consciously caring for ‘nature’. To the Burunge, however, it means allowing nature to have its way, not disturbing its life-giving force.

The Burunge and the Rangi both hold that the Burunge “respect trees” in a special way. There are many implications attached to this notion. It includes such diverse associations as being “pagans” and “primitive”, roaming around in the forest, fiddling with their beehives instead of farming to produce food. At the same time the phrase also contains a recognition that the Burunge have not destroyed their

environment, and that they are “gentle people” who do not create problems for others, i.e. ideas not too different from what in the West is associated with being “close to nature”. All these different views have their empirical counterparts. It is true that only a minority among the Burunge are either Christians or Muslims. Honey is of importance to many households, and hunting to some, and forest fallows are relied on to maintain soil fertility. The despair many Burunge express when the forest is being lost to a cultivation steppe similarly fits well with the idea that the Burunge “respect trees”. But the rash conclusion should be forestalled, that the Burunge therefore have a particularly caring attitude towards their habitat. The case is rather that they expect nature to manage, much in the same way as a Burunge will expect a neighbour to know how to go about his/her own life. Do not impose yourself unduly on your neighbours; and neither on nature. What the Burunge and the Rangi both appear to have in mind when thinking of the Burunge as “close to nature” is the stereotype that Burunge do not practise *kilimo cha kisasa* (modern agriculture) and the fact that many clear the forest in a way that allows it to regenerate easily.⁵

God's wishes and people's deeds

Most Burunge believe that if nature is not abused, and people behave decently towards one another, God will send the rains, and the crops will do well and the beehives will be full of honey.⁶

Introducing declining yields as a topic of conversation did not provoke comments about land degradation. The fact that the last few years' rains have been poor, most Burunge argue, is the reason why the harvests have been below expectations. Rains are “the work of God”, and thus beyond discussion. Rain can be stopped deliberately but may also fail because of the way people (mis)behave: “The words of the old people used to be very good. Now people say anything they like and there are no rains.” Some express such feelings with reference to a more active divine intervention: “Perhaps God wants to show us something. People have been playing around.”

Such thoughts are also formulated by the Rangi. As the harvests are now declining in Lower Irangi, many Rangi see this as God's punishment because some settlers have disrespectfully squandered their bumper harvests in the towns and on conspicuous investments when, in accordance with Rangi norms, they should have used the money to build a respectable estate for the family instead.

Normally things are in order, but then "someone" or "people" do something that puts off the rain. During 1991-94 the rains kept being late and were too short-lived. As the dry days dragged on people asked one another with increasing emphasis: Why have the rains stopped? It was an invitation to consider whether diviners ought to be approached to find out the cause and to initiate remedies. If someone is accused of stopping the rains, as happened several times while we were living in the area, the pointed question put to that person is "Why are you destroying the land?"

Over and over again we heard people saying "What have we done to deserve this drought?" This was said not only in remorse or despair, but also in an inquisitive and amused frame of mind. What goes on in secret cannot be known, but one may wonder at how life is.

Another cause of crop failure may be that people have been presumptuous. Years with good harvests were remembered when there was not even space to store all the grain, "the goats and the hens were fed on grain, people were sleeping on bags full of grain". "While people were drinking beer you could see young people lounging about on top of bags full of grain." Food was treated with disrespect, and ever since "we have only had poor years".

The Burunge share with many other African peoples the thinking that environmental problems may depend on human activities, although in a very different sense from what land management science implies. Dahl (1991:191, 1995:11) reports that in Sudan the Beja, a Cushitic-speaking pastoral people, may relate the recurring droughts to the moral conditions among the people, particularly among their leaders. In Ayirebi, southeastern Ghana, drought is seen as a punishment from the gods and the ancestors to make the community aware that they are

neglecting customs and the need to live harmoniously together (Dei, 1993:73–74). We also meet this theme in overviews by Jacobson-Widding & van Beek (1990:31f) and Shipton (1994:361f.).

Poor harvests are experienced and hunger haunts the Burunge Hills because of the “problems of the times”, according to many Burunge. Such sentiments come particularly easily to elderly people, but young people also blamed the inadequate harvests on failed rains, rather than involving themselves in questions like the quality of land management, the degree of infiltration of rainwater, the protection of catchment areas, etc.

What to the outside observer is an agronomic topic turns out also to be a problem of relationships between people, and of misunderstanding between God and man.⁷

Lamenting lost forests

If it is true to say that it is not particularly important to the Burunge that each and every parcel of land is conserved, this does not mean that they are indifferent to environmental degradation. Whenever current changes in the Goima area are discussed, it will not be long before the last twenty years’ deforestation is commented upon. The demise of the forests is a cause of sorrow to many Burunge.

When someone returns from a journey – and people are often on the move in these dry years – they say “people have become many”, or “everywhere there are people”, “you pass a place where there used to be no one and you meet people, and you hear a cock crowing from a distance and you know there are still more people”. Our notebooks were filled with comments on places where a only few people used to live but where now a settlement was found, or where villages were growing close to each other. Those who have many beehives worried as more and more forest was cleared: “There is no shade anywhere. Where are the bees to find shade and flowers?” A neighbour of ours paid a visit to relatives at Churuku and came back full of surprise:

– I asked, where is the *miombo*-forest? The hills were bald. The immigrants had cut the trees to burn bricks for their houses and to get firewood. Will trees ever grow there again?

People recalled how not so long ago there were large forests even close to Goima village:

– Where you are now living I used to shoot antelopes in the 1960s. And where the road for Jenjeluse leaves Goima village you met rhinos, even in the middle of the day.

The area has changed. Many Burunge feel strongly, that it all started with the political doctrine that land is the wealth of the nation, that everyone who needs a piece of land to provide for him/herself should be given the means of his/her survival. “But”, the Burunge say, “tomorrow their relatives arrive while they all have land in their home areas. They come just to get rich. They want more and more land and the land dies.”

Over and over again we heard descriptions of how the immigrants built roads to bring in tractors and lorries. (In Chapter 6 we shall study in more detail the cultivation frontier in the Burunge Hills.) They need more and more new land. “They are after money, and when there is trade it is like war.” Pius Damasi, a well-off farmer and a long-standing member of the Goima Catholic church council, outlined how “ploughs and brick-kilns swallow land and trees. The land cannot support all the investments made in towns.” The point he makes, like so many others in Goima, is that considerable proportions of the profits from new clearings are removed to urban areas to be invested in business, transport and real estate.

The area has become colonized by immigrants who do not want to live in the “bush” merely to get their food. They want brick houses and bicycles, they need money to pay for secondary school fees and radio cassettes. Such things have a price tag attached to them which at present reads: deforestation and soil erosion. The Burunge, by contrast, are “minimizers” who have cultivated small fields and allowed the forest to regenerate in order to be able to cultivate in newly cleared, fertile land.

Losing political control

Whenever we became involved in discussions about the current situation in and around Goima, the fate of the forest was soon referred to. As mentioned before, a booklet in Swahili on land use in the Burunge hills (Östberg, 1994b) was discussed with village leaders. During these meetings the deliberations kept coming back to the fate of the forest. We had set no particular agenda for the meetings except that we asked for criticism of the contents of the booklet. The participants picked up whatever thread they wished. They often chose to talk about the forest. The way the meetings developed the participants did not so much address us as talk to one another.

They reminded each other how, as soon as areas are left bare, the winds gather momentum and during the dry season a lot of soil is carried away. But forests break the wind and that is where the soil particles become deposited. Rain also tends to fall on forested slopes. One cannot live without the forest.

When landless immigrants had asked for land to clear, this had been granted, it was remembered, because land is abundant and the forest immense. John Bira, member of the Goima village council, repeated what many say, although the statement is not necessarily to be taken literally: "There is more land than anyone can plough even with a tractor. If you want to plough a thousand acres, go ahead." However, Mzee Ramadani Gido, a former CCM chairman at Goima, pointed out that "the late chief always argued that the area can only tolerate a limited number of immigrants. He once opposed the government when it wanted to put a bore hole at /Adiya [a *mbuga* close to Goima] as it would attract too much outside livestock and he kept advising us to grant clearing permits in Soya instead of here. That is also what happened, by and large. But later villagization came and the people became many. And now the forest is gone. Some forest remains, but it will be lost."

As long as the Burunge had a firm hand on village politics the situation was regarded as under control. The new political realities have provided a new stage and the immigrants have become numerous.

At the same time, public control over land resources has dwindled as the administration was gradually starved of resources. To the Burunge leaders these different developments appeared intimately linked. They despaired of the prospects. "There will only be a name left. People will ask, what does this 'Burunge' mean? They will not know that once there was a people here named the Burunge."

The Burunge have no means to protect the forest. What remains for them is to talk about how it was when "people had respect for the forest". When they criticize the destruction of the forest they simultaneously grieve for the demise of what was their way of life, their "health", their good "coolness". The forest could be used for people to live, but it could not be used up without killing the country and the people.

Indeed, many of them have themselves been instrumental in clearing the forests, working as the immigrants' *vibarua*. Could they not have refused to do this? But the immigrants came on the authority of the Tanzanian policy of growing food for the needs of the country's citizens. And, besides, many Burunge are in need of whatever income they can find during the long dry season.

Losing ritual control

A common answer to the question of why the rains fail was that a tree had been cut which should not have been touched.

A ceremony of reconciliation is required when trees are felled that are the homes of spirits, or where beehives are mounted, or trees growing close to water. The spirits become annoyed, leave their tree and must be appeased. "If you quarrel with your wife, and she leaves. What do you do? You follow. You ask for pardon. You pay, you compensate. Will she then not return?"

The culprit will be asked "Why do you destroy the land, like a bull?". If he turns out to be an outsider, someone clearing the forest for cultivation or a logger, he will probably not provide the black goat or the sheep or bull required for the ceremony. The Burunge have no

possibilities of pursuing such a case. All Burunge can tell of incidents when the immigrants ignored what the Burunge regard as proper behaviour in relation to the forest.

Bibi Sumbu is the hereditary *hhapeeloo'ay* at Madah. She is aged, however, and a middle-aged son *Timka* now performs the duties. She had gone to collect water at a well below Madah hill. It is an old well, once dug by the old woman's father. Rangi women were drawing water there as she arrived and a young Rangi herdsman was watering his livestock. As *Bibi Sumbu* helped herself, the herdsboy got it into his head that she was obstructing his work. He upset her gourd so that the water poured out. When he had finished his work he blocked the well with thorns. His impertinence made *Bibi Sumbu* call a curse on the peace of the land. "If you are the land owner, young man, you just keep watering your animals."⁸ Since then the water has disappeared from the well.

This was in 1991. At the onset of the dry season in 1993 two Rangi elders approached *Bibi Sumbu* and *Bwana Timka*. They offered a goat if the ceremony that would restore the peace of the area, and bring the water back, could be arranged.

Yes, this could be done but the Burunge elders had to meet "as owners of the land". On their own *Bibi Sumbu*, or *Bwana Timka*, could do nothing. Only the elders could call the *hhapeeloo'ay*. The implication of this reasoning was that the elders would publicly formulate the reason why the *hhapeeloo'ay* was to be called, and this would be accompanied by an apology from the offender. Bringing back the water was not a question of merely carrying out a technical act. *Bibi Sumbu* explained that if the *hhapeeloo'ay* blessed the well without an apology, water would indeed appear, "but the herdsboy will become proud, he may boast and then the elders will get angry. Someone may well curse anew...". Her view was that it would all turn into a game in which the immigrants would continuously be reinforced as those who were setting the norms governing life in Madah.

The Rangi offer never materialized. A reasonable guess is that they did not accept the framework of the ceremony that the Burunge envisaged. It would have implied that they acknowledged the rights of the

Burunge as firstcomers to the area.⁹ Here, in their expansion areas, they prefer not to think in such terms but rather argue that “land is from God” and that the interests of no group or individual take precedence over those of other human beings. The Rangi decided to dig for water in another part of Madah. The Burunge remained without water and with diminished authority over what they consider to be their area since time immemorial.

When *Bibi Sumbu* was insulted at the well she cursed the land, not the herdsboy. We were provided with an illustration of how the authority of the *hhapeeloo'ay* extends over land, not individuals. The curse was a public statement directed at the immigrants collectively. It was also on a public, collective level that her group was defeated when the ceremony of appeasement failed to take place.

There is a background to this incident which was in the minds of all involved while the deliberations were going on. The father of the young herdsman who had offended *Bibi Sumbu* was already involved in another conflict with the “owners of the land”. He had built a house at the site of an old grave. This house accidentally caught fire soon after it had been completed. He was told that he ought to perform a ceremony to cool the land. He agreed to do so, but never called people for the ceremony. The Burunge that we asked were of the opinion that he thought that they had fabricated the story of a grave only to get free meat to feast on. The man hired *vibarua* to rebuild his house and that was the end of the matter, until one of the walls of the house chanced to collapse.

Now the Burunge elders in the neighbourhood were resolute that a ceremony had to be performed. “This man is killing the land.” However, the owner of the house had also grown stronger in his conviction and was now no longer in favour of a ceremony. Two meetings were called but the owner of the house did not show up. Had it all been a matter within the Burunge community, the culprit in such a situation would have been brought to the meeting by force. This was not possible, however. It could have had unpredictable repercussions in an area where all public posts are held by the Rangi. The Burunge remained with abused land, and, as in the case *Bibi Sumbu*, with their

understanding of how people should behave towards the land and towards one another slighted.

Had it been a matter of only restoring the well's water or the peace of the land, the Burunge could have carried out the ceremonies themselves. Water would have appeared, and the house would have stood firm, we are assured. But they never contemplated this option. Obviously what was at stake was understanding between people, and understanding of what constitutes decent behaviour. The Burunge felt deprived of their rights, and these were not restored.

But, was this episode necessarily a confrontation between immigrants and the original inhabitants? Does it not fit into a general pattern in which traditional restrictions everywhere lose force as local communities change and become incorporated into wider socio-political frameworks? What happened, for instance, to the case mentioned in the Preamble to this book, when the administration decided to cut a few branches from the big Ficus in the middle of Goima village? Did the government employees contribute a sacrificial animal for the ceremony the Burunge elders found inevitable?

When we left Goima in November 1991 the rains were imminent and the elders argued that things must be put in order so that the rains could fall as they should. When we returned in May 1992, at least one ceremony for the rains had been conducted at the tree. It had taken place in February, when fears had been high that a drought threatened. We never learnt who had provided the black goat required. All those we asked held firm but diverging opinions about what had happened. Five trustworthy and well placed men gave the following variety of versions, which by no means exhaust our collection of answers:

– Everyone contributed so that the *hhapeeloo'ay* could sacrifice a black goat. The employees at the office were told: "You are guests here. You did something which should not happen. Why do you not put things right?" But they had refused and people had to solve the problem. It can be done also that way, but then the officials may later see what follows. (Identity withheld.)

– It is those who “own” the land at Goima who should see to it that the necessary ceremony is conducted. Since the offence was committed by the administration it will be the villagers themselves who will have to contribute the animal. (Mzee Meda Unei.)

– The Ward Executive Officer paid 1,500 shillings from his own pocket for a black goat after the *hhapeeloo’ay* had been to see him and made him understand the situation. The official was also present at the ceremony, but he never shared in the meat. All went round the tree to arouse the spirits. Everyone asked for forgiveness. They killed the goat. Then the matter was over. (Identity withheld.)

– Yes, an old man came to ask for a goat because we had had to cut two branches from the tree. “Well”, I said, “it is very good that I now get to know who is responsible for the tree. Because those branches could have harmed my family and everyone who lives in the government house there. Now I had better deal with you.” The old man was afraid of being imprisoned and so off he went. Later, a ceremony was in fact carried out at the tree, and they invited me, but I told them “You mind your business, I have other matters to attend to”. He who owns the tree must of course make sure that it does not cause damage. But they tried to avoid the cost of a goat by putting the blame on the administration. (Huseni Mbaraku, Ward Executive Officer.)

– A ceremony was indeed held by the tree but it was for the rains generally and not because of the branches that had been cut last year. Someone had been accused of stopping the rains [through witchcraft] and to show his good will that person contributed a black goat for the ceremony. As for the tree, the cost of the goat will be paid from the village purse and the worker who cut the branches will be the one who will carry out the ceremony. (Christopher Mwigani, employee at the cooperative office.)

The last time we inquired about this matter was in September 1994. Nobody seemed to care any longer whether the proper ceremony had been performed or not. What had been on many people’s lips a few years earlier, although some had felt uncomfortable about discussing it as the administration was involved, was now a dead horse. Instead

public interest was occupied by how a Burunge couple had been accused of having stopped the rains. This *was* a dramatic affair, but it is a different story. The point to be made here is that Goima village was divided between being the seat of an administrative division in Tanzania where Burunge norms did not carry any weight, and being a Burunge-dominated village where their way of relating to processes in nature was indeed important.

We may thus conclude that *Bibi Sumbu's* words would have carried weight if Madah had still been a Burunge-dominated community. But Burunge-controlled areas have now become very few. When the Burunge lost the control over land distribution, permissive as it may have been, their prerogative as firstcomers also dwindled.

Epilogue

Their forest is an immense building of flickering light, slender trees and dry grass. We walk through layers of light and air. The sun drifts through a canopy both providing shade and allowing spots of light to illuminate the dry, reddish-grey ground. Below the plains dissolve in light.

The savannah is close, the rain forest far away.

When the Burunge lament their lost forests, when they spontaneously return to this theme time and again, or when one follows their gaze in the direction of hills where still more forest burns to make room for cash crops for distant markets – we learn what they mean when they say that someone, something “kills the land”. When they say “God made it that way” as an explanation for why, for instance, the forest brings “health”, the inquisitive outsider may take it as evading the question. Instead the Burunge tell us how it is when things are the way they should be. They lean back in the assurance that the forest is the provider. They are at home. As Bwana Bira of Kinando said: “The forest is food. You have your fields. You harvest. You eat. You are at home. Nothing is bad.”

To many Burunge “God made it that way” *is* an answer. When we continue the questions: how did He do it, why did He do it that way... the questions just slide away. When the forest is there, the land is abundant, the rains come as they should and there is food, then everything is the way God made it.¹⁰

When, on the other hand, this natural condition is upset, when trees are felled indiscriminately, when people do not show respect, when “evil things” stop the rains, then the Burunge become removed from the confidence in which they belong.

To the Burunge *kazi ya Mungu*, God’s work or “it is in the hand of God”, or “the way God made it”, is no shrug of the shoulders. They speak of peace. We are not being cheated of an answer. It is only that we do not listen.

5.

Rhetoric about land and people

This chapter contrasts Burunge and Rangi views on land, farming and development – a topic which is continuously evoked by both groups as they comment on everyday events as well as the future of the area. However, this is not to be a general account of ethnicity in the Goima area. The discussion will focus on differences in attitudes towards the management of natural resources. Contrasting views between immigrants and indigenous people have been an undercurrent throughout the previous chapters and will also feature in the next chapter on how the Burunge Hills are being re-colonized. Now it is time to explore this theme more directly.

The vast majority of immigrants are Rangi. From their home areas they bring with them experiences of land shortage and of severely degraded lands, but also a tradition of making use of expansion areas, as well as an orientation towards economic progress. In Goima such experiences blend to produce an attitude that is identified, by both the Burunge and the immigrants themselves, as characteristic both of the Rangi and of all newly arrived people. We shall follow the local habit and use the words “Rangi” and “immigrants” somewhat interchangeably. The extent to which it is economic interests or ethnic characteristics that make locals and newcomers disagree over land management is absolutely crucial to our discussion. What, however, constitutes an important background to what follows is the fact that the interaction between the groups takes place in a situation where the immigrants are overrepresented among the better-off groups and the original inhab-

itants among the poor (cf. the discussion of social stratification in Chapter 1).

The process of expansion

The standard Burunge description of how the Rangi acquire land goes like this: Many households do not cultivate all the land to which they have access; a part will remain which they intend to cultivate when a field is fallowed or as the family expands. A Rangi first comes and asks permission to cultivate for a period. This is granted. What subsequently happens is that the Rangi will build a house there and retain the piece of land that was offered as a temporary help. S/he will start to create difficulties. The newcomer may even sue you in court to get the remaining land you cultivate. The Burunge do not like quarrels. They would rather move.

The Burunge Hills are a current expansion area for the Rangi. They first settled in the Haubi basin about 250–300 years ago (Eriksson, 1995:6; Mung'ong'o, 1995:39–41) and have in different phases spread over the Kondoa Irangi Hills and eventually also out on the plains to the east (Östberg, 1986:29f,69f.,92f.; Mung'ong'o, 1995:86f.). They have penetrated Alagwa areas to the north-west, and the Alagwa remember this process with words almost identical to those the Burunge use today (Östberg, 1986:31). Fosbrooke (1958) noted that Alagwa and Rangi lived together at Kolo in the early 1950s. With reference to the southern border, he later wrote (1982:11f.) that it “is not immediately apparent why the Rangi, who have blended in with the Wasi [i.e. Alagwa] so easily to the north and east of their area have not penetrated into Burunge country to the south”. By the mid-1980s however, the Rangi had a firm grip over the area around Paranga village (Östberg, 1986:30f.). Now the Rangi are in a majority throughout Goima Division with the exception of Chambalo, Goima, Kambi ya Nyasa and Mirambu villages and the settlements in the Burunge Hills excluding Madah. Pampay, administered as a *kitongoji* of Makamaka

village, had 66 Burunge households and one Rangi household in 1993 (cf. map 3 reproduced in Chapter 6).

Also in villages where the Burunge are still in a majority the Rangi exercise a marked influence. At Kambi ya Nyasa, where they make up slightly more than one-fifth of the households, the village chairman and 13 of the 15 members of the village council are Rangi. The Mirambu chairman is a Rangi. In 1993 Chemba was split evenly between the two groups but all positions but three in the village council were held by Rangi. In Chambalo the initiative is Burunge-oriented while in Goima the presence of the Division and Ward administrations has a definite influence on village politics. Ownership of economic enterprises in Burunge-dominated areas, though quite few in numbers, is largely in immigrant hands (Table 5.1).

	Shop	Café	Grinding mill	Bicycle repair	Tractor	Ploughs	Carp- entry
GOIMA	2	7	1	1	—	13	—
Burunge	1	2	—	—	—	4	—
Rangi	—	5	—	—	—	3	—
Other	—	—	—	1	—	6	—
Institution	1	—	1	—	—	—	—
MIRAMBU	1	2	1	3	2	3	1
Burunge	—	—	—	—	—	—	—
Rangi	1	2	—	3	1	3	1
Other	—	—	—	—	—	—	—
Institution	—	—	1	—	1	—	—

Table 5.1 *Economic enterprises in Goima and Mirambu villages, 1993.*

The Rangi have come in search of land. If they had been able to choose they would have preferred to live in Haubi where water is available, vegetables are grown all the year round, fruit trees are plentiful, and the dry season is far less taxing. Haubi remains the place for respectable Rangi life.¹ But Goima and the Burunge Hills offer land, not only land as *shamba*, field, but also as *eneo*, extent, range; with the possibility of expansion, growth, development.

The carpentry workshop at Mirambu village.

This, then, is the background to the following little collection of Burunge accounts of how the Rangi acquired land in the Burunge heartland in and around Goima:

– The Rangi came first to buy beeswax. They came with soap and exchanged it for beeswax. People became friends and some Rangi asked if we could look after their livestock, which we did. All the time they had land on their minds. The trade, the friendship, everything was to lead up to one thing: to get a shamba. First they ask for a piece of land to cultivate; the next day they claim that they have bought the field.

– The first Rangi to settle at Mirambu had already had their livestock herded there by Burunge friends. Later they asked if they could cultivate, and they came and built their houses.

– First they make friends. Then they come and visit. They may invite you, or a son of yours, to come and visit them. You go there and you are welcomed. They come again to visit, this time bringing a relative or two. You become acquainted. Somebody will ask for a piece of

land to cultivate. He is given it. Soon you will see Burunge starting to move out of the area.

– My father was invited to a Rangi friend's house at Aya (close to Mondo village). Later the Rangi came and visited at home, and I was given a shirt. I was still a child. Later that man got land from my father, and became rich. Now the friendship no longer counts. He just says *jambo* (a neutral greeting) when we meet. Nothing more.

– You give your friend a piece of land to cultivate. The next day the relatives arrive.

– These days the Rangi say that land belongs to God and to him who can cultivate it. They just take what they need. We have no voice.²

The underlying message, then, is that, by being at a disadvantage and pretending friendship, the immigrants get a foothold in the area which they quickly use to take over the initiative. These testimonies concur well with what Igor Kopytoff (1987:50), in an overview of the frontier situation in Africa, describes as one moment in the subjects' standard story of how the rulers came to power: "The ancestors of the present rulers arrive meekly on the scene /.../ meekness then gives way to ambition and they assume power, with varying degrees of assent by the people".

In this case, the description of cunning, or even treacherous, behaviour is provided also by the Rangi themselves, although of course without the bitterness that permeates the Burunge accounts. A story told by both the Burunge and the Rangi, and leading up to the same conclusion, tells how Burunge and Rangi long ago lived together at Haubi, which today is regarded as the cradle of the Rangi. The Rangi suggested that they should ask the land to which of the two groups it belonged. Beforehand a Rangi man had hidden himself in a termite hill. When the Burunge elders asked in their language if the land was for the Burunge silence reigned. When the Rangi elders put the same question in their language there was a quick answer from the man hidden in the ground: "This land is for the Rangi". And the Burunge had to move away.

Rangi rhetoric dwells on how they came into possession of land through forms of "friendship" and "co-operation" that come close to cheating. They admit themselves that they are quick to open court cases if their interests are challenged. It is thus not a particularly noble picture which the Rangi paint of their successful expansion into the different corners of Kondoa District, and beyond.

So much for attitudes and rhetoric. In everyday life there is also close interaction and co-operation between the Burunge and the immigrants. And not surprisingly so, since intermarriage and integration form part of the expansion process. The Rangi make a point of stressing that during their expansions they never used force to establish themselves. In this they in fact exhibit a trait which is typical of what happens when peoples with similar levels of technology meet. Rather than physical strength it is organizational and political skill which decides how successful the intruder will be (Kopytoff, 1987:28). Rangi expansion has, at least during the last few decades, been backed up by a reasoning difficult to call in question, since their needs for more land have coincided with a government policy of expanding cultivation to produce food for the rapidly growing urban areas. Rangi expansion appears to be a direct answer to the government's hopes. In the Goima offices the word immigrant is currently more or less synonymous with progress and modernity. "Just look at Goima itself, this old Burunge village. It has one small shop, and a co-operative which is more defunct than operational. There is not a single tractor. Nothing happens. And yet it is the divisional headquarters. But just ten kilometres down the road a much more recent village like Songolo has numerous well-stocked shops, a weekly market, a busy mosque, tractors, lorries, you can buy yourself lunch... Not to mention Soya, which is even more recent, and many times bigger and a real trading centre."

The Rangi have been able to make their interests and their conception of what counts in society, and for the future, become the norm against which events and opinions are measured. They emphasize that to a place where ignorance previously ruled they have brought modern agriculture, political committees and links with modern Tanzania.

Stealing strength

So, the immigrants acquired land. It did not stop there, however. In popular Burunge parlance the strength of the land is also said to move from the original inhabitants to the newcomers:

– You cultivate beside a Rangi, and he harvests while you don't. The rains were the same, but you are hungry while they have food. Look at what is happening at Chioli (one of the expanding communities in the hills). The Burunge have started to leave. They do not want to have their fields destroyed.

– If your neighbour is a Rangi, you don't get anything in your fields. Why?

– They take the seed. They do something to the seed so that we don't harvest while their fields bear a lot. They don't want us to harvest. They are after cheap labour.

– The first year there is no problem. They don't want to discourage you. The second year they are already bold. Now they have already gone over the top. And they come and ask "Do you need to earn a *debe*? That is half an acre (of agricultural work). Or do you need two? That is a full acre."

– How is it that the Burunge gets only a *kimbo* tin of grain while the Rangi are selling sacks of grain in town?

It is said in many parts of Africa that afflictions like sickness, childlessness or poor harvests result from a weak life force. By living poorly your life force may be impaired. But it can also be actively taken away from you by witchcraft. When the Burunge see crops doing well on their Rangi neighbours' fields, while their own fields have a poor crop, many of them feel that the immigrants have manipulated the strength to flow their way.

The immigrants do not pay much attention to such allegations. They know that they have the support of the administration if need be. If they care to comment, they say that if they get better harvests this is because the Burunge weed badly. "They do not even realize that one must thin out young bulrush millet." This is, of course, only a stereo-

type. But we have several times referred also to a difference in determination, for instance in Chapter 2 when we found different organizing principles underlying working parties arranged by many immigrant households as compared with some of their Burunge neighbours. Similarly, we argued that the immigrants have their minds set on producing a surplus from land that many Burunge want to disturb as little as possible. The popular sayings quoted above refer to a difference of orientation in relation to farming and economic gain which is recognizable in many spheres.

Immigrants commonly say that the Burunge drink and feast excessively and that they are slack towards their children. Burunge women are said to be impossible to "control". All in all, the Burunge are criticized for moral inferiority, laziness and a general lack of determination to improve their living conditions. Many immigrants come with a different attitude – in desperate need of land and with hopes for a new future. Many are prepared to work hard to achieve this. Mung'ong'o (1985:87) notes that the expansion areas attract "energetic risk takers and profit seekers".

In Kondoa town one may hear comments about people who arrive from the expansion areas that they "are truly men", that "they know how to consume money" (cf. Östberg, 1986:69). The frontier stands for being successful and making money and thus appeals to one set of values in Rangi society. But it is also an area without cultural sophistication. Respectable Rangi life centres on decent affluence, established community life, political skill, elegance in behaviour and speech, observance of Islamic virtues and certainly not excesses of any kind. The expansion areas on the plains and in the Burunge Hills are characterized by roughness and hardship, but also with a chance of windfall profits. You endure hardships in order to build yourself a future, preferably in the Rangi core area of the Haubi basin or in Kondoa town. Newbury (1987:164) makes the point that the values projected on the frontier may not necessarily replicate those of the core area, but "focus on the core area's ties to the frontier". On the frontier you become rich while in the more established life of the Rangi heartland the ideal is to manage the affluence wisely.

If the Burunge Hills thus represent the chance to become someone in Rangi society, they are in themselves seen just as "bush". In contrast to many Burunge, the settlers find nothing intrinsically valuable in the varied woodlands and the tranquillity. What the hills offer, apart from precious land for the landless, is an arena for exploiting opportunities, for transforming idle resources into wealth (cf. Östberg, 1986:25, 37, 40, 71). In this way the Burunge Hills, and the expansion areas generally, act as a developer of traits in Rangi society. The Rangi living in Goima Division project Rangi identity into new areas, while at the same time also providing the Rangi heartland with empirical confirmation of the truth of these values.

After this short digression to bring Rangi society into focus, M.H. Kova, the Divisional Executive Officer at Goima and former chairman of the CCM party in Kondoa District, will help us get back to Goima as he sorts out some of the allegations that were perhaps allowed above to run somewhat wild: "Burunge people do not want to have Rangi as neighbours since we Rangi clear everything, whereas the Burunge leave a field fallow for a couple of years and allow the trees to regenerate. But when the Rangi arrive the trees die. And the Burunge move on. We cultivate fields permanently. They are shifting cultivators. People express this difference by saying that Burunge know that trees sprout, while the Rangi don't."

Ndugu Kova's remark may well reflect what happens in fields and fallows. The Burunge pattern of minimal cultivation did not severely damage the root masses of forest trees, nor did it suppress the coppicing capacity of secondary forest trees. The woodlands were able to recover in the long fallows, while the immigrants' more intensive farming has the opposite effect. They transform the forest into a cultivation steppe with its concomitant increased demand for labour inputs. Then the Burunge "come to remember" the forest and move on. But, technicalities aside, what Huseni Kova had in mind was first and foremost a difference in culture, trying to capture what happens as a number of Burunge farmers decide to move on.

Each Burunge clan is associated with an area. It has its rock, its caves and its trees harbouring spirits. The area is an embodiment of history. But then again, the Burunge are not particularly bound by the place on which they subsist. Fields are fallowed to regenerate fertility. When hunger strikes people move. What is more important than the place is its condition, that it has "good coolness". One moves to get health, peace, food.

Permanent cultivation may transform the area. We have already mentioned how the Burunge expect congestion to lead to strife between people, to sickness and, in the fields, to weeds. If the land is also being destumped and mined for excessive profits, rather than cultivated to support a family, this plays havoc with the Burunge tenet that land should be disturbed as little as possible. It hurts people also quite apart from the acreage lost. When the land no longer has life the Burunge move.

Getting established

The immigrants arrive individually, and although they may use relatives as bridge-heads to establish themselves in the Goima area, they do not live there as members of a closely knit kin group. We have already learnt how an immigrant may have acquired a "friend" in the Burunge community and come to stay with that household, perhaps marrying into the host's family. An immigrant may also have a sister married in the Goima area and will get initial help from this family to get established.³ Mung'ong'o (1995:86), observing the process from the Rangi end, notes this and adds that the "host" may also be a maternal uncle or friend of the father. Another reason may simply be that they originate from the same village. Whatever the links between host and newcomer, the process will be described as *kukaribisha wageni* (welcoming guests). To the immigrants in the settlement areas the newcomers mean additional hands to keep out vermin, to build roads and schools and to defend the interests of an expanding community. Meanwhile, the guests will also have to make themselves useful to their hosts. They

work in the fields, particularly to expand the cultivation. Having a few "guests" of course constitutes a substantial increase of manpower for the host.

Since the immigrants by and large establish themselves by individual initiative, it is not surprising that their attitude towards the land and cultivation is also one of individual effort and entrepreneurial achievement. There is little social activity to become part of, apart from the new collective responsibilities relating to the practicalities of the farming enterprise or the Muslim celebrations which the immigrants initiate. Whereas the Burunge hold that there is a correspondence between the sustenance of the land and the social communion of the people living respectfully off it, the immigrants are more inclined to trust their own efforts to make the land provide for them.

People mixing

That different qualities mix is an important value to the Burunge. The notion was encountered in Chapter 3 in the discussion of what constitutes good soil and conditions conducive to life. Chapter 2 concluded on the note that the most desirable state is reached when different qualities mix in a balanced way. When the Burunge describe contemporary life in Goima Division they often emphasise that a mix of people live there.

Despite everything that has been said above about feelings among the Burunge that they are losing their land and their forest to the immigrants, some also want to see the positive side of different peoples mixing. In this they are in tune with Tanzania's policies of counteracting ethnic or religious differences – and it is therefore of course the right thing to tell outsiders. Most people do, however, share these sentiments, which they consider characteristic of their country, and many want to contribute towards their realization. Everyone is aware of the tragic consequences ethnic politics have had in neighbouring countries. But ideological considerations aside, the general recognition that it is good when conditions and characteristics mix helps to make

many Burunge feel comfortable with the official policy that the country belongs to all its citizens.

As problems occurred, and the Burunge usually got the worst of it, we heard them using the phrase "*wenzetu warangi* (our companions the Rangi) and we try to...", almost as an invocation to bring things together, to make differences blend.⁴

To the immigrants also an important characteristic of Goima Division is that "here people have mixed" (*hapa watu wamechanganyika*) – again, of course, the politically correct message to outsiders, and at the same time what settlers claiming legitimacy for their territorial claims will find it natural to say. If they have cordial relations with the indigenous population, there can be no cause for concern. One may recall how the Herero pastoralists establishing themselves on Bushman territories denied that there was "any trouble with the 'wild' Bushmen" while serious fighting over land was in fact going on (Gordon, 1992:122). This is not the situation in the Burunge area. It never comes to an open confrontation between immigrants and Burunge, for a number of reasons. Recurrent food deficiencies, and a history of

famines, are remembered when different localities and groups have depended on each other. The Burunge and the Rangi share the history of the Kondo District. Inter-marriages are not a new occurrence. Of more immediate importance are the new possibilities of incomes that the immigrants bring, and of course the administration would police any hostility. Not only that; by actively promoting expanded cultivation and market involvement the policy of the administration also restructures Burunge relations with the land. Here, as in so many other situations in the South, the state "copes, so to speak, at the level of cohesion of the whole social formation with the dislocative consequences of the expansion of the capitalist mode" (Lamb, 1974:131-132).

The process is not without its dialectics, though. The authorities do not, of course, pose as bodyguards of the immigrants, but defend their own interests in keeping law and order. The government may also actively support disadvantaged groups or economic pursuits. A bee-keeping officer is posted to Goima. He does not have access to inputs or loans, nor to means of transport to keep in touch with his clients, whereas his agricultural colleague has the use of a motorcycle. However, his presence is a recognition that other pursuits than expanding crop production also have their worth in modern Tanzania. But note that the legitimization comes from the centre. Hence, even when traditional practices are supported, this very recognition reinforces the prerogative of the state and of modernity. Indeed, it is only lack of resources that prevents the beekeeping officer from putting every effort into replacing the local industry with imported technology.

Turning Rangi

A number of young Burunge are eager to identify themselves as Rangi.⁵ They use a Muslim name, are fluent in the Rangi language and socialize intensively with their Rangi contemporaries. Nothing reveals a Burunge ancestry. One of the Goima households that happened to fall into our random sample, and was entered with the code "RI" for Rangi and Muslim, consisted of a man in his early twenties, his wife and a

baby. When we met the husband in their fields for the first interview we asked him by way of conversation if we perhaps knew his parents. This turned out to be the case, and they are both Burunge. "But how is it that you are listed in the roster as Rangi?" The answer was that he had married a Rangi woman. Three Rangi farmers who were also present quickly assured us that our interviewee was fluent in the Rangi language, had converted to Islam on marriage, and that obviously the children would grow up to be Rangi. The correct designation of the family was, we were told, "Rangi with Burunge ancestry". That formula describes one important dimension of the rapid Rangi expansion into the Alagwa, Burunge and Gogo areas. Young Burunge join the immigrant group as they want to associate themselves with progress, with *kilimo cha kisasa* (modern agriculture) and generally with modernizing Tanzanian society. Many are of the opinion that a Muslim name makes it easier to get a job or other favours in Kondoa town. Outside the district it is likely that someone from Kondoa District will be taken to be Rangi, and some Burunge find it easier to leave it that way. They find their ethnic origin stigmatizing and prefer to be associated with those who are regarded as being successful and moving with the times.⁶

Rangi society has been successful in incorporating the indigenous populations. Marriage and conversion to Islam are obvious entry tickets, but more diffuse characteristics like living in a Rangi-dominated part of the village, socializing freely with the Rangi and being economically or politically successful may also lead in the same direction. Checking details in the population rosters Rangi informants time and again identified households as Rangi where both parents were in fact Burunge. Rangi identity spreads much more quickly than Rangi descent would account for.⁷

Many young Burunge admire the dynamic determination that characterizes the immigrant community. We sit in one of the expanding settlements in the hills trying to make out the number of households that have been added since our previous visit. Before the results of the count are noted down the general opinion of the small group of villagers who are helping us is that the Rangi now number about as

many as the Burunge. In fact, they constitute less than a quarter of the households. While the discussion is going on I particularly note a 25-year-old Burunge man whom we know quite well. He is a Standard 7 school-leaver with some experience both as a voluntary teacher and as a catechist. His eyes shine with delight and admiration as he details how the immigrants have established themselves in one part of the settlement after another. The people he belongs to may be regarded as losers in this process. But at the same time he personally feels like a winner as he gains new acquaintances who like himself have been to school and are knowledgeable about modern developments. He is fluent in the Rangi language and spends a lot of his time with the immigrants. He delights in their capacity to realize their ambitions.

He nourishes hopes for his future. In his environment it is the immigrants who represent change and success. He wants to belong to those who will succeed, and mixes comfortably with the immigrants although he is from the wrong tribe⁸, and the wrong religion, and is still poor.

Wrong tribe? Yes, ethnicity has become inscribed in what is regarded as developmental, modern. It thus says something about progress and the future rather than about tradition. The young Burunge who turn Rangi must obviously be reckoning with ethnicity. Why else bother? Becoming Muslim is often part of being accepted into the Rangi sphere, but in this case, the young man's involvement as a catechist precludes that possibility.

The forest once again

Walking into the hills one is immediately presented with the reality behind the stereotypes we have toyed with in this chapter. In the Rangi-influenced areas everything is set to create a village, whereas in the areas where the Burunge live space is left between the settlements. Beehives are important. We are in the forest. Of course, some of the harvest will be eaten by game. To our surprise we hear people say that

in these dry years life is difficult for the monkeys. There is no food, no water and they suffer.

We are told of a man who did not get anything to harvest as game finished off his crops. The ensuing comment was said tolerantly, not really critically. "It is senseless for him to cultivate since he does not have children who can guard the crops. But, you know, he is a man of beehives, not of fields."

In Madah, by contrast, where the immigrants have taken over, it is the new road that counts, and profitable finger millet production. Madah has linked itself with the commercial centre of Soya and people look forward to their road becoming the main connection with Kondoa town. Not a single maize cob is lost to the forest which is cleared away.

6. Recolonizing the Burunge Hills

Standing on the rock outcrops above Mirambu village one gets a beautiful view over the open plains stretching towards the Kondoa Irangi Hills with the wide sandy Kelema river below. A large gully eats its way right through Mirambu village. As it reaches the plains below the settled area, where the fields stretch out, it spreads into a sand fan covering the cultivated land. Mzee Ramadhani Athumani¹ is one of those who have had their fields destroyed by sediment from the hills. He tells us that he has cleared 19 acres further out on the plains to compensate for the land that has been lost. The new land is far out on the plains beyond reach of the sandy river. Along the border of the destroyed fields he has planted a barrier of elephant grass to trap the sand. He will plant again as soon as a protective ridge has formed.

During heavy rains the unprotected catchment above Mirambu village may discharge sediment which endangers both settlements and fields below. People with resources like Mzee Ramadhani, have no difficulty in finding alternative land. In his new fields he has planted two commercial crops, finger millet and sunflower, mixed with some maize and red sorghum to be used to recruit casual labour for the farm work.

These two fields are not the only ones cultivated by Mzee Ramadhani. Problems of soil erosion in and below the hills pose no immediate threat to his well-being. As this chapter unfolds we shall learn that the process of resettling the hills may affect poor people differently.

Miombo woodlands in the Burunge Hills

This chapter describes the current recolonization of the Burunge Hills, an area of about 300 square kilometres, portraying different actors and their respective strategies in relation to land resources in the hills. The hills are undergoing rapid changes and therefore some documentary evidence on the current situation is provided. The relationship between farming in the new settlement areas and in the villages is discussed. The reasons behind the cases of gross mismanagement of land by small-scale farmers are presented in an effort to understand why some of them exhaust the land they depend on for their survival. The crucial role of external factors in regard to current developments in the hills is emphasized.

New possibilities, no safeguards

New conditions prevail in the Burunge Hills in the wake of the economic liberalization that began in the mid-1980s, formalized as a succession of three-year "economic recovery programmes". The political reorientation of 1992, *mageuzi* (the transformations), when Parliament passed legislation introducing a multi-party system in Tanzania, was a further decisive step in the same direction. Areas that were evacuated during the villagization process in the 1970s are again settled by Burunge families returning to their old home areas, but even more so by immigrants to the area who come in search of vacant lands, determined to improve their lives.

It is a time of new opportunities and people of quite varied interests make inroads into the hills. The previous communal efforts to create well serviced communities all over rural Tanzania, with schools, dispensaries, water points, village tractors and granaries, have given way to a rush to secure new private resources. *Twende kufyeka* (Let's be off and clear new land) is a phrase on the lips many farmers. More commercially oriented people see the possibility of harvesting finger millet from newly cleared areas and selling the produce at a substantial profit to breweries in the Arusha area. When new fields are opened up in the Burunge Hills vast numbers of trees are felled and burned on

site. More often than not land is cultivated without any conservation precautions. Other entrepreneurs bring in large livestock herds while timber and charcoal are assets which are less exploited in the hills; the transport costs are apparently regarded as too high.

Neither the village councils of the communities surrounding the hills nor the district administration are actively managing the recent colonization of the hills. It is just happening. The authorities recognize that many people have legitimate demands to obtain access to new land, and one obvious solution is to accept that fields are cleared and livestock grazed in the hills. Such an attitude finds its corroboration in the ideology that land belongs to all the inhabitants of Tanzania as well as in the political tenet that those who have *uwezo* (ability, capacity) should be allowed to use it to produce food. This policy has a firm grounding in Tanzania. While the land redistribution during *Oparesheni Vijiji* aimed at providing all households with a minimum holding, some farmers were also allocated additional land in proportion to family size as well as to their ability to produce.² The same principle also informs customary land allocation but results, as Aud Talle (1991:20, 34) has observed, in quite far-reaching consequences when applied to business people who make money by large-scale tractor cultivation.

According to the Local Government Act forested areas are administered by the village councils. In reality, the situation is less clear-cut. A careful settler would do well to consult the *hhapeeloo'ay*, the traditional custodian of the land, and the *balози*, the village section leader, and prospective neighbours, as well as the nearest forest officer and perhaps land officer. On the other hand, it is also true that in this fluid situation a person of resources who is determined to make use of public land will often be able to have his/her way. If things are carried to extremes and one of the village councils sues a settler it regards as an encroacher, it would have difficulty in substantiating in court its own rights to allocate land, since none of the villages surrounding the hills have title deeds to their land.

Forest officers are doubtful about their right to intervene. "We can advise, but that is it. As long as people do not cultivate on steep slopes,

on hill tops or along streams, they have the right to make use of the land. If they do it carelessly, that's too bad, but they cannot be forced by law to cultivate in a proper way."

The village councils issue permits to clear land and in some cases the forest guard or a local committee will advise on where and how to clear it. In other cases people just go ahead with the work. The clearings represent a considerable economic value which makes it difficult for the administration, which is weakened by both the economic recession and the new political direction, to take a firm grip on what is happening in outlying areas. Among the local elite groups it is difficult to think of anyone who is not able to profit from the current situation. When business people mine the soil officials may get their share. Extension staff, teachers and townspeople can supplement meagre incomes by agricultural speculation. The threat against the Burunge Hills is thus not easily confronted.

Now, before we meet the different actors in the hills and discuss how the land is faring, a few words first about how the information for this chapter was collected, since the work was conducted in a somewhat different way in the settlement areas as from how it was carried out in the villages.

Field work in the hills

Together with Mohamed S. Senyagwa, the then village chairman at Chambalo, my colleague Claude Mung'ong'o from the University of Dar es Salaam and I had set out for Morah hamlet. It is a beautiful walk through undulating hills, into secondary acacia woodlands growing up where people used to cultivate before they were moved off the hills during the Oparesheni Vijiji in 1974.

We saw livestock being grazed in the forest and met a group of men working on a beehive beside a cedar tree they had felled. The general impression of the area was of an abundance of resources. But a number of fields in the foothills also gave evidence of soil erosion and in

several instances cultivation ridges were arranged up and down the slopes. We saw cleared areas close to river banks. And everywhere cattle tracks led off in different directions.

Mzee Duba resting in the porch in front of his house in Morah high up in the Burunge Hills.

The seasonal Tumbah river cuts its way through the landscape. On its steep banks sediment has been deposited on top of clay. Recent vegetation growing on top of the sediment indicates that the landscape had stabilized when people were prevented from cultivating some fifteen years earlier. At the same time a look at the map shows that the catchment area is about 55 square kilometres and it is thus no surprise that the Tumbah river carries large loads of sediment.

Eventually we ended up at the home of Mzee Duba high up in Morah. He received us kindly, if also with a wait-and-see attitude. It soon turned out that he and the chairman knew each other well. Although Mzee Duba retained his reserved attitude, and was rather evasive during the conversation, the two notables also related to each other in a manner that approached institutionalised joking.

We learnt that Mzee Duba had been among those who refused to leave the hills in 1974. He and his family had hidden in the forest as their houses were burnt down by soldiers. He never agreed to live in Chambalo village, to which they were forcibly moved, and had soon launched a tug-of-war over the right to return to Morah. (It was also difficult in practice for him to settle in a densely populated area. There was a time when his cattle herd numbered 160 heads.) Now 15 years later feelings had calmed down and there was no doubt that the chairman was quite appreciative of this stubborn elder of Morah.

Later I came to know that Mzee Duba was the *hhapeeloo'ay* of Morah and also the husband of a neighbour of mine at Goima, Mama Maria Silooti. This meant new connections with Mzee Duba, who subsequently entertained us on several occasions with both food and reflections on Burunge culture and history.

This little sequence of events is rather typical of how the field work took shape in the hills. No recorded information is available. One has to look and learn. The people in the hills live there without security of tenure and have every reason to play a waiting game with inquisitive visitors associated with official Tanzania.

In 1992, when we had become fairly familiar with life in Goima Division, Joseph Mduma and I started more systematically to walk the paths that criss-cross the hills. Some of those who had fallen into our

random sample of farmers in Goima and Mirambu villages cultivated fields in the hills. We had legitimate reason to visit them. One of the

Map 3. The Burunge Hills are situated in the south-eastern part of Kondo District. Most Burunge live in the villages at the foot of the hills. During the villagization process of 1974 the Burunge who lived in the hills were forcibly removed. Today the hills are again being colonized. The Burunge make up the majority in Chambalo, Goima, Kambi ya Nyasa and Mirambu villages while the Rangi have become the largest group in the other villages. Inside the hills the Rangi dominate Madah, whereas the rest of the settlements have a Burunge majority.
Map by Karin Weilow.

school teachers at Goima became head teacher of the new school at Madah and we did not wait long to visit him. Eventually an agreement was made with the village committee³ at Madah that we should make a photographic documentation of the achievements of this fairly recently established settlement. This provided us with a role in Madah that both we and, so I believe, the leaders of Madah found advantageous.⁴

We did not try to compile a roster of households living in the hills. Nor did we use questionnaires. Instead we opted for informal conversations, while trying to make sure that as varied categories of settlers as possible were included. Systematic farm interviews were carried out, without difficulty, with the seven farmers of our sample who cultivate in the hills. (Since the rounds of interviews have been concluded several more farmers from our sample have moved into the hills.)

Some settlers showed a guarded attitude, were surprised to see us turning up at their homesteads and questioned our motives for inquiring about their lives. Many tried to be as imprecise as possible if the conversation touched on how they made their living and were anxious to show that nothing took place which could be interpreted as breaking the law (no, I have not made any new beehives for years; no, definitely this field was cultivated when you first came here...) A few of the older people we met were initially afraid to talk to us. Apparently some feared that plans for moving people or livestock were in the offing.

Opening a frontier

In one of the small cafés in Mondo village, on the border of the Kondoa Irangi hills, farmers who cultivate out-fields in Goima Division tell of comfortable conquests. "Even close to the village centre in Goima I can easily buy land for 1,500 or 2,000 shillings an acre." If so, it means that the price of an acre of arable land would correspond to the cost of a *khanga* of thin, cheap material, or half a bag of bulrush millet or maize, or half the cost for having that same acre ploughed by tractor. In the hills themselves land is free for the taking.⁵

Goima and the Burunge Hills are not places to move to if you can survive in the Rangi core areas. The health care facilities and the schools are of poor standard, even in Goima village. The roads are poor, the markets undeveloped. A reasonable Rangi strategy is therefore to plant maize and sorghum in their expansion areas using as little labour as possible. If it turns out to be a year with good rains a surplus will be reaped that can be invested in non-agricultural enterprises, thus reducing one's dependence on the erratic rainfall.

At home one may have intensively cultivated gardens in the stabilised sand-fans or *mbuga* of the Kondoa enclosed area. In years with poor rains they will yield something when the out-fields might fail. In average years there will be something to gain at both ends. There is also in these semi-arid areas, as already noted, the element of *kutega mawingu* (trapping clouds), of cultivating in different areas so that some harvest may be reaped somewhere else if drought strikes the homestead fields. With small investments people in the Rangi core areas are able to increase both their security and their profits by cultivating also in the expansion areas to the east. Many do so; no less than three-quarters of the 124 randomly sampled cultivators in the Kondoa Irangi Hills interviewed by Mung'ong'o (1995:86, 97) had farms in Lower Irangi. Those with inadequate resources at home may have to consider moving there permanently. Also this is a long-established practice for the Rangi. New generations have found land to be scarce, or too degraded, to establish families and some have therefore ventured into new areas (cf. Östberg, 1986:78).

For those who are now moving into the Burunge area it has been easy to establish themselves. Not only does that land not really have a price. Some Burunge also move away leaving arable land behind. Mzee Saki, the *hhapeeloo'ay* at Pampay, a man in his late eighties, formulates it as "We Burunge do the work of clearing the land. After that, what is there for us to do?" He is joking a little with us here about what is commendable male behaviour but he is much more reflecting on the Burunge relationship to fields and forest. Many have felt uncomfortable in the villages into which they had to move during the

Oparesheni Vijiji, and for about a decade some have been filtering into more peripheral areas.

However, many Burunge note that possessive pronouns are now becoming more and more important in their area: "Mine, mine, the Rangi say. They are people who ask, where is your wealth?" Litigation over land occurs as newcomers lay permanent claims to land they had "borrowed".⁶ The Burunge are of the opinion that this is a new occurrence and that most cases are initiated by the Rangi. Land cases at Goima Primary Court seems to lend support to their opinion as four plaintiffs of five were Rangi (Table 6.1).

Year	No. of Cases	Rangi plaintiff	Cases won	Cases lost	Withdrawn	Pending
1983	1	1	1	—	—	—
1984	2	2	—	1	1	—
1985	1	1	1	—	—	—
1986	2	2	1	1	—	—
1987	7	7	5	1	1	—
1988	10	7	7	1	2	—
1989	7	5	4	1	2	—
1990	6	4	3	2	1	—
1991	3	3	1	—	—	2
Total	39	32	23	7	7	2

Table 6.1. Land cases at Goima primary court 1983–91.

The Rangi are in a majority not only as plaintiffs but also as defendants. 51 per cent of the complaints were registered against a Rangi. In addition to civil cases listed here, the court records also contain a small number of criminal cases concerning trespassing. These were dismissed on the legal technicality that trespassing could not be proved when the parties disagreed on where the boundary was. In reality these were land cases, although not entered as such. Source: Files at Goima Primary Court. The 1991 figure refers only to part of that year.

Different ways of life now meet in the hills. At Chioli wells have been dug by people from the surrounding villages to make sure they have water for their livestock. But people from farther away also use the water, paying the well owners for the right to water their livestock. A Barabaig man finds this obnoxious: "Water is from God. If you deny it

to someone in difficulty, it will disappear. Without God there is nothing. You may toil, but without the will of God you reap nothing. Two people, or four, may co-operate to dig a well. They pray to God, you cannot see it, but in their souls they ask God for help. They get water. Water does not come from people, but from God. If someone is in difficulty you must give them water. But with these Rangi from the villages it is different. They sell water." In the phrase "Rangi from the villages" it is "from the villages" which is of significance, with the ensuing specification that they "sell water".

People in the hills experience new mental landscapes in the making as land is sold, quarrelled over, and is even becoming scarce. The immigrants and the Burunge agree that vacant land still remains in the hills, but they disagree on whether the remaining forests should be cleared or not. Many newcomers hold that the sooner the forest is gone the better. Additional settlers mean more people who can defend their interests, and who can help solve the problems of wildlife, lack of water, inadequate transport, etc. Igor Kopytoff (1987:17) notes the general experience that in frontier situations power "lay largely in numbers". The Burunge, however, harbour no urge to transform the forest. They feel that the hills have already received more than enough outside settlers. The Barabaig, for their part, fear that the grazing areas will diminish as the cultivation areas are continuously extended.

Small numbers, quick growth

There is a steady trickle of people settling in the hills. Madah had 111 households in late 1989, 142 households by May 1992 and 169 by the end of that year. The number of households was estimated to reach 234 by September 1994, ahead of any possible natural population increase.

The figures presented in Table 6.2 unavoidably contain mistakes. Most people in the hills clear the land without permits, and it is part of the game to try to avoid registration for as long as possible. When we inquired about places where we knew that people had lived before

Oparesheni Vijiji we were sometimes told that no people lived there now. Once we arrived, however, we certainly met people.

Some of the Barabaig live away from the small communities in the hills, and their neighbours are not too sure of the exact number of households in their camps. Their own statements were often rather vague. The number of households also varies with the season. We have counted households that were expected to return after the dry season. There was also sometimes disagreement between informants as regards which settlement a particular household belonged to. The Barabaig figures are thus informed guesses.

The figures recorded are of resident households, not of the number of people who cultivate there. The latter are many more. An initial step in preparing to settle in the hills is often to clear a field and use the first harvest or two to enable the family to move. Farmers living in villages bordering the hills may have additional fields in the hills. And then there are people with resources, schoolteachers, shopkeepers, civil servants, etc. who cultivate in the hills using hired labour. There are also, as already noted, a number of people from the central parts of the district who have established out-fields there.

Table 6.2 shows that the Burunge are dominant in the interior of the hills. If the Madah area is also included, the largest ethnic group in the Burunge Hills is the Rangi, but this is not the impression one gets from everyday conversations. Most people think of the hills as almost entirely inhabited by the Burunge. For instance, when discussing the hills with people in Goima and Mirambu villages, they all thought that only Burunge families live in Kinando, a somewhat isolated settlement strongly associated with Burunge values and tradition. However, the Burunge make up less than half the number of households there.⁷

If, finally, the area cultivated is considered, it would result in a far more drastic picture of how the Burunge are rapidly becoming marginalized in the Burunge Hills.

The Burunge live scattered. The fields are usually cultivated with the hoe and are therefore not very big. 10 acres is a large, and unusual, Burunge holding in the hills, cultivated with the help of working groups, and sometimes with oxen. Many have quite small holdings.

	Barabaig	Burunge	Gogo	Iraqw	Rangi	Other	Total
Chioli	25	40	4	2	26	2	99
Daraba	—	15	—	—	—	—	15
Gwerutuku	4	8	—	—	—	—	12
Ka'afafe	—	3	—	—	—	—	3
Kinando	11	13	1	3	6	—	34
Madah	26	42	3	6	155	2	234
Mbarada	2	3	—	—	—	—	5
Morah	—	26	—	—	—	—	26
Thloka	—	10	—	—	—	—	10
Unjui	—	5	—	—	—	—	5
Total	68	165	8	11	187	4	443

Table 6.2. Households Burunge Hills, 1994.

Information from village offices, ten-cell leaders, CCM branch secretaries as well as local wealth rankings and intermittent interviewing.

The Rangi-dominated parts of the hills are characterised by more nucleated settlements. The fields are bigger. Some Rangi plough 40–50 acres, while 20–30 acres are not uncommon as most households plough with oxen or tractor. There are also a fluctuating number of poor Rangi who come to work as farm labour or to “visit”, hoping to be able to establish themselves. They do not have the grain and other resources to carry them through the time up to their first harvest, but hope to manage it with the help of casual work, “free” lodging and other help from the settlers. The expansion areas attract both rich and poor. In Lower Irangi, the area east of the Kondoa Irangi Hills, which was settled before the current penetration of the Burunge Hills, 50 per cent of the population count as poor (*watu wa hali duni*, i.e. those with nothing), while 7 per cent of the population control two-thirds of the farmland (Mung’ong’o 1995:99).⁸ Also in the Burunge Hills wealth rankings disclosed the existence of poverty (cf. Chapter 1). Amanor (1994:34), discussing West African experiences, describes how areas with declining smallholdings provide labour, “the lifeblood of the large landowners”, for the frontiers. “This system has profound long-term consequences of impoverishment and environmental degradation”.

Other frontiers

The first settlers in an area they consider uninhabited lay claim to considerably more land than they are able for the moment to cultivate. There are good economic reasons for this, but the practice also has its roots in the notion that the first to open up a new area will be considered "the owners of the land", whose approval should subsequently be sought by any future settlers.

Banking on expansion into new areas as an integrated part of the farming system is well known from other parts of central Tanzania, with the Sukuma-Nyamwezi as the paradigmatic example (Brandström, 1990b:6,13f.,19,21). It is likewise an integral part of the Iraqw agricultural economy. The Iraqw have spread from an isolated mountain area into a much larger area covering the best part of three districts. Concomitant with the geographical expansion is a conceptual distinction between homeland, frontier and wilderness, which merits its own particular heading since wrongdoing in earlier days was punished by exile in the wilderness. If, however, the unfortunate ones were successful in their banishment rituals could be performed that incorporated their area into the Iraqw homeland. Analysing such processes, which are rather more elaborate than there is space to go into here, made "the cultural creation of space" a dominant theme of Thornton's monograph on the Iraqw (1980). More recently Loiske has demonstrated how Iraqw core and expansion areas can be economically integrated much as is the case for the Rangi in Kondoa District. The process of expansion has been characterised by differences in land management between the intensively cultivated core area around Kainam and the expansion areas with extensive cultivation and also problems of soil erosion (Loiske, 1995:17, 24–29, 104–107, 145f.). It is households with resources that take the lead as marginal lands in Hanang District are currently being penetrated. This runs contrary to the received wisdom, which has it that it is the poor who are pushed on to the marginal lands as better-off households take over medium and high quality agricultural land. Loiske argues that it is the better-off who can afford the investments required, and who have the political contacts

that facilitate the process, while many of the poor remain in the villages as a labour reserve (*ibid.* I 38, 144). Also from Rangi core areas it is reported that the better off households have been prominent in the exploitation of the expansion areas of Lower Irangi (Mung'ong'o, 1995:111).

For the Gorowa Talle (1991:33) notes that the person who "comes first" has a strong claim to the land. Lindström (1987: Ch. 5) discusses similar themes for the Iramba of Singida Region, while Rigby (1969:155,161) notes that the Gogo create "ritual areas" as part of their expansion management. Also outside the region similar processes have been common, so common in fact that Igor Kopytoff (1987:7 *and passim*) argues for regarding Africa as a "frontier continent". In Kopytoff's overview the political aspect is emphasised. Groups splinter off from the metropolis and form, if they are successful, a new polity sometimes as an integral part of the metropolis, sometimes in opposition to it. In the present study, as in those of Loiske in Hanang District and Mung'ong'o in Kondoa, it is rather the economic interconnections between core and periphery which come into focus. One and the same household may oscillate between core and expansion areas. A conclusion important to our interests is that often the care of the land will be less intense in the out-fields which may be looked on as an extra resource for activities in the home area.

Burunge-dominated communities

The Burunge are returning to areas from which they were forcibly removed in 1974. The current resettlement by Burunge farmers follows previous patterns – small fields, modest harvests, not particularly intense exploitation, honey as an important crop for many households. As soil fertility declines the fields are left fallow and new clearings made.

Walking through the Kinando area one passes through glades in the forest where once were homesteads, then arrives at a clearing with

fields, only to dive back into the forest along a small path leading to the next homestead. Light filters through the foliage. One moves between sharp sunshine and shade, heat and coolness. Kinando takes the form of a large bowl below low forested ridges. There is blue sky and white cumulus clouds.

The serenity is broken by occasional shouts from children guarding crops against the monkeys, with a distant cowbell, birds and the the dry echoing sound of someone shaping a beehive in the forest. But what one mostly hears is the screeching and buzzing of insects. The houses are shaded by trees, embedded in green foliage. The fields are moderately sized and separated by stretches of forest. There is no sign of surplus production, of export. We are far from centres like Songolo or Soya, far from schools, offices, markets and vehicles.

Here in the hills one gets a view of what Burunge life was like before the people were moved into villages in the *Oparesheni Vijiji*. A well-established family would have a married son or two and their families living nearby. The compound consisted of a small cluster of houses and a livestock enclosure. The fields were just below the houses and in the valleys and plains. The neighbours were a little distance away, nowhere near as close as in today's villages below the hills. Birds of prey hover high above. The world is vast. This is the landscape that has given rise to the feeling that when problems occur, harvests fail, sickness strikes or neighbours quarrel, you move. There is always room to take up new fields somewhere else.

Approaching a homestead we see a man cutting his son's hair. His wife keeps in the background, watching us suspiciously. Three or four children of schoolage roam about. A few cows graze around the house. A young woman is busy with a mortar and pestle. An old man appears from somewhere to greet us.

Seven Burunge households living in the hills happened to be included in our random sample of farmers, and were therefore formally interviewed about their farming activities (as were also many others selected situationally and subjectively). Four of them were dependent on casual work to carry them through the year and one household had

other local income. One of these households was ranked by others as "without anything" (*hana kitu*). Of the other two households one was a young family doing comparatively well from selling finger millet and maize as well as honey beer and various forest products. The other household had a rather elaborate set-up, combining land in one of the villages and at two different settlements in the hills. In 1974 the family was moved from the husband's ancestral land in the hills to one of the villages, where they subsequently bought land. The second forest settlement is on land taken over from the wife's parents from whom she has also inherited livestock. When members of these two households occasionally do casual work it is not so much to contribute towards the family's survival as to raise extra cash. Their farms and animals produce more than enough for their daily needs.

At the other end of the scale is Mama Ula Dorobo.⁹ In 1990 she returned to the hills after fifteen years in one of the villages. She was now a widow. Three of her sons accompanied her while another son had taken over the land in the village. The sons cleared the abandoned fields in the hills and now she cultivates one field for herself adjacent to those of her sons. She grows a variety of food crops in mixed stands: bulrush millet, white sorghum, maize, beans, pumpkins, etc. Monkeys, warthogs and antelopes are certainly a problem but Mama Ula and her sons take turns guarding the fields. They manage. Birds pose no major problem. "There are mostly big forest birds here, there are no swamps or scrub to attract *quelea*-birds."

They have not yet been able to build up a reserve against dry years. They eke out a living by filling in with various extra activities. They look after cattle at their home for a well-off man from the village, as well as his small stock, ducks and some hens. Mama Ula can use the milk and eggs they need and the rest is sent to the owner of the cows. She may also get a little extra from selling firewood to the village. Her sons have taken over their father's beehives and honeybeer provides an extra income, although they do not sell beeswax. Honey is furthermore a means of calling on neighbours to come and help with the farm work. Little honey was produced, however, during the dry years in the early 1990s, they say, and this is one reason why their land does not yield the

surplus one would expect. With no honey in store Mama Ula could not call in neighbours to come and help with planting and weeding, and for the same reason the sons were forced to go out on *kibarua*-work. The farm work was delayed and hastily carried out.

Soil erosion is one reason why they have not managed to subsist from their land. Mama Ula's field is on a 9 per cent slope. An old, stabilised gully runs through the land but is now again exposed after clearing and threatens her field. No cut-off drain protects the slope. Water runs at high speed through their fields transporting soil downhill. The crops easily dry up. In some places the sons have put in cultivation ridges and have had to experience these breaking and the seeds being washed away. Their mother plants by just digging a hole for the seeds, and this has proved to work somewhat better. But her field yields poorly, one and a half bags to the acre in the admittedly dry years of 1992 and 1993.

The Burunge families who leave the villages for the hills had often been short of land in the main villages. Some of them had subsisted on "borrowed" land after they were forced into the villages. As it became possible to return to the hills some decided to leave. If they had no extra resources to fall back on this was no easy undertaking and as the stores became empty there was no alternative but to toil in the fields of others and tend others' livestock to get food.

Those slightly better-off, who had enough food, and honey, for at least a year's needs, have done better. Livestock would of course be another possibility both to guard against crop failures and to provide resources for cultivation. This is the situation for a few young families and unmarried young men who are opening up a new settlement above Mirambu village. They are all related to two elders at Mirambu who hold the traditional land rights to this part of the hills. The young men started clearing in August 1991 and during the following years each household has been extending its fields by about an acre a year. Everyone works on his own clearing, while working parties are called to help with some of the field operations. Since they have had provisions to fall back on they have not been trapped in *kibarua*-dependency.

Their harvests have been more than adequate. "This year there is hunger in Mirambu. People are going to Chambalo and other places for food. But up here there was a harvest." The surpluses will come in handy in marriage negotiations. They also make extra money from selling beehives and building-poles, by taking on casual work when they find that advantageous, as well as various other informal activities.

The days pass with farm and forest work, guarding against wildlife, visiting each other in the evenings, discussing the daily work, listening to the radio if a receiver and batteries are available, telling stories and riddles. Neighbours from Mirambu have come to cultivate and may settle. Their settlement is growing. One of the two elders who "own" the land here is about to build a house and will in all likelihood give his name to the settlement.

All the middle-aged and elderly Burunge interviewed, and most of the young ones as well, share the experience of having lived in several places. Moving the homestead after some years was part of the Burunge mode of production and existence. Co-operation with neighbours and acquaintances are means of making migration work. People usually say they settled where there was "just bush", but one is moving into well-known areas and around the corner are often old neighbours and relatives. If a new area is opened up for settlement, it is blessed and subsequently becomes "owned" by the first settler, as was noted above. We kept asking the people we interviewed if they had experienced such occasions. None of them had, not even the oldest *hhapeeloo'ay*. The hills are not virgin areas for the Burunge, but at the same time it remains important to all who clear the land, of whatever ethnic or economic standing, to emphasize that when they arrived there was *pori tu* (just bush) which may mean anything from old *miombo* woodlands to quite recent acacias or thickets. The importance of being first is a salient feature of African frontiers (Kopytoff, 1987:52-61). Another is continuous abandonment and resettlement (Nyerges, 1992:865f.).

The Burunge settlers described here are people of meagre resources, and also young households looking for a better future than they could

hope for in the villages. They are not the kind of farmers known to be in the forefront of conservation work.

In these small, dispersed and recent settlements land management becomes an individual rather than a collective matter. Other people can be talked into co-operating, but not compelled to do so. The Burunge settlers have as reference points, although not as leaders of cooperative organizations, respected elders such as Mzee Duba, the *hhapeeloo'ay* at Morah, or Mzee Doo, the sage and healer at Kinando, or Mzee Mooa, the *hhapeeloo'ay* at Chioli whom most of the Rangi immigrants of that area said they had liaised with before settling, or Mzee Soma at Daraba whom the authorities never managed to move (he had his “medicine”!) and several others. Such elders are people who try to live life as it once was, when a respectable man lived surrounded by wives, sons, livestock – and forest. They have succeeded in re-establishing themselves in the hills and live well there. Whether they, and those who grow up to succeed them, will influence the future land use of the area remains to be seen.

Rangi-dominated communities

Someone interested in settling in Madah will attempt to find a “host” (*mwenyeji*, an indigenous person, or *jamaa* or *ndugu* if one wants to emphasise that it is, as is often the case, a relative). At some stage the “visitor” will be formally introduced to the elected committee running the affairs of Madah. The presence of the newcomer has, however, probably been known more or less from the very first day. S/he may then be allocated a virgin area to clear, formally under the supervision of the resident forest guard whose degree of involvement varies from one case to another. The committee will not interfere with the previous land transfer, whether this was a temporary loan or an outright purchase.

This means that in Rangi-dominated Madah the resident Burunge community, the traditional “owners of the land”, and the government of Songolo village, to which Madah formally belongs, as well as the

Ministry of Lands, have given up their respective interests in controlling land use in this settlement area. The initiative has moved to a committee representing the immigrants at Madah.

The immigrants come with their minds set on obtaining land but also with experience of what a surplus can provide in terms of improved living standards. They expect to live in houses made of bricks and covered by iron sheets. They are used to having bicycles, ox ploughs, water points, radio receivers – goods seldom encountered in a Burunge *tembe* home.

Many settlers at Madah cultivate with oxen. Those who do not have their own teams swap by offering a plough or their labour. They can also pay 2,000 shillings an acre (c. US\$4) to have their land ploughed, or hire a tractor at a cost of 3,500 sh. an acre (1993).

At Chioli, about an hour's further walk into the hills, many Rangi cultivate with a hoe while others use oxen. The Rangi here live scattered among the Burunge, not as nucleated as in Madah. The immigration into Chioli came later than at Madah and the Burunge community they joined was bigger.

Madah and Chioli are more densely populated than other settlements in the hills. The Madah farmers have formed a CCM branch, elected their own leaders and embarked on communal undertakings like starting a small school which, in 1993, had 51 children in Standard 1 and 41 children in Standard 2. Koran classes are organized for the children in a *tembe* house which is used as a mosque. Muslim religious events are celebrated regularly. At Chioli a party branch has likewise been formed and a mosque and a church have been built through communal efforts in which Christians and Muslims are said to have helped each other.

Madah farmers have constructed a new road through their area in order to be able to export their grain. Traders from Arusha, Dodoma and Kondoa come to buy at the farm gate. The CCM secretary at Madah, *Ndugu* Juma Nkuri, notes these achievements: "We have become known now. The traders have seen that grain is available here. When we built our new road to Soya in 1993 Madah became a centre. There will be lots of trade. All travellers want to use this new short cut

to get to Goima and Kondoa.” A few buildings of the new centre are already standing along the new road. In September 1994 a small shop had opened and there were three cafés in Madah.

Madah is changing rapidly. Large areas have been cleared. Very little vegetation remains in the central parts. Since most farmers there cultivate with a plough few trees are allowed to remain in the fields. The centre is growing. The leaders at Madah nourish the ambition to become formally recognised as a village, and have filed a formal application to that end.¹⁰ To reach the required population size they have tried to incorporate Chioli and Kinando, which immediately made the neighbouring communities come to resent “Madah expansionism”.

The CCM branch committees are dominated by the Rangi. At Madah they hold 90 per cent of the posts. At Chioli they have 46 per cent of the posts, while constituting 20 per cent of the households. The Burunge have 27 per cent of the posts. The Barabaig and other immigrants hold a few odd posts (February, 1993). In the Burunge-dominated areas no hamlet has bothered to form a CCM branch.

The CCM chairman Ndugu Hatibu H. Nyodi at Madah photographed outside his well-built brick house. Above the door his name is written as well as the place: Madaha. The Rangi spelling of Madah is rapidly becoming official, one of many indicators of how Burunge origins are being pushed back. Not far away the village Aynabu is now dominated by the Rangi and has changed its name to Igunga.

Map 4. Madah area. Map drawn on the ground by Rashidi I. Kidunda, Hatibu H. Nyodi, Juma A. Nkuri, Siraji L. Sasha, Ali I. Suleiman and Meda Unei. The walking distance between the Mwaka and Denesa seasonal rivers is about a quarter of an hour's walk.

The map is not drawn to scale and has been redrawn here by Karin Weilow after a sketch from the original map by Elias Etho.

Mapdrawing in Madah

AUGUST 1994

The common opinion in Madah is that there is abundant land available for future needs. In connection with two meetings with village leaders to discuss land use and the future of the Burunge Hills, a map of the Madah area was drawn on the ground over an area of about 20 square meters by six participants in one of the meetings. The map represents their subjective picture of their area.

Drawing a map of the area and discussing it publicly had a profound effect on the perception of land use for a number of people in Madah. We had been told over and over again by the immigrants that the pastures and the areas to be cleared were enough for a long time to come. Faced now with facts showing that the cultivated area was bigger than the reserve areas, and also a poster we had prepared depicting a dramatically increasing population curve, many came to express their worries. "People increase all the time but the land cannot increase. Settlers arrive. The young start new families. Where are they to go?"

Not all of them worried, though. One influential member of the CCM branch committee reminded those present that no one gets land in Madah without a period of probation and that s/he can only be given 3 acres at most; that s/he must have a permit to move from the previous village and that any clearing must be supervised by the forest officer.

Now, this is not the way land is allocated at Madah, and as he went on adding more and more details about how carefully the committee monitors the land resource, people in the end could not stop themselves from laughing. As we probed the issue the chairman was obliged to confirm that the party branch has no legal right to stop a newcomer with a licence from clearing land. Another member of the committee tried the argument that a local rule prevents livestock from moving along the slope on their way to the wells. Again people burst into laughter as we mentioned several cattle tracks proving the opposite. The argument was just too silly. How do you make livestock heading for water take extra turns in an open landscape?

At this point several people expressed concern over the number of livestock brought into Madah from other areas and also from distant places in Hanang and Mbulu Districts. This was the first time we had heard such worries expressed from the Rangi side, whereas both Barabaig and Burunge living at Madah had often aired the opinion that people, and livestock, have become too many at Madah. But the Rangi have remained insistent that the land is enough for decades to come.

The map-drawing exercise, and the published documentation of land use in the hills, provided a new arena for discussing an issue which was not yet on the agenda. The discussions went far beyond the stereotypes about the community and gave rise to a new interpretation.

A Swahili booklet describing developments at Madah (Östberg, 1994c) included a photograph of the CCM committee. Burunge readers looked with surprise at the photograph: "We do the communal work together. We always co-operate with each other. Have these elections been held only by the Rangi?"

Some Burunge think that the Burunge ought to take the lead in Madah affairs since they are the original inhabitants. "But what are we leading now?" Discussing the issue in more detail it turns out that it is not merely that the Burunge were voted out. They also withdrew, both by not coming to meetings and not paying the party levy, and by refraining from assuming posts which implied responsibilities. The only Burunge *balози* resigned after he had been criticised, and eventually fined, for not being able to get people to turn out for communal work. A Rangi took over the post.

The Burunge are in retreat, whereas the immigrants build structures of permanence, roads, brick houses, mosques, committees, etc. But when the Burunge see only Rangi faces on the picture of the party branch committee they ask with surprise, aside and in a low voice, how did this happen?

The land question has rapidly become a sensitive one in Madah. When our inquiries into the history of Madah started in May 1992 the settlers confidently assured us that when they arrived only a few people lived in the area. It was all wilderness, "dense forests, elephants and leopards". It was obvious that they did not foresee that anyone would even think of challenging their great feat of converting a wilderness of lions and baboons into prosperous fields. By August 1994, when we again undertook a period of intensive work in Madah, feelings were different. The immigrant community had grown larger, and there were signs that the resources of the area were not inexhaustible. No bush remained to be cleared in the central parts of Madah and water had become scarce. The settlers were on their guard as soon as the discussion touched on the antecedents of their fields. They now felt uncomfortable to discuss such matters with outsiders. And new myths were in the making. We were told that the area had previously been used only by livestock

keepers who had watered their herds at the defunct dam built during colonial times. Before that it had only been the Maasai who grazed animals seasonally at Madah but they no longer brought their livestock there because of lack of water. The Burunge were about to disappear from the history of the area as the immigrants were creating their own charter of occupancy. The latecomers were to become firstcomers. The immigrants' leading political role seemed to require that they should also try to assume the status of "owners of the land".

Settler strategies

Middle-aged Rangi settlers in the Burunge Hills have often lived in several other places before arriving here. This is the case with Ramadhani Athumani. (He has the same name as the Mzee Ramadhani mentioned in the introduction to this chapter. There is, however, no connection between the two men.) He grew up in Haubi but moved in 1975 to Mrijo, then to Njoro and eventually Itolwa, all communities in the Rangi expansion areas on the plains north and east of the Burunge Hills. In between he also spent a period in Oleboloti in Arusha Region. He still keeps a household in Itolwa, but the better part of his family are now firmly established at Chioli. "Everything is here now", he tells us. "Fields, crops, animals, houses, everything is in place... *kila kitu tayari*. The baboons are a nuisance, otherwise this place is good. Haubi is for visiting only. There is no land there to support a family. We got there only to see the parents' graves."

Bwana Ramadhani cultivates thirty acres at Chioli. He cleared land with the help of day-labourers, at a cost which he, like other well-established farmers, finds marginal. (In 1993 it was 1,500–2,000 sh. an acre but 600 sh. at the time when he cleared most of his land.)

Some ten years ago he had relatives living at Songolo who grazed their livestock in the Chiolo area. As official policy slackened they started to clear new land. Ramadhani got to hear about the new possibility. In 1983 he opened up a field at Chioli while still living at Itolwa. He tried his luck in the forest but did not put all his eggs in one basket.

"I could have done different things, stayed closer to the roads or even started a business in Kondoa town. At the time, I was lucky to have a little capital." Chioli proved to be a good choice and he is now a committed settler. "The land I cleared in 1983 is still fertile. The soils are good." This he tells us in a field of 7 per cent slope, cultivated flat, with a thick layer of good soil but also rills.

Bwana Ramadhani has property in several places. We have not had reason here to mention his livestock involvements and partnerships. He exemplifies people with resources who want to improve their standing with the help of a new resource that became available following economic and political changes in the nation. He divides his time between Chioli and Itolwa, being a member of both communities but not dependent on either of them. His attitude seems to be one of "diversify and prosper". This is the first of four settler strategies we shall now sketch briefly.

Ali Iddy Suleiman came to Madah the first time as a driver's mate on a lorry buying crops. He was impressed by what he saw and asked about the possibilities of settling. In January 1991 he arrived to plant a five-acre field he had borrowed on a three-year loan. Now he has cleared a further three acres and is in the process of expanding his own land.

He is in his mid-thirties. He and his wife have six children. He comes originally from Masange, an area in the northern part of the district which the colonial government cleared in the 1940s to provide new land for people from badly degraded parts of the Kondoa Irangi Hills (Fosbrooke, 1950/51:169f.). Today it is both densely populated and suffering from land degradation. His family later moved to Kinyasi on the plains east of the Kondoa Irangi Hills where he married. The harvests were poor, however, and insufficient for his growing family. "Here it is different. Even in a bad year like the last one there is no problem with food whereas people at Kinyasi have difficulties. As long as this village of Madah stands I want to remain here."

Bwana Ali is one of the many young to middle-aged Rangi who by their own efforts and enthusiasm are building a future for themselves and their community at Madah. His fields are well tended, producing

handsome harvests, and his whole mind is set on making both his homestead and Madah a success. He thus represents a different commitment from that of Bwana Ramadani, one that could count as a "whole-hearted settler" – a second strategy. Madah is where he expects to live for the foreseeable future. He is enthusiastically involved in co-operating with his neighbours, both to pool resources to manage the transport of harvested crops for instance, and to help improve Madah's communal resources.

Ali's experiences concur with those of several other families from the Kondoa Irangi hills who had left as they found it increasingly difficult to make ends meet when their families were growing. They tell themselves that they will try for a few years to see if it is possible to secure a decent living, "or else we shall leave this bush". The crops are certainly doing well, but they miss the social life of the Rangi core area, the busy Sunday market at Haubi, their fruit trees, vegetable gardens. "Here there is nothing but forest. We look at trees, trees, only trees. There are no people here."

A young, newly married, Rangi man from Ntomoko village in the Kondoa Irangi hills has a clear vision of what he wants to achieve at Chioli:

"At home I met a man from here who in just five years had become rich. He has 35 cows and produces crops worth between 600,000 and one million shillings a year. He had come as a poor man. After a few years he started to call people to come and help (*vibarua*). Now he is rich.

I had heard that there are two men from Ntomoko who live here. I decided to follow them, and when I came here they became my hosts.

I tell you, at Ntomoko the fields are just gravel, not soil. We cultivate with fertilizers just to get something. Here everything grows. The soil is rich. And it has not been dry one day since the rains started. (The rains begin in November/December. This interview is dated May 26, 1992. Most areas in Goima Division outside the hills were experiencing drought at that time.) Even the maize we planted as late as March is now giving cobs and is very strong.

Cattle grazing in the hills. Seasonally the number of livestock increases drastically as people from surrounding areas bring their animals to the hills. Maasai livestock-owners have been regular visitors for generations, but now many others also add their herds to those of the locals.

I have given myself three years. One year has passed. I will stay two more years. Then I will be someone. Some people leave Ntomoko for town. There they are trapped. You use up all your money in town. It just disappears. Here you can achieve something. After three years I will get myself a business.

There is land here. If you want 30 acres, you just clear it."

Here we encounter a third strategy, "fortune hunting", where the hills are simply a stepping stone towards other goals. Into this category also fall people with resources who invest in clearing in the hills but who do not plan to settle there.

Leaders at Chioli and Madah strongly deny that there is "open access" to their areas; this was at least the case as they talked to outsiders who they knew had an interest in land management issues. They argued that newcomers should not be allowed to start "projects", i.e. distributing land which they themselves had received for free. Newcomers were instead supposed to join the ranks of the current leadership's dependants, and supporters. Yet one hears little complaint that it is difficult to get land to clear. Quite the contrary. (But note the situation discussed in the text accompanying MAP 4.)

A fourth settler strategy in the hills could perhaps be termed "property building". The first person to open a shop at Madah, Mzee Faku, runs a well stocked shop also in Songolo village, and has property in Dodoma and Kiteto. He cultivates between 40 and 50 acres at Madah. Another well-off immigrant, Mzee Ifwadi, controls a similar holding and one of his sons has established himself as a successful independent farmer at Madah with his own ox-teams. A second son has converted profits from farming at Madah into a thriving urban-based business. The decisive step in his career is well remembered in Madah. He had amassed enough resources to hire a lorry together with two other people and sold 50 bags of finger millet in Arusha. He used the profit to buy more finger millet, changing from farming to business. It was not long before he turned up in Madah with two hired lorries and had enough cash in his pockets to be able to load them with 300 bags of finger millet.

Another succesful settler, Mzee Kidunda, owns the brick building where the CCM office in Madah is housed. He has a large herd of livestock and ploughs some 30 acres. A few successful farmers *cum* businessmen resident in Songolo village cultivate at Madah and Chioli. One of them has two married sons living on the land, and keeping cattle in the hills, whereas the others use the land rather to extract resources for business activities – which are far more important concerns to them than safeguarding the sustainability of land in Chioli and Madah.

The Burunge as a minority

Ramadhani Leeh is a man in his thirties, who comes from Goima. “No, I am not a Muslim, it is just a name”. He has lived at Madah since 1991 with the young wife of a second marriage and their young child. He has had a somewhat adventurous life, working among other things for a professional hunter in Arusha. He has lived in Mrijo and been on business trips to the Pare and Usambara mountains.

The first year he was at Madah he borrowed a house and land from a Rangi he knew from the time when he lived at Mrijo. The following year he embarked on his own clearing:

“This place is good. The soils are heavy, and very fertile. The place is healthy. In Goima you can no longer get a proper harvest. Even in a good year the harvest is not enough. If you want to buy clothes for your family, or even food, you have to shoulder your hoe and go and work for someone else. The harvest is simply not enough. And even if Goima people do get a surplus, they finish it off drinking. It is better here in the forest, far better.”

Some young Burunge are attracted to Madah. The virgin soils produce good harvests, and the rainfall in the hills is said to be distinctly better than in Songolo or Goima, for instance. And Madah is not so remote that they feel completely cut off from the weekly market at Songolo and other important social events.

Before 1974 only Burunge lived at Madah – and in the whole area stretching from Kinando and Chiolo over to Songolo and Chandama. Maasai and Barabaig pastoralists came there seasonally to graze their herds. In the villagization of 1974 the Burunge had to move to Songolo. Some kept their fields at Madah and walked the six kilometres there and back to Madah, sleeping in the fields during the season when the maturing crops needed to be protected from wild animals.

Mzee Meda Unei, who is about 75 years of age, was born in Madah. His father originated from Goima, they are of the Mirambu clan. He was a nephew of Chohai, who was related to those who had opened up the area. “All who stayed here were his guests. He was a Mehetu. Madah is their country. They had lived here long ago. Chohai lived at Goima but he said I want to return to our place of origin. My father and others followed him. When they arrived my mother was expecting a child and I was born here. My father was a friend of Chief Meda of the Gogo and that is why I have a Gogo name.” Since Mzee Meda Unei was born not long after his parents had arrived with Chohai we can date this period of settlement in Madah to around the time of the First World War. This was by no means the first time the Burunge had settled at Madah.

In 1952 Mzee Meda left Madah to move to Kinando where he married a second time. Around 1960 he planned to return to Madah together with his contemporary, Mzee Meda Kwachima, who also lived at Kinando. Madah was now “just forest”. They had kept track of the situation in Madah as they were looking for honey in the area. They started to clear land at Madah while they were still living at Kinando.

In 1974 they were all moved to Songolo in connection with *Oparesheni Vijiji* but Mzee Meda continued to cultivate at Madah. In 1991 he moved to fields he had started to clear in 1989 in what had by then become the Burunge part of Madah. The Rangi had established themselves in the area just below the Intela range where Mzee Meda had lived as a child. “People ask for a place, and they are given one. If it is land that is cleared they may be asked to pay compensation (*wanarudisha hengo*).” *Hengo* is the local bush-knife used when clearing land.¹¹ “Returning” the *hengo* means that the person taking over the

Mzee Meda Unei, one of the few adults at Madah who was born there, standing in front of the members of the elected committee of the CCM branch, which de facto runs public affairs at Madah and of which he is not a member.

land is not formally buying the land but compensating for the fact that s/he did not have to clear it him/herself. This does not prevent him/her from claiming permanent rights to the land.

During the course of his life Mzee Meda has lived in several parts of Madah. Shifting residence while retaining an interest in the area one has abandoned is no longer possible, and immigrants now live on his previous holdings. Part of the holding he has cleared is currently cultivated by an immigrant who has married one of his daughters.

Barabaig camps

Barabaig families arrived in the hills earlier than the Rangi. The Barabaig had been using the hills for seasonal grazing, but some of them also settled and cultivated the land. The area was well known to

them for several reasons. The administration had camped a large group of Barabaig at Songolo in the 1970s in the aftermath of a war between the Barabaig and the Nyaturu. A special class for Barabaig children was started in the Songolo school.

Some Barabaig regularly pass through Goima Division offering salt for barter or sale. Others bring their herds into the Burunge Hills when grazing is scarce in Hanang.

One finds Barabaig households in many peripheral areas of Kondoa District, at Bubu, Busi, Bambare, Gwandi, Mwailanje... The nature of their economy requires up-to-date knowledge of where water and grazing are available; consequently they were well informed also about the potential of the Burunge Hills when the option to settle there arose. The number of Barabaig households living in the hills varies from year to year, and also with the season. They have active links with their core areas in Hanang District.

When they settled the hills were unoccupied "apart from the leopards", they say, and there was therefore no reason to negotiate with anyone. They still have problems with wild pigs and monkeys, someone must always be on guard in the fields, but otherwise conditions are good: "the baridi (coolness) is good here". The Burunge view is that only a few isolated Barabaig were living permanently in the hills before ca. 1980. They first lived close to Madah and Songolo but then moved deeper into the hills in the mid-1980s, as it became increasingly difficult to keep livestock in areas of expanding agriculture.

Old Burunge remember that they saw Maasai with livestock in the hills when they were children, but the Barabaig, and "their friends" the Iraqw, are more recent arrivals. "The Maasai used to come but we did not have much to do with them. It was only rarely that someone got married to one of them."

The Barabaig cultivate maize and red and white sorghum and some also have a little bulrush millet. Only a few have ventured into the finger millet business (see below), "too much work and too difficult with the birds and monkeys". But generally farming is important to them. Families concentrating on livestock production do not live permanently in the hills.

Barabaig settlers who have cultivated the same fields for five years or so note that harvests are diminishing. They relate this to the insufficient rains. If only there are good rains they trust that the harvest will be good again. They often plough with oxen – contrary to what people outside the hills believe. It is commonly said that the Barabaig do not cultivate: “Only when a Barabaig marries an Iraqw woman will he have a shamba” is the stereotyped view. The Barabaig in the hills draw the line elsewhere: “Those with large herds do not bother to cultivate. We who hoe are the poor ones with only some 10–20 cows.” 40 cows is about the maximum herd that even a large household can keep in the area during the dry season since here they need to dig for water.

The Barabaig fear that the central parts of the Burunge Hills will soon be penetrated by cultivators. Their economy requires large areas, and they fear that they will be squeezed out of the hills as the settlements at Chioli and Madah expand. They therefore try to extend their own cultivation as much as possible so that they can lay claim to an area as their own. Apart from noting what is now happening in the hills, the Barabaig also have a vivid memory of how over 100,000 acres of grazing land once used by them have been converted to a huge wheat farming complex in Hanang District.¹² They have also for decades experienced how Iraqw agropastoralists have settled in their core areas.

At Madah the Barabaig now tell of how fields all of a sudden appear in what they regard as grazing areas, and how the entry to water holes has become difficult because of the expanding cultivation, and how conflicts will follow as the livestock damage the crops. They argue that the time has come for fields and pastures to be separated. In this they can count on support from Rangì livestock owners as well but not from the many people who are looking for bush to clear.

Gradually the Barabaig are being forced to concentrate more and more on farming. “Our soul wants livestock, but because of difficulties we have to cultivate. Before, when we had a lot of livestock, you could sell five and still have plenty. There are elders who do not even know how to handle a hoe. They have never even tried. But when there are

not many cows you must think of shamba. Cattle or fields? – the choice is now valid also for us.”

The Barabaig have become one of the peoples of the Burunge Hills. They do participate in the communal work organized at Madah, but in many ways they also form a community of their own. Few of their children go to school. In the school at Madah 12 Barabaig children are enrolled but only two of them attend.

Other settlers in the hills

Some Iraqw households have come from Hanang and Mbulu Districts. Several settlements in the hills contain a few Gogo immigrants. Seasonally Maasai herders bring animals into the hills.

A few very rich cattle owners from Hanang District have established cattle posts in the area. Mzee Gurtu, a leading personality of Giting village on the slopes of Mount Hanang, has kept a household north-east of Madah with some 400 head of livestock. During the drought in 1992 he moved the camp to Dodoma Rural District. At about the same time Mzee Ami moved a herd of about the same size from the vicinity of Madah to the Bubu area. He is a leading entrepreneur at Katesh, also in Hanang District, where he owns tractors and lorries. A third cattle owner from Hanang District, Mzee Barheida, keeps more than 500 head on the outskirts of Madah. Commenting on these camps people say that they use milk like water and the women do not work. The livestock are herded by hired labour and food is brought in from Hanang District by tractor. “All that remains for the women to do is to milk.”

When we ask people at Madah if their almost 1,500 extra head of cattle can be accommodated at Madah they do not appear to find this an issue on which they can express an opinion. It seems to be a matter beyond their power to influence. Generally, there are no restrictions on access to grazing or water in the hills. Elders at Kinando do not fear their land will be depleted by the seasonal invasion of livestock: “There is grass in plenty.”

Having described the actors in the hills we shall now look more carefully at how they make use of the land.

The finger millet racket

One particular attraction of the new lands in the Burunge Hills is the possibility of growing finger millet, which does well in the ashes of newly cleared and burnt land. The price for finger millet is more than double that of other grains. In 1992 when the local maize price stood at 3,500 shillings a bag, finger millet sold for 7–10,000 sh. At Haubi in the Kondoa Irangi hills the price was 11–12,000 sh. At Arusha and Dodoma rumour has it that it was around 18,000/-. In September 1994 the price at Goima was again 7,000/- and the Arusha price was said to be 10,500/-. (The cost of transport to Arusha was 350/- per sack.) Another advantage for farmers with finger millet is that it requires no effort or cost to market. At Madah and Chioli, which can be reached by lorry or tractor, traders from Haubi and Kondoa as well as Arusha and Moshi come right to the farms looking for finger millet. More inaccessible places are visited by small-scale traders with donkeys. Otherwise the normal practice is for farmers to take grain to a centre to sell it.

Finger millet offers the farmer an opportunity to bargain. It is also easy to store; farmers expect it to last for three years without having to use preservatives, and so, if hunger strikes, they have food in store. A handbook on East African crops notes that satisfactory storage for as long as ten years has been recorded (Acland, 1971:114). There is thus no hurry to sell; the opportunity is sure to recur. More than 30 lorries a year come to Madah and Chioli buying finger millet and a tractor with a trailer loading grain is a regular sight in the area at harvest time.

Finger millet cultivation can be expanded into very profitable enterprises. During the last few exceptionally dry years it has been easy to recruit labour for the season by just providing food rations. This makes finger millet growing enormously profitable. Already in the first year when the investment in clearing is undertaken, a handsome profit can be realized and the money re-invested in new clearings. In this

successful racket of virgin soils and guaranteed profits, soil conservation ranks low. Public land, and other people's penury, are converted into private profits which are eventually invested elsewhere.

When a poor household, often enough a Burunge household, puts in extra labour to secure needed food or cash, its efforts end up in other people's fields. Long-term benefits that could be reaped from improving their own cultivation have to be forgone for the immediate returns offered by day-labouring. During the clearing season in July-October young Burunge find *kibarua* money attractive. At Mwakisabe, in the expansion area east of the Burunge Hills, they can earn 10,000 shillings a month (approx. 20 US\$) which is more than an untrained teacher gets and twice the minimum wage. For those particular months this may be a solution. But as the competition for land increases the Burunge will find their self-reliance sapped. Their traditional strategy of surviving by doing a little of everything gradually narrows down to poorly paid *kibarua* and diminishing harvests from exhausted fields.

In times of drought payment drops down to nothing. In the Goima

	1989	1990	1991	1992	1993
B. HILLS:					
Goima	500	800	1,000	1,350	
Chioli	500	1,000	1,200	1,900	1,750
EXP. AREAS:					
Msada	800	1,200	1,500	2,500	
Mwaikisabe	800	1,200	1,500	2,200	2,500
Matui	500	1,000	1,500	2,350	

Table 6.3. Cost of clearing one acre of forest in the Burunge Hills and in the eastern expansion areas, 1989-93 (Sh).

Prices fluctuate during the season. At Goima they varied between ca. 1,200 and 1,500 Sh. in 1992 (giving a mean of 1,350). This was paid for destumping; clearing is no longer undertaken in the Goima area. At Chioli some people paid only 1,500 per acre in 1993. Prices vary according to how difficult the forest is to clear and the hunger situation as well as personal considerations. Although the Burunge's clearing skills are highly regarded they are still systematically underpaid in the eastern expansion area. A trip from Goima to Msada was thus in reality not quite so rewarding for a Burunge casual worker as the table indicates. Source: Intermittent interviewing.

area the daily wage during 1992 and 1993 varied between 100 and 300 Sh. (approx. 0.2 – 0.6 US\$) depending on ability, season, and type of work – below the payments for casual labour at the low rates of commercial farms (Talle, 1991:24). At the same time a kilo of flour cost 100 Sh. In February-April 1992 weeding one acre was paid 100 Sh.

It is the vast difference between the high prices paid for finger millet by beer brewers in the Arusha region and the extremely low production costs in the Burunge Hills that makes finger millet growing so exceptionally profitable.¹³ In the process the land is mined. Those involved in this profitable trade do not find time to worry over much about the risk of land degradation. They want to exploit the opportunity while it lasts. It is a general experience that pioneer frontiers are often associated with using natural resources as a windfall (Amanor, 1994:33).

The profits generated in the hills are not re-invested there. Improved housing, ox-ploughs, one small shop and a few cafés and pit-saws are about the only investments made so far. Some people buy livestock but not very many as water is scarce in most places and veterinary support is lacking. Everybody knows that there are years when livestock die in large numbers from disease. Soil conservation structures are not considered economic as long as more forest is available. And in any case the erratic rainfall makes it hazardous to invest in farming.

Instead, the profits from farming fly off to the central parts of the district and to the urban areas to be invested in shops, transport, real estate, etc. As is the case also in the surrounding areas. Mung'ong'o (1995:100) describes the same circumstances for Lower Irangi, even finding "tentacles into far-away urban centres such as Dodoma, Arusha, and Dar es Salaam". The surplus from Giting village in the Katesh area of Hanang District by and large went into non-agricultural pursuits. Investments in land improvement were marginal. The richest strata bought tractors to extend their farming acreage, largely in expansion areas outside the village (Loiske, 1995:114,121,127,142,144). Typical of the history of the region, Giting village is itself an old expansion area for Iraqw, from the period 1910–30 (ibid. p. 18).¹⁴

Land degradation

There are indeed traces of soil erosion in the Burunge Hills dating back to the times before 1974 when the people were moved off the hills. The large gully that cuts through Mirambu village, and which was the starting point for this chapter, is an instructive example. It has an older wide part, about three metres deep in many places, and with tributaries leading into the main gully; these are covered by secondary vegetation and have stabilised. In the catchment above one finds old depleted lands where thickets and acacia trees now grow on exposed argillic layers. But there is also extensive cultivation and active soil erosion. In the bottom of the main gully a new channel is cutting its way through. The Mirambu gully is active again.

Old badlands can be found in the hills north of Chambalo village. The gullies have not only cut down to the bedrock but have also widened and combined to leave isolated islands of the original soil. The process may have started some 250 years ago.¹⁵ Old people now living in the vicinity have no recollections of having been told of people living in the degraded part.

There are also other badly degraded areas in addition to those just mentioned, and others less degraded, but on the whole they are isolated occurrences. The hills are not severely degraded in comparison with the Kondoa Irangi Hills and they have been left to recover during fifteen years or so of quarantine. But there are also alarming signs of a renewed threat.

On the flat cultivated slopes approaching the Denesa river which passes through Madah rills are common. In many fields the crops look stunted or have simply been washed out. The water course itself is well-defined, however, and the river banks are covered with vegetation. The sediment loads from the Chioli area further up are still limited. On Map 4, which shows Madah, a number of places are marked as suffering from soil erosion.

The road from Songolo to Chioli passes through a valley before one gets into the hills. Here it is easy to register how cultivation is being pushed up the slopes. In the lower reaches the cultivation ridges run up

Even in a well-vegetated area like the Burunge Hills, splash and sheet erosion can be a serious problem. Here the top soil and parts of the subsoil have been removed. The soil pedestals indicate the extent of the erosion.

and down the slopes so that the furrows between the ridges can act as waterways; the farmers do not expect to be able to manage the run-off entering their land and prefer to let the water flow down the slope with as little obstruction as possible. The furrows end up in gullies on the lower part of the slopes.

Cattle tracks lead to the wells at Chioli. From a distance one can see how the bad-lands gleam white in the sharp sunlight. Every evening sizeable herds are driven into Songolo after grazing in the hills.

On the slopes above the river Tumbah the cultivation ridges running up and down the slopes speed up the erosion process. Livestock are watered from wells by the river, and the cattle tracks form runways for new gullies.

Soil erosion is now taking its toll in the hills, and where livestock pass there are undeniable proofs of land degradation. Monocropped

finger millet cultivation may be easy to identify as land mining, but ordinary fields also make their contribution.

Some of the Burunge, particularly the young, who now move into the hills are poor and spend most of their time as day-labourers. Whatever they do in their own fields is invariably too little and too late. The inevitable consequence is soil erosion. Some of the immigrants are only temporary visitors, with their minds set on sacrificing a few years in these remote areas to be able to return to more central parts of the district with new wealth. They have no reason to invest in soil conservation. Others have their principal home in the Rangi heartland but use the Burunge Hills to increase their surplus beyond what is possible in more densely settled areas.

The writing on the wall...

Lacha Doo¹⁶ is a middle-aged farmer. His home is situated close to that of his father and a paternal uncle. His grandmother and her brother also live there. Their houses form a small settlement, giving a glimpse of what Burunge homesteads looked like before villagization.

Lacha Doo cultivates both in one of the villages and in the hills where he has a field on an 8 per cent slope which gradually levels out. A gully formed in the field the second year he cultivated it, which was in 1991. This is only a small problem, he says, and as it gets worse he will not cultivate that particular part of the field but use it as a water-way to allow excess water to pass through the field.

Our probing questions about how the emerging gully will unavoidably be fed with top soil from the parts of the field sloping towards it, is met with indifference. The gully is a natural occurrence, and he intends to adjust his farming according to what happens on his land. We point out how some of his cultivation ridges have been destroyed by moving water, how seeds have been washed away and that there are obvious signs of sheet erosion above the gully. Nothing much to worry about, he says. He will wait and see how the water moves and then... Well, all in all, there is no big problem with soil fertility and harvests.

The fine sand on top of the soil is the way things are – not an indicator of land degradation. Of course, water will carry some material as it moves down a slope. Could anything else be expected?

Lacha Doo is not unconcerned about soil erosion. Neither is he a person who find it difficult to make an extra effort to improve his living conditions. He spends the long dry season earning extra money by carpentry as well as getting an income from selling chicken or goat's meat and tobacco at beer drinking places. He has previously spent almost ten years outside the district. We have met on several occasions, and have had no difficulty in getting to understand each other. Something else is at issue here. He shares with very many farmers in other parts of the world the conviction that, while soil erosion may be a serious matter generally, their own farms are not at risk.¹⁷

In 1991 the family cultivated three acres. In 1992 they increased the field by a further acre and a half. They harvested four bags of bulrush millet and one bag of red sorghum, in addition to what the family had consumed while the crops were maturing in the fields and what was lost to wildlife. Yield figures are thus very low. Already during the first years on virgin soil, their efforts did not reward the family with enough food for the whole year, while the emerging gully demonstrates that cultivation ridges across the slope do not alone make for sustainable cultivation.

Bwana Lacha is not planning to put in a cut-off drain or take any other more thorough measures to arrest soil erosion.

Producing soil erosion

Outright disastrous cultivation is met further up in the hills, at Mzee Dosa Chandu's settlement. He is in his seventies, and lives with his wife and a grandchild and a married son and his family. He is sickly but has the support of his son's family. The son spends part of the year clearing forest on contract in the Mwakisabe area. Mzee is one of those who never really left the hills during the villagization period. He main-

tained his beehives there and he tried to keep out of village affairs as much as possible.

The family's land slopes between 10 and 13 per cent in the steeper parts and is cultivated without any conservation precautions. It is situated just below a hill with rocky outcrops where large quantities of run-off are produced during the rains. No cut-off drain protects their field which is a mess of stunted and bent crops, with empty patches between plants far apart, rills everywhere and small emerging gullies in places. This is one of the worst fields we have seen and it is difficult to contain our reaction as we walk through the fields with Mzee Dosa's adult son. But he does not share our worries. He is convinced that very little soil has been carried off, very little (*kiasi sana*).

He is pleased that water enters the fields since it brings "manure" from the forest. Next year the productivity of the fields will have increased, he argues, because of the "strength" (*nguvu*) added from decomposing leaves, etc. When we try to discuss the uneven distribution of the crops in the field, he says this is because they were planted on different days, and have therefore developed differently.

As we point to some areas with obvious soil erosion, his attitude is either that there is no problem or that the problems are so big that nothing can be done about them. He admits that it is unlikely that he will harvest anything from this field. But "this is because the rains were poor".

Returning to the house we ask Mzee Dosa, as politely as possibly, what he expects to harvest this year. He agrees that there will be nothing. "Last year we at least got something." Our cautious probing of the family's situation results in only one suggestion from this seventy-year-old man: "I think we shall have to move to Matui." Even a man in his seventies may think of yet other frontiers and new forests and *baridi mpya* (new coolness). Or is he keeping his visitors at bay? We shall return to this point.

One more example. Dinu Bira cultivates one and a half acres on an 8-9 per cent slope in the hills above Mirambu village. During the last three

seasons we have had a chance to follow his efforts in this new field. The results are discouraging.

The household consists of two adults and nine children. The oldest son is often away on casual work, as is Dinu himself. The livestock tax records of Mirambu village show that Dinu had three cows and three goats in 1990. In 1991 he was taxed as having two cows and two goats. In November 1991 the animals were gone. For two consecutive seasons the harvests were too poor to support the family through the year, and for the 1992/93 season they could not afford to call on neighbours to come and help with the planting. They were thus able to plant only three acres out of six. In January 1993 there was no food remaining in the store and almost no crops growing in the fields.

Most people in Mirambu were obliged to do *kibarua* now and then during these years to survive. There was an unlimited supply of labour available and consequently the remuneration dropped to almost nothing. Some people worked for a "payment" of a small bundle of cassava tubers. For someone with dependants to care for, it is not possible to keep the family going on a hundred shillings a day. Dinu's family have not bought any new clothes or anything else for years. There was not even a chicken in the compound. Their failing fields added rapidly to their difficulties (cf. Blaikie, 1989:28). Since the family could not support themselves during the dry years in the early 1990s, their farming largely served to relieve their employers of part of the cost of hiring them. Their plight was part and parcel of the profitable agricultural exports from the hills discussed above. It was development, and land degradation, running amuck.

By 1994 conditions had improved slightly. Bwana Dinu was looking after four cows and a dozen goats for one of the immigrants. The oldest son had had some luck with a two-acre field he had cultivated far out on the plains below Mirambo, close to Makamaka. There was not enough food in the store to carry them to the next harvest, but things were far better than in the previous years. A few chicken pecked around in the compound.

In 1991 Bwana Dinu had put all his strength into clearing these one and a half acres in the hills, full of expectations that this field would

provide the family with both food and a surplus to sell. In the middle of the rains of 1993 we stand looking at a gully, 50–70 centimetres deep, breaking right through the middle of his field. We note that it has widened further since we were here last time. Dinu has planted some bulrush millet in parts of the gully itself. At another place seeds from the shamba have been washed into the gully and have germinated. Some grass and weeds are also growing there. “I will weed it”, he assures us.¹⁸

The plants in the field itself are few and far between. He is cultivating flat on the slope. Lots of seeds have been washed away. Erosion is everywhere. In an area densely covered with weeds we measure a sharp ridge of soil varying between two and four centimetres in height. That represents the minimum thickness of the soil layer which has been washed away from the adjoining areas during the current rains.¹⁹ Nearby, 15 centimetres of the roots of a tree are exposed, that much soil has been removed in these few seasons. Everywhere are small heaps of stones which Dinu has collected while working in the field. An argillic stratum is appearing in the gully, indicating that the field will acquire a hard surface when more soil has been washed down the slope.

While he admits that there is nothing to harvest this year, he insists that the shamba is first-class. When we try to discover his reasoning as to why the crop has failed this year, we get a long explanation of how “people” take cobs of bulrush millet from the field and do “things” to them which will make the harvest fail.

We move on to the question of the galloping gully in the middle of his land. He says that it is only affected during years with heavy rains... Now, have these last years really brought too much rain?

Bwana Dinu has lived all his life cultivating his own as well as other people's land. Now in his mid-forties he opens a new clearing on steeply sloping land, below a rocky area which produces a lot of run-off. The surrounding area has a thin layer of soil covered by secondary vegetation. Sheet and rill erosion characterise the slopes. How is it that

he has chosen such difficult land, and cultivates without any conservation precautions, thus producing nothing but soil erosion?

I can remember how happy he was to show us the results of his labours the first time we walked up to this forest field. He led the way and as we approached the field he turned to us saying, "Here it comes!"

How experienced farmers like Mzee Dosa and Bwana Dinu, born and bred in the hills, manage to transform virgin land into a disaster area in just a few seasons is the billion dollar question. Or is it? Of course, they both know that unprotected soil will be transported away by water moving down a slope.²⁰ They both have previous experience of having had to abandon fields which no longer produced enough crops. So, why these complete failures?

Explaining land degradation

There is of course the odd chance that a few particularly lazy or stupid farmers ended up in our sample. Blaikie and Brookfield (1987:34f) write ironically that some farmers, "like a minority in any walk of life, are certainly stupid and many more are conservative". They note that the use of "ignorance", "stupidity" and "conservatism" as an explanation would imply that there *is* a choice and it is only that people are unable to make the right one... Indeed, we have to consider more tangible constraints.

Poverty is one important explanation. When observing households like those of Mzee Dosa and Bwana Dinu, it is easy enough to know where to look for reasons for their miserable fields. Both families live virtually from hand to mouth. After series of dry years poor people have no margin left. When everything in the stores is finished, there is no alternative other than to accept casual work, whenever it is offered and on whatever conditions. Of necessity everything they do in their own fields will be too late and too hastily carried out. If they have water flowing through their fields with high erosive force, they just cannot afford the extra effort required to handle this situation.

Poverty holds back new initiatives. Changed practices and extra effort are not what come easily to farmers who can barely manage to meet their subsistence requirements. Attacking poverty is thus a necessary pre-condition for improved land husbandry in the hills. Important as this is, it is far from the only dimension of land degradation, however. Doubling *kibarua* rates would mean a lot to poor people but would not necessarily lead to a corresponding improvement in land husbandry. Many Burunge maintain that land is abundantly available and this amounts to land rehabilitation. Listening to elderly people talking about traditional farming, the standard description runs roughly as follows: "In those days people didn't really weed. They would move around in the field uprooting particularly big weeds, but real weeding was never done. They avoided weeding. Instead they found it easier to clear new land. They burned, they planted, and that was it. After two to three years the field was abandoned. People were after the forest." Thereby they allowed nature to recapture what had been lost to cultivation and to replenish the land.

When the soil turns sandy and pebbles show up in the fields this is *shauri ya kilimo*, because of cultivating. As soil is worked it will become affected, it will lose its heaviness, its fertility. This is nothing to panic about. Lacha Doo observes how a gully is forming in the middle of his sloping land, and he allows nature to have its course. After all, the rest of the field is still there to cultivate.

For people hard pressed by difficult circumstances, like Mzee Chandu and Bwana Dinu, it is difficult to think of something other than to close one's mind and eyes to what perhaps needs to be done, to accept soil erosion as something that just happens, to plant, and to pray that one's effort will be rewarded with food for the family. For centuries people have survived famines. Rain may still fall, fertility still be restored, the land still yield.

For people who are destitute, as many *vibarua* in Goima Division, have in fact been during the last few dry years, the planning horizon narrows down to nothing. It is a matter of finding food for the family, day by day.²¹ It is not difficult to understand how poverty destroys

Mzee Chandu's and Bwana Dinu's fields. Why they still plant and hope for good harvests may perhaps appear more puzzling. But they do. As long as they cultivate they are still people, not just day-labourers. They are people who invite their neighbours for working parties. They belong to the area and live from its resources. Even if their fields were only to return the seeds, and probably they will yield more than that, it would still be meaningful to plant because it draws the line against being *vibarua*.

They hold their own against an unfavourable fate. And it is also the case that land has life and the rains may bring a good harvest. Crops mature, as do children, as do also the gullies in their fields. The farmers, their neighbours and their habitat belong to one and the same process. They persevere.

When Mzee Dosa's son attributes their failed harvest to lack of rain (well, did their neighbours get more rain?) and Bwana Dinu says that witchcraft lies behind his difficulties, this does not mean that they are unaware of what physically happens on their land. But soil science is not directed to their most urgent problems and is therefore neglected. What they instead express is what it means to be powerless, the despair at having a hungry family and being paid a kilogram of grain, or a bundle of cassava roots, for a day's work. This is what lies behind soil erosion in the Burunge Hills, and not farmers' alleged lack of knowledge. Nor is Dinu's family poor because of too little work.

The farmers we are now discussing may have experienced difficulties in supporting their families over the last few years but their principal identity remains that of being a farmer. Referring to poor rains or witchcraft puts problems into the past tense, and one is free to continue the work that has to be done. When questioned closely about their affairs, they, and others in the same predicament, do well to respond in ways other than merely saying that they do their job poorly. What Mzee Dosa's son and Bwana Dinu, and others with them who ostensibly refuse to accept soil erosion as one reason behind their poor harvests, are doing as they are politely evasive ("too much, or too little, rain"), or ethnically confident ("this is what we were told by our elders"), or factual ("I was away, I was sick"), or redefine the matter

("it was sorcery"), etc., is defending their lives against inquisitive outsiders. We are made aware that our concern for the soil particles which are lost is not the same as their struggle to feed their families. We arrive at the same point as in Chapter 3, the Swahili expression *wanadharau*, they appear oblivious of the seriousness of the situation. Impertinent questions are treated off-handedly.

Analysing how outside "expert" recommendations on fishing in Whalsay, Shetland, clash with local versions of knowledge, Cohen writes that the reasons why the Whalsay fishermen made decisions contrary to "expert knowledge" had "little to do with fishing, and much to do with Whalsay culture" (Cohen, 1993:34). Talking to Bwana Dinu about the technicalities of his field we were of course also talking about him, and he responded with his social identity as much as with particulars about farming. Cohen explains: "People make knowledge accommodate their general social circumstances and not just those to which items of knowledge refer specifically" (ibid.p. 38).

Nor do outsiders' tales about imminent ecological threats tell the Burunge anything important about the hills. If they had addressed the political problem that the land is being overcrowded by immigrants most Burunge would have agreed that the hills are threatened. But rills in the shamba are something of a different order. Nature cannot be exhausted in the way that a Western scientific conception of "soil erosion" implies. When they tell us that they will be able to harvest if only the rains come, this is in fact anything but evading the question. It is a comprehensive answer, because land has life, and is renewed when things are well.

Summing up

To arrest the rapid and uncontrolled degradation of the Burunge Hills which is now taking place is no easy task. The resources of the hills are more or less free for the taking. And they are being extracted. Some of those now clearing land in the hills make considerable profits while feeling no compulsion at all to invest in good land management. The

surplus realised is often transferred to urban areas. Meanwhile many poor people find it difficult to invest in sustainable land management. The opportunities for casual work allow them to remain in the area, but reduce the labour available for soil conservation efforts.

Small-scale farmers who find their lives slowly improving as they produce good harvests in the hills are at the same time undermining their own existence by paying scant attention to erosion problems. Others are more conscientious and try to make sure that the land they have acquired will support them for the rest of their lives.

At the same time as problems of land degradation make themselves apparent, the hills also offer the best of lives. High up in Morah, the hhapeeloo'ay Mzee Duba can look out over forested ridges and rich pastures and fields, a permanent well is not far away, and he is surrounded by his sons' families. He lives in a small settlement that tells of what Burunge life was like when land was everywhere and Burunge country stretched beyond Gwandi in Usandawe and Mondo in Irangi and east to the Maasai plains. At the other end of the hills, in Chioli and Madah, immigrants build their own infrastructure and institutions.

Many of the immigrants now clearing the Burunge Hills harbour a considerable pride in "civilizing" pori, the wilderness, and producing profits where previously there was "nothing". They create wealth, they build good houses for their families. Their efforts constitute a potential for sustainable resource management in the future. They have many other pressing needs, however, that also have to be met: for water, medicine, etc. Soil erosion ends up at the bottom of the list of "problem rankings" (cf. McCracken et al., 1988:25f.) in the hills (table 6.4)²².

Now, problem ranking is a blunt method to get to the heart of how people experience their situations. There is a considerable risk that the mere presence of outside researchers will influence what items are ranked, not to mention the score they are awarded. Every attempt was made to discourage expectations of outside development aid. The ratings quoted in TABLE 6.4 may nevertheless also reflect such considerations. Nevertheless, they give a snapshot of the relative importance for different problem areas, and for the limited point we are making here, that in 1993 soil erosion was not a major worry for people living in the

hills, it may be conclusive enough. Richards (1975:111f.) reminds us that indirect ratings may better indicate what villagers are particularly concerned about. For instance, religious and eschatological language tells of an urge for social and ethical reform, and "song texts are especially valuable as sources of information about changing attitudes and as an emotional commentary on how people perceive current problems /.../ In general, it could be said that students of environmental problems in Africa might find it an advantage to develop a much more sensitive literary and musical ear than hitherto".

1. Health care	0.25	7. Water	0.50	13. Marketing	0.75
2. Maize mill	0.25	8. Fruit trees	0.58	14. Build. mat.	0.83
3. Sick transport	0.42	9. Vet. med.	0.58	15. Shop	0.83
4. Ox-ploughs	0.50	10. Farm inputs	0.67	16. Tractor	0.92
5. School	0.50	11. Office	0.67	17. Low soil fert.	1.00
6. Transport	0.50	12. Leadership	0.75	18. Soil erosion	1.00

Table 6.4. Problem ranking, Chioli and Madah, 1993.

Source: Ranking by cards at three group meetings dominated by middle-aged men. Scoring computed in accordance with Guijt (1992:62f.). Low score indicates high priority and vice versa. Items ranked were identified during informal discussions.

When official Tanzania lacks the resources to provide the necessary social services in outlying areas, some people there do take initiative to establish at least some of the institutions they need. Obviously common management of natural resources could emerge as one of these undertakings. But it must also be recognised that the population of the Burunge Hills consists of people with different interests and belonging to different communities. The hills contain different actors and no single solution will satisfy them all. Their respective interests will have to be first known and then openly and fairly negotiated, if any plan of action for the hills is to stand a chance of success.²³

The situation in the Burunge Hills tells of the changes now taking place in many other peripheral parts of Tanzania. The (varying) achievements of organized soil conservation work, or of land that was taken out of use because of the population redistribution during the

villagization process of the 1970s, are currently being surpassed by new developments. It is becoming increasingly difficult to maintain a commitment to public control of natural resources, when entrepreneurial initiatives are expected to make up for diminishing government funds. Until new patterns of organization emerge to safeguard good management of natural resources, soil conservation work remains in jeopardy.

Conclusions

The Burunge are not among the peoples to whom a particular piece of land is all important. They do not need to live where their forefathers are buried. Yet, here as everywhere else, the land they live from, the landscape they inhabit, gives rise to strong feelings. Ideas about what is good land, and how people should relate to the environment, form important ingredients in their way of life and in their understanding of themselves.

This book describes and analyses how the Burunge relate to land, how some of them conserve land while others devastate the very fields they depend on for their subsistence. Some of the reasons behind this are given. Both objective conditions and subjective worlds are described, both the changing land use and the fears and hopes these changes evoke. Still a number of important aspects have had to be left out – agronomic, economic, historical, juridical, ritual.

Understanding in anthropology can be implied “by the way the empirical data are organised and highlighted” (Talle, 1988:17). If this is so “description and analysis /.../ run parallel in the text” (*ibid.*), and this is what is attempted in this study. Inserted in the descriptions are accounts of how the information was obtained, which are intended to give the reader a chance to judge its possible worth (cf. Riesman 1977:2, *et passim*).

By way of conclusion we shall now pick out a few lead themes from the different chapters (without, though, summarising their contents) and finally comment briefly on research on land degradation and on the relationship between research and local communities.

Burunge subsistence comes from a number of different sources. Not least important is the forest. When yields drop, fields are fallowed to regain strength from the forest. Cultivation is said to make soils become "light". "The Rangi add manure. We don't. We have space." Although crops are guarded against vermin, many Burunge farmers accept that some of the surplus has to be shared with other inhabitants of the forest. Hopefully there will be enough for the cultivator as well. Most settlers, by contrast, say that they are not cultivating to feed the monkeys. They want to bank every cob produced to compensate for the fact that they have left the relative comforts of village life.

Many Burunge find security in living in a forested area whereas most immigrants harbour opposite feelings. To feel comfortable they want clean areas around their houses and fields, exactly the condition that makes the Burunge say that the land has turned "white" and that it is time to settle somewhere else, to get new health and security, peace and well-being.

However, if Burunge farming may at first glance appear a somewhat haphazard undertaking, a fiddling around with various loosely connected activities, on closer inspection it turns out to have both consistency and conviction. A district-level development project, KIRDEP, came into conflict with these when it wanted to introduce infiltration ditches as a new form of land preparation. A number of people found the new conservation structures to be an inadequate solution. Some villagers resisted openly while many others expressed their opposition by refusing to cooperate. It turned out that much of the conflict revolved around "knowing differently". The new structures were not only evaluated on their inherent merits but also in the light of what they communicated about 'us' (the villagers) and 'them' (the district staff, townspeople, administrators of project money).

During the planning stage the critical voices had remained silent. At the level of meetings and public knowledge the outside experts and a few influential villagers managed to arrange things their way. Local understanding was expressed through withdrawal, and when this no longer worked, through physical resistance.

A changing world

Many Burunge are of the opinion that they are a disappearing people. Immigrants are now in a majority in most of Goima Division. The Madah area provides a current example of a process that has already happened in the surrounding villages of Songolo, Chandama and Soya as well as at most other places that used to be Burunge areas.

When we began our studies in Madah in May 1992 the place definitely belonged to the hills. A narrow track led into the settlement which gave the impression of a clearing in the forest. Climbing the Intela hill one could see, however, that a number of fields had been cleared on the plains around Chambogo and Denesa. In 1994 a centre was emerging featuring brick houses roofed with corrugated iron sheets. There was a shop and two cafés, and a third a little way down the road towards Songolo. A few young men had small stalls at the burgeoning centre. A sports field had been cleared. The school had a building of good quality and two qualified teachers, and a third was expected any time. The forest remains on the periphery of Madah, but generally it is an open landscape resembling Songolo village just as much as the hills.

During the dry season in 1993 the road was extended to Soya. It took the able-bodied adults of Madah three days work a week for a month to transform a small track into a road which is passable most of the year, and it has made all the difference. The traffic increases all the time as does the export of grain. Entrepreneurially minded people compete to get a plot in the emerging centre or think of getting land in neighbouring Chioli to try to cash in on the developments in the Madah area.

In 1992 it took long hours of walking to get to Chioli and Kinando. Today Chioli can be reached by a fairly good road from Songolo and from there a track leads on to Kinando. Our neighbours in Goima used to listen with interest to our impressions of "the bush" when we returned from Unjui or Thloka. Today such exotic places tucked away in the interior of the hills make at least some people toy with the thought that perhaps they ought to clear land there.

Whatever the Burunge may think about the colonization of the hills by others there is little they can do about it. It means more food produced, fewer landless households. The Burunge have no case to argue. In Tanzania the land belongs to all its citizens.

Widespread poverty – and its representation

A large number of households in the study area are unable live on what they produce in their fields, but have to supplement it with other income. For the vast majority this means casual work. At least during the years when this study was conducted, when the rains were poor, many farmers were forced to accept work under conditions so miserable that their families could hardly survive. In this situation there was little time or strength, to attend to their own fields. The rich and the destitute became joined in a Dance Macabre of the land, while the surplus produced was invested in urban-based business, in transport and in real estate.

We found the gap between the few better-off and the many poor to be more dramatic than is generally assumed for rural Tanzania with its heritage of *ujamaa* politics. Studies commenting on rural stratification give a somewhat varied picture (cf., for instance, Hekken & Thoden van Velzen 1972; Collier *et al.* 1986; Kjærby, 1987; Booth *et al.*, 1993; Sarris and Brink, 1993; Holtland, 1994). Generally the situation with regard to a large number of very poor households remains less emphasised than in this study. The results of our wealth rankings were however, corroborated both in local seminars and by the results of other studies recently carried out within the MALISATA research programme (Lindberg, 1991 and forthcoming; Lindberg *et al.*, 1995; Loiske, 1995; Mung'ong'o, 1995). Social stratification emerged as an important dimension of land degradation. In semi-arid central Tanzania also we found ourselves face to face with Robert Chambers' dictum that the "extremes of rural poverty in the third world are an outrage. The outrage is not just that avoidable deprivation, suffering and death are intolerable; it is also that these coexist with affluence" (1983:2).

Research work in rural Africa could benefit from an "irruption, or breaking-in of the poor" (Gutierrez, 1984:4), to borrow words from a related discussion. It is the experiences of the poor which are at the heart of current developments.

If the poor were to influence how studies of rural Tanzania are conducted their presence would immediately create a greater awareness of the structural dimensions of land degradation. Conversely, if they become involved in studying their own environment, villagers may also gain by having the opportunity to reflect together on the causes of land degradation and to raise their hopes.¹ As I make this point I feel embarrassed. If for a moment we leave the arenas of "soil conservation" and "rural development" to consider how other issues – say marriage conflicts, sickness, lack of rain, infertility etc. – are commonly approached in many African village settings, we encounter competent people interacting with specialists. In healing the patient is contributing to the process, not passively awaiting recovery as often happens in the West when a patient hands over the responsibility for his/her health to a medical establishment. When someone falls sick neighbours and relatives may gather round the sick person and co-operate to find different specialists to interact with, for herbal treatment, in prayer meetings, in therapies of forgiveness, in biographical sessions looking for causes in the patient's history, etc. But when it comes to land rehabilitation, these same people have for decades been lectured to and instructed on how to dig conservation structures. The discussion has been dominated by outsiders' ways of understanding the problems. It has therefore been easy both to blame supposedly ignorant farmers for land degradation and to belittle, for instance, the role of land alienation as a cause of land degradation.

Soil conservation specialists seldom advocate land reform, or changes in trade regulations, as a way of attacking problems of land degradation. And rightly so, it is not part of their profession. But if it had been common practice to share responsibility with local land managers for both diagnosis and cure in land management, we would have had a rather different understanding of land degradation and soil conservation in rural Africa.

Local knowledge

When discussing the Burunge theory of soils (summarised in FIG. 3.1), as when other opinions and indigenous forms of classification have been at issue, I have tried to make explicit that the views considered are held by “many”, “some” or by certain persons, and that these are debated. Goima men and women, like all other people, change their minds, think differently depending on the context, and may indeed feel uncertain about how they understand the world. In presenting “indigenous ideas”, even if one is careful not to forge them into a system, one still risks petrifying as “truths” what may be differently emphasised in different situations and to different interlocutors.² Fairhead, who has studied in considerable detail how the Bwisha of Kivu, Zaire, understand crop characteristics and how they theorise about their farm practices writes that “nobody locally is in a position to say what is ‘right’ or what is ‘wrong’ and to turn a farmer’s hypotheses into truth” (Fairhead, 1993:193). The KIRDEP project staff could in fact be said to be right in believing they had reached agreement with members of a village on a conservation input, i.e. right as far as what is said in planning meetings on natural resource management goes. Yet, they were also to experience that another truth ruled in other fora.³

A series of publications in the Swahili language report on the results of the MALISATA research programme to the communities concerned. It is to be hoped that these help somewhat to counteract the privileged position of researchers in interpreting other people’s thoughts and actions (cf. Asad, 1986:155). However, written publications, even if they are quite insignificant, may also have the opposite effect. They may give the impression of representing *the* truth about how things are. Similarly, “community feedback” may reward influential people at the expense of less articulate groups (cf. Dahl, 1993b:15f.). These are risks, which it is necessary to balance, but which are all the same worth taking for the possibility that they may encourage local debate on the sustainable use of natural resources. One such example was given in Chapter 6 when a local map-drawing exercise triggered a new understanding, I dare to claim, in one local com-

munity. If reporting results back to the villages, and involvement in “barefoot history”, risk creating reified truths of dynamic processes, the best remedy I can think of is to keep the dialogue going.

In 1992 I had the opportunity of participating in a field-work session of the Kondoa “District Committee on Culture and Customs” in which two elders from each of the four peoples indigenous to Kondoa District participate together with a few District officials. The elders were to record local history in one area. What they documented turned out to be as much a normatively correct story as a historically based account. They did not merely write history but attempted to create it. Researchers and informants shared experiences with one another of how life is, and of how it ought to be. The elders felt it important to identify good customs which should be promoted and bad ones that were obstacles to “good development”. The elders on the committee saw themselves as leaders with a responsibility to teach, even to preach. The field-work that the members of the Committee carried out turned into performances with rhetoric, prayers, informal chats, anecdotes, dancing. The question and answer pattern collapsed as feelings and experiences were shared.

Would it perhaps be better to arrange social events like story-telling sessions, socio-dramas, listening surveys, producing songs rather than to print booklets on research findings? Perhaps we should provide meals so that people can meet comfortably, instead of printing booklets? Could this be a way of encouraging so that contrasting views make themselves heard instead of “authorizing” one version? Telling history is an event, a process. Writing history, or printing a pamphlet, by contrast, may mean consolidating one version.

Local opinions and classifications are flexible, divided, dependent on context, and expressed in many different ways. When describing other peoples’ worlds it is important to allow for their uncertainties and differences of opinion. Fairhead (1993) adds that one “ought to be very careful not to see it as – or worse, turn it into – stone”. Ways of getting a little closer to lived realities include, I believe, making the research process as public and shared as possible, and seeing to it that the views of those usually excluded from the public arena are included. No one

having any experience of either field research or development projects believes that this is politically easy, or that communication between villagers and scientists is not beset with pitfalls, or that beneficial results automatically result from such efforts – but it is still right to try. In the hope that it may help the less privileged to make themselves heard and to act.

“Indigenous knowledge”

The examples provided by a few “indigenous conservation” farmers getting harvests even in dry years when many others failed (Chapter 2) fit a little too well with current reasoning in development circles. One version goes like this: traditional agriculture throughout Africa successfully fed the continent before the colonial agricultural service, and later international aid, “deskilled” the farmers. Now renewed aid is needed to salvage the pre-interference knowledge so that smallholders can get back on to a sound footing after experiencing externally induced mono-cropping, fertilizers, pesticides, improved seeds, and the resulting widespread hunger.

Although some Burunge farmers obtain harvests which appear to remain reasonably stable over the years, others fail pitifully as has also been recounted. Most farmers produce too little to provide them with reasonably secure and comfortable lives. There is no reason to jump to exultant conclusions about hidden agricultural wisdoms. Here it needs to be added, though, that the farming survey we undertook, but which is not reported in this book, revealed a considerable gap between farmers getting quite good results and others getting nothing or very small harvests. The fact that there is scope for improvement should, however, not be taken to mean that farmers with meagre results are necessarily lacking in knowledge about farming.

In Chapter 3, discussing Burunge soil science, it was argued that what to outsiders may look like soil conservation awareness may in fact have a different grounding. With the current focus on “indigenous technical knowledge” – with books being published on the subject,

special journals appearing catering for this interest and aid agencies looking to ITK as a panacea for their difficulties in rural development – it is tempting for outside observers to read reason and system into what may be odd trials, idiosyncrasies, mistakes, coincidences. Richards (1993:62) warns against “misplaced abstraction”. As everyone hunts for local knowledge, there is a risk that it will be detected also where people’s views and practices are informed by quite other considerations. We who are in the trade may do well to reflect upon what can be done to make sure that our reports are not unduly influenced by what suits current fashions in distant markets.

One remedy is to repeat the same argument once more – to bridge the distance between farmers, agricultural staff and researchers so that together they try to understand what is going on agronomywise as well as socially and politically. If the responsibility for what becomes recognised as ‘knowledge’ is shared, there is less risk that subjective interpretations will be accepted. Anthony Cohen (1993:41) turns the argument inside out when he writes that “few of us would claim anything more than ‘version’ for our own expertise; we should not assume more than that for our informants. In matters of development policy and planning, that may be what makes them, /.../ more reliable as experts than ‘Experts’”.

Co-operation in research improves its quality, I have tried to argue. But on an ethical basis it is already mandatory. The Brundtland Commission emphasised that people have a right “to know and have access to current information on the state of the environment and natural resources” (WCED, 1987:330). Redclift (1992:38) makes the related observation that sustainable development is linked to human rights.

Land degradation research

For a long time the structural dimensions of land degradation were overlooked when the causes of land degradation were being analysed. Explanations focused on poor cultivation methods (i.e. ignorant

farmers), overpopulation and overstocking. Mung'ong'o (1995: Ch. *et passim*) has demonstrated for Kondo District that such reasoning is simplistic and ahistorical.⁴ Other case studies have reached similar conclusions. A pioneering effort from the 1930s was Audrey Richards' *Land, Labour and Diet in Northern Rhodesia*. She found land degradation in the Bemba areas to be dependent on male labour migration, in turn caused by structural conditions beyond the control of individual farming families. Gudrun Dahl (1979:203f.,260f.) has documented how drastic herd reductions, following military operations, as well as loss of dry-season grazing areas to game parks and to expanding agriculture in "marginal areas", forced large numbers of the young Borana pastoralists of northern Kenya to look for jobs downcountry. These and other aspects of externally induced poverty combined to force cattle owners to overgraze areas within reach of permanent water since the manpower required for a more varied and sustainable land use were no longer available.

At a more general level the volume by Blakie and Brookfield *Land Degradation and Society* (1987) has been particularly influential in showing how land degradation is an interdisciplinary issue, which needs to be understood in a wide historical, geographical and social framework. In *The Political Economy of Soil Erosion in Developing Countries* (1985: Ch. 6&7) Piers Blaikie had developed the argument that small producers cause soil erosion "because they are poor and desperate", and in turn soil erosion exacerbates that condition. He used the phrase 'desperate ecocide' to capture the predicament of the poor (p.138). The Brundtland Commission (WCED, 1987) subsequently picked up the same thread, concluding that there is a close relationship between environmental problems and poverty at a global level. Today it is acknowledged that political ecology provides important keys to understanding the processes of land degradation. Also textbooks on soil conservation mention, at least in passing, that social differentiation can be a key factor in land degradation (cf. for instance, de Graaf, 1993:53f.,156). Even though many commentators now consider a socio-political perspective on land degradation justified, empirical stu-

dies of local natural resource management remain few (cf. Stocking and Sanders, 1992; Östberg and Christiansson, 1993).

Looking at land degradation from a conservationist point of view, physical factors will dominate: overgrazing, deforestation, ploughing up and down the slope, etc. Here it has instead been important to provide a background both of how the environment is understood by different local actors, and of their respective modes of subsistence, as well as their interaction with the wider society. Current land use in the Goima area and in the Burunge Hills was found to be highly influenced by agricultural prices, national land policies and social stratification – conditions that at first thought do not perhaps seem to have much to do with how cultivation ridges are arranged.

Agricultural extension workers in a peripheral rural area do not easily approach structural limitations like poverty, and the concomitant labour constraints in poor households. Nor are they used to consider how ‘land’ and ‘people’ are culturally constructed. Rather, they emphasise that farmers know too little about soil erosion. No doubt the consequences of incipient soil erosion can be difficult for anyone to estimate. Many Burunge farmers accustomed to an abundance of land may indeed benefit from conversations with agricultural field staff on the contemporary requirements of sustainable farming. Nevertheless, what even more than conservation advice can save soil in the Burunge area are decent wages for casual workers, good quality water available nearby, affordable medicine, etc.... Simply, things that would make it possible for poor people to live decently, and also be able to conserve the lands they cultivate. An agricultural workers’ union that succeeded in improving living conditions for the *vibarua* would do a lot to support a sustainable future in the Burunge Hills, even if it did not solve all of the problems. The thought behind this argument, which emerged towards the end of Chapter 6 and which may perhaps appear somewhat happy-go-lucky, was to make the point that behind the “facade of technical objectivity” of environmental management (Redclift 1987:138) lies the charged issue of how the means and resources of production are distributed.

Research, local communities and “facts”

Anthropology some twenty years ago presented itself as being a discipline that studied societies “from within and from below” (Knutsson 1971:76f.). It furthermore carries with itself, from the time of Malinowski, the ambition of seeing things from the “native’s point of view”. Clifford Geertz has noted that such an injunction may be difficult to make trustworthy when anthropologists no longer dare claim “some unique form of psychological closeness, a sort of transcultural identification” with the people they work among. “What happens to *verstehen* when *empfinden* disappears?” (Geertz 1983:56).

Geertz argues for using concepts that are close to the heart of those studied, at the expense of those that are the exclusive domain of the specialists: thus “love” rather than “object cathexis”, “caste” instead of “social stratification”, “fear” rather than “phobia”. By analysing how people represent themselves to themselves and to one another, in words, images, behaviour, he hopes to understand local notions (*ibid.* p.58) The idea is to see their experiences within the framework of their ideas.

Gerholm (1993) argues in a similar vein, though with reference, in particular to contributions by Asad and Lienhardt, that a task for anthropology is to expand world languages and scientific understanding with the contents of the studied worlds, “in order to preserve the structure, the “coherence”, the “foreignness”, of the original discourse in the language into which it is being translated” (p.11). It is not merely a matter of finding an approximation in Western languages and scientific discourse to a notion like “jihad”, for instance, but of allowing it to “extend /.../ the sphere of the receiving language” (p.19).⁵

When “the field” in this way, or through local research co-operation, invades anthropology Geertz’ *verstehen/empfinden* -question becomes less embarrassing. Knowledge is produced in encounters, and if those whose lives are being studied are consciously and actively involved in the process its boundaries change, and in my experience at least, its precision increases. Examples have been given. Probably its usefulness also increases.

During the community feedback sessions the discussions soon left the researchers behind. People debated with each other and selected issues because they mattered to them, not because questions had been posed. All the sessions lasted for hours and with only occasional inputs from us. These gatherings helped us along in a concurrent flow towards an emic understanding of how the Burunge relate to their environment. Research co-operation seems to offer one way of addressing the problem Geertz raised – although ‘participation’ in itself does not of course preclude the possibility of misunderstanding, as Hobart (1993:25) rightly warns.⁶

Can we, then, know that we have arrived at a reasonably valid description of what at least a large number of Burunge mean by saying, for instance, that a certain piece of land is “good”, or how they think about land degradation? I have selected words and situations I found telling of what are important experiences to many Burunge in relation to land. Since social scientists tend to think that the way we understand our respective natural environments is invested with cultural and social significance, it is not possible to understand ecological relations without grappling with indigenous knowledge and cognitive structures (Ellen, 1982: Ch.9).

The stories are contained in each other. When an elder told us that the ceremony had been performed at the *moogimo* tree in Goima (Preamble and Chapter 4), he was both taking account of something that had (or had not) happened and expressing his satisfaction that in the end the elders had won the day. The field researcher, for his part, was listening to an elder talking about the significance of trees in a Burunge world view, while a reader may perhaps note local resistance against state power. To someone interested in modes of thought, or in local-level politics, it is immaterial whether the ceremony was performed or not. To the elder this was a plain truth, to the field worker something he had to cross-check. In this way one and the same “fact” becomes evidence in different stories. Some social scientists draw the conclusion that encounters between ethnographers and informants are worlds of their own and that it is through such constructs that ethnographies are made. While admitting that any description is unavoidably

a construct, our tales have still aimed to take account of realities of Goima life. Places, persons, events are therefore named and dated. The “facts” can be checked by others. We have asked people in the study area if they recognise our descriptions of their lives. Epistemologically this may not perhaps solve the problems of representation, but it allows initiatives other than those of the investigator to enter the study. The description moves at least one step closer to “reality” and to what is important to people in Goima. New processes of understanding Goima life, independent of studies initiated from outside, can begin. Other stories can be added.

The sketch (FIG.3.1) summarising Burunge thoughts on soil formation and soil erosion proved intelligible in comparison with the thoughts and concepts of other East African peoples to which references were made in Chapter 3. This has value as evidence. Nevertheless, I also wanted to acknowledge that here an altogether different demonstration was important to the field worker as the study unfolded. The field researchers’ subjective hearing, seeing, smelling and feeling are parts of their understanding of what goes on (cf. Riesman, 1977:151f.; Stoller 1989; Wikan 1992). When I happened to note satisfied, inner smiles of recognition on the faces of two elders unknown to me as they quietly exchanged a close gaze when we went through the different details in the model summarising Burunge views of how soils form, change and erode – then I felt convinced that we had got it right. They recognised their own world and they felt confident. This “proof” may not convince a sceptical reader. But I trust what I saw, and it was backed up by the long ensuing discussion. After all, Geertz’ point that *empfinden* has disappeared from the craft of anthropology is perhaps not as self-evident as it at first looks.

Geertz writes that understanding another person’s forms of expression may be like “grasping a proverb, catching an allusion, seeing a joke” (Geertz 1983:70). That satisfied gaze between Mzee Daa and Mzee Lali of Igunga village was important to me. But, of course, when it comes to finally deciding on the material value of the findings it is the word of those who are to eat that counts. I hope that at least some in Goima will recognise what is on the menu.

Thanks

This book owes its existence to many people, of course. Two have a particularly direct responsibility. Professor Carl Christiansson of the Environment and Development Studies Unit in the School of Geography, Stockholm University, asked me some time around 1990 to “do something anthropological” in connection with a research programme assessing environmental changes in Kondoa District that he was coordinating together with Professor Idris S. Kikula, the Director of the Institute of Resource Assessment in the University of Dar es Salaam. Carl and I had first met in Kondoa in 1985 when I was doing a study of the socio-economic impact of the HADO project. Would I not now be interested in following up what had happened since 1985? Certainly I was excited at the prospect. What we then thought of as a minor input to the multi-disciplinary team has grown out into an undertaking lasting several years which I much cherish. Apart from the cooperation in the field and at the home base, Carl with all his knowledge of environmental processes in central Tanzania, has also read the manuscript and given me his usual exact and challenging comments. Some of them I have tried to do justice to here; others have put me on the track towards future reports.

When I was about to start work in Kondoa I made inquiries if it would be at all possible to involve Mr Joseph Mduma, a forester with the HADO project, in the work. The then HADO manager, Mzee Alfred C. Mbegu, generously arranged this, and Mduma and I were able to work together for virtually the entire period in the field. I am most grateful for this. Mr Mduma is not only a competent professional but also an unusually gifted field worker. I much admire his ability to

make research issues accessible to people with no previous experience of research work, his conscientious and honest way of relating to everyone who comes his way, and his dedication to environmental rehabilitation work with which he has now been involved in Kondo District for more than a decade under quite demanding conditions. Mr Mduma's contribution to this study is absolutely vital. And, apart from that, like all others in Goima, I much enjoyed his company.

That Mzee Mbegu, and later his successor Mr Cassian Sianga, agreed to let Mr Mduma involve himself so intensively with the research programme I believe grew out of their own personal experiences of, and commitment to, scientific work. Both of them made a point of visiting us in the field and vice versa; a trip to town for whatever practical reason would always involve lengthy and inspiring discussions at the HADO office about our work. I am much obliged to both Mzee Mbegu and Mr Sianga for their keen interest in the work, and equally for their friendship and that of their families.

In Goima many people helped us in impressive ways. Mzee Joseph Bahe Silooti, the last chief of the Burunge, travelled with us all over Burunge country and introduced us everywhere. During long formal interviews on the history of the Burunge he shared with us his intense interest and extensive knowledge of the subject. In 1991 Mzee Silooti was an energetic elder, prepared to join us even for long walks into the Burunge Hills. When we arrived in April 1992 for our third period in the field, he was sick and no longer able to work with us. His condition rapidly deteriorated, and early in the morning of June 1 the piercing wailing from his house in Goima village announced that the last chief of the Burunge had died. A separate publication on Burunge history and socio-ecological changes, to no small extent influenced by our cooperation with Chief Silooti, is planned.

Mzee Mikaeli Muriyanga Ninga and Mzee Paskali Saki, both of Goima village, have been intimately involved in the work, not only as knowledgeable informants but also as companions on many trips and at various social occasions. Like Mzee Silooti they introduced us near and far, had a keen interest in Burunge culture and were anxious that our

study should “make the Burunge known”. Both their substantial contributions to the work and their personal consideration and kindness to us remain among my most cherished memories from Goima. The many tea-breaks and meals we shared together, when their humour and eloquence flourished, are highlights of my time in Goima.

Mentioning Mzee Mikaeli makes me think of his daughter Mama Martha Ninga, chairperson of Goima village council, who likewise was of great help. Discussions with her, and with the *balozi* Mama Elizabeth Bura, with Mama Maria Silooti and Mama Yema Khankhai, did much to help us see the role of women in Goima social life. Again, their warmhearted characters were wonderful to meet. So many faces appear in my memory, people who have given of their knowledge and ingenuity. I think of long conversations on Sunday afternoons at Salim Suta Doo's porch, with its pleasant shade, or the delightful wit that graced the many interviews with Mzee Meda Unei of Madah, the helpfulness of Elias Etho, the gentle Sheikh Saidi Chara... They are just too many to mention by name.

At the Goima office we were always well received by its dynamic commander, *Ndugu* M.H. Kova, as well as his pillars of support *Ndugu* Shabani Hida and *Ndugu* Huseni Mbaraku. Discussing development issues in Goima with them was as enjoyable as it was rewarding.

Mr Thomas Chorray, Divisional Forester at Goima, deserves special mention. An experienced professional, with a sincere dedication to supporting his fellow villagers' work to improve their lives and the environment, he gives to development work in Goima Division invaluable competence and inspiration. Mr Mduma and I were always seeking his company, for trips into the hills, for meals, on whatever pretext we could think of that provided an opportunity to learn from him while at the same time having a good time.

The fathers and sisters of the Goima Catholic parish kindly allowed us the use of a room at their dispensary, but more than that they provided the very best of company and comfort, becoming our friends and a substitute for our own families throughout our stays at Goima. It is with gratitude and affection that both Joseph Mduma and I remember how well we were received by all and sundry of Goima parish.

I also wish to put on record, with equal gratitude, the peace and comfort I enjoyed during visits to Kondoa town where the fathers and brothers of Kondoa Catholic parish allowed me the privilege of staying with them. These were blessed occasions for reflection and writing up my notes while Mr Mduma gained a more than well-deserved chance for a short break at home.

And then all those many, many more, in Goima, Mirambu, the Burunge Hills, Chambalo, etc. – acquaintances too many to mention, but I see them filing past in my mind as I write these lines. I only hope that the tone and contents of this book bear witness to how pleasant my time in Goima Ward was, and how much I look forward to returning there and continuing the cooperation.

In Dar es Salaam, IRA Director, Professor Idris S. Kikula, not only made all the practicalities flow smoothly, but was constantly a most inquisitive and challenging discussion partner. Having the busiest office I know of in academia, he is nevertheless always prepared to jump straight into discussion on Goima field realities. Whatever success the research programme MALISATA is having is to no little extent due to his dynamic leadership and his inspiration to the team of researchers at IRA.

Dr Robert Payton, soil scientist at the University of Newcastle and a contributor to the MALISATA programme, shares his knowledge and enthusiasm about soils with us all, and one particular visit in the field by him and Carl Christiansson was most helpful to us in getting going on what became Chapter 3 of this book.

Particularly warm thanks are due to my every-day colleagues within the MALISATA project, Mats Eriksson, Clas Lindberg, Vesa-Matti Loiske, Claude Mung'ong'o and Pius Yanda. They make creative and dynamic company. Together with them my understanding of life in Goima developed. They immediately brought me into their Tanzanian world, giving generously of their knowledge, their contacts and their enthusiasm. It was an easy and safe start which grew into a warming and encouraging experience. I feel happy that as I write these thanks for help with the current study it does not mean that our joint endeav-

ours are over. For the time being, however, it must be acknowledged that they have read most of the manuscript in various stages, and involved themselves in its details to the extent that it is difficult to know whose ideas start and end where. I am, of course, most grateful.

Other colleagues who have read manuscripts are Sten Hagberg, Bawa Yamba and Eva Tobisson. Their competent and thoughtful comments were as penetrating as I had hoped and though I have incorporated a number of points and checked references they suggested, I am happy that I am still left with even more ideas to develop. A few telephone conversations with Mohamed Lodhi, Department of Afro-Asiatic Languages, Uppsala University, were also helpful and inspiring.

Throughout the time I have been involved in the MALISATA project, the Department of Human Geography, Stockholm University, provided me with a home base. I am most grateful to Professor Ulf Sporrang and his staff. The exchange of ideas has been particularly close with members of the research groups on Third World issues and on Landscape History. And to Henrik Miettinen at the Geographical Library, master of bibliographies and electronic highways, I am deeply and happily indebted, and hope to be even more so in the future.

Dr Ulla Wagner, associate professor and research director at Folkens museum—etnografiska, the Swedish National Museum of Ethnography, has supported the work in many ways. First by granting me leave for this study from my regular job as curator of the museum's Africa section, and subsequently on many occasions, for instance when I was in dire need of advice on financial support and research organization. Her interest in studies of natural resource management and of local perceptions of the environment is a constant encouragement. A book she initiated, *På naturens villkor* (On Nature's Terms), was an important platform for me when the present study was launched (Wagner, Isaksson and Östberg, 1990). I am also indebted to the current director of the museum, Per Kåks, for extending my leave so that I could finish this book.

Dr Roland Kiessling of the Department of African Languages and Cultures in the University of Hamburg has lent his expertise in

Burunge linguistics to the transcription of Burunge phrases. A coincident period of field work in Goima is happily remembered.

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Mrs Margaret Cornell read and corrected my English, putting great effort into making the text pleasant for English speaking readers. Any language errors in the text are due to last minute extensions and reformulations. Towards the end of the production of the book calamities piled themselves up, as normally happens. Ian Murray worked round the clock to help save the situation. Thanks.

Dr Tomas Gerholm, associate professor in social anthropology at Stockholm University, read most of the manuscript, with a supervisor's critical and helpful eye, and a friend's encouraging support. Tomas died on April 28, 1995. His admirable contribution to anthropology remains a wonderful source of inspiration. This book benefits from this, and it would have been a much more professional product if he had had the chance to help me with the later versions also.

When Tomas was no more, my friend of three decades back and ante-anthropology, Professor Gudrun Dahl, took over the critical final reading. I much appreciate how she brought coherence to muddles in the manuscript and offered new insights into material I thought I had already gone through too many times. Once more I found myself on the receiving end of Gudrun's generosity, and had occasion to remember the many notes I have received from her over the years with ideas and literature hints. Thanks!

All these good people, and many others, have helped in the writing of this book. For its existence they cannot escape responsibility. But for any mistakes contained therein they are as innocent as the children leading the way in the Burunge rain-making ceremony.

Notes

Introduction

1. No attempt has as yet been made to write a Burunge history, with the exception of a somewhat erratic and speculative account, written in Italian (Montefiori, 1988). The information in overviews like Huntingford (1953, 1963) or Murdock (1959) is of little value. Hence, there was room for a new attempt to record the history of the Burunge.

2. I am pointing here to influences of particular importance for the line of reasoning followed in this study. Brokensha et al. (1980) could have been mentioned, as could Long and Long (1992) and several others. The literature on farmer participatory research has been annotated by Amanor (1990). Key concepts have been analysed by Farrington and Martin (1990), and the state of the art in participatory agricultural research evaluated by Okali *et al.* (1994).

3. A main contestant on this continuity-oriented side, Robin Horton, has written a highly opinionated overview of the debate including a partial reassessment of his own stand (1982).

4. On this point I wish to acknowledge advice from Bev Sithole of the Stockholm Environment Institute. During a presentation of an earlier version of Chapter 3, where names of informants were withheld in line with the anthropological convention of "protecting the identity of the informant", she pointed out that I was treating local learned persons differently from their academic counterparts. I had to give way to her criticism.

5. Hastrup also deals with this situation in a previous paper (1990a:49f.) where she discusses fieldwork in the light of

the concept of "becoming". "Participation /.../ can never be complete and /.../ is no immediate consequence of physical presence."

6. Clifford (1986a:25) uses similar words when in an optimistic tone he asks "is there not a liberation, too, in recognizing that no one can write about others any longer as if they were discrete objects or texts?"

7. Lest I should risk this meaning something different from what it appears, I note that a seasoned observer like Marilyn Strathern writes that Tyler denies that the ethnographer is able to represent facts and provide objects of knowledge (1991:8).

8. An alternative interpretation of Tyler's point may be less far-reaching, namely that the "story" one wishes to tell will influence what data are used I find my reading more plausible, however. Tyler is aiming to be anything but trivial. Lest I implicate more people than necessary, I hasten to add that Hastrup is adamant that anthropology is a science (1990a:47; 1990b:78,82).

9. Maurice Bloch (1992:186, 193f.), among others, has drawn attention to that much passes outside language in transmission of knowledge. He argues that in fact most of the material field researchers make use of comes from non-explicit practice rather than from "linear, linguistic thought".

10. More than twenty years ago Geertz (1973:20) disarmed the worst rigour of this argument when he observed that "it is not necessary to know everything in order to understand something".

Chapter I

1. The literature on rural change in Tanzania is too vast to refer to in this short section. Two fairly comprehensive books of relevance to what follows could be Boesen *et al.* (1986) and Simon *et al.* (1995).

2. Three years with complete figures give an annual average of 457 mm. and the data for the other years point in the direction of a figure much closer to 500 mm than 550.

3. An often quoted figure is that the erosive power of the tropical rain is 16 times greater than that of the temperate rain (Hudson 1981:79).

4. I am relying here on observations by physical geographer Mats Eriksson.

5. Discussing wealth differentiation in rural Lesotho, Ferguson (1992) has picked up a classical theme of anthropological analysis, that different forms of wealth may not be mutually comparable. Households possessing different kinds of assets can therefore not readily be placed along a linear continuum of poor and rich. Instead, he favours mapping complex relations between different categories of wealth, what he calls a topographic approach. This is what rankers do when they compare different households by assessing, for instance, acreage cultivated against the number of children in school, the number of beehives against access to non-farm incomes, etc.

6. Another possible bias could be that people were reluctant to talk about poverty as that may be regarded as a way of bringing about misfortune. We did not, however, come across such reasoning in the Burunge areas.

Chapter 2

1. The wording here is deliberately vague. This is not the place to discuss the relationship between descent and territory in Burunge. Although rules are relevant, situational solutions and negotiations are characteristic (cf. Kuper, 1982).

2. The closely related Alagwa people describe themselves with similar words (Östberg, 1986:31).

3. Also among the Gogo, the neighbours to the south, mobility is part of a traditional ecological and economic strategy (Rigby, 1969:20, 28f., 54, 61, 116f.). For the Burunge, who have fewer livestock than the Gogo, moving sometimes occurs under more pressure and in more desperate circumstances. Opening new frontiers of cultivation, a related theme common in the region, will be dealt with in Chapter 6.

4. Similar themes seem to occur among the Gogo. Descent is not the basis for corporate groups beyond the "sons of one man" and networks are "ego-oriented" (Rigby, 1968:7, 306f.). Generally, Gogo society is "fluid, mobile, and egalitarian" (ibid. p. 308).

5. Among the Gorowa, a Cushitic-speaking people of Babati District, it is similarly uncommon for people to fight over land. Immigrants are accepted in order to avoid conflicts over land. The underlying cause has a different emphasis, however: land is the embodiment of their ancestors and therefore quarrels connected with land should be avoided (Talle, 1991:15). In more densely populated areas more restrictive attitudes are developing as large tracts of land are taken over by settlers. "The Gorowa, taken by surprise, ask themselves, 'How could it all happen so suddenly?'" (ibid. p. 29). That people in need are offered land occurs in many African situations.

6. It has a slippery texture, like all *mlenda*-type plants, and a distinctive taste which is appreciated in combination with the stiff porridge made from bulrush millet, maize or sorghum. The plant grows upright, while another variety is *kavagumbaa* which spreads on the ground. I am indebted to Mr L.B. Mwasumbi of the Department of Botany, University of Dar es Salaam, for the botanical identification.

7. Richards (1989:39) draws attention to what he terms "a performance factor" in farming, that things are done in ways

that strengthen each other and are sensitive to coincidences of the moment. One example he provides is that for the same group, "working on the same day with and without music, 20 per cent more work was done to drumming than without it". (Data available in Richards 1986:87.) To get the performance factor right is "of the same order of magnitude as the productivity increment to be had from adopting research recommendations".

8. The historians David Anderson and Douglas Johnson (1988:11) write about north-eastern Africa that people vary their pattern of subsistence production, moving back and forth along a continuum of herding, farming, gathering and hunting. "This flexibility is, for many societies, an important part of the strategy of security against ecological adversity."

9. Similar adaptations also occur in many other places. In Mvumi Division, a Gogo-dominated area near Dodoma town, a female farmer was happy to get six centimeters of sand washed over her millet crop which was grown in sub-soil. She claimed it fertilized it and reduced evaporation (Holtland, 1994:36). From Sierra Leone Paul Richards (1985:81f.) notes that erosion high up the slope may be welcomed "as part of the process of enriching run-off zone soils".

10. The Iraqw use similar, although rather more elaborate, structures as one component in their intensive agricultural system in the Mama Isara area, Mbulu district. (Loiske 1993, and personal communication).

11. Relating this point to a much wider issue, it may be noted that Horton (1982:239-243) argues that although explanation and prediction belong to a "traditionalistic" concept of knowledge, this occurs in a situation where "critical monitoring" of theory is rare. This is so for a number of reasons, for instance because a consensual mode of thinking is more common than competition between

rival theories, and because a local theorist of necessity has restricted experiences to draw from. There is therefore less scope for systematic examination of knowledge. Innovations do not become institutionalized as readily as in a "modern" setting. Perhaps such considerations can provide a background for the lack of community-level agricultural monitoring reported from at least some areas of Africa.

12. The word *bibi* has several meanings in Swahili. Here it is to be understood as "grandmother", "respected elderly woman".

13. Giddens' (1984:374f.) distinction between practical and discursive consciousness provides a theoretical frame for this point. Also Bourdieu's (1977) concept *habitus* cover similar ground.

14. The fact that the project claimed to have got the go-ahead for soil conservation during "participatory appraisal" did not make any difference. We are not here discussing the quality of the appraisal. Suffice it to note that it is common that, when there is suspicion of the motivation of outsiders, "participatory styles of interaction are of little value. References to land issues in particular can raise anxieties" (Okali *et al.*, 1994:103).

15. That local communities are being coopted into organizing their affairs according to the priorities of donors and the state, is a widespread phenomenon. Amanor (1994:75) describes current "global environmentalism", with its concomitant aid packages, as a renewed threat to local development and environmental initiatives.

16. Project activities are often based on the assumption that farmers act independently rather than as 'embedded' in a social, cultural and political context. Gatter (1993:170ff.) discusses this issue in some detail using experiences from Luapula Province, Zambia.

17. In a recent review article Shipton (1994:349) reiterates the insight, academically well established, but in practical work often overlooked, that overlapping and interlocking rights in land are of the essence of African tenures. It is small wonder that conflicts accompany virtually every attempt to influence natural resource management. From neighbouring Babati district, for instance, it is reported that tree planting activities have collided with the interests of livestock keepers (Johansson 1991:65ff.). Taking individual conservation initiatives on land to which others also claim some kind of right can be a way of laying claim to land and may trigger counter-measures (cf. for instance Östberg, 1988:67; Talle, 1991; Loiske, 1995:99). A number of such conflicting interests could be cited. One approach, which has been increasingly tried, to resolve them is through so-called "negotiated settlements" (cf. Christiansson *et al.* 1993a: 18f.). This, however, is not without its inherent dangers in situations characterized by major structural contradictions.

18. This is a rather flat translation of the Swahili phrase "hali ya hewa", which, apart from describing the quality of the "air" may also denote the general atmosphere, the well-being of an area.

19. Mung'ong'o (1995:42) notes similar attitudes in Kondoa Irangi Hills. Yanda (1995:86) found farmers denying that gullies in their area had increased, while aerial photographs from 1960 and 1992 respectively proved that this had in fact happened. He argues that people in the area tried to minimize the problem in relation to outsiders, since they feared the risk of being removed from an area shown to have active gully erosion.

20. The Rangi, the majority population of Kondoa District, share this conceptualization of soils, and particularly soil fertility, as hot/cold (Fosbrooke, 1958: 23,26; Östberg, 1986:21f.; Mung'ong'o, 1995:50f.). It is common in the neighbouring Babati District (Johansson,

1991:31). The Sukuma-Nyamwezi comprehensive concept of "mhola" refers to a 'cool' state, the desirable state of life and of fertile land (Brandström, 1990c: 2). Though Lindström (1987:80f.) does not say anything specific about how the Iramba classify soils we still learn that they associate the "blessed" cultivation season with coolness. And, to make a rather dramatic jump, potato farmers of the Andean highlands characterize soils as hot/cold (Douwe van der Ploeg, 1993:211).

The translation "cool", instead of cold, is preferred here since it better captures the Burunge association of *caagwa* with ritual "cooling". The phrase quoted in the text translates more exactly as "this place, its coolness is good", but for reasons explained by Kiessling (1994: 79f., 202f.) it can equally well be translated "this place, its good coolness". I chose a slightly freer translation which captures the essence of what people want to convey when discussing what makes good fields.

21. Fairhead (1993:190) describes how Bwisha farmers in Kivu, Zaire, insist that to grow strongly crops must not have too little sap, but neither should they have too much sap, in which case they may become 'over-extended' and prone to sudden death.

Chapter 3

1. One middle-aged farmer tried to combine the erosion and the "land is coming up" explanations by saying that run-off removes the top layer making the water enter deeper layers where the soil gets saturated, and "it becomes crowded, squeezed, different soils bump into each other, and soils are forced upwards". The rains caused the soils to swell which in turn has the consequence that they rise upwards. It was only once that we came across this line of reasoning spontaneously.

2. That soil and seed are symbolically linked to sex and gender is a quite a

common theme in sub-Saharan Africa (Shipton, 1994:360). Brandström (1990c:6f.) writes that to the Sukuma-Nyamwezi of western Tanzania it is a powerful imagery that men clear the bush and plant seeds in the female soil. The sky is commonly connected with male powers of creativity, while the earth is perceived as a female source of fertility (Jacobson-Widding & van Beek, 1990:21).

3. The old man here used the Swahili word *nguvu*, meaning force, strength, power in general. 'Energy' would in this case also be an appropriate translation. It is not used here, simply because it may carry connotations of the Western "New Age" manner of speaking, as much as of Burunge thought.

4. Here we appear to have a borderline case, however. A few interlocutors who shared this conceptualization still hesitated about saying that posts holding the roof were alive.

5. Although the German soil scientist Ewald Wollny had already between 1877 and 1895 conducted experiments on splash erosion, the importance of the falling rain drop as an erosive agent still remained little noted for almost half a century. Once its significance was demonstrated it had important implications both for priorities in erosion research and for practical soil conservation efforts (Hudson, 1981:26; 1992:9,106)

6. Heat and fire are common ingredients in African rituals connected with fertility. In the rainmaking ceremonies of the Manyika of Eastern Zimbabwe fire acts as a transforming agent and has a role in releasing rain from the male sky to the female earth (Jacobson-Widding, 1990:67f.).

7. It may be remembered from Chapter 2 that Dosa Bura used almost identical words to elaborate on the meaning of the phrase "land is for everyone" and also as

a reason why land should not be regarded as a commodity.

8. Henry Fosbrooke served as District Commissioner in Kondo, but also as a senior government sociologist for the British colonial government. He has written several papers on land use in central Tanzania, in addition to many other publications.

9. From Iraqw areas Loiske (1991:10) has reported that degraded lands are referred to as "stones coming up". The Fipa of western Tanzania note that big boulders "grow" as they become more and more exposed because of erosion (A. C. Mbegu, pers. com.). Some people in Ghana also say that stones grow (Asem 1959:713) and among Akan speakers it is more precisely argued that some specific stones grow during heavy rains (Halvor Wöien, pers. com.). Scattered notes like these may not cover exactly the same realities but it is still interesting to note a widespread mode of expression.

Chapter 4

1. Kiessling (1994: 245–270) provides the full text of one version in the Burunge transcription, with both a word-for-word and a free translation into German. I also wish to acknowledge illuminative communications with Dr Kiessling on the distribution and interpretation of the story. In the version used here the narrator gave a personal twist to the hyena's answer. Dr Kiessling tells me that the Burunge phrase used rhyme with the hyena's cry.

2. It is tempting to link Bwana Bira's words with white ash, which may be associated both with cooking/providing and with being consumed/destroyed (Moore, 1986:113). Among the Oromo, Cushitic speakers of Ethiopia and Kenya, white can stand for the burning out of potential in contrast to the blackness of fertility (Gudrun Dahl, pers. com.).

3. In interpretations like this one I am, as always, indebted to the forestry expertise of my colleague in the field Joseph Mduma.

4. Here it is primarily attitudes and relationships to the forest that are in focus. Its practical uses are of course legion (food, building materials, medicines, firewood, etc.), as they are also for other settler groups in the hills. Also villagers, regardless of ethnic origins, will, for instance, most days eat gathered food as a relish for the stiff porridge (cf. also Lindström & Kingamkono, 1991:42.f.-Chs.6,7,9, p.118f.).

5. It may well be that our little field team became particularly exposed to the idea that the Burunge "respect trees", since one of us was known to be a forester. Kondoa District has been subjected to land rehabilitation projects for more than fifty years, with an ensuing endless series of meetings propagating conservation ideology. Local byelaws have backed up the message. The Forest Department's current slogans *Misitu ni mali* (Forest is wealth), and different variations of the themes Care for the forest and It is a crime to start a fire are well known by each and everyone in Kondoa District. Forest reserves have been demarcated in the district. People had every reason to assume that we would be interested to learn how much the Burunge love the forest. With this reservation I am not trying to say that the idea that the Burunge "respect trees" was invented for our benefit. But we were probably told this more often than many other field workers would have been.

6. The Cushitic-speaking Borana of Kenya likewise find that their herds increase when people cooperate amicably (Baxter 1972:173; Dahl & Megerssa 1990:25).

7. Forty years ago Evans-Pritchard (1956:199) pointed out how Nuer sacrifices to the divinity were "concerned with relations within the social order and

not with relations between men and their natural environment".

8. The underlying meaning of the phrase being "let the land itself prove who has precedence here". Discussing territoriality among the Cushitic-speaking Beja of the Sudan, Hjort af Ornäs and Dahl (1991:58) note that "using resources without a proper demonstration of 'respect' can be interpreted as a claim to ownership". This certainly was at stake in the confrontation between *Bibi Sumbu* and the young immigrant.

9. The significance of this permeates Chapter 6, on the colonization of the Burunge Hills, where firstcomer status is a recurrent theme.

10. Horton (1982:240) has suggested that a reason why beliefs are accepted is "not just because they are seen as age-old, but because they are seen as time-tested /.../ where a body of theory is seen as having such a long run of predictive success behind it, any current run of failures must seem of relatively minor consequence".

Chapter 5

1. Yanda (1995:91) relates how people at Mwisanga, bordering on Haubi, carry food from the plains in order to be able to remain in their severely degraded home area. This is not only for reasons of history and belonging. The more reliable rainfall of the hills offers an opportunity to grow a variety of crops, thereby reducing the risk of total crop failure. The lack of water on the plains likewise makes people prefer the hills.

2. Rekdal and Blystad (1995:6-9) report similar themes in an account of how the Iraqw acquire land in the Barabaig homelands of Hanang District.

3. From Iraqw areas Thornton (1980: 240f.) reports that a woman who marries out of her ethnic group will soon be followed by her brothers who, through her, get a "foot in the door" which, as

more immigrants arrive, will be followed "by greater and greater claims on the land by his or relations who follow" (*ibid.* p. 241).

4. The word colleague/companion has a double meaning, however. Like *rafiki* (friend) it may also denote a tense relationship, with implications of a patron-client-like relationship. Another similarly ambiguous word is *mtani* which means friend of the same age group but may also imply a teasing, competitive relationship. Kinship is often used as an idiom also for other relationships. It has connotations both of intimacy and hierarchy. "Son" may mean a respected heir but also a servant. The same contradictions apply to "colleague", etc. As the immigrants, themselves of varying origin, settle in among the Burunge there is a constant trying out of useful and adequate statuses. Who counts as a relative, quasi-relative, client, ally, friend... becomes a fluid and changing perception.

5. Here I rely largely on discussions with young men. Judging by how easily young Burunge women turn Rangis when marrying a Rangis, and that they have as much to gain as their male contemporaries by being associated with the successful Rangis community, my guess is that there are no major differences between the sexes in this regard.

6. In a neat case study of social change among the Lafafa Nuba in the Nuba Mountains of central Sudan Manger (1990) shows how young migrant workers become Islamicized and through their behaviour at home come to produce "new socio-cultural realities for all Lafafa" (p.122).

7. Dr J. Safari, Department of Sociology, University of Dar es Salaam, has studied Rangis expansion from this angle using material going back half a century.

8. Here the local vocabulary is used although it runs contrary to current fashion in anthropological writing.

Chapter 6

1. Mzee Ramadhani is in the photograph on p.34.

2. To produce food for the country's needs is not only a right but also an obligation. The Human Resources Deployment Act stipulates that unemployed, urban young people can be forced to cultivate a minimum acreage of crops in agricultural areas.

3. Madah is officially administered as part of Songolo village and has no independent government. At the time they had, however, elected their own steering committee and they were later to form a CCM branch and elect a branch committee which could act as an informal but *de facto* government for Madah.

4. Copies of the documentation are available in Madah and at several government offices in Kondoa District. A booklet in Swahili on Madah has been produced (Östberg, 1994c).

5. Generally land has a low value in Dodoma Region. Traditional Gogo society had no attachment to land (Rigby, 1969: 26,29,111). Even today there is no relation between income and land ownership in rural Dodoma implying that people with resources do not feel a need to invest in land (Holtland, 1994:20).

6. While the Burunge have not been successful in defending what they consider to be their lands, one may also note that in other places permissive attitudes to sharing natural resources may turn out to have specific limitations once a resource is seriously threatened. For instance, Hjort af Ornäs and Dahl (1991:58) write that among the Cushitic-speaking Beja of the Sudan rights of admission to plentiful grazing are open to all. But "when pasture is becoming scarce /.../ the guest grazer will be supposed to leave /.../ the host group pushing away any intruders whose stay approaches permanency. From another part of the world it has been reported that dormant

marine tenure traditions became activated when the seemingly open-access conditions of fishing in a Solomon Islands community were misused (Vivian 1992: 58).

7. The counting of households was not without its ambiguities. There was disagreement between informants as to whether all six, or some, or none of the Rangi households included here in Kinando should instead be counted as belonging to Chioli. What in any case is beyond doubt is that the Burunge are not the only group living at Kinando and that the Rangi are about to establish themselves there.

8. Poverty in Lower Irangi is also commented on in Östberg (1986:69f.).

9. This name has been invented to protect the identity of the family, as has also the exact location of their settlement.

10. Achieving village status improves the possibilities of capturing development inputs for the settlement. It gives new career chances for the leaders, and, not least important, the community is no longer dependent on decisions made by another village council.

11. *Hengo* is a Rangi term, while the Burunge call the local type of bush-knife *senko*. It is interesting to note that as Mzee Meda was talking Swahili to us he used a Rangi term instead of the Burunge word. The closest Swahili word would be *panga* (machete), but the Burunge/Rangi bush-knife looks different, more like a sickle, and is therefore not referred to by that word.

12. Numerous articles and reports have been published on the conflict fought both locally and in the High Court between the Barabaig and the parastatal NAFCO which runs the wheat farms. A summary in support of the Barabaig's claims is given in Lane, 1993.

13. A theoretical basis for the way extractive and productive economies interact has been analysed by Mandel (1976:48–

49). Blaikie (1984: Ch.7) elucidates the process with a number of cases focused on natural resource management in the South. A related theme in economic anthropology is how economic "spheres" can be governed by totally different rationalities and economic values. Crossing such "sphere barriers" can at least temporarily give rise to exceptional profits (cf., for instance, Bohannan, 1963: Ch. 15.; Barth, 1967).

14. Rapid profits, impoverishment of land and people – the pattern is well known from other settler areas. For instance, in northeastern Namibia speculators purchased farmland, grazed it extensively during good years, cashed in the profits, and moved on. Gordon (1992: 206) aptly describes the process as "predatory farming". On the Botswana side of the Kalahari, one encounters the same process. Here it is the highly advantageous conditions for meat export to the European Community that make cattle ranching profitable. The government allows anyone who "develops" state land, which in reality means drilling a borehole, to utilize the surrounding areas. Land is thus virtually free, and so is labour since the cattle invasion is making hunting and gathering unviable, thus forcing the Bushmen and other marginalized groups to accept virtually unpaid work at the cattle-posts in order to survive (Östberg, 1993:128f., 150).

Conditions far from Kalahari determine land use there, as is also the case in the Burunge Hills where the beer trade in the Arusha region and national land policies fuel local developments – and land degradation.

15. For this estimate as well as for guidance in the intricacies of landscape morphology in the hills I am indebted to my colleague in the MALISATA programme, physical geographer Mats Eriksson.

16. This farmer's name has been invented as have the names of other

people in this and the following section, as circumstances are recorded which can be interpreted as reflecting unfavourably on them.

17. From Ethiopia two seasoned observers of the soil conservation situation report that local land users often refuse to acknowledge how seriously threatened their own lands are, while at the same time being knowledgeable about the general processes of erosion on steep lands (Tato and Hurni 1992:4). This is a lesson learnt also in many other areas: early warning signs of land degradation are commonly taken lightly (cf. Pitt & Yapp, 1992:117 f.).

18. This is noted not primarily as a statement of his intentions, but as a reflection of how many farmers relate to people they associate in one way or another with official policies, however cordial the personal communication may appear.

19. Hudson (1981:39f.) cautions that grass clumps can be raised by soil splashed from bare patches, and thus give an exaggerated impression of the depth of soil that has been eroded. However, this field abounded with also other characteristics of rapid soil erosion.

20. Burunge conceptions of soil erosion, and also soil formation, were discussed in Chapter 3.

21. The difficulties are not restricted to the Burunge Hills. In the nearby Lower Irangi, Mung'ong'o (1995) found that 50 per cent of the households can hardly make ends meet, except by spending a lot of their time on *kibaru*.

22. Similarly, during problem-ranking exercises in Mamire and Mutoka villages of Babati District one single farmer mentioned soil erosion. Yet, one of the reasons why these two villages were selected for study was outsiders' conviction that they do have problems of soil erosion (Lindberg, 1991:9 and forthcoming: Introduction).

23. Suggestions for what can be done practically along such lines have, as already noted, been presented separately, Östberg, 1994b,d.

Conclusions

1. For heuristic reasons I disregard the risk that it could also make people despair of the difficulties.

2. A highly readable illustration of this point is Brandström's (1990d) account from Sukuma areas in Western Tanzania of how he heard a story told in three different situations. A bicycle had been stolen and the story took on entirely different content and meaning for each time it was repeated. By the end of the paper the reader does not know what has happened (except that a bicycle has been stolen) but s/he has gained the insight that the truth of a story may depend on whether the tale is appropriate or inappropriate to the situation in which it is told, and if it was told 'correctly' or 'incorrectly' (1990d(7):15).

3. Hobart (1993:17), using words clearly reminiscent of Brandström's reasoning (note 2), explains that it is useful to study local knowledge as a "situated activity /.../ Such knowing requires evaluation by some measure like appropriateness to particular circumstances, rather than by being true as such".

4. One may also remember that it is outsiders, and usually people living, directly or indirectly, on the aid industry, who describe what constitutes (under)development. They (we) have for a long time had everything to gain from attributing ignorance to others. Mark Hobart (1993: 2) writes that "without such underdevelopment and ignorance, the West could not represent itself as developed and possessing knowledge". And again: "knowledge, especially technical knowledge, is widely treated as a valued commodity to be sold or otherwise transferred. It would be poor marketing to

question its worth, or whether it is a commodity at all" (ibid. p. 4).

5. Horton (1982:203) likewise thinks that "Western concepts may themselves have to be stretched and bent" to accommodate African concepts and thought-patterns.

6. Noting this, I still propose to close the door to further discussions on what 'knowing' and 'understanding' may entail. This is, after all, a discussion of land management and not philosophy of science.

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Glossary

Swahili phrases and words are *in italics*. Burunge and Rangi words appear in underlined italics.

access A buzz word in political ecology. Farmers' differential access to resources is considered a key to understanding how agriculture develops, and also how land degradation occurs. Land with poor physical capability is considered to have low access qualifications. Poor households, squeezed out from better areas, tend to end up in "open access" areas and to overuse them. The reasoning also has its critics.

alluvial deposits Sediments deposited by water in comparatively recent time, often having a high silt content, common along the bottom of river valleys.

argillic layer Hard, clayey sub-surface stratum where clay has been deposited from now eroded layers of soil. More generally argillaceous substances are composed of clay minerals or have a notable proportion of clay in their composition. Argillic thus means pertaining to clay.

badlands A region nearly devoid of vegetation, severely dissected by gullies. An area in South Dakota, USA, named Badlands, has given the name also to the wider phenomenon.

balozo Sw. The original meaning is "consul", diplomat. In Tanzania it also describes the leader of a part of a village, a *kitongoji*, or during the heyday of CCM rule of a "ten cell", the basic party unit which was supposed to consist of ten households, but which usually enrolled a group of households far bigger than that.

bao Sw. A game where pebbles, seeds, nuts or marbles are moved between cup-shaped holes in a wooden board or

on the ground. *Bao* is the Swahili word for this game which is ubiquitous throughout East Africa, and in many other places.

bibi Sw. Grandmother, lady.

bund Earth (or occasionally stone) bank to retain soil and water. Usually a low bank approximately on the contour, dug by hand.

bush fallow or Shifting/Swidden cultivation, or Slash-and-burn cultivation. Natural vegetation is cut down and burned, after which crops are planted in the ashes, which serve as a fertilizer. Fields are cropped for fewer years than they are allowed to fallow. Highly productive per unit of labour but not per unit of area. The different varieties and logic behind it have been detailed by, among others, de Schlippe, 1956, Allan, 1965, Sahllins, 1972, Ruthenberg, 1980 and Ellen, 1982.

bwana Sw. Mr, Sir or master. The word has a wider coverage in East African parlance than the English translation. It is so commonly used that it is not reproduced in italics in this book.

bwana shamba Sw. Agricultural instructor.

catena A sequence of soils down a slope. The concept has been in use in Tanzania since the 1930s in connection with soil mapping. "Geomorphic history of the land surface is also involved in the catena concept" (Whittow 1984:84).

CCM *Chama cha mapinduzi*, The Revolutionary Party, up to 1992 the only registered political party, formed when TANU, the Tanganyika African National Union, and the Afro-Shirazi party in Zanzibar joined forces after the union of Tanganyika and Zanzibar.

channel terrace Terraces built on slopes to intercept the surface run-off. A channel is excavated and a bank formed with the spoil from the excavation. Often also called contour ridge, meaning a graded channel with an open end allowing surplus water to be dis-

charged into an artificial or natural watercourse.

cut-off drain An open trench with an embankment on the lower side. Leads water away from cultivated areas. Also used in gully control. Disposes water into a waterway or onto grassland.

debe Sw. Tin can, containing 18 litres, originally obtained when buying kerosene, and commonly used in the household to carry and store both crops and water.

district Administrative unit in Tanzania. A region is divided into districts, which are further subdivided into divisions, wards and villages.

division Administrative unit in Tanzania, positioned above village and ward in the hierarchy but below district and region.

domestic mode of production

Household economy based on a small labour force, simple technology and finite production objectives (Sahlins, 1972: Ch.2).

emic Originally a term from linguistics, an emic analysis attempts to capture a studied group's own way of perceiving and expressing something. It is their semantics which are in focus, and the researcher's own categorizations should not be forced upon their understanding.

erodibility The vulnerability or susceptibility of the soil to erosion. "In general, as the percentage of clay or aggregating material increases, soils become less erodible" Whittow 1984:177).

erosivity The potential ability of rain to cause erosion, a function of the physical characteristics of rainfall.

fanya juu terrace Sw. A terrace constructed by throwing the soil upwards (*fanya juu*) forming an embankment above the ditch. The terrace develops naturally with soil erosion on hillsides.

"friend" The Swahili word *rafiki* has a number of meanings. It may denote people with whom you have business relations. "Cattle friends" is a concept often invoked in ethnographic literature to describe how livestock is are distri-

buted through networks. "Friend" may indicate a tense relationship. When individual Burunge and Rangi describe each other as friends a patron-client like relationship is often implied. In political discourse the word is often used in a similar way to when a British politician says "my friend from the opposite side...".

gully erosion Rill erosion commonly develops into gullies on steep slopes with poor vegetation cover.

HADO Sw. The national soil conservation project for Dodoma Region. HADO is an abbreviation of *Hifadhi Ardhi Dodoma*, Dodoma land management (project).

hengo Ra. Locally made bush-knife used for very many different activities. Men very commonly carry a hengo with them when they move between different places. Can also be used by women. *Hengo* is a Rangi word but is in common use in Kondoa District also by other groups.

hhapeeloo'ay Bu. "Owner of the land", someone who is considered to have inherited from the original settler the right to grant others the right of settlement and cultivation in a local area. The *hhapeeloo'ay* has a key role in ceremonies connected with rains and fertility of the land.

household A domestic group sharing residence and eating together. A homestead may thus consist of several households. The same is true of a "family" which in a Tanzanian context may consist of several households.

Indigenous Technical Knowledge A buzz word in development studies. It has become fashionable to argue that local farmers do experiment, and that food shortages have their root in aid agencies having "deskilled" the peasantry. Paul Richards, who has done more than most others to demonstrate local farming competence, has also criticized outside observers for seeing systems where instead improvisational capacities in response to changing

- needs are more characteristic (Richards, 1993).
- intercropping** Growing two or more crops at the same time on the same piece of land.
- Irangi** The heartland of the Rangi, strictly speaking the area of first settlements in the Haubi basin, but more vaguely used to denote the Rangi hills as opposed to the surrounding plains.
- ITK** Indigenous technical knowledge. (See above.)
- jihad** Arabic for struggle, combat. The form of war allowed by Islamic dogma.
- Kalenjin** A cluster of peoples living in Rift Valley Province, Kenya. Linguistically they belong to the Highland Nilotes.
- khanga** Sw. The two pieces of printed cloth commonly worn by women.
- kibarua** Sw. Day-labouring, both someone who works as a casual worker and the institution of casual work.
- kimbo** A brand of industrially produced fat, the tins are used as measures. The most common size is of one kilogram.
- kitongoji** Sw. A part of a village. An important social unit in Tanzania village life. Communal work obligations are arranged according to *vitongoji*, most small-scale problems and misunderstandings can be sorted out at this level under the leadership of an elected *balozi*.
- Kondoa Eroded Area** A 125 sq. km. large area, one of the most degraded areas in Tanzania, and indeed in Africa. Organized soil conservation work has been going on in the area since the 1940s. In 1979 the area was destocked following a bye-law passed in Kondoa District. The soil conservation project for Dodoma Region, HADO, has its headquarters in Kondoa town.
- land degradation** Reduction of land resources to a lower rank, as perceived by human beings (Blaikie & Brookfield, 1987:1).
- mabati** Sw. Corrugated iron sheets, primarily used for roofing.
- MALISATA** Acronym for the research programme Man-Land Interrelations in Semi-arid Tanzania jointly run by the Institute of Resource Assessment, University of Dar es Salaam and the Environment and Development Studies Unit, School of Geography, Stockholm University.
- mbuga** Sw. Depression in the landscape, often with impeded drainage, and containing heavy clay soils, "black cotton soil". In many areas used for dry season grazing. Seasonally inundated.
- mganga** Sw. A man or a woman knowledgeable about both natural and unnatural medicines. Able to divine. Healer, rainmaker.
- miombo** Sw. Low-stocked, open savannah woodland often with interlocking tree cover. Widespread in East Africa. *Brachystegia* spp. is common.
- mode of production** The combination of two structures, the productive forces (resources, tools, people) combined in a specific way to produce material goods, and the relations of production, i.e. functions fulfilled by individuals and groups in the production process (Godelier, 1972:335).
- moogomo** Bu. A tree, *Ficus Sp.*
- mtemi** Sw. A chief. The term has its origin among the Sukuma-Nyamwezi, where the mtemi also was a ritual leader. During the colonial period the word came to be used nationwide.
- mzee** Sw. An elder. Respectful way of addressing someone older or senior to oneself. Can also be used jokingly between friends. A word so common in East African parlance that in this book it is not reproduced in italics.
- ndugu** Sw. "Brother" or "relative" (and many related meanings) but also "citizen" and commonly used as a title when addressing or referring to Tanzanian civil servants and politicians. During the years characterized by *ujamaa* politics its use was almost compulsory.
- Nyaturu** Bantu-speaking people with Singida District as their core area.

Opareseni Vijiji Sw. A major restructuring of rural Tanzania. Between November 1973 and the end of 1974, 11 million people were moved into villages as part of a programme to reallocate land and to provide development incentives and social services to rural areas. Coulson (1982) describes the process and its ramifications.

pediment The fairly gentle and long slopes below the inselbergs and the steeper piedmont zone, extending towards the plains. "...surface flow increases downslope on the pediment, enabling the same amount of debris to be transported across a progressively gentler angle" (Whittow 1984:391).

PRA/RRA Participatory/Rapid Rural Appraisal. A "tool kit" and an approach intended to facilitate cooperation between researchers and local communities in development-oriented work. It is multi-disciplinary in approach and has its roots in action-oriented research in the South. PRA developed from RRA, and is far more common in rhetoric than reality. A widely used handbook is McCracken, Pretty and Conway (1988), while Chambers (1992, 1993) assesses the potentials and limitations of PRA/RRA.

qancanaru Bu. Greens, the most common vegetable, germinating spontaneously in cultivated fields. Eaten fresh and dried and stored for later use. Also commonly used by the Rangi who call it "mlenda".

quelea quelea Small brownish bird belonging to the *Ploceidae* family. Sometimes referred to as the "locust bird" plague since it occurs in enormous numbers and brings great damage to grain crops. Breeds in thorn-scrub country. Each pair has two or three young, which within the year may wander hundreds of miles and breed in their turn.

reflexive analysis A major theme in contemporary anthropology/ethnology. The researcher is not taken to be a distant observer of what is being studied

but is recognized as an unavoidable part of the inquiry. Researchers and "the field" mutually influence each other and in some ways create together the end product. The research process is an encounter and not simply gathering data. The reflexive dimension is present also in writing up, just as much as in field work.

relay cropping The form of intercropping where the sequences of different crops planted in the same field during the same season overlap.

rill erosion Erosion by water. Occurs when water flowing over a ground surface concentrates into small rills. A more concentrated form of water erosion than sheet erosion. As rills develop into wider channels one talks of gully erosion. There is no precise dividing line between the two (Hudson, 1981:39).

RRA, Rapid Rural Appraisal See PRA/RRA.

sand river The ephemeral rivers of Kondoa District receive soil removed from the slopes by erosion carrying sediment. The sand will remain on the bottom and fill out the river bed into wide sand rivers which may grow into a few hundred metres wide and stretch for kilometres.

sedimentation Solid particles transported by water becomes deposited in depressions, rivers, dams and if transported by wind where the wind speed is reduced.

shamba Sw. Field, farm. One of the several Swahili words that in East Africa have become part of common English usage and are therefore in this book not reproduced in italics. In the form *shambani* can also refer generally to rural areas.

sheet erosion Erosion by water, both the movement by rain splash and surface flow. Commonly occurs on even ground with a very slight angle of slope. Finer particles are carried away, leaving the coarse. It has been suggested that a more precise term would be

inter-rill erosion, but sheet erosion remains in frequent use.

shifting cultivation See Bush fallow.

shilling In 1993 a US dollar was approximately 500 Tanzanian shillings.

soil conservation Activities and measures to decrease processes of soil degradation. Is rapidly being replaced by "land husbandry", to emphasize instead care and improvement of the land resource. Hence soil conservation as an independent discipline is fading (cf. Hudson, 1992; Lundgren & Taylor, 1993).

soil degradation Lowering of the current and/or potential capability of soil to produce goods or services, quantitatively or qualitatively (FAO, 1979).

soil erosion The removal of soil at a greater rate than its replacement by natural agencies. A natural process, in contrast to land degradation or soil degradation which are concepts based on human perception. Human-induced erosion is often termed "accelerated erosion".

splash erosion Soil particles are detached by the force of raindrops, and moved downwards in sloping terrain. The small particles also seal the soil pores which leads to increased surface run-off and makes infiltration more difficult. Hudson (1981:39) writes that the impact effect of the raindrop is the first and the most important stage in the soil erosion process.

structural adjustment A policy advocated by, among others, the World Bank, the International Development Association and the International Monetary Fund, which demands that poor countries of Africa, Asia and Latin America, as a precondition to obtaining loans, adjust their economies to market-oriented development strategies including drastic reductions of government expenditure, currency devaluation and an orientation towards increased export earnings. The policy, at least in its more orthodox form, has been very contro-

versial in the affected countries. The blueprint version has become more country-specific, and it is becoming acknowledged that distributional issues, poverty and the environment may also need to be considered.

Sukuma-Nyamwezi Tanzania's largest ethnic group. Linguistically they belong to the Bantu-speaking family.

sustainable development A buzzword in the development debate since the 1980s and unavoidably an undercurrent in any account of local natural resource management. Refers to improvements that "meet the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Pearce *et al.* (1990:2-3) emphasize improvement in income and its distribution, in health, education, freedoms, and access to resources, not just conservation. Sustainable levels of consumption remain the paramount need for many in the South (Redclift, 1992:25f.).

swidden agriculture See Bush fallow.

tembe The traditional type of house in Kondo District, rectangular in shape, and with a flat roof covered by soil. They are rather low but may be higher than expected inside as the earth floor is sometimes lowered somewhat during the construction.

ten-cell leader See *balozi*.

the South A collective designation for the poor countries of the world. Became common in development discussions when the Soviet Union was dissolved and the previously common name the "Third World" lost some of its pregnancy.

tied ridging Closely spaced ridges in two directions at right angles, intended to stop surface run-off and infiltrate it into the soil. Ties are lower than the ridges so that the sudden release of run-off will be along each ridge and not down the slope.

uhuru Sw. Freedom, a word frequently used also in other contexts than the politico-legal sphere.

ujamaa Sw. Family, socialism. The central notion in Tanzanian development work and generally in politics during the 1960s and 70s, strongly associated with the leadership of the nation's first president Julius K. Nyerere.

uwezo Sw. Ability, capacity. An expression used in varying contexts, for instance to indicate socio-economic conditions, agricultural production ability, and political power.

vibarua Sw. Casual workers.

village Apart from its general meaning, a village in Tanzania is also a specific administrative unit. Local communities can apply for rights as a registered village if they have more than 250 households. Being recognized as a village brings administrative and economic privileges.

villagization See *Oparesheni Vijiji*.

waganga Plural of *mganga*.

ward The second lowest administrative unit in Tanzania, above village and below division.

wind erosion Soil particles are carried by the strong winds during the later part of the dry season when the ground in many places is unprotected by vegetation. A common occurrence on the plains around Goima.

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