



Zentrum für Entwicklungsforschung
Center for Development Research
University of Bonn

October 2007

ZEF

Policy Brief No. 7

Deforestation of Ethiopia's Afromontane rainforests

Reasons for concern

by Franz W. Gatzweiler



MAIN FINDINGS

Main messages

1 Economically valuable forests in Ethiopia which contain the world's only wild *Coffea arabica* populations are diminishing and, at current deforestation rates, will be completely lost within 27 years.

2 Deforestation in Ethiopia is due to past governmental and institutional changes, insecurity of land tenure, resettlement programs, population pressure, agricultural and infrastructure developments. Farmers suffer from poverty as well as food insecurity and cannot bear the costs of forest conservation.

3 Ethiopian and international stakeholders are involved in a competition for resources, rights and mandates. This hinders cooperation and collective action to prevent deforestation.

4 Apart from providing appropriate economic incentives, environmental education, public awareness and civil society engagement need to be strengthened and trust rebuilt between stakeholders. Capacities for conservation must be built by devolving authority.

5 Despite Ethiopia being the birthplace of *Coffea arabica* and the source of one of the world's finest coffees, current commitment on the part of the worldwide coffee industry to conserving the forests is negligible.

Introduction

The Afromontane rainforests of South West Ethiopia are the birthplace of *Coffea arabica* and harbor the last wild populations. Variability in their tolerance to diseases and drought reflects the high genetic diversity of the wild coffee populations. Their value has been estimated at between 0.42 and 1.458 billion US\$ a year. But how much longer can the forests withstand the pressures before they disappear? What are the reasons behind deforestation? And why is nobody taking action? Worldwide, about 5 billion kg of coffee are consumed in the importing countries per year. Coffee houses have become popular and the specialty coffee market is booming. However, there are no major schemes on the part of the coffee industry or alerts from concerned consumers or civil society to save the forest repositories of wild *Coffea arabica* in Ethiopia. If deforestation continues, in about 27 years there will be no more forests to be concerned about. Why isn't anybody concerned? This brief provides facts on deforestation in Ethiopia, its causes, reasons for the perceived modest public concern, and recommendations for future actions.

Deforestation in Ethiopia

Among the less developed countries, especially in Africa, Ethiopia is exceptionally rich in history, as well as in cultural and biological diversity. It is home to one of the earliest ancestors of the human species, around 80 languages are spoken by various ethnic groups and it is home to two globally

important biodiversity hotspots. However, this rich cultural and natural heritage is threatened.

Earth trends estimated that in 2000 Ethiopia had 4,344 million ha of natural forest area, which is 4% of its total land area. Compared to other East African countries Ethiopia's deforestation rate is about average. However, the deforestation rates in East Africa are second highest on the continent. Moreover, East Africa has the smallest fraction of its forest area designated primarily for conservation. After Northern Africa, East African countries show the second highest rate of decline in forest conservation on the continent.

In a forest resource assessment of Ethiopia, Reusing found that within 17 years (1973–1990) high-forest cover decreased from 54,410 to 45,055 km² or from 4.75% to 3.93% of the land area. He calculated a deforestation rate of 163,000 ha per year, which means that continued deforestation at the same rate would leave about 18,975 of the 45,055 km² in 2006. The FAO (2007) estimated a deforestation rate of 141,000 ha per year.

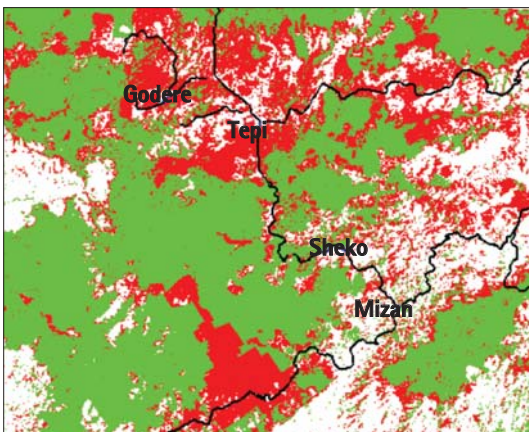


Figure: Forest cover change between 1973 and 2005. The green area shows the forest cover in 2005. The red area shows the deforested area.



Deforestation rates in East Africa are second highest on the continent.

Dereje carried out a study in the coffee forest areas of South West Ethiopia in order to estimate forest cover change between 1973 and 2005. The study covered an area of 3,940 km² with 2,808 km² of high forests (71% of the area) extended over five districts in the two regional states of Gambela and Southern Nations. His analysis shows that the forested land declined to 1,907 km², which equals 67% of the forest cover in 1973 (Figure). Between 2001 and 2005, 5,540 ha of forest land were also allocated for private coffee producer firms and 2,000 ha for rubber plantations.

Gessese studied an upland rainforest area of 3,060 km² in the Awassa watershed of the south-central Rift Valley, 280 km south of Addis Ababa. He estimated the rate of deforestation between 1972 and 2000 using remote sensing techniques. He was able to show that 80% (40,000 ha) of the 1972 forest cover (48,924 ha) had been lost within the 28 year period. He describes how clearings created a speckled pattern of non-connected small forest patches within the formerly closed forest.

Despite the slightly different estimates for deforestation in different regions of



Forest management changes the structure of the original forest.

Ethiopia, given deforestation rates remain the same: the country will lose its last high forest tree within about 27 years. And with it will go the world's only original wild populations of *Coffea arabica*. The economic loss of that genetic resource ranges from between 0.4 and 1.5 billion US\$/year.

Causes of deforestation

Dereje explains deforestation in the coffee forest area he studied by linking it to historical events over certain periods of time. From 1973–87, forest cover reduced by 11%. That period was characterized by resettlement and villagization programs and the expansion of state farm programs. Twenty-four percent of forest loss was a result of converting 10,128 ha of high forests into coffee plantations. In later periods, forests continued to be converted to agro-forestry systems, agricultural land and settlement areas. The speed and pattern varies depending on the distance to state monitoring and coincides with changes in government.

From the 1950s to 1974, private land ownership was promoted through land grants to civil servants and war veterans. During this period, mechanized farming became increasingly attractive. As a result, large numbers of rural

people were dislocated – also to forest areas. Recently pressure is coming from intensive management of forest coffee and semi-forest coffee, which drastically changes the structure and functions of the original forests. Improved transport and communication infrastructures and the resulting better access to markets are facilitating deforestation. More forest cover change was detected close to areas with good road networks and around settlements.

Gessese Dessie and Carl Christiansson identify an entire combination of biophysical and socio-political conditions for forest decline in the Awassa watershed area. Geographic properties, socio-political change, population growth, insecurity of land tenure, agricultural development and the improvement of transport capacities are among the most important. Large forest areas were cut down as a result of a political power vacuum during periods of political transition.

These proximate reasons are accompanied by underlying causes for deforestation. Faced with food insecurity, agricultural land is just more valuable to farmers. Individual farmers exposed to severe food insecurity do not have many other options than to convert forests into agricultural land. Their time preference rates are low, which means they prefer food today over tomorrow, and they definitely cannot carry the costs of forest conservation for the larger national or global society.

Whose forests are declining?

When the Derg military regime seized power in 1975, socialism was declared the guiding ideology for Ethiopia and all rural and forest land was nationalized. Central and Eastern European experience has taught us that state ownership of land is a disincentive to

manage it productively and sustainably. However, the current government also adopted a constitution in 1995 in which forests (land and other natural resources) are declared exclusive state property. The constitution also says that anybody who is willing to work the land has a right to obtain land without payment. Although this goal can be enforced through land allocation, it will almost certainly conflict with land users' tenure security. This is because the administrative redistribution of land and use rights (in all regions except Amhara) is contingent on physical residence, the



Coffea Arabica originally comes from Ethiopia.

amount of land to be rented out and the prohibition of mortgaging and selling land. This leads to confusion and provides scope for bureaucratic discretion.

In 1994, a proclamation made the distinction between public and private ownership of forests, declaring natural forests as state-owned and allowing planted forests to be owned privately. Proclamation No. 94/1994 prohibits any person to use or harvest trees, settle, graze, hunt or keep bee hives in the state forest.

The first land certification scheme was initiated in Tigray in 1998 with the intention of improving tenure security. It was only

80% completed because of the war with Eritrea. Shortly before the 2005 elections, land certification also continued in other regions of Ethiopia. The results show that certification has indeed improved tenure security and investments in land. However, certification of land rights cannot eliminate systemic uncertainty of the type mentioned earlier in the context of the administrative redistribution of land. Also, the head of the Ethiopian Forum for Social Studies expressed doubt that "...a piece of paper will bring about (tenure) security because it leaves all other aspects of the (current) land tenure system intact, like interference by the authorities."

In 2000, a new approach to forest ownership and management was initiated with the help of international donor agencies. The so-called co-management approach builds on a contract between the government and communities which rely on forest management for their livelihood. Forest user groups are established and exclusive rights for forest use are granted to the members of the group. The contract confirms the boundaries of the forest, defines ownership and use and other specific conditions. The principal idea behind the co-management approach is that secured rights are a crucial incentive for sustainable management. After initial promising results, the sustainability of this approach still needs to be evaluated.

Why do only a few care?

One reason for the modest concern about deforestation in Ethiopia might be that credible commitment to conservation comes at a cost. It is expensive to halt deforestation and as long as willingness-to-pay is not followed by a willingness-to-act deforestation will continue. Coffee companies, in



Germany for instance, have discovered the niche market for forest coffee from Ethiopia and are willing to pay higher prices to the farmer cooperatives in coffee forest areas. Consumers are promised that by buying the coffee they will improve farmers' incomes and therefore farmers will be motivated to manage their coffee forests sustainably. Will farmers act that way? Traditionally farmers have abandoned wild coffee collection whenever coffee prices were too low.



Environmental issues hardly have a lobby in Ethiopia.

Whether higher prices for forest coffee are an incentive either to over-harvest or harvest more sustainably, remains an open question. Currently, there is no scientific evidence that higher prices for forest coffee are an incentive for sustainable harvest practices. In fact, there is little knowledge at all about the amount of wild coffee that can be collected in a sustainable way.

Because of the complex nature of the problem of deforestation, the Ethiopian government alone is not able to prevent deforestation. We also know that markets alone cannot do magic either. Eventually, local stakeholder participation will be required. Much of Ethiopia's national budget is funded by international development aid. International aid agencies should therefore also play a prominent role in sustainable forest man-

agement. The government of Ethiopia has asked several international agencies, like the Japanese ICA, the German Technical Cooperation (GTZ) and Farm Africa to become involved in Participatory Forest Management. Such projects aim at developing forest management plans and signing contracts between local communities and the government. Different areas of the remaining forests are divided among the foreign aid agencies, where they carry out "their" projects on behalf of the government. What is needed, however, are direct, competent, trustworthy relations between local resource users and the federal authorities: in other words, a functioning and effective forestry extension service.

Another problem is that environmental issues in Ethiopia have no (or a very weak) lobby and the current restrictive socio-political context for public engagement has detrimental effects on environmental education, awareness, advocacy and the building of an engaged and empowered civil society – assets which are necessary to conserve and use Ethiopia's forests in a sustainable way. The recent "School Children Talent Competition Award on Biodiversity Conservation", organized by the Ethiopian Coffee Forest Forum, is an excellent example of what is needed.

At first sight the multiplicity of actors and interests in the forest regions points to a structural coordination problem. However, a second look shows a disparity in empowerment. Whereas international donor agencies and coffee companies have clear rights and a mandate to pursue their aims, local resource users and Ethiopian civil society organizations, who may care most for the forests, have little say. Apart from restric-



tions on their liberty to act, they lack resources and capacities which they then seek in a competitive market for international donor sponsorship.

This competition between Ethiopian civil society organizations for international donor support, among coffee companies in the wild forest coffee niche market and the struggle for mandates among national authorities and international donor agencies is a contest which does not lead to collective action and cooperation to promote conservation. The lack of a national forest policy in Ethiopia does not make things any easier.

To conclude, the reasons for deforestation in Ethiopia are plenty and complex and it is not possible to single out one particular reason. Few people are showing concern about deforestation in Ethiopia and the impact of their concern and true commitment to act upon it are insufficient to halt deforestation. In order to cope with the difficult task, the government needs to devolve authority and assign resources for tackling deforestation. More is needed than administrative decentralization. Rights and responsibilities need to be passed on to resource users and civil society organizations – not only to international donor agencies. The capacities of governmental and Ethiopian civil society organizations need to be strengthened with support from the international development agencies and, specifically for the coffee forests, from the coffee industry itself. This process cannot be prescribed from the top – it needs to be called for by the public. If nobody knows about the threatened rainforests in Ethiopia, nobody will act. Therefore, investments in environmental education, commu-

nication, public awareness building and civil society organizations need to be encouraged. The commitment of the worldwide coffee industry to conserving the forest habitats of wild *Coffea arabica* populations in Ethiopia is negligible. As wild *Coffea arabica* is the source of one of the world's most important industries, it goes without saying that wild coffee conservation should take a very prominent place on the agenda for social corporate responsibility.

Acknowledgements

Most of the results presented are based on the work of the CoCE Project members and collaborators. CoCE is carried out by ZEF Bonn and receives financial support from the German Federal Ministry of Education and Research (BMBF).

For references, please contact the author Franz Gatzweiler (fgatz@uni-bonn.de).

ZEF Policy Brief

For the purpose of applied research the ZEF Policy Briefs mainly address decision makers and practitioners of development cooperation with pointed comments on current and emerging topics. The ZEF Policy Briefs are published sporadically. They are complementary to ZEF's more extensive Discussion Papers that intend to stimulate discussion among researchers and practitioners.



The Center for Development Research (ZEF) is an international and interdisciplinary research institute of the Rheinische Friedrich-Wilhelms-University, Bonn. The Center came into operation towards the end of 1997.

The work of the Center is supported by an external International Advisory Board, currently chaired by Professor Hans van Ginkel, former Rector of the United Nations University in Tokyo, Japan. The Board monitors and evaluates ZEF's progress.

IMPRINT

Published by:

Zentrum für Entwicklungsforschung (ZEF)
Center for Development Research
Walter-Flex-Strasse 3
D - 53113 Bonn
Germany
Phone: +49-228-73-1846
Fax: +49-228-73-1889
E-Mail: zef@uni-bonn.de
www.zef.de

Contact:

Dr. Franz Gatzweiler (fgatz@uni-bonn.de)

Editors:

Alma van der Veen, Lynn Benstead

Layout:

Katharina Moraht

Print:

BGo Media GmbH & Co KG, Bonn

Copyright © 2007 Center for Development Research. All rights reserved. Sections of this document may be reproduced without the express permission of, but with acknowledgement to, the Center for Development Research.