

**Environment,
Famine, and
Politics in
Ethiopia**

A View from the Village

Alemneh Dejene



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1

Introduction

The number of people and countries in Africa engulfed by famine has increased at an alarming rate. In the early 1970s, 70 million people were affected by chronic food shortage. This number had surged to 100 million by 1985.¹ Similarly, in the 1970s, two-thirds of the people in Africa lived in countries where food consumption per capita was increasing, whereas in the 1980s only one-fourth of the people lived in such countries.² In 1986, 31% of the world's population (1,570 million people), living in forty-nine developing countries, did not have an adequate dietary energy supply for good health and productive work. Thirty-one of these countries were in sub-Saharan Africa.³ Ethiopia is one such country, and a third of its population suffers from food shortage even in years when there is adequate rainfall.

In the predominantly agrarian societies of Africa, one of the most ominous threats to the food supply is environmental degradation, the deterioration of croplands, grasslands, and forests. In an attempt to counter the rapid decline of Africa's natural resources, the first United Nations Conference on Desertification was held in Nairobi, Kenya, in 1977. The conference emphasized human activity and pressure on the land as a major contributor to the process of desertification.⁴ The result of the conference was a plan of action to combat desertification through ecologically appropriate land use and measures to recover degraded lands. According to the United Nations Environmental Program, that plan has failed because the program has no immediate payoff for either developing or donor countries.⁵

Since the 1977 conference, a number of studies have suggested a self-perpetuating cycle of increased human demand on the ecosystem and vulnerability to famine. These studies have, in particular, identified the degradation of natural resources due to human activities as one of Africa's gravest problems in increasing its food supply.⁶ As the World Commission on Environment and Development has succinctly stated, "poverty is a major cause and effect of global environmental problems."⁷ The World Commission on Environment has popularized the concept of sustainable development that aims to meet the basic needs of the poor without damaging the environment.

Degradation of drylands, commonly referred to as desertification, is the depletion of the renewable resources essential to the basic needs of a population.

This process of degradation destroys the ecological support system and greatly contributes to drought, poverty, and famine in Africa.⁸ An estimated 4,500 million hectares of land—land that feeds 850 million people (20% of the world's population)—are seriously threatened by desertification. Each year, 21 million hectares lose all of their productive potential. Most of this degraded land (75%) is located in the dry land areas of the world.⁹

The impact of desertification on sub-Saharan Africa is particularly severe, as 85% of all rangeland (542 million hectares), 80% of all rain-fed cropland (114 million hectares), and 30% of all irrigated land (40 million hectares) are at least moderately desertified.¹⁰ Desertified land has sparse vegetative cover and low productivity (generally less than 400 kilograms of dry matter per hectare per year). Desertified land does not use rainfall efficiently to produce dry matter, and as a result the yields are often poor. This has increased the speculation that desertification may have contributed to the successive droughts in Africa.¹¹

Studies show that rainfall in sub-Saharan Africa has continuously decreased since the late 1960s and the impact of each drought has been more severe than the last.¹² The prevalent explanation for drought and desertification emphasizes the global-scale changes in the atmosphere and in the ocean¹³ because changes in land surface due to human activity occur at a slower rate than changes due to atmospheric fluctuations.¹⁴ Recently, however, some have argued that both account for the recurrent drought and famine that affect most of sub-Saharan Africa.¹⁵

In fact, several feedback mechanisms between the earth's surface and the atmosphere have been identified as reinforcing the cycle of drought.¹⁶ One of the most significant mechanisms is the high reflection rate (albedo) of the sun's radiation due to the absence of vegetative cover. This absence, through a complex process, will eventually lead to dryness of the soil and to reduced cloud formation.¹⁷ A second mechanism accounts for the reduction of locally evaporated moisture. Some researchers argue that a great deal of the rain in the Amazon basin, as well as in the tropical inland of Africa, comes from the evaporation of water from the nearby trees and soil, rather than from the distant ocean.¹⁸

Other researchers have emphatically asserted that the primary reason for the successive African droughts is the excessive human exploitation of natural resources, which exceeds the land's carrying capacity.¹⁹ Carrying capacity is a calculation that estimates the human and animal population an ecosystem can support without being seriously degraded.²⁰ Carrying capacity, however, is a relative term that varies among and within regions, as well as with the level of technology, and its applicability is limited. Some proponents of this concept (notably Garret Hardin) have aroused controversy because of their single-minded focus on population growth as the primary source of land degradation and their unduly pessimistic assessment of ecological disaster based on the contested premise that sees the earth as an isolated ecosystem with limited re-

newable resources.²¹ Be this as it may, the role of human beings has become increasingly prominent in explaining the process of ecological degradation in Africa. Harold Dregne, for instance, describes desertification as "the impoverishment of the terrestrial ecosystem under the impact of man."²²

In Ethiopia, there are three predominant human activities invariably identified as contributing to the vicious cycle of environmental degradation, drought, and famine; these are overgrazing, overcultivation, and deforestation. Nowhere is the adverse impact of human activity on the environment so striking as in the famine-ridden areas of the Ethiopian highlands which occupy 44% of the country's 1,251,282 square kilometers (125,128,196 hectares)²³ and which contain 80% of the country's 47 million people²⁴ and two-thirds of the 77 million ruminants.²⁵ These highlands, which include over 90% of the cropland and are the center of the nation's economic activity, suffer from massive land degradation due to soil erosion. It is estimated that 1,900 million tons of soil are eroded annually. About 76% of the highlands' 41 million hectares of land has been significantly or seriously eroded, 4% (2 million hectares) has lost its ability to produce food, and only 20% (10 million hectares) has relatively minor problems of erosion. Given this trend, it is projected that 18% of the highlands will be bare rock by the year 2010 and 10 million people will not be able to produce food from the land.²⁶

The intensity of drought in these highlands has worsened in the last two decades.²⁷ Intensive cultivation, overgrazing, deforestation, overpopulation, and the political and economic forces that relate to peasant agriculture have exerted enormous pressure on the ecosystem. These factors have resulted in soil loss, a substantial loss of vegetative cover, and soil compaction, which have severely reduced soil fertility and crop yields. In 1978, a report circulating in the United States embassy in Addis Ababa pointed out that about one billion tons of topsoil were being eroded from the Ethiopian highlands.²⁸ Although a direct causal relationship between topsoil erosion and famine is difficult to establish, it is plausible that such massive erosion could lead to the eventual collapse of the ecological support system, particularly in times of drought, resulting in widespread famine as witnessed in 1984.

Objective of the Study

Recent studies have suggested that the process of environmental degradation is largely place specific and is greatly influenced by the local socioeconomic and national political forces operating in a particular society.²⁹ There has been little precedent for a systematic field study such as this that identifies the forces that feed the interaction between environmental degradation and famine at the house-

Figure 1.1 Map of Ethiopia and Its Regions



This study uses the administrative structure of Ethiopia as it existed prior to January 1989.

hold level and critically examines the impact of government policies upon these forces. The Wollo region of Ethiopia, the most devastated by the 1984 famine, provides a classic representation of the vicious spiral that engulfs most peasant households in the Ethiopian highlands (see Figure 1.1). In addition, this study offers a comparison between peasants' views and Ethiopian government policies on major issues such as resettlement, villagization, tree ownership, population and livestock density, and various conservation and famine prevention activities. The findings bring to light the key issues that need to be considered by policymakers in the attempt to arrest the reinforcing cycle between environmental degradation and famine and to attain sustainable development in Ethiopia.

Chapter 2 specifically examines how the existing socioeconomic forces on peasant farmers' management and utilization of cultivated and grazing land affect the rate of land degradation in Ethiopia. The data provide insight into the debate over what are the primary causes of land degradation in the famine-prone Ethiopian highlands and how these problems should be addressed by the appropriate actions of peasants and by government policies.

Some major physical and social indicators of environmental degradation are compared with peasants' perceptions. Chapter 3 analyzes peasants' views of the Ethiopian government's policies concerning conservation activities and identifies the major obstacles to attaining the rehabilitation of degraded land. Famine has differing impacts on households living in the same peasant association or in close proximity to one another. Chapter 4 identifies the factors that have made a difference in reducing the vulnerability of peasant households in times of drought and famine, highlights the lessons peasants attributed to the 1984 famine, and evaluates the effectiveness of Ethiopian government policies to avert future famine in drought-prone regions such as Wollo.

Chapter 5 explores peasants' views toward resettlement in Wollo and the conditions of Wollo peasants who have settled in the relatively fertile southwest regions following the 1984 famine. This chapter assesses the environmental impact of the government's resettlement program in famine-affected Wollo and in relatively resource-endowed settlement areas. It also investigates whether one of the objectives of resettlement—helping famine victims achieve food self-sufficiency in settlement areas—has been attained, as well as the kinds of constraints faced in meeting these objectives.

The final chapter formulates the major policy issue that emerges from the findings of this study. It argues for major policy reform and the enactment of appropriate legislations that would provide incentive for peasant farmers to undertake conservation and rehabilitation activities. This chapter also identifies the technical packages of conservation projects that have made a substantial contribution in restoring ecological balance while maintaining farmers' productivity.

Methodology of the Study

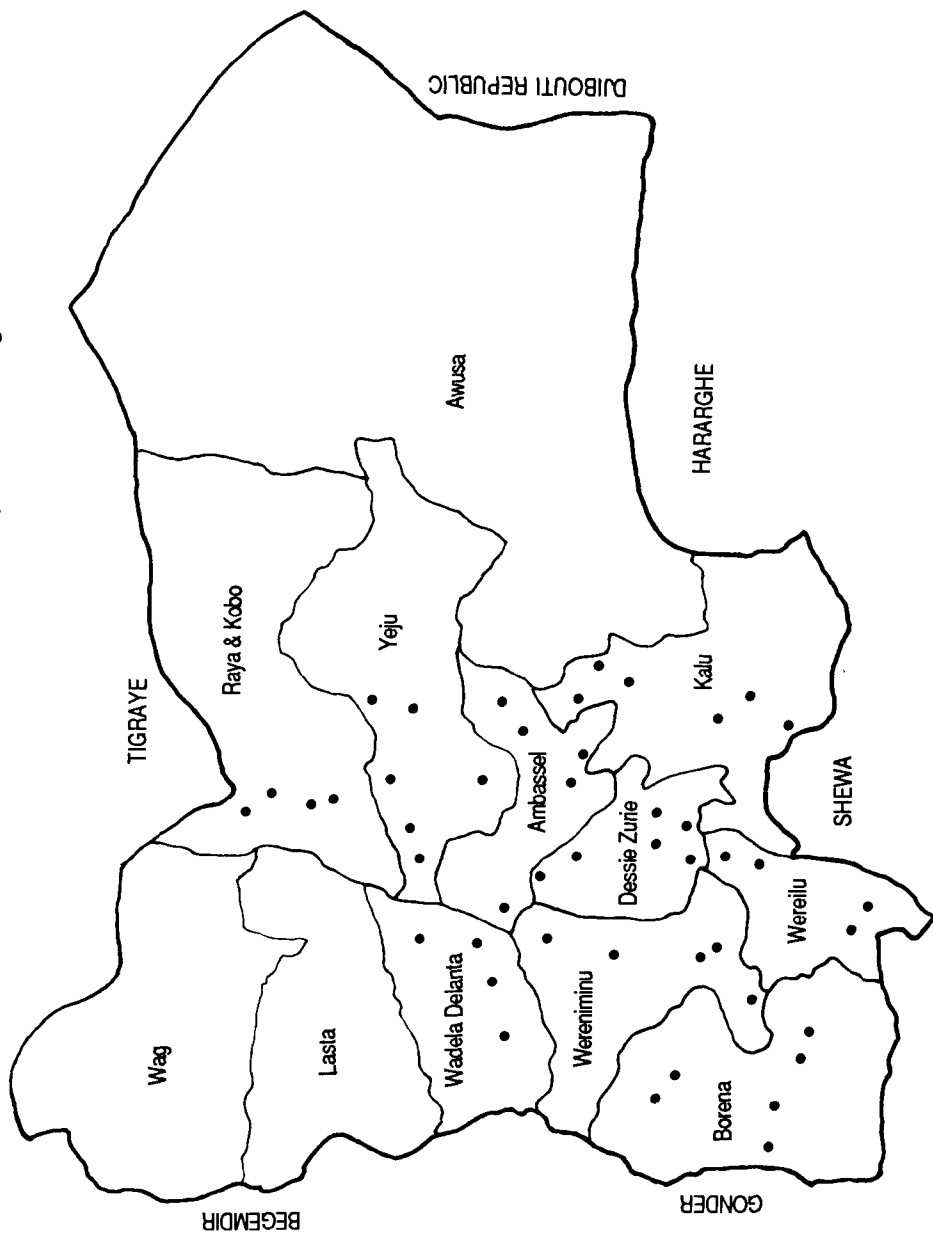
In an attempt at systematic investigation, the study combined two approaches. In Wollo, where a major part of this study was conducted, survey questionnaires and participant observation were used. In the settlement areas (southwestern Ethiopia), a case study approach, with an in-depth study of a few villages and families, was used. The survey questionnaire was designed in Ethiopia and pretested in Dessie, in the Wollo region (see Appendix 1). The administrative units in Ethiopia were, in descending order of size, administrative regions, awrajas, weredas, and peasant associations. Tragically, the new legal administration, enacted as of January 1989, divided Ethiopia into twenty-five administrative regions and five autonomous regions based on ethnic lines. This division has fueled ethnic hostility and posed an unprecedented threat to the unity of the country. In addition, the new administration dissolved wereda as an administrative unit leaving a wide gap between awraja (considerable large unit) and peasant association at the village level. The leaving out of wereda which has been an intermediary unit between awraja and peasant association has made it difficult for the regional administrators to maintain security and administer development projects at the village level.

As of January 1989, Wollo was also divided into two regions: Southern Wollo, whose capital is Dessie, and Northern Wollo, whose capital is Woldeyia. This division is unpopular among the people of Wollo, and in this study—which was completed before the division—Wollo refers to both Southern and Northern Wollo.

Interviews were conducted among randomly selected heads of household in nine of the twelve awrajas and in nineteen of the thirty-seven weredas of the Wollo region (see Figure 1.2). The sample consisted of 230 households from forty-six peasant associations (see Table 1.1). In addition to its name, each peasant association in Wollo has an identification number in each wereda (the peasant associations selected are presented by their identification numbers in Table 1.1). The selection of the peasant associations was done in close consultation with the Ministry of Agriculture, wereda representatives, and extension agents with knowledge of the area. The factors taken into account in stratifying the peasant associations in each wereda were ecological zones, the extent to which peasant associations were affected by the 1984 famine or had serious land degradation, and the extent to which the composition of households and the problems they faced were representative of the wereda. This method of stratification, known as expert sampling, is based on informed opinion and can be used in generating hypotheses.³⁰ Although expert sampling is not reliable for statistical analysis, it is useful for the purposes of this study.

Five farmers were interviewed in each peasant association. A two-stage nonprobability and probability sampling was used to select the farmers who were interviewed. The first stage nonprobability sampling involved the deliberate

Figure 1.2 Awrajas and Peasant Associations Covered Under the Study in the Wollo Region



decision for five interviewers, including the author, to travel three to ten kilometers in different directions through each peasant association, depending on its area. This dispersal was designed to capture the variations in altitude and soil fertility within each peasant association. Even though peasant associations were stratified by ecological zone, their classification in Wollo is ambiguous. Most peasant associations usually extend from highland to medium altitudes, and in some cases from highland to lowland altitudes, extending over two or three ecological zones. In order to circumvent the uncertainty such a variation might generate, this study considered the predominant ecological zone within each peasant association. Therefore, 26% of the population in the sample were selected from highland areas, 44% from medium altitudes, 28% from lowlands, and 2% from the Alpine *wurch* zones. These figures corresponded roughly to the percentages of the total population living in the four different ecological zones in Wollo.³¹

The next stage in the nonprobability sampling involved not selecting those heads of household whose houses had tin roofs (a sign of wealth) or those who were executive members of the peasant association. Each interviewer selected the first house with a thatched roof that he encountered upon entering the village. If the interviewer could not find the head of the household in the first house, as was often the case, he went to the next house, and so on until he found the head of the household. Before conducting the interview, the interviewer gave an elaborate explanation to gain the farmer's confidence that the study had nothing to do with unpopular government programs, such as resettlement.

A separate questionnaire was designed for the Wollo peasants who were resettled in western Ethiopia as a result of the 1984 famine (see Appendix 2). In this region, the author undertook a case-study approach in which the data were generated by an "in-depth study" of a limited number of farmers and by participant observation. The case-study approach is adaptable to different situations, is easy to carry out, and often leads to deeper insights than large-scale surveys.³² In addition, the limitations of the questionnaire survey used alone to investigate conditions of the rural poor are well illustrated by what Robert Chambers has called the "pathology of rural surveys." This pathology includes costliness, inefficiency, and often misleading findings in the absence of careful cross-checking and analysis in the attempt to capture and interpret rural realities.³³ Our questionnaire survey was cross-checked by our independent verifications, by a follow-up "in-depth study" of a few informative farmers, and by participant observation while we were conducting the survey. The author also carried out extensive discussions with peasant association leaders, extension agents, and local government officials to obtain relevant information for this study. The other sources for this study were the Ministry of Agriculture's Regional Office for the Wollo, Illubabor, and Keffa regions; the Regional Planning Offices for Northeastern Ethiopia in Dessie and for Southwestern



Methods of data generation: The individual interview, Werebabo, Ambassel.



Methods of data generation: Group participation, Bati, Kalu.

Table 1.1 The Names of Awrajas, Weredas, and Peasant Associations Covered Under the Study

Awraja	Wereda	Number and I.D. Numbers of Peasant Associations	Number of Interviewed Households
1. Borena	Debersina	2 (060, 056)	10
	Kelala	2 (020, 070)	10
	Sayent	2 (01, 02)	10
2. Werehiminu	Legambo	3 (030, 01, 02)	15
	Tenta	1 (08)	5
	Mekedela	1 (012)	5
3. Wereilu	Jamma	2 (013, 024)	10
	Wereilu	2 (019, 017)	10
4. Wadela Delanta	Delanta	4 (040, 02, 017, 032)	20
5. Kalu	Bati	3 (014, 04, 07)	15
	Eseyegola	3 (06, 07, 02)	15
6. Raya & Kobo	Kobo	4 (08, 03, 01, 011)	20
7. Yeju	Habru	3 (018, 038, 01)	15
	Gubalafto	3 (030, 016, 013)	15
8. Ambassel	Tehulederie	2 (010, 012)	10
	Werebabo	2 (012, 013)	10
	Ambassel	1 (034)	5
9. Dessie Zurie	Kutaber	2 (014, 012)	10
	Dessie Zurie	4 (02, 021, 025, 027)	20
Total	19	46	230

Ethiopia in Jima; and the Relief and Rehabilitation Commission in Dessie and Addis Ababa.

Duration of the Study

The field investigation was undertaken from the last week of October, 1987, to the first week of April, 1988. Nearly five months of this period were spent in Wollo and the rest of the time in Illubabor and Keffa, visiting resettlement sites and speaking with the settlers from Wollo. The total distance covered during

this study was about 15,000 kilometers, of which 10,000 were in Wollo. The journey to settlement areas started from northern Ethiopia at Raya & Kobo Awraja in Wollo (bordering the Tigraye region) and ended at the western tip of Ethiopia in Gambela Awraja, close to the Sudanese border. Additional field work was also undertaken between October, 1988, and March, 1989, in both Wollo and the settlement areas in western Ethiopia. The total distance covered by car during this period was about 25,000 kilometers. This does not include travel within peasant associations, which was accomplished mostly on foot and, in a few cases, by mule (in Wollo, the roads leading to peasant associations are impenetrable by car).

Limitations on the Study

Large-scale surveys, although appropriate for some studies, were neither feasible for this independent one-man study nor the best method of obtaining reliable information on its major concerns. As a policy research, this study attempts to highlight peasant's perceptions of some key government policies that influence their survival and the management of natural resources. Hence, the approach taken here, as explained by the sampling strategy, is not intended to generate statistically reliable output based on rigorous empirical research. However, it does generate some hypotheses and provides insights into some of the research issues under investigation.

This field survey was undertaken at a time when many areas of Wollo were experiencing major crop failures caused by the shortage of rain during the main planting season in 1987 (*meher* season). Acknowledging the prevailing drought conditions, the government declared a food emergency situation in many parts of Wollo. Relief operations were underway in some of the weredas and peasant associations covered by the study. The drought conditions may have influenced peasants' responses to questions such as whether they had some reserve food at the time or whether they had any assets with which to buy food.

At the time of the study, Wollo was gripped by the hysteria of resettlement (see Chapter 5). Extension agents and party officials were promoting (the term often used was "agitating") the virtues of resettlement, which the peasantry resisted strongly. The farmers were restrained from expressing their views candidly on environmental degradation (Chapter 3). In fact, they were initially apprehensive about why they had been selected for the interviews. Their reactions were understandable, given that it was precisely information regarding degradation that was sought by government officials to determine who should be drafted for the unpopular resettlement program. Thus, we had to reassure the farmers constantly that we were in no way involved with the resettlement program. Judging from their responses, we succeeded in gaining the confidence of the majority of the farmers. Still, it is likely that some remained skeptical.

Suffice it to say, an understanding of this situation is crucial to an examination of the findings of this study.

The Setting

Located in northeastern Ethiopia, Wollo borders the Tigraye region to the north, the Republic of Djibouti and the Hararghe region to the east, the Gojam and Gonder regions to the west, and the northern Shewa region to the south (see Figure 1.1). Wollo has a spectacular landscape: its endless hills and valleys, each one more scenic than the other, are dazzling sights. Wollo has a population of 4,075,959, of which 94% live in rural areas.³⁴ The largest town in Wollo is Dessie, the capital city of the region, with a population of 68,848. The two other towns, each with a population of 16,000, are Kombolcha (Kalu Awraja), located 23 kilometers south of Dessie, and Woldiya, located about 100 kilometers north of Dessie.³⁵ The most notable urban enterprises in the region are the soft drink industry in Dessie and the textile and meat industries in Kombolcha.

Wollo is an historic region and a source of great pride to Ethiopia. The oldest remains of humankind, the famous three million-year-old fossil "Lucy," was found in this region. Wollo is the home of two of the oldest churches in Christendom, Lalibela (carved out of solid rock), and Gishen Mariam (Saint Mary), under which a part of the cross on which Jesus was crucified is believed to be buried. The Muslims of this region also proudly recite the heroic battles that Mohammed the "left hander" fought in Wollo during Islam's expansion in Ethiopia. It is also a region recurrently ravaged by famine—about five famine years in this century alone. The most brutal in scope and intensity was that of 1984, which led to the expansion of relief centers in every region of Wollo, an expansion previously unknown in Wollo's history. Through the extensive television coverage they received in 1984, the relief centers at Bati and Korem highlighted the tragedy of famine in this region.

Wollo is also unique in that, in a land marred by ethnic and religious hostilities, the Amhars, the Tigres, and the Oromos (the main ethnic groups in the region) live harmoniously together, often married to one another, despite their differences. Wollo is predominantly Muslim, yet most Muslims also indicate that they are ethnically Amhars, who in most regions are Christian. With respect to religious and ethnic harmony, Wollo is an exemplary region from which the rest of Ethiopia has a great deal to learn.

The character and the spirit of Wollo peasants are equally impressive. Nearly every Wollo peasant experienced the two worst famines in this century—one in 1973/74 and one in 1984/85. The scourge of famine neither subdued the peasants nor haunts them incessantly. They certainly have not forgotten the famine conditions, yet they do not live with it every day. Most peasants interviewed in this study were neither optimistic enough to say that famine