Institut für Lebensmittel- und Ressourcenökonomik (ILR)
Bonn

Governing the Ethiopian Coffee Forests: A Local Level Institutional Analysis in Kaffa and Bale mountains

Inaugural – Dissertation
zur
Erlangung des Grades

Doktor der Agrarwissenschaften
(Dr. agr.)

der
Hohen Landwirtschaftlichen Fakultät
der
Rheinischen Friedrich-Wilmelms-Universität
zu Bonn

vorgelegt am
29. August 2006

von
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aus
Köln

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Tag der mündlichen Prüfung:	22. Dezember 2006
Erscheinungsjahr:	2007

Diese Dissertation ist auf dem Hochschulschriftenserver der ULB Bonn
http://hss.ulb.uni-bonn.de/diss_online elektronisch publiziert.

Abstract
This work analyses institutional frameworks that determine the use, management and conservation of two afromontane rain forests, namely Koma Forest (Kaffa Zone, Southern Region) and Kankicho Forest (Bale Zone, Oromiya Region). The research focuses on the actual situation on the local level, the actors involved in the action arena and the specific institutional framework that impact on their interactions and behaviour. This approach reflects current processes of decentralisation and local 'participation' in Ethiopia. Diverse historic and present interventions of the state and non-governmental organisations (NGOs) as well as the heterogeneity of the local communities are identified and analysed as exogenous variables. In this context, relevant institutions are understood as the rules and regulations that determine who of the local peasants enjoys which use rights to particular forest resources in which forest plot to what extent. Data collection was undertaken between May 2003 and March 2006 by means of qualitative and quantitative research techniques, including, amongst others, open interviews with 160 key informants.
Ethiopia is known as the home country of the Coffea arabica gene-pool (Coffea arabica rubiacaeae). Until the present, both forests under investigation comprise naturally regenerating 'wild' populations of Coffea arabica in a unique genetic variability. Traditionally, the local peasants use this resource as a cash crop or for own consumption. In this work, Coffea arabica is considered as the flag-ship forest resource. However, the coffee forests are gradually depleted and destroyed, particularly due to use demands of local peasants.
The work shows that both investigated coffee forests - although de jure nationalised and protected as "National Forest Priority Areas" - are fully segmented in use right plots that are owned and inherited by the local people. The concerning forest use and management practices are basically determined by locally-initiated structures that persisted the institutional change from 'above', like the elderly and iddir, a village social security fund. Nevertheless, traditional institutions are weakened due their lack of formal status as well as state-driven settlement of allochthone population with different cultural and institutional background.
It becomes apparent that parallel to the perpetuation of the concept of state control of all forest and land resources in Ethiopia, the self-imposed responsibility of the state exceeds its practical capability. State structures in the field of forest use, management and conservation are defined by a low implementation competence, not only due to a lack of financial, personnel and technical resources on all levels, but institutional and structural weaknesses. In local level reality, this created a complex legal pluralism in which both - traditional as well as state structures - lack implementation competence and/or legitimation. This promotes de facto open access situations of forest utilisation.
The work also evaluates the chances and limitations of a "Participatory Forest Management" (PFM) project, currently conducted by a south-NGO in Koma forest. The key initiative is to unite the local coffee forest users in a "Forest User Society" (FUS) apparelled with state-approved and exclusive forest use rights, and bound to a "Forest Management Plan" developed - under mediation of the NGO - between representatives of local state bodies and traditional authorities. The research results show disparities concerning acceptance, engagement and adherence to the FUS system between different communities as well as considerable practical difficulties in the sustainable installation of novel institutional structures. Future PFM projects are recommended to continue with the approach to formally legalise the forest use rights of local peasant communities, but thereby to not only to respect but empower locally existing institutional structures instead of developing and trying to implement new 'artificial' ones.

Kurzfassung
In der Arbeit wird der Einfluss institutioneller Rahmenbedingungen auf Nutzung, Management und Schutz zweier afromontaner Regenwälder, Koma Forest (Kaffa Zone/Südliche Region) und Kankicho Forest (Bale Zone/Oromiya Region), analysiert. Der Fokus liegt auf der aktuellen Situation auf lokaler Ebene, in der Handeln und Interaktionen von Akteuren innerhalb der Aktionsarenen von institutionellen Rahmenbedingungen beeinflusst werden. Dieser Ansatz reflektiert gegenwärtige Dezentralisierungs-, und Partizipationsprozesse in Äthiopien. Historische und aktuelle Eingriffe staatlicher Stellen und Nicht-Regierungs-Organisationen (NROs) sowie die Heterogenität der lokalen Bevölkerung werden als exogene Variablen identifiziert und analysiert. In diesem Kontext untersucht die Arbeit Gesetze und Vorschriften, die bestimmen (sollen), wer aus der lokalen Bevölkerung welche Rechte hat, welche Waldressourcen in welchem Maße zu nutzen. Zur Datenerhebung wurden zwischen Mai 2003 und März 2006 qualitative und quantitative Forschungstechniken angewandt, u.a. wurden 160 offene Interviews durchgeführt.
Äthiopien ist die Heimat des Arabica Kaffee Genpools (Coffea arabica rubiacaeae). Bis zum heutigen Tage wachsen in beiden untersuchten Wäldern sich natürlich regenerierende ‚wilde' Kaffeepopulationen in einmaliger genetischer Vielfalt. Traditionell wird diese Ressource von lokalen Kleinbauern als cash crop oder für den Eigenkonsum genutzt. Allerdings werden die Kaffeewälder zunehmend degradiert und unwiederbringlich zerstört, insbesondere auf Grund des Nutzungsdrucks durch die lokale Bevölkerung.
Die Arbeit zeigt, dass beide untersuchten Kaffeewälder - obgleich seit 1975 de jure verstaatlicht und als geschützte „State Forest Priority Areas" ausgeschrieben - von der autochthonen Bevölkerung vollständig in Nutzungsparzellen aufgeteilt sind, die als Eigentum betrachtet und vererbt werden. Die Waldkaffeenutzungs- und managementpraktiken werden weitgehend durch traditionelle Regeln bestimmt die den institutionellen Wandel von ‚oben' überdauert haben, und administrativ und juristisch von lokalen Strukturen wie dem Rat der Dorfältesten oder iddir, einer dörflichen Sozialkasse, getragen. Allerdings sind traditionelle Institutionen durch ihren fehlenden legalen Status sowie durch eine staatlich geförderte Ansiedlung allochthoner Bevölkerung mit unterschiedlichem kulturellem und institutionellem Hintergrund geschwächt.
Ungeachtet des Festhaltens der Regierung am Konzept der staatlichen Kontrolle aller Wald- und Bodenressourcen wird deutlich, dass die selbstauferlegte Verantwortung die praktischen Kapazitäten übersteigt. Staatliche Strukturen im Bereich Waldnutzung, -management, und -schutz sind durch anhaltende geringe Implementierungskraft charakterisiert, neben finanziellem, personellem und technischem Ressourcenmangel auf allen Ebenen insbesondere durch grundlegende institutionelle und strukturelle Schwächen bedingt. In der lokalen Wirklichkeit ist so ein komplexer legaler Pluralismus entstanden in dem beiden - traditionellen als auch staatlichen - Strukturen die Durchsetzungskraft und/oder Legitimation fehlt. Dies begünstigt de facto Open-Access-Waldnutzungssituationen.
In der Arbeit werden zudem die Chancen und Schwierigkeiten eines „Participatory Forest Management" (PFM) Projektes, welches gegenwärtig von einer Süd-NRO in Kaffa implementiert wird, evaluiert. Im Kern geht es um den Aufbau einer „Forest User Society" (FUS), die mit staatlich anerkannten und exklusiven Waldnutzungsrechten ausgestattet und an einen „Forest Management Plan", der - unter NRO Mediation - von Vertretern staatlicher und traditioneller Strukturen gemeinsam entwickelt wurde, gebunden ist. Die Arbeit zeigt Disparitäten bezüglich Anerkennung, Engagement, und Einhaltung des FUS Systems unter den verschiedenen Waldnutzergruppen sowie erhebliche praktische Schwierigkeiten im nachhaltigen Aufbau neuer institutioneller Strukturen auf. Zukünftigen PFM Projekten wird empfohlen den Ansatz der formellen Legalisierung von Waldnutzungsrechten weiter zu verfolgen, dabei allerdings nicht neue ‚künstliche' Strukturen zu schaffen, sondern traditionell existierende lokale Institutionen zu stärken.

ACKNOWLEDGEMENTS

The author wishes to express his gratitude to the following people who were involved in the process of bringing this book to fruition.

First of all, I would like to thank my supervisor Prof Dr Thomas Kutsch who has walked the long journey with me. He gave me continuous advice and encouragement during the study period. My sincere thanks are also addressed to my co-supervisors PD Dr Achim Clemens and PD Dr Jürgen Burkhardt for making valuable suggestions and comments on the manuscript.

The study project was carried out at the Center for Development Research (ZEF, Bonn) within the framework of the ZEF International Doctoral Studies Program. It was financed by the German Federal Ministry of Education and Research (BMBF). Thank you for providing me with an excellent working environment. I hope that this work will not only stimulate further research and academic debate on the Ethiopian coffee forests but will provide a source of information that spurs the future development and realisation of more sustainable forest management and conservation activities in Ethiopia and beyond.

I am personally grateful to my friends and colleagues at ZEF, many of them contributed in one way or another to the realisation of this book. Special thanks go to those who have been working jointly in the “coffee project”, Dr Alice Beining, Dr Manfred Denich, Dr Franz Gatzweiler, Dr Tadesse W. Gole, Dr Holger Hindorf, Dr Taye Kufa, Georg Lieth, Dr Anke Reichenhuber, Dr Christine Schmitt, Dr Feyera Senbeta, Dr Admassu Shibru, and Dr Teklu Tesfaye, for the good times we had together, in the field, in the office and beyond.

I spent a long period of my life in Ethiopia for this research, and I gained understandings, appreciations and experiences that I will treasure forever. I am deeply indebted to many people that accompanied and supported me during that time, and not all can be named here. My special acknowledgements go to Abeto Mamo, Assrat Gebre Mariam, Tadesse Kasa, Hailemariam Gebre, Abdurro “the commander” Burisso, Atto Tadesse, Andenet Anbessa, Hussein Mohammed, Fayyissaa Maggarssaa, Misganaw Azeze and Weyzero Asnaketch. May I wish you and your families all the very best for the future.

Above all, I would like to take this opportunity to express my sincere acknowledgements to all interview partners and informants in Komba, Agama, Yeyebitto,

Wushwush, Bita Chega, Bita Selam, Bonga, Jimma, Chilimo, Belete Gera, Kankicho, Burkito, Dolo Mena, Robe, Goba, Awassa, and Addis Ababa. 160 of the interview partners are individually named in the appendix of this book. Particular appreciation goes to the people in Komba village and Kankicho village for providing so much time, effort, knowledge and hospitality.

Finally, I would like to thank my family for their emotional and material support, encouragement and understanding. They gave me both roots and wings.

Für Brigitte.

Till Stellmacher

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Acronyms and abbreviations

AAU	Addis Ababa University
APC	Agricultural Producers Cooperatives
ASC	Agricultural Service Cooperatives
BFCDP	Bonga Forest Conservation and Development Project
BMBF	Bundesministerium für Bildung und Forschung
BMNP	Bale Mountains National Park
BoA	Bureau of Agriculture
BoANRD	Bureau of Agriculture and Natural Resources Development
CBD	Coffee Berry Disease
CLR	Coffee Leaf Rust
CoCE	Conservation and use of wild populations of Coffea arabica in the montane rainforests of Ethiopia
CPFMP	Community Participatory Forest Management Project
CPR	Common-Pool Resource
DA	Development Agent
DFGF	Department of Forestry, Game and Fishery
EIAR	Ethiopian Institute for Agricultural Research
EPRDF	Ethiopian Peoples' Revolutionary Democratic Front
EWCO	Ethiopian Wildlife Conservation Organization
FAP	Forest Administration Plan
FDIM-DP	Forest Demarcation, Inventory and Management Plan Division
FDP	Forest Development Plan
FDRE	Federal Democratic Republic of Ethiopia
FMP	Forest Management Plan
FoWCDA	Forestry and Wildlife Conservation and Development Authority
FPP	Forest Protection Plan
FSWC-T	Forestry, Soil and Water Conservation Team
FUS	Forest User Society
FWCD-T	Forestry and Wildlife Conservation and Development Team
GDP	Gross Domestic Product
GO	Governmental Organisation
GPS	Global Positioning System
GTZ	Gesellschaft für Technische Zusammenarbeit
HH	Household
HYV	High Yield Varieties
IAD	Institutional Analysis and Development
IBC	Institute for Biodiversity Research
ICO	International Coffee Organization
IPFMRHP	Integrated Participatory Forest Management and Reproductive Health Project
JICA	Japan International Cooperation Agency
LDC	Least Developed Countries
MARLNRAWO	Mena Angeto Rural Land and Natural Resources Administration Woreda Office

MLRA	Ministry of Land Reform and Administration
MNRDEP	Ministry of Natural Resource Development and Environmental Protection
MoARD	Ministry of Agriculture and Rural Development
NEPA	National Environmental Protection Authority
NFPA	National Forest Priority Area
NFPA-CD	National Forest Priority Area Coordination Division
NIE	New Institutional Economics
NP	National Park
NRCDMD	Natural Resource Conservation and Development Main Department
NRCD-T	Natural Resource Conservation and Development Team
NTFP	Non-Timber Forest Product
ORLNRAA	Oromiya Rural Land and Natural Resources Administration Authority
PA	Peasant Association
PFM	Participatory Forest Management
PFMA	Participatory Forest Management Agreement
RCT	Rational Choice Theory
PRA	Participatory Rural Appraisal
RFPA	Regional Forest Priority Area
RRA	Rapid Rural Appraisal
SFCDD	State Forest Conservation and Development Department
SFoDA	State Forest Development Agency
SNNPRS	Southern Nations and Nationalities Peoples' Regional State
TGE	Transitional Government of Ethiopia
TPLF	Tigray Peoples’ Liberation Front
WCB	Wildlife Conservation Board
WCD	Wildlife Conservation Department
WCED	World Commission on Environment and Development
WCO	Wildlife Conservation Organisation
WWF	World Wide Fund for Nature
ZEF	Zentrum für Enwicklungsforschung / Center for Development Research
ZNRRLAD	Zonal Natural Resources and Rural Land Administration Desk

Glossary

Expression	Language	Explanation
ada	Oromiffa	Community-initiated social system similar to *iddir*
Amhara		Ethnicity dominant in Northern and Central Ethiopia
Amharic		A Semitic language originated in the central highlands of Ethiopia. It has been the official language of the country from beginning of the Ethiopian Empire until 1991 and continues to be the *lingua franca*
balabbat	Amharic	Local elites with similar rights as *neftegna* landlords
bala kaarnii	Oromiffa	Local elites with similar rights as *neftegna* landlords
birr	Amharic	Ethiopian currency, 100 birr equivalent to 10 EUR (in 2003)
bunna	Amharic/Oromiffa	'Coffee'
bunna bosona	Oromiffa	'Forest coffee'
bunna nanno mana	Oromiffa	'Garden coffee'
Borodube		Ethnicity from Arsi Zone, also known under Waradube
chacka bunna	Amharic	'Forest coffee'
dabbo	Amharic/Kafficho	Communal working group
daddo	Amharic/Kafficho	Communal working group
derg	Amharic	Committee, widely used term for the military government that ruled Ethiopia from 1974 to 1991
dschiga	Oromiffa	Communal working group
enset	Amharic/Kafficho	A plantain-like perennial crop endemic to Ethiopia, traditionally grown in the SW including Kaffa Zone
fered shengo	Amharic	*kebele* court
ferengi	Amharic	A widely used term to label a 'foreigner' or non-Ethiopian person
feresula	Amharic/Kafficho	Unit of weight used in rural Ethiopia, one *feresula* is equivalent to 17 kg
gadaa	Oromiffa	Institutional arrangement that traditional organises Oromo communities by age and sex into seven groups
gebber	Amharic	Similar to 'smallholder peasant', but more in the direction that combines the meanings of 'the one who cultivates the land' and 'pays the taxes'.
got	Amharic	A community of kindred neighbours descending from a conjoint ancestor roughly interpreted with the term hamlet
gult	Amharic	Landlord-based land use system dominant in Southern Ethiopia until 1974

Expression	Language	Explanation
gult di diritto terriero	Italian	*gult* system during the Italian invasion 1936-41
gurmu	Oromiffa	Communal working group
Haile Selassi I		Emperor of Ethiopia from 1930 to 1974, also known under his birth name Ras Tafari
injera	Amharic	Sour bread made of *teff*, an omnipresent staple food in Ethiopia
iddir	Amharic	Locally organised insurance system with formal structures in which all households of a concerned village are members
Kaffa		Dominant ethnicity in Kaffa region
Kafficho		Language with Cushitic origin spoken by Kaffa people, also referred to as Kaffa language, Kefficho or Kaffiniya
Kambata		People from Kambata region, administratively part of Sidama Zone in the most eastern tip of SNNPRS
Kaldi narrative		An Ethiopian legend that portrays how coffee utilisation was discovered by the young goat herder Kaldi in Kaffa region
kebele	Amharic	Lowest administrative unit in Ethiopia
kocho	Amharic/Kafficho	Staple food made from *enset*
limatiya	Amharic	Joint labour organised (and enforced) by the local PA/*kebele*
Mandjah		Ethnicity in Kaffa region, sometimes referred to as the ‘forest people’
maresha	Amharic	A traditional plough consisting of an iron tine and a wooden arm which is fastened on a wooden neck yoke
mideh	Oromiffa	A locally used land size unit which defines the area which two oxen can plough in one day
neftegna	Amharic	‘Man with a rifle’ or musketeer, commonly used for the descendents of the soldiers which settled down in the Ethiopian South after the occupation by the Amharic Empire
Oromo		Dominant ethnicity in Central and Southern Ethiopia, due to most figures the Oromo constitute the largest ethnic group in Ethiopia
Oromiffa		A Cushitic language mostly spoken by Oromo people
rist	Amharic	Kinship-based land use system dominant in Northern Ethiopia until 1974
shimagile	Amharic	‘Old men', the village elders
teff	Amharic	Cereal endemic to Ethiopia, used to prepare *injera*
tella	Amharic	Self-brewed light beer
tukul	Amharic	Traditional straw covered round huts which are common homesteads all over South-western and Southern Ethiopia

Expression	Language	Explanation
woreda	Amharic	Administrative unit that binds together several *kebeles*
yarsa	Oromiffa	‘Old men', the village elders
yeyebet bunna	Amharic	‘Garden coffee’
Waradube		Ethnicity from Arsi Zone, also known under Borodube
wof arach bunna	Amharic	‘Coffee brought by the bird’, naturally spread coffee

1 What is it all about?

The Ethiopian coffee forests are subject to rapid depletion, largely emanating from overuse by local smallholders. This work investigates the set of rules and regulations that determine the entitlement and access of the forest resource appropriators to the respective forest resources. But why bother?

1.1 Importance of Coffee and the Loss of Coffee Forest: Problem Statement

The production of coffee is of an enormous relevance for Ethiopia, playing a dominant role in economic, social, cultural and environmental terms. Annually, an average of about 150,000 tons of coffee is produced in Ethiopia and the livelihood of about 15 million people depends directly or indirectly on the production, processing and export of coffee (EEA 2000). In contrast to other coffee producing countries, the Ethiopian coffee production is dominated by smallholder agriculture, contributing with more than 90 percent to the total harvest (Dercon 2002). A special feature of Ethiopian coffee production is that domestic consumption is considerably high, as coffee is a traditional beverage throughout the country; FAO estimates that about 50 percent of the total harvest is used within Ethiopia, and that some farmers grow coffee only for home consumption (Dercon 2002).

Nevertheless, the export of coffee is of enormous importance for Ethiopia, as the commodity contributing to over 60% to the foreign currency income (EEA 2000). This massive socio-economic dependency on one single agricultural product makes Ethiopia highly vulnerable by different constraints. On the one hand, production fluctuates due to environmental issues such as plant diseases or weather conditions. On the other, the country depends on coffee's world market prices, which are rather unstable and have dropped dramatically since the breakdown of the "International Coffee Organization" (ICO) in 1989 and the emerging of new producers like Vietnam (Bates 1998). Ethiopia, already one of the poorest countries in the world, is in danger of facing further socio-economic deterioration.

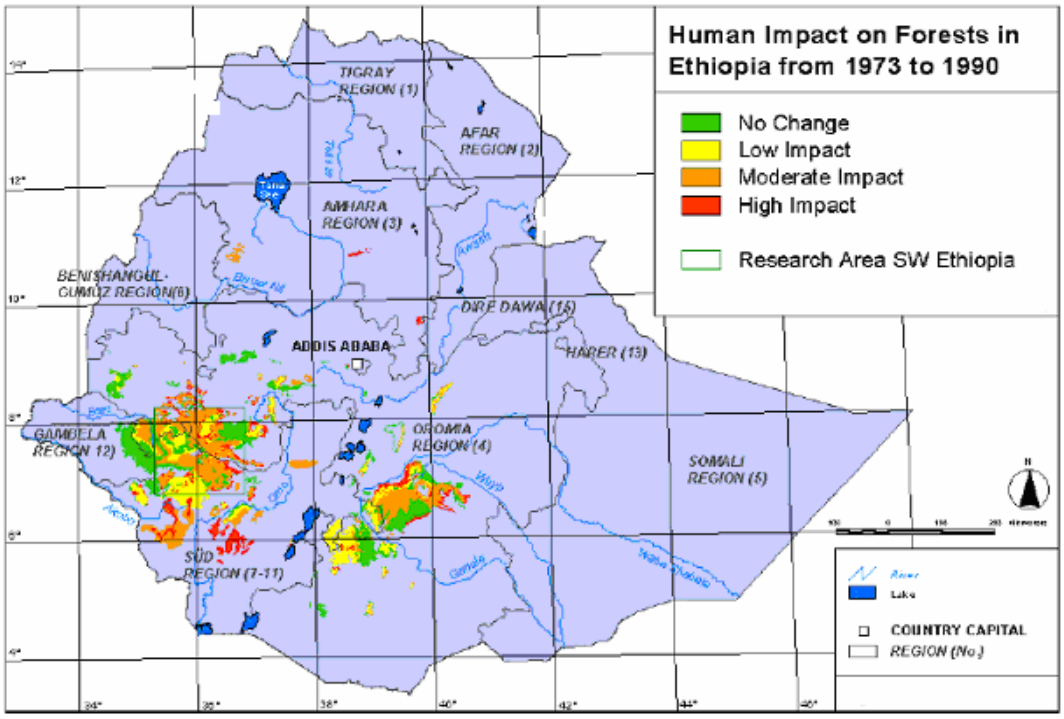
With more than 38 species of crop plants important to agriculture world wide, Ethiopia is well known for its crop genetic diversity and hence the country is one of the eight Vavilonian centers of crop origin, and the only one on the African continent (Vavilov 1951). Most notably, the worldwide origin of *Coffea arabica* gene-pool (*Coffea Arabica rubiacaeae*) lies in the mountainous moist forests of South-western Ethiopia (Gole 2003: 1). Until these days,

this area still contains some of the last remaining largely timbered regions within the country, of which parts can be described as primary high forests with high biodiversity relatively undepleted by human activities. These forests still comprise naturally regenerating populations of wild forest coffee with a significantly high genetic diversity. Hence, *Coffea arabica* is one of the few crops of worldwide importance that still can be found in wild populations in their home region. As the genetic diversity of *Coffea arabica* is considerably narrow worldwide, the in-situ protection in which natural selection and adaptation are maintained is of great importance.

However, parallel to the trend in other African countries, Ethiopian primary high forests including coffee forests undergo a steady process of depletion and destruction, hence the extraction of forest resources is greater than their natural regeneration capability or human re-investment (also known as forest mining). The processes of forest degradation and loss are complex and difficult to assess as there are few reliable primary data. Environmental scientists began their long-term assessments at a point when the ecosystem had already begun undergoing massive change. Hence, we do not actually know much about the natural 'original' state of the Ethiopian coffee forests. However, researchers have been able to gather hard facts that illustrate an unambiguous tendency:

- Between 1955 and 1979, Ethiopia lost 77 percent of its forest cover (Bech 2002)
- From 1975 to 1997, 60 percent of the closed high forests in south-western Ethiopia were lost (Reusing 1998)
- The current decline of the primary forest in Oromiya Region is assessed to be 1.6 to 9.4 percent annually (Boum 2002)

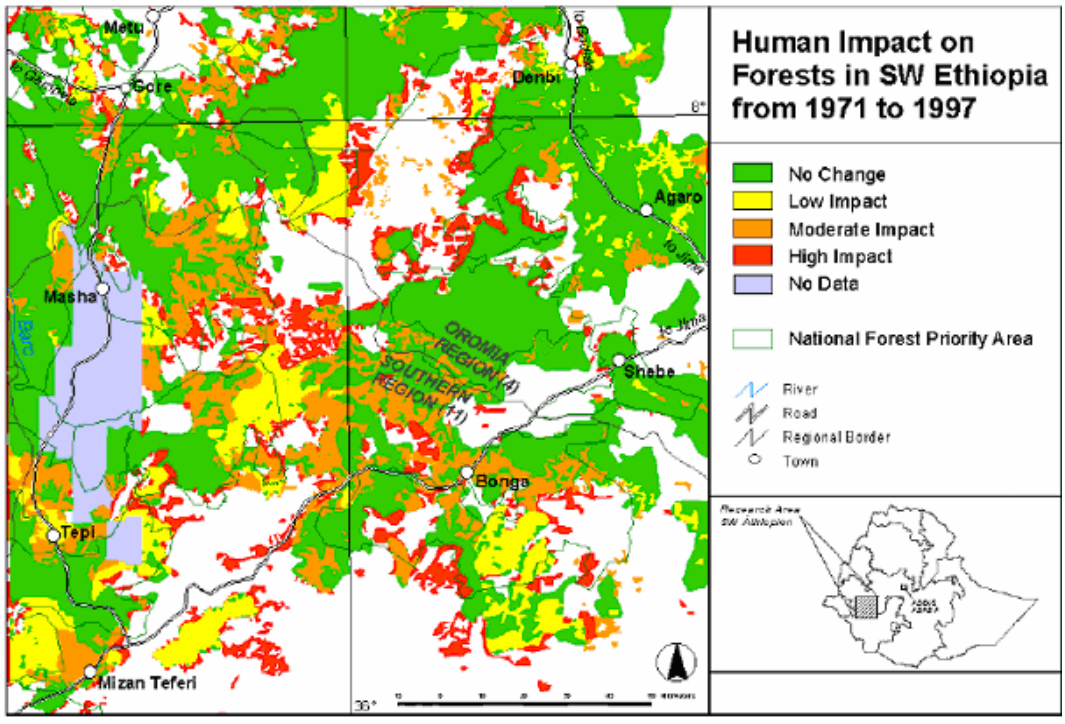
Figure 1: Forest degradation in Ethiopia between 1973 and 1990



(Reusing 1998)

Figure 2 is a segment of Figure 1 and shows a map of Southwest Ethiopia which is not only the largest connected forest area of the country but the area with most forest coffee occurrence. Obviously, the national trend is mirrored when going into detail.

Figure 2: Forest degradation in Southwest Ethiopia between 1971 and 1990



(Reusing 1998)

Obviously, the development shown in Figure 1 and Figure 2 is not desirable. It entails manifold negative ecological and social-economic impacts. In case of the coffee forests, the 'typical' negative ecological impacts such as soil degradation, erosion and change of the microclimate come along with an irretrievable loss of the worldwide unique forest coffee populations including its biodiversity and the potential economic value of its genetic resource, e.g. for breeding or the purpose of marketing the Ethiopian forest coffee on the international market as a speciality product. However, the utilisation of wild *Coffea arabica* and the depletion and destruction of its natural habitat, the primary moist forest, are two interlinked processes.

Closely linked to that, coffee forests have a socio-economic value, most directly for the people who reside in or close the forests, largely in smallholder farming households, and who traditionally depend on its natural resources, both for subsistence and as a cash crop. However, the ecosystem forest provides a variety of natural resources that local smallholders make use of, and coffee is just one component. Therefore, this work broadens its research focus by considering forest coffee as a 'flagship' forest resource while taking the use and management of other natural resources from within the coffee forests into consideration. In order to set an adequate research parameter, the definition of forest resources is narrowed down to extractable resources of biological origin derived from forests that are (at least potentially) of value to the local people. This understanding is based upon Carlsson's consideration that forests only become resources when they serve human needs (2000: 605).

For the local smallholders, who already live under tenuous economic conditions, the loss and depletion of coffee forests does not only mean the change of their neighbourhood environment, but their economic ruin. This is closely related to questions of conflict within the local communities or among different forest-resource user groups.

Nevertheless, forest depletion and loss is man-made, undertaken for particular reasons. The rationale behind was repeatedly identified to be the conversion of forest land into other kinds of land use, basically smallholder agriculture traced back to increased land pressure due to population increase. From the 1980s onwards, an increasing number of scholars and practitioners came to the conclusion that there must also be other underlying fundamental causes for forest depletion and loss, most notably a) the absence or distortion of markets, in non-tangible and long-term forests benefits, and b) the lack of transparent, predictable and universally enforced institutions that say which resource appropriators are allowed to use what resource in which forest to what extent (Agrawal 1995). This leads us to the essential

question of what is understood with the notion 'institution' in reference to the concrete subject of this research. In a prolepsis to the in-depth discussion on institutions in Chapter 2.2.3, in the following institutions are defined in Ostrom's understanding as 'the rules of the game'; hence, in this context, as the rules (and regulations) that say who is allowed to use what forest resource in which forest area to what extent.

Answers to forest resource depletion and loss ought to involve institutional change[1] and socio-political solutions rather than focusing on a purely technical fix (Tache and Irwin 2003: 16). However, the identification and evaluation of the underlying factors for forest depletion and loss is difficult and still discussed with controversy. Particularly in case of the Ethiopian coffee forests, not much is known about the institutions that determine how local people use, manage and conserve the forest resources.

1.2 Underlying Normative Goals

Policy discussions and interventions on forest resources are always led by normative goals and moral purposes. In the past, they were more related to forest use, rather than to forest conservation. Nowadays the concern is upon on forest management. Based on earlier research and literature review, this research work is concordant with the understanding that forest management is the most advantageous human-forest interaction in achieving descriptive normative goals, which are a) sustainability, b) efficiency, and c) equity. The term sustainability is applied in the sense of the report 'Our common future' issued by the "World Commission on Environment and Development" (WCED), and better known as the Brundtland Report. It developed guiding principles for sustainable development, as it is generally understood, by highlighting sustainability to be "concerned about continuation of well-being into the future, either one's own or that of several generations to come." (WCED 1987; Lele 2002: 286). This implies not only the long-term considerations, but also the economic, social and ecological dimensions of sustainable development (GTZ 2004: 8). Efficiency - the second underlying normative goal of this thesis - is "concerned with maximising current well-being derived from the natural world at minimum costs, whether measured in physical or monetary terms." (Lele 2002: 286). Hence, in this study, efficiency is seen as a tool to reduce waste of time, labour, money and, last but not least, waste of forest resources. Whereas the first two underlying normative goals focus on environmental and human dimensions, the third is concerned with the distribution of human well-being. Equity

[1] In this regard, institutional change is been understood as a shift "in any rule affecting the set of participants, the set of strategies available to participants, the control they have over outcomes, the information they have, or the payoffs" (Ostrom 1990).

concerns are far less in the foreground of debates on forest use, management and conservation than the other two normative goals depicted above. This research project states equity as a normative goal to reduce conflicts and to promote prosperity in society, while pursuing fairness and equality for individuals across barriers such as power, information, ethnicity, or religion. Putting it more concretely with respect to human-forest interaction, equity denotes sharing both, the benefits of resource use, management and conservation as well as the externalities generated by resources extraction, processing and consumption (Lele 2002). As a matter of course, these three normative goals define which institutional arrangements for human-forest interaction are identified as being 'appropriate'. Disagreements on what is 'appropriate' are in fact more often consequences of different normative concerns rather than of theoretical or empirical claims about the ability to meet similar goals (Lele 2002: 287).

1.3 Research Objectives

Against the background of the problem statement and the normative goals specified above, the research objectives are to be formulated. Initially, however, it should be mentioned that the overall research objective is not to analyse all issues important for coffee forest use, management and conservation in Ethiopia and all means of forest depletion and destruction. First, the work does not intend to contribute to the discussion whether and how far population density and growth contribute to forest degradation and loss, known from literature as the neo-Malthusian vs. Agarwalian discourse. Second, economic incentives and disincentives that impact on forest use, management and conservation also play a minor role in this work either.

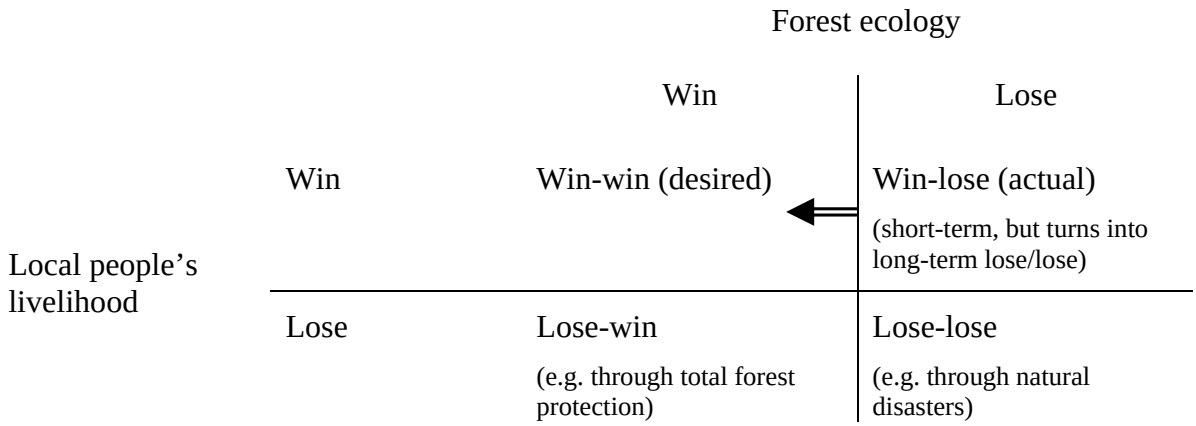
This research follows two basic research objectives, the second built upon the first one. Actual decisions on forest resource use, management and conservation are predominantly made on the local level, hence in small villages within or close to the coffee forests. However, be it with the scientists involved, the decision makers in Ethiopian state bodies or development organisations, only few satisfactory knowledge is available about the rules and regulations that determine relationship and dependencies between the local forest user communities and the coffee forest environment in reality, not on paper. Accordingly, the first objective is to look behind the curtain of academic discourse and outsiders' perception and to portray and analyse the legal framework that has in practice an impact on local people's forest resource use, management and conservation activities in the case study coffee forests. In this regard, a set of diverse forest resource use right regimes established and promoted either by the local communities themselves, the state, or NGOs are considered to be relevant, and hence investigated. The analysis also includes the manifold relationships between the different legal

right systems on different levels as well as their internal coherences, as they have a strong impact on the way local communities make use of forest resources. Thereby, specific focus will be given to two natural resources protection activities currently ongoing in the chosen case study areas. This is first, a 'classical' state-initiated approach of establishing protected forest zones, namely "National (and Regional) Forest Priority Areas" (NFPAs/RFPAs), and second, a 'Participatory Forest Management' project with model character, implemented by an NGO. This first objective is concerned with developments deeply driven by path dependency with major shifts in the institutional framework determining forest use, management and conservation that took place during the last three decades. Accordingly, this implies a historical perspective by many means.

The systematic and holistic analysis of the local level setting and the institutional background will firstly provide knowledge about 'how things function' and secondly 'why things go wrong', in the latter case, answers to the question why we are losing Ethiopian coffee forests at such an alarming pace. This information is a prerequisite to handling the second objective, which is producing knowledge of practical value to change the situation (which is - referring to the normative goals - considered to be negative) for the better. In simple words, if things need to be changed, it first has to be known how they actually work.

In this regard, the aim of the thesis goes beyond providing knowledge of purely scientific matters. It will also include suggestions that should be of assistance to decision makers in developing concepts for more sustainable, efficient and equal use, management and conservation of coffee forest resources by focusing on institutional change, and a realistic assessment of how this can be achieved and maintained. In the concrete case, ways have to be found and taken in order to change a situation with short-term livelihood gains for the local people but long-term ecological losses into a situation with long-term livelihood gains as well as long-term ecological gains, hence a classical win-win situation. Figure 3 puts it graphically.

Figure 3: Actual and desired linkage between local people's livelihood and forest ecology



1.4 Research Questions: People, Institutions and Change to the Better

In order to accomplish the above research objectives and to structure the whole research process, three central research questions have been formulated, each one mirrors on a respective research objective:

- Which specific local level socio-economic characteristics impact on local peoples' decisions in regard to use, management and conservation of coffee forest resources?
  (**Local people**)
- Which institutions <u>in practice</u> influence the coffee forest resource utilisation, management and conservation activities of local people in which manner?
  (**Institutions**)
- Which practical measures of coffee forest conservation are implemented and which results do they bring?
  (**Coffee forest conservation**)

However, in order to do justice to the broadness and multi-dimensional complexity of these central research questions, each one is split into more detailed sub questions.

Local people:

- Who are the people that actually use, manage and conserve the coffee forest resources of the two case study forest areas?
- Which coffee forest resources do they use and how?
- Within which broader socio-political, historical and economic context are they operating?

Institutions:

- Which state-initiated institutions on the federal, regional and local level impact on utilisation, management and conservation activities of local people in the two case study areas?
- Which community-initiated (traditional) institutions impact on coffee forest use, management and conservation activities of local people?
- Is coffee forest resource use, management and conservation actually practiced within a *de facto* open access situation?
- Which forest land use property rights play a role in practice? Are there traditional property rights?
- How are these rights determined?
- What is their internal structure of the institutions identified to be relevant?
- How do they interact which each other?
- Which local elites/pressure groups do they represent?

Coffee forest conservation:

- What state-initiated institutions regarding coffee forest conservation exist on the federal, regional and local level and what is their actual impact on concerning decisions of local people?
- Which community-initiated (traditional) institutions determine local people's decisions regarding their coffee forest resource conservation activities?
- How does an NGO-initiated 'Participatory Forest Management' (PFM) project function on the local level? Which problems does it face? What may be improved?
- Which institutional 'tools' could help to provide sustainable use and conservation of forests take pressure from these natural resources?

This work does not deal with these research questions in a static sequence by checking off one item after another. Instead, applying a coherent conceptual research frame, they are embedded in the different chapters of this work, and discussed and answered accordingly.

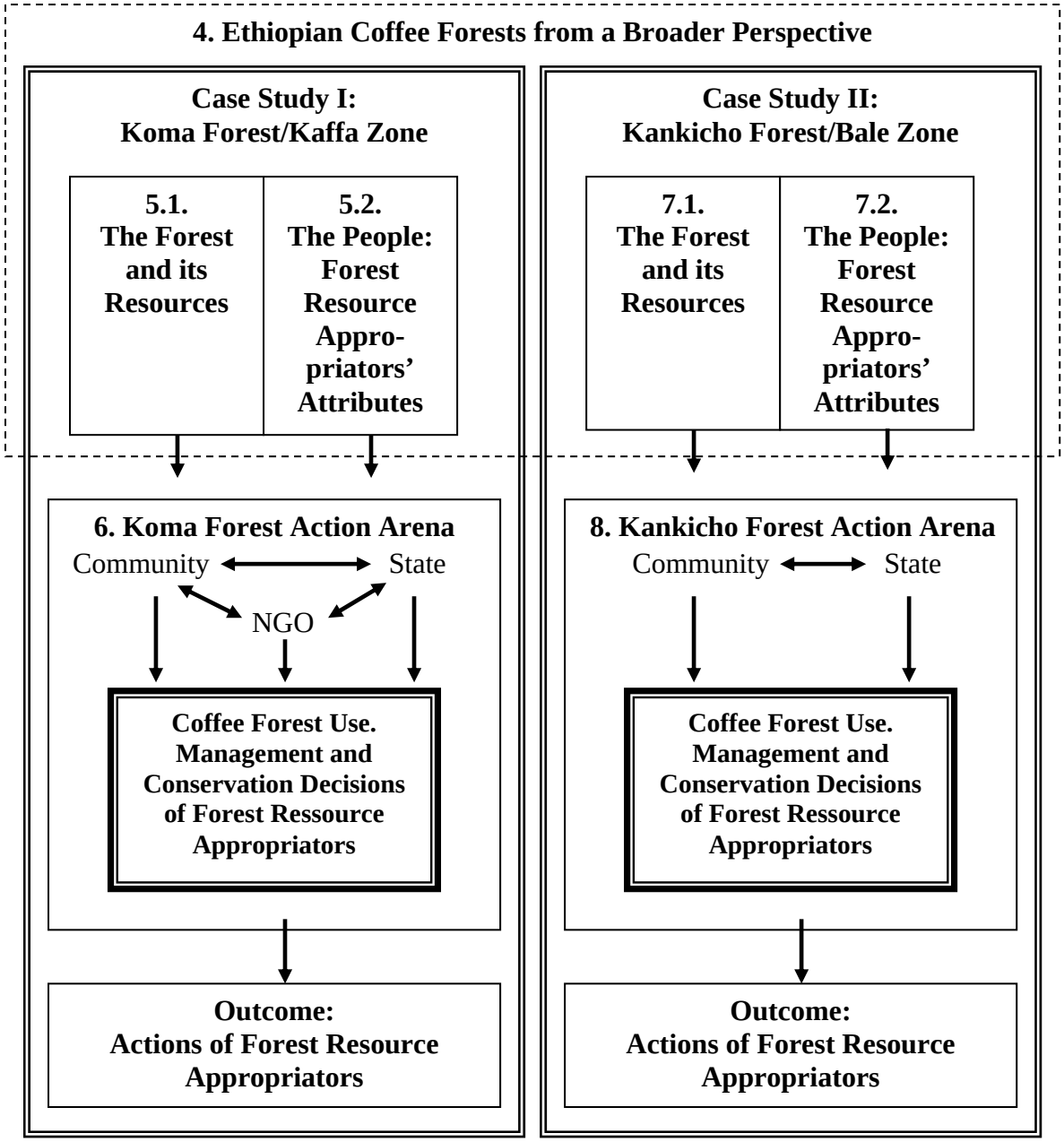
1.5 Research Objects and the Outline of the Study

Mainly two units will be discussed and analysed in this study. The first one, as the base unit of the research, are the households (HHs) living in and around the case study coffee forests and having a stake in utilisation, management and conservation of forest coffee and other forest resources. On the one hand, these people's livelihood directly builds upon the existence of these forest resources, on the other, they are their main destructors.

The second research object are the institutions on the local level, but also on regional and federal level, which directly or indirectly influence the activities of the local HHs concerned regarding their coffee forest resource use, management and conservation activities.

The outline of the study follows the conceptual framework of the "Institutional Analysis and Development" (IAD) approach exceedingly depicted in Chapter 2. Accordingly, the whole thesis is structured as follows: Chapter 2 will discuss the applied conceptual framework and describes and discuss the theoretical literature on issues relevant in the following chapters. Chapter 3 will describe the methodology applied 'in the field' and concerns of ethics and data quality. Chapter 4 will examine and analyse the broader thematic context of the research' subject matter. Chapter 5 leaves the "superior" level of discussion behind and rushes towards the 'forest level' and the delineation of the first case study, which is Koma Forest/Kaffa Zone. Chapter 6 provides a stakeholder and relationship analysis in which the action arena of Koma Forest is investigated, basically subdivided into community-initiated (traditional), state-initiated and NGO-initiated 'institutional worlds'. Chapter 7 brings the discussion to the second case study, which is Kankicho Forest/Bale Zone, and in Chapter 8, the Kankicho Forest Action Arena is presented and analysed. In sum, empirics give slightly more space to the Koma Forest case study as first, many issues coincide with those of Kankicho Forest case study and do not need repetition, second, the Kankicho Forest action arena does not involve the impacts of an NGO-initiated PFM project and third, less time of field research was spent in Kankicho Forest. Chapter 9 brings the discussion back to more general considerations. It involves the superordinate comparison and analysis of both case studies and general conclusions and questions concerning the practical relevance of this work. The systematised cohesion of Chapter 4 to 9 is shown in Figure 4.

Figure 4: Illustration of the outline of the study



1.6 Project Background: CoCE, Interdisciplinary and the Practical Exploration

This work is part of the research project "**Co**nservation and use of wild populations of ***C****offea arabica* in the montane rainforests of **E**thiopia" (CoCE) set up at the "Center for Development Research/Zentrum für Enwicklungsforschung" (ZEF) in Bonn/Germany and financed by the German "Bundesministerium für Bildung und Forschung" (BMBF). The whole project is embedded into a Public Private Partnership (PPP) framework. Cooperating Ethiopian and German partner organisations are: "Ethiopian Institute for Agriculture

Research" (EIAR)[2]; "Gesellschaft für Technische Zusammenarbeit" (GTZ), Kraft Foods Deutschland GmbH & Co KG (Jacobs Kaffee Bremen); Amber Foundation, Freiburg; "Deutsche Stiftung Weltbevölkerung" (DSW), "Institute for Biodiversity Research" (IBC), Addis Ababa University (AAU), Amber Corporation AG, Freiburg; and Geo schützt den Regenwald e.V., Hamburg.

Multifaceted research topics require multifaceted thinking. The general research issue of conservation and use of wild populations of *Coffea arabica* and its natural habitat, the montane rainforests of Ethiopia, spans a great number of research disciplines from botany, plant eco-physiology to economics and social science and deserves miscellaneous research arrangements with horizontal and vertical structures. Due to this complexity, the CoCE project is organised in an interdisciplinary approach that combines different disciplines within natural science, economics and social science. As a result, CoCE is organisationally divided into six subprojects. Social scientists from the "Department of Political and Cultural Change" at ZEF, together with researchers from EIAR and AAU work together in CoCE subproject 6 on the "Analysis of institutional factors influencing the conservation and use of *Coffea arabica* gene pool" (subproject title). The work at hand is the outcome of this subproject. Its intention is to investigate and analyse the research topic by an interdisciplinary approach within social geography. Applied disciplines involve institutionalism, anthropology, and sociology.

Rural Ethiopia is quite secluded. Most actions regarding conservation and use of coffee forest resources in the montane rainforests of the country take place on the local level and are relatively unresearched by now. Accordingly, this research was commenced with only minimal secondary information available beforehand on local human-forest interrelatedness and the concerning institutional context in reality, hence not in theory of institutional scholars, in policy papers on the shelves of Ethiopian state bodies or international donors. Therefore, the work follows an open research approach, based on extensive fieldwork and 'open eye' observation and assessment.

[2] Until 2006, known as the "Ethiopian Agricultural Research Organisation" (EARO).

2 How to Analyse Complex Human-Forest Systems: The Conceptual and Theoretical Framework

2.1 Which Framework is Applied and Why?

There are many tools which help to scientifically approach issues of natural resource management and institutional analysis from a social science perspective. Especially for the analysis of institutions - due to different understandings of the term, its thematic breadth, complexity, and interrelatedness - many tools for approaching the subject have been developed, which often cover different levels of analysis (Ostrom 1999a: 36ff).

This work applies the 'Institutional Analysis and Development' (IAD) framework. Its roots lie in the fields of classical political economy, neoclassic microeconomic theory, institutional economics, public choice theory, and noncooperative game theory. Each of these fields hinges on the individual, if not considered fully autonomous, then as a limited rational agent within a constrained institutional environment (McGovern and Yacobucci n.d.). Initially, the IAD framework was drawn up in the early 1970s by Elinor and Vincent Ostrom, who tried to understand how diverse paradigms in political science affected the way public administration and metropolitan organisation were conceptualised (Ostrom and Ostrom 1971; Ostrom and Ostrom 2004). Over the years, the framework was further elaborated and developed at the Workshop in Political Theory and Policy Analysis at Indiana University (Kiser and Ostrom 1982; Ostrom, Gardener et al. 1994; Ostrom 1999a).

The IAD framework provides a meta-theoretical toolbox, created to facilitate organising diagnostic prescriptive and analytical capabilities in order to make statements about the performance of institutions and the most important structural variables of institutional arrangements. It predominantly focuses on the question how various institutions directly or indirectly determine human activities by providing different incentives and disincentives.[3]

This research project uses the IAD framework in order to guide the analysis of which rules and regulations (as defined by the state, local communities and an NGO, respectively) constrain who can use forest resources in what way. Thereby, the IAD is considered to be particularly applicable for the following reasons: firstly, it provides a logical and appropriate framework on which the thesis structure can be built. Both theoretical as well as empirical chapters follow in their design the concept provided by the IAD framework. Secondly, the

[3] In the following, the notion of incentives will be used as "factors that motivate human behaviour" (GTZ 2004), whereas disincentives are understood as "factors that deter people from doing something" (GTZ 2004). Both can be material (e.g. capital, goods) as well as non-material (e.g. reputation, appreciation).

IAD framework is sufficiently broad to be consistent with a wide range of theories, and is therefore particularly applicable for complex issues treated by different disciplines in different ways, thus interdisciplinary research (Ostrom, Gardener et al. 1994: 26-28; Vasenda 2001: 8; Ostrom 2005: Ch.1,9). Thirdly, the IAD framework is not merely designed to assess the current state of a system, but to include the 'change' factor. Hence, it can be applied to assess and analyse questions of institutional change. Fourthly, the IAD framework provides a useful approach for organising and thoroughly analysing heterogeneities among a specific community. Both, institutional change as well as heterogeneity, are highly relevant issues in regard to the research topic.

In the early 1990s, the IAD framework was mainly used in the study of common-pool resources, whereas in recent years, its field of application has widened to other questions of institutional analysis (see for instance Robert Christensen (2004), who applied IAD in order to theoretically investigate policy potency of non-governmental organisations). In the realm of forest resources, Sandra Vasenda (2001), for instance, applied the IAD framework when tackling institutional change in the Russian forest sector; Evelyn Lwanga Namubiru (2002) used it to elucidate conflicts arising from multiple forestland use in Uganda.

The foremost part of the IAD framework is the identification of a conceptual unit, the so-called action arena, in order to position a clearly defined research frame, hence to narrow down what has to be regarded as relevant and non-relevant for the research.

2.1.1 The Playing Field: Action Arena

An action arena is understood as a "social space where individuals interact, exchange goods and services, solve problems, dominate one another, or fight" (Ostrom 1999a: 42). In the IAD framework, this theoretical construct is employed to analyse, explain and predict human behaviour within a broad area of different institutional arrangements (Ostrom, Gardener et al. 1994). Thereby, the action arena is not bound to a limited structural or geographical size, it may exist within households, village communities, local, regional, national and international councils, as well as in firms and markets (Ostrom 2005: Ch.1,16). One action arena does not debar another, and one research topic may regard multiple action arenas at different levels at the same time. The action arena contains interacting individuals with decision-making competence, i.e., the 'actors'. Their decisions (affected by exogenous variables) entail activities that produce the action arenas' outcomes. In this way, the action arena can be understood as the "decision environment of the actors" (Ebenhöh 2005: 10).

The outcomes of the action arena again may provide a feedback on the action arena and the variables and might change both over time. When interactions between actors produce outcomes which tend to be positive and/or satisfactory for those actors involved in their production (evaluative criteria), the actors might increase their commitment to maintain the present state. When actors perceive the produced outcomes to be negative and/or unsatisfactory, it is likely that they try either to amend their strategy in the action arena or to change the exogenous variables themselves. First, I elaborate on the actors and their interaction.

2.1.2 Actors and Decision-making within the Action Arena

In the IAD framework, 'actor' is applied for individuals, social groups, or organisational bodies, which possess a 'stake' in one particular issue (e.g. use of a certain forest resource). Actors are capable to 'act otherwise', as they have the ability to intervene - or refrain from intervening - in the world. Thereby, they influence a specific state of affairs or a process (Giddens 1984: 14). In case of resource management, actors are understood as:

> "*Parties who are affected directly or indirectly by management decisions, in a positive or negative way. It includes those who can influence those decisions, as well as those who would like to influence decisions.*" (Ingles, Musch et al. 1999)

Therefore, the notion of actors within an action arena is particularly built upon their potential capacity to make decisions and to negotiate the outcome of the action arena. But what are the criteria for actors' behaviour?

The theoretical debate on new institutionalism basically focuses on "mechanisms by which individual decisions are aggregated and combined into collective decisions" (Dahl 1961: 770), whereas Rational Choice Theory (RCT) centres on the "analysis of the choices made by rational actors under conditions of interdependence" (Immergut 1998: 12-14). Both theoretical approaches, however, can not fully elucidate actors' behaviour, mainly arising from their inability to provide explanations for fundamental social phenomena such as altruism, trust and the existence and binding character of norms and obligations. This issue has proved to be of central importance, as in reality, actors' motives differ significantly and are not necessarily based on collective action or rationality. Being aligned with that criticism, in the IAD framework, actor's behaviour is considered to be rather guided by the quest for

utility, which is not necessarily palpable as it includes aspects as power, convenience, reputation, and appropriation by others. Actors' striving for utility does not occur under conditions of independence but is constrained by their environment composed of social, institutional, historical, religious, ideological as well as psychological factors (GTZ 2004: 9). Accordingly, the IAD framework delineates actors to act merely in bounded rationality rather than in absolute, 'full' rationality. Thereby, issue of information is conceived as a critical factor which limits actor's rationality. As information is principally incomplete and information-processing capabilities are limited, not all information is available for every actor at any time and the actors have to act with imperfect information (Johnson 1998: 5,6). For instance, actors may have different types and amount of information about themselves, and costs and benefits that accrue to them from actions and outcomes they collectively engage in (Schlager and Blomquist 1998: 3). This gains particular meaning in action arenas in which actor's information is generated, exchanged and processed in highly dissimilar milieus and manners.

The idea of inequality of actors is fundamental to the action arena perspective. There are significant differences not only in information availability and processing capabilities but in preferences, selection criteria, and resources of the actors. Nevertheless actors do not act and interact within an empty space, but in a certain social structure, which is in IAD terminology labelled action situation.

2.1.3 Social Space in which Actors Interact: The Action Situation

Whenever two or more actors are faced with a set of potential actions that together generate outcomes, the actors are said to be 'in' an action situation (Ostrom 2005: Ch.2 P.1). Archetypical action situations include: buyers and sellers exchanging products, politicians negotiating an agreement, and forest users extracting forest resources.

The structure of the action situation can be depicted as follows: actors make choices in the context of positions that are held by other actors. Each actor in this position has an array of potential actions available that he may take within a specific period of time. Some actors have only limited control over the actions they can take as their actions depend on the agreement of other actors. All actors have certain - often diverse - levels of information about their own actions and actions of other actors, about perceived benefits and costs of action and about how actions are linked to produce certain outcomes, which are in this study the use, management and conservation of forest resources (Moran, Ostrom et al. 1998: 6).

In order to analyse the action situation, its structure is classified using seven clusters of variables, namely:

- Boundary: determine which actors belong to a certain action situation. Thereby, they influence number of involved actors, their characteristics and resources.
- Positions: ascertain the set of positions within an action situation. Determine which and how many actors hold a given position.
- Scope (Potential outcomes): determine which outcomes can be influenced by the actors and which outcomes are intermediate and which are final results.
- Aggregation (Action-outcome linkages): earmark the transformation functions which are used to interconnect sets of actions to final outcomes.
- Authority: concerns the control that actors exercise, hence determines which actions are ascribed to certain positions, and/or how much control each actor holds in a position.
- Information: define which information is generated and available for each actor.
- Payoff: the costs and benefits assigned to action and outcomes. Influence benefits and costs, which are linked with certain combinations of activities and outcomes. They are positive and negative incentives to realise certain activities.

This classification, developed by Ostrom, Gardener et al. (1994), does not entail that the variables are not associated with each other, on the contrary, variables affect each other, if one variable alters, also others do.

Similar to aforementioned characteristics of the actors, characteristics of the action situation provides potential for heterogeneity, as actors may differ in relation to types of actions that they are required, permitted, or forbidden to take in a certain action situation (Schlager and Blomquist 1998: 3). For example, actors may differ significantly in the resources that they have to support their actions in the action situation (Schlager and Blomquist 1998: 3). In that way, the differences designate pattern of interaction between the various actors which finally determine the outcome, in our case, the way how humans use, manage or conserve the forest resources.

After describing the conceptual unit action arena and its subunits, I would now like to zoom out and to elaborate on the variables which the IAD framework identified to influence the action arena.

2.1.4 What Comes from Outside? Exogenous Variables Influencing the Action Arena

The action arena is influenced by a great many of exogenous variables which the IAD framework classifies into the three clusters: attributes of the natural resource, attributes of the community, and institutions. By principle, the clusters are interrelated and impact on each other.

Attributes of the natural resource may include the ease in excluding 'outsiders' from resource use, the subtractability of consumption, and availability of storage in the system. In that way, they affect boundary rules, authority rules as well as the monitoring and enforcement of arrangements and therefore influence how actors behave within the action arena (Ostrom, Gardener et al. 1994).

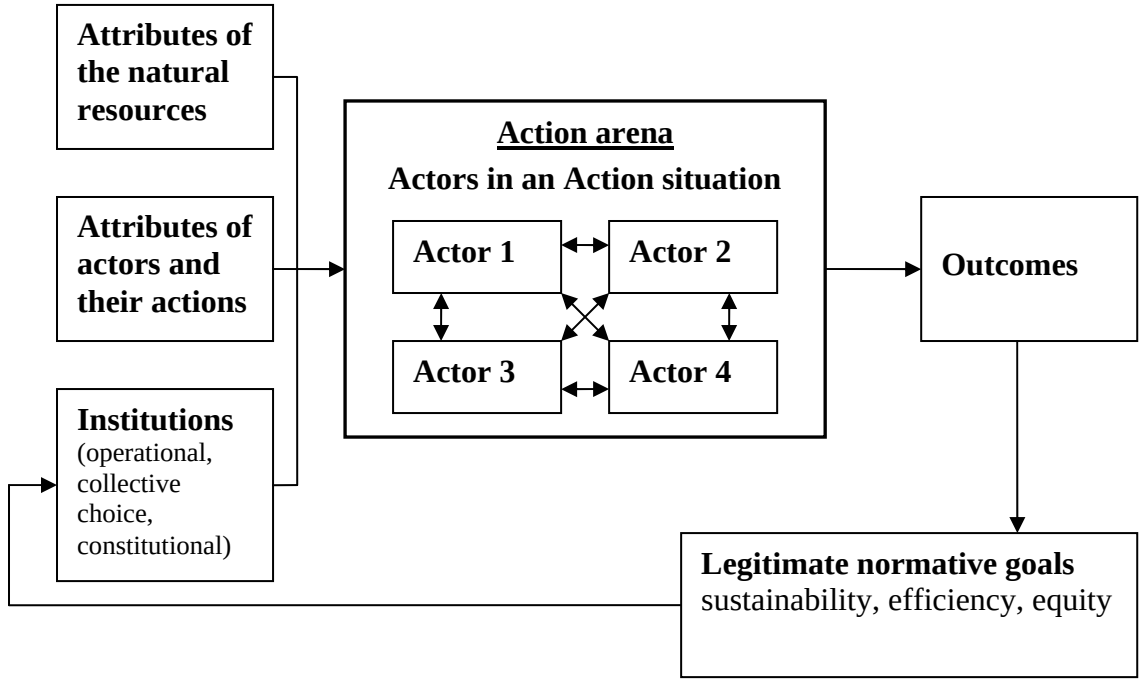
Attributes of the community comprise "generally accepted norms of behavior, the level of common understanding about action arenas, the extent to which the preferences are homogeneous, and distribution of resources among members" (Ostrom, Gardener et al. 1994: 45). Ostrom (1999a) bundles these attributes under the idiom 'culture', which appears to be inappropriate as culture is just one attribute of the community, among historical, social, political and economic factors as well as patterns of flexibility and change. Concurrently, in case of human-forest interaction, important variables are for example size and homogeneity of the forest users, as well as their dependency on the forest resources.

The third group of exogenous variables which influences the action arena are institutions, the 'rules of the game' (see Chapter 2.2.3.2**.** for an extensive discussion on the term institutions). Each group of individuals creates own institutions, or is exposed to institutions created by others, which may also be contradictory. It is important to be aware that individuals will not always obey institutions and that their 'results' - unlike in the case of mathematical or biological rules - are therefore not predictable.

Kiser and Ostrom (1982) have elaborated the idea of 'three worlds of action'. Every institutional arrangement, they argue, is shaped by the three levels, or layers of institutions which form a hierarchy: operational, collective choice and constitutional. Each level is arranged to independently serve different functions, but nevertheless, higher levels affect lower ones by dictating their boundaries of actions. Operational institutions regulate activities which are occurring on a day-to-day basis, hence actions of individuals relating to each other

or - in case of this study - to the physical world. Accordingly, the operational level includes the rules and regulations that say which individual has which right to use which coffee forest resource in what way to what extent at what time. Collective choice institutions regulate how decisions are made, hence the results of interactions between actors, and who has the right to establish operational rules. In the case of this study, this basically concerns negotiations between and within local communities, the state and NGO bodies. Finally, constitutional institutions provide political and legal arrangements which 'officially' shape rules and laws within which actors operate, e.g., legal property rights on forest land. In that manner, "constitutional decisions establish institutional arrangements and their enforcement for collective choice" (Kiser and Ostrom 1982: 209). In regard to change, the notion is important, that the higher a level, the more expensive (in terms of time, effort, and capital) is its change; hence it is relatively easier to change the rules and regulations on the operational level than on the collective choice level, or even the constitutional one (Ostrom 1990: 52; Ostrom 1999b: 4; Vasenda 2001: 5; GTZ 2004: 30). In order to provide clarification, the units depicted above of the conceptual framework and their interdependencies will be visibly portrayed in Figure 5.

Figure 5: The conceptual core for institutional analysis



own presentation based on Ostrom, Gardener et al. (1994: 37)

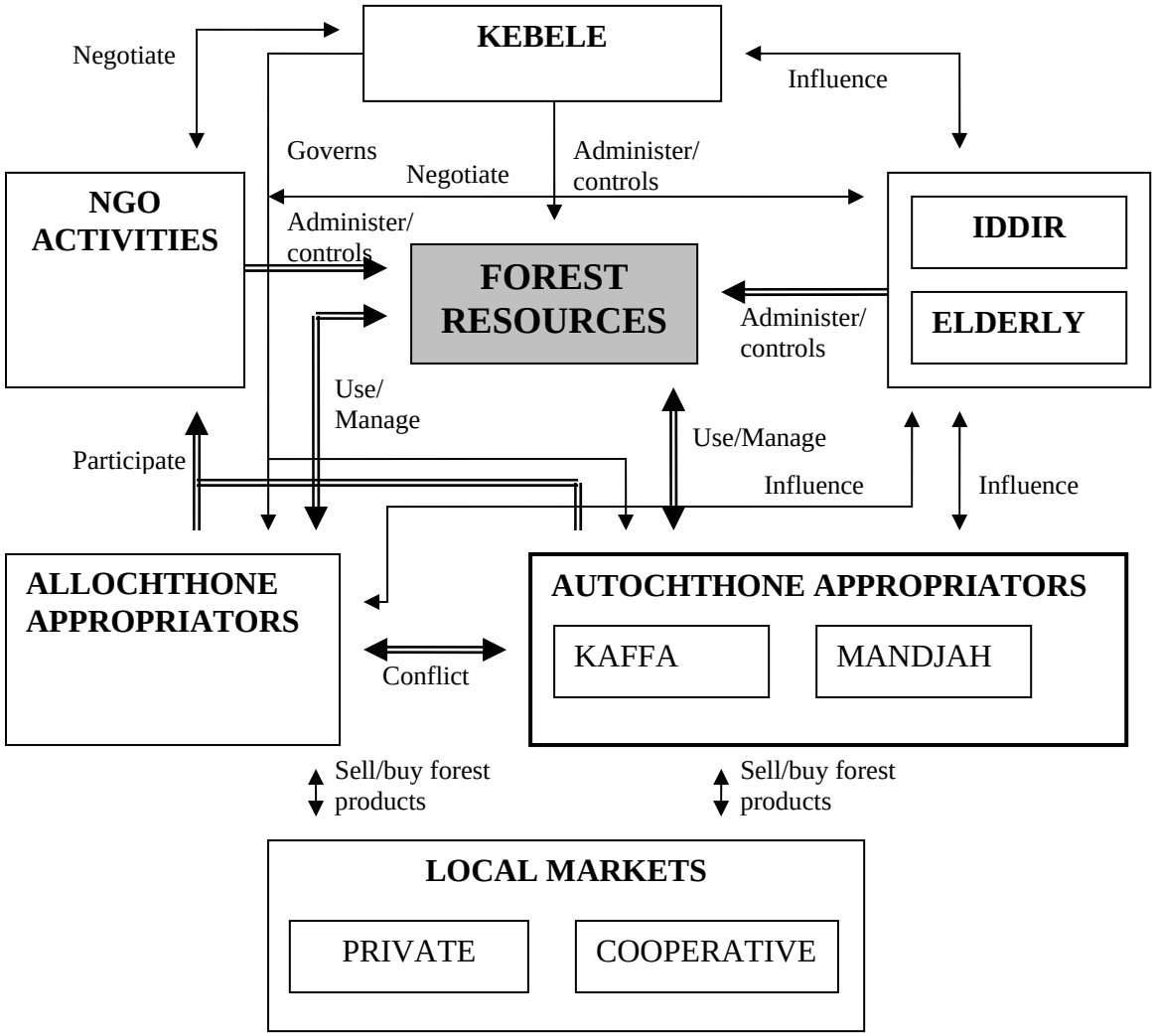
2.1.5 How is the IAD Framework Applied in this Work?

The IAD framework proves the conceptual and structural basis of the thesis. The starting point is the identification of the conceptual core unit, the action arena with its actors.

Although ‘local level’ and ‘upper’ levels (regional, national, international) have manifold significant coherencies and mutually influence each other, the structural focal point of this thesis is located at the ‘local level’. This is identified as the most imperative stage at which decisions and concrete actions related to the use, management and conservation of forest resources are being conducted or averted in practice, and hence how humans directly affect forest conditions. Accordingly, the action arena with which this thesis is primarily concerned is positioned on the local level, and the notion of ‘local action arena’ will be applied. As this thesis comprehends a comparative study of two diverse local level situations, accordingly two local action arenas (“Koma Forest” and “Kankicho Forest”) will be researched. The actors within the local action arena will include all stakeholders directly or indirectly involved in or affected by decisions concerning forest use, management and conservation, irrespective of their organisational or hierarchical background.

When applying the IAD framework, the starting point is the preparation of a tentative action arena by identifying all actors that - as a research hypothesis - are thought to be of relevance in the particular arena (see the example “Koma Forest” in Figure 6). The thickly framed box ‘Autochthone Appropriators’ displays the identified ‘core actor’ in this concept. Furthermore, expected interactions between the actors, hence the action situation, have to be brought in. In Figure 6, actors, pictured by boxes, are circled around the forest resources and are linked by arrows which depict the action situation. Double-lined arrows present the interactions which are tentatively perceived to be of particular relevance in the concerning action arena, hence deserve most attention in this research.

Figure 6: Tentative action arena “Koma Forest”



This rather cluttered diagram is expected to contain all actors which have a direct or indirect impact on forest resource management in the local action arena “Koma Forest”, and - in a simplified way - provides characteristics of their expected interrelations. The arrangement of this preliminary conceptual unit enables the researcher to organise work, to sift through the relevant research subjects, and - by analysing the situation within the action arena - to systematically throw light on each of the actors and the action situation in which they are situated. However, this figure has to be seen as the starting point of the research, not the result.

Secondly, after defining a tentative action arena, focus is zoomed out towards the exogenous variables that are identified in the IAD framework as influencing the action arena. These are the three variables natural resources (coffee forest resources in this case), humans (the resource appropriators, i.e., people who directly use and manage coffee forest resources) and institutions (the rules and regulations that determine the related decisions and activities of

these people). These variables depict the three research units on which the theoretical and empirical structure of the thesis is configured.

2.2 Theoretical Reflection on the Research Units: Forest Resources, Forest Resource Appropriators and the 'Connecting' Rules and Regulations

This thesis is embedded within policy-oriented science, which is - in contrast to pure basic science - initiated by policy-driven demands. The explicit starting point is the necessity to identify variables conducive to devising institutional change in order to fulfil the legitimate normative goals which are committed to sustainable, efficient, and equitable coffee forest handling (see Chapter 1.2**.**). In that sense, this research is objective- and solution-oriented by principle and hence intends to conclude with concrete policy contributions, rather than to break new theoretical ground.

The thematic nucleus is the thesis is the human-forest relationship. Humans can use, destroy as well as conserve forests for entirely different purposes, both consumptive as well as non-consumptive. Prominent examples are extraction of fuelwood, timber or "Non-Timber Forest Products" (NTFPs), land reclamation, biodiversity or watershed protection, sequestration of carbon, as well as cultural, religious, aesthetic, recreational or historic values. A variety of concerned agents within diverse sceneries act with contrasting - often conflicting - priorities, different time horizons and historical backgrounds. This multi-dimensional and inter-disciplinary complexity makes it indispensable not to elaborate solely on a single theoretical background, but on a broad assortment of theoretical debates from different academic disciplines.

Accordingly, this study picks up elements from different discussions and approaches in different academic disciplines. Investigating the rules and regulations that bind and separate people who use and manage forest resources not only as individuals but as members of a group, e.g., bound by kindredship, common history or ethnicity, makes particular allowance for sociological perspectives. The thematic and methodological focus on in-depth local level case study examination with cultural relativity requires inputs from socio-cultural anthropology. In addition, the description and analysis of the legal and organisational system initiated by the Ethiopian state in order to govern over coffee forest use, management and conservation needs to consider views from political science. This 'amalgamation' of reflections from different schools of thought does justice to the policy-oriented approach and the imbeddedness within the interdisciplinary CoCE research project.

Human-forest relationship is determined by various factors, both deriving from ecological as well as human constraints. In this thesis, stipulated by research objectives and research questions, focus is made upon institutions influencing human behaviour concerning use, management and conservation of two different coffee forests in Ethiopia. As alluded to in the preceding chapter, the following theoretical discussion will be structured into the three groups: attributes of the natural resource, attributes of the community and institutions, at which - in regard to the research objective - the latter earns foremost importance. Hereby, the discussion intends to exceed a pure discussion of 'what is an institution', but to enter the debate of how institutions provide determinants of human-nature interaction in general, and use, management and conservation of coffee forests in Ethiopia in particular. At the end of this chapter, the discussion exceeds the notion of institutions to be 'given' and 'stable', and focuses on institutional dynamics. Thereby, institutional change is preassumed to be an instrument to change the action arenas' outcome by providing stronger incentives for more sustainable, efficient, and equitable coffee forest handling, as well as to reduce incentives which lead to an undesirable outcome.

2.2.1 Nature: Attributes of the Forest Resource

Humans depend on natural resources, but not the other way around. This simplistic but fundamental notion is ubiquitous, valid globally and over time. Examples range from biological circumstances as human dependence on air to breathe, water to drink, food to eat etc., to income-driven harvesting of coffee from a forest in Ethiopia up to more indirect and multifaceted human dependencies, for instance use of computers in Europe which depend on semiconductors manufactured in Taiwan, that again depend on silicium mined in D.R. Congo. This thesis' subject area is the analysis of one particular component within this broad spectrum, namely human dependency on forest resources. Forest resources need land to stand on, which is a resource in itself. Therefore, before we start to discuss attributes of the forest resource, we have to take a brief look at the attributes of land resources. In this context, the critical attribute of land on which forest resources are located is suitability for other use, e.g. for crop production. Besides soil quality, the question of accessibility plays a critical role particularly in case of montane areas such as South and South-western Ethiopia. In that sense, whether forest resources are located on very steep hillsides or river banks, or on well-accessible plains may significantly impact on human-forest interaction, as forest land may be virtually inaccessible for ploughing by oxen or for constructing infrastructure, and hence less likely to be deforested (Marena Project n.d.a).

In order to operate with the terms forests and resources, it first needs to be more intensively discussed what the terms refer to in this context. Forest resources are not forests. The distinction between forest as a resource and forests per se is essential, as a forest is not necessarily a resource because it exists. Abundance in terms of forests does not necessarily imply enormous forest resources, and vice versa; hence there is no one-to-one correspondence between the size of a forest and amount of forest resources. Forests only become resources when they - at least potentially - serve human needs (Carlsson, Olsson et al. 2000: 605). Nevertheless, as different forests provide different resources which meet different human needs, a universal definition of forest resource is difficult to compile. At all events, various attempts of definition have been made, e.g. denote forest resources as "resources and values associated with forest and range including, without limitation, timber, water, wildlife, fisheries, recreation, botanical forest products, forage and biological diversity"[4]. However, this definition is unclear as it simply equates forest resources with the products and services that humans use from it. Forest resources stand for their own, may provide forest products and/or services when humans invest time, labour and/or capital input to extract them from forest resources. Products (in the following used interchangeably with the term 'goods') are visible and transportable, hence they can be consumed in a different place that have been produced. Moreover, forest resources provide forest services. Services tend to be less tangible, such as aesthetic and cultural value of forests, its importance as a flora and fauna habitat, and regulation functions (e.g. watershed, pollution sinks). Forest services cannot be transported or stored and their monetary value is difficult to evaluate and to fix. Nevertheless, differentiation between products and services is not always that apparent, as overlappings exist between the two categories (GTZ 2004: 13).

In this thesis, the definition of forest resources needs a detailed specification. The term is detached from the universal dichotomy of 'forest products' and 'forest services' and narrowed down to the concrete research issue, i.e., local people using and managing the Ethiopian coffee forests. Accordingly, the understanding of forest resources as extractable resources of biological origin derived from forests that are (at least potentially) of value to the local people" is applied.

After discussing and defining the contextual understating of 'forest resources', attributes of the forest resources that have a tendency to impact on the local action arena and its outcome are debated.

[4] Government of British Columbia. 1998. *Forests Practices Code of British Columbia Act Chapter 159, Section 1*. Government of BC, Victoria, B.C.

2.2.1.1 Questions of Regeneration and Multiple Use

When the extraction of goods from a renewable resource is investigated, regeneration rates have to be considered. In contrast to non-renewable resources such as minerals, forest resources have potential to regenerate and therefore potentially provide a never ending resource. Regeneration rates of primary high forests are much slower than those of plantations (this is of particular importance when comparing Ethiopian montane high forests with eucalyptus plantations which are in Ethiopia commonly used for timber provision). Regeneration rates of different forest resources within one forest differ significantly and range, for example, from very slow in the case of timber to relatively fast in the case of grass. Hence, to ensure sustainability, different forest resources require different management systems aligned with their regeneration rates (Lele 2002: 288).

Another forest resource characteristic which is important in this regard is the degree of multiple utilisation within and across appropriator groups.[5] Most literature on natural resource use merely focuses on single use of resources, e.g. pasture land for grazing, forest for timber, water for irrigation and so on. In reality, however, most resources are used simultaneously for multiple purposes. In the Ethiopian coffee forests, for instance, trees may be used at the same time to hang beehives, to provide shade for coffee plants as well as to supply fruits and firewood. Multiple utilisation has high potential to initiate conflict among forest users, as the use of one specific resource may run counter to another, e.g. when trees used to hang beehives are cut for timber (Leach, Mearns et al. 1997). For any case, use patterns are not fixed, and multiplexity is likely to change with human abilities and needs. Some use patterns may emerge (e.g. forests as an attraction for tourists) whereas others may wither (e.g. use of 'wild' plants for medicinal purpose) (Lele 2002: 288,89). Multiplexity is often linked up with the physical proximity between appropriator and resource, as nearness is likely not only to go along with higher human dependency on forest resources and better knowledge of particular use characteristics, but also tends to increase multiplexity of use.

2.2.1.2 Substractability, Exclusion and Common-Pool Resources

Beside regeneration rate and use multiplexity, in the following, two additional resource characteristics which took centre stage in literature on human use of forest resources are delineated, namely subtractability and exclusion. Use of forest resources is dominantly based

[5] Following Plott & Meyer (Plott and Meyer 1975), subsequently, the term appropriator will be employed to refer to users who extract and/or use goods or services from a forest resource.

on repeated, rather than single, decisions and includes utilisation of a great many of diverse forest goods, both timber and non-timber. These goods have different attributes regarding the subtractability of benefits consumed by one individual and the difficulty of excluding others from utilising them (Ostrom, Gardener et al. 1994: 6,7). By using just these elementary characteristics, four different types of goods can be classified as in Figure 7.

Figure 7: Classification of goods concerning their use characteristics

		Substractability	
		Low	High
Exclusion	Difficult	Public Goods	Common-Pool Resources
	Easy	Toll Goods	Private Goods

(Ostrom and Ostrom 1977)

Although these four categories are simplistic and do not cover numerous mutual overlappings and significant variations, they are useful in providing a functional classification of forest resource utilisation schemes.

Potentially, all four categories of goods can be found in Ethiopia's coffee forests. Nonetheless, theoretical focus is drawn to the one whose characteristics - based on underlying presumptions - fits most to the apparent state of affairs of forest resource utilisation 'on the ground', namely the group of Common-Pool Resources (CPRs).

CPRs relate to resources that are collectively shared and whose property rights rest with a number of users. Wade (1994: 183) characterises CPRs as a sub-set of public goods, as all public goods have the nature that exclusion is difficult and many appropriators can use it at the same time. The problem of overextraction of resource units from a resource system shared with other users has become a topic of considerable research in the whole spectrum of socio-economic science, especially in regard to institutions and development, and has been widely analysed within the theoretical framework of new institutionalism. In order to step into the discussion on CPRs, the theoretical background needs to be discussed briefly.

Three theoretical models have had fundamental influence on academic discussion on CPRs, namely H. Scott Gordon's and Garrett Hardin's articles elaborating on 'property' and 'Tragedy of the commons' respectively (1954; 1968), Mancur Olson's theory of collective action (1965), and the 'Prisoner's Dilemma' paradox, first formalized, defined and publicised by the mathematician Albert W. Tucker.

Back in the 1950s, H. Scott Gordon conceived a theoretical approach to predict suboptimal CPR use and natural resource destruction by highlighting the dictum of "everybody's property is nobody's property" and that "wealth that is free for all is valued by no one because he who is foolhardy enough to wait for its proper time of use will only find that it has been taken by another." (Gordon 1954: 124). This rather pessimistic approach did not gain greater attention until Garrett Hardin's article in Science, "The Tragedy of the Commons", that became a symbol of environmental degradation in which more and more individuals use a limited natural resource in common.

In 1965, Olsen stated that "unless the number of individuals is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, rational self-interested individuals will not act to achieve their common or group interests." (Olson 1965: 2). His theory is often depicted to be pessimistic regarding the question whether groups voluntarily provide collective benefits, but actually leaves much tolerance on the characteristics ("special devise") of groups in which individuals action provides collective benefit (Ostrom 1990: 6).

The 'Prisoner's Dilemma' is the classic example of a 'non-zero sum game' and has been applied in a number of different disciplines, such as economics, political science, evolutionary biology, and of course game theory. It gives a picture of a decision situation that illustrates the benefits of collective action but also the limitations to gain such benefits. Thereby, the individual payoffs are structured in that way that it is individually beneficial not to cooperate with each other even though collaboration by all actors would entail acceptable benefits. In that way, actors consider that they need to defect due to vagueness about other actors actions.

Even though these theoretical models contain crucial limitations regarding their application in practice (e.g. 'prisoner's dilemma' concept implies precondition that all actors possess complete information), they can provide frameworks which can be harnessed to arrange ideas and research concepts related to CPRs.

In the following, building upon this theoretical background, discussion on use of forest resources within CPR systems, basically emanating from Figure 7, is continued. Figure 7 displays that it is difficult (and/or costly) to exclude appropriators from a CPR. This can be attributed to the resource's physical characteristics (e.g. difficulty to guard thousands of hectares of montane coffee forest) as well as to the given institutional setting, for example the laws and customs which protect public or communal forest use rights. Substractability, which can also be understood as rivalry in consumption, implies that resources are finite and

subtraction of one appropriator reduces the benefit available for others. High substractability is the second main attribute of CPRs (Ostrom and Ostrom 1977).

These characteristics may create numerous challenging problems when focusing on settings where supply of a resource is limited in relation to its demand. If exclusion is difficult, and rivalry in consumption is high, many appropriators have access and the opportunity to use a CPR. Incentives to gain direct benefit prevail over the burden of future costs, consequently, the situation promotes excessive (over-)utilisation of the resource. In this situation, individuals' rationality produces a result which is not prudent from the groups' perspective. This is commonly known as a CPR dilemma.

But not all CPRs are necessarily dilemmas. For example, some goods of a forest area may be abound but appropriation relatively low. Ostrom, Gardener et al. (1994: 15,16) formulated two conditions to clarify which CPRs are 'dilemmas' and which are 'situations'. Thereby, CPR dilemmas are defined as resources in which "strategies of the appropriators lead to suboptimal outcomes from the perspective of the appropriators" and "at least one set of coordinated strategies […] are more efficient than current decisions and are institutionally feasible".

If we apply this theoretical background to utilisation of resources from within the contemplated forests in Ethiopia, we expect to discover both, CPR situations and CPR dilemmas in which the number of goods appropriated from the CPR exceeds the natural regeneration rate. Hereby, with regard to the research objective, the questions arises how to overcome these CPR dilemmas. Ways out of the predicament require change in resource appropriation and/or coordinated provision strategies. Both may be accomplished by structures adopted by appropriators regarding how much, when, where, and which resource units are extracted by whom and which technology is applied.

2.2.2 People: Attributes of the Community

After having theoretically discussed attributes of the nature which is used by humans, in the following, attributes of the community which use nature come to the fore. Due to complexity of human life, there are numerous interrelated attributes which determine human behaviour in general and forest resource utilisation in particular. As it is not intended to provide a stock staking of all theoretical literature concerned with aspects of human behaviour, the following theoretical discussion concentrates merely on the most relevant features which are presumed to have high influence on community members' motivation to cooperate among each other, obey rules and use, manage and conserve forest resources in a 'positive' way (GTZ 2004: 24).

One central point in this regard are the attributes of the appropriators, the group of people who directly extract goods or services from the forest.

2.2.2.1 Human Variegation: Heterogeneity of the Appropriators

In the past, groups of resource appropriators have been understood as something homogeneous. Typically, it has been considered as a small group of similarly endowed, relatively homogeneous households that share the same characteristics. This similarity has been assumed to reduce hierarchical interests and internal conflicts and to promote cooperative solutions, hence that appropriators act similarly and speak 'with one voice'. When using the IAD terminology, they were thought to represent merely a single actor.

However, empirical information has shown that considering appropriators as a homogeneous social group overlooks important social dynamics which may lead to different outcomes (Schlager and Blomquist 1998). Therefore, it is nowadays commonly accepted to perceive appropriators as a heterogeneous entity, with axes of differentiation within each group, and multitude differences which criss-cross groups and form sub-groups. Main differences among appropriators occur along dividing lines such as class, origin, age, caste, religion, ethnicity, and gender. Dispartment can be undertaken in two ways, 'horizontal' and 'vertical differentiation' (Lele 2002: 290). The former refers to a group where "barriers to cooperation may exist but there is no hierarchy of power", which may cause "efficiency losses, as groups may refuse to cooperate even in win-win situations" (ibid.). In 'vertical differentiation', there is "unequal distribution of power […] in addition to social distance" (Lele 2002), which "may or may not result in lack of collective action, but it clearly results in less-than-equitable outcomes" (Lele 2002). In literature on CPRs, heterogeneity has been detected as a substantial barrier to solving CPR dilemmas, as it positions appropriators differently in their access and use of CPRs (ibid.2).

As a matter of fact, composition of people using resources from Ethiopian coffee forests is highly diverse in terms of origin, ethnicity, culture and religion. For example, a specific family or political elite may hold privileged positions regarding resource endowments. A particular ethnic clan may hold relatively more power, and a village elder may have a final say in who is empowered to use a particular forest resource. Consequently, this thesis also addresses the question what effects heterogeneity among resource users has on the characteristics, capability and robustness of resource management and institutions concerned.

2.2.2.2 Human Quantity: Size of the Appropriators

Another characteristic of the appropriators which literature indicates to be a critical factor determining human-forest interaction is the size of the group of appropriators. Olson (1965: 62) first elaborated on the argument that in the case of natural resource management, small groups of appropriators are preferable to larger ones. He agued that the larger appropriator groups are, the smaller "each member […] is […] in relation to the total that his actions will not matter much one way or another", and that "in any large group everyone cannot possibly know everyone else […] so a person will ordinarily not be affected socially if he fails to make sacrifices on behalf of this group's goals". Ostrom, Burger, et al. (1999c) devised more supplementary explanations for this correlation. First, cost for devising institutions increases with larger groups of appropriators. Second, larger groups enhance ethnic, cultural, and linguistic diversity, hence reduce homogeneity and thereby complicate shared understanding about resources and their management. Third, larger appropriator groups have more heterogeneous concerns, perceptions and assets. Nives Dolak (2002: 2) elucidates this correlation impressively when comparing difficulties in devissing arrangements for forest conservation as global sinks for carbon dioxide on a worldwide dimension in comparison with a local level scale.

The size of the resource appropriator's group is of specific importance if we analyse traditional forest management schemes, which is based on relatively small sized groups in which appropriators predominantly know each other and can communicate directly, in comparison to larger, often governmentally initiated forest related approaches. Another issue related to the size of the appropriators group is concerned with the groups' multi-functionality. Thereby, it is argued that small groups increase likelihood of the group to be multi-functional (Vermillion and Garcés-Restrepo 1999: 33). However, heterogeneity and size of the appropriator's group are only two attributes that are likely to improve chances of sustainable forest resource management.

Evidently, also population growth, or - to put it more precisely - a positive increase in the size of the group of forest resource appropriators is a critical feature of human-forest interaction. However, although identified to be central, this subject matter exceeds the scope of this work.

In Chapter 2.2.2.3, two more characteristics which loom large in this connecting are presented briefly.

2.2.2.3 Attributes that Link Appropriators to Forest Resources and Institutions

Research in the field of Common-Pool Resources gave convincing examples of which other appropriator-centred conditions influence resource management of CPRs. Stern (2002) listed two conditions which appropriators should fulfil in order to improve chances of sustainable common pool management implementation:

- The resource must be important to the appropriators.
- Appropriators must have the autonomy to change institutions.

The first condition refers directly to the relationship between appropriators and natural resources. The question of interest, hence meaningfulness of the natural (forest) resources for appropriators - or to put it the other way around - the dependency of the appropriators on these resources, is of particular concern in the context of use, management and conservation of Ethiopian coffee forests, and will therefore gain considerable amount of space in the empirical chapters.

The second condition opens an entirely new discussion. It concerns the relationship between the appropriators and the institutions which determine their actions and the possibility to change these institutions (see Chapter 2.2.3.6 for a detailed discussion on institutional change).

In Chapter 2.2.1 and 2.2.1.1, a variety of characteristics of the forest resources and from those of the appropriators are addressed that provide incentives or disincentives for actors' decisions and actions. Questions on human behaviour concerning use, management and conservation of forest resources directly lead us to the third cluster of exogenous variables influencing the action arena which forms also the analytical heart of this thesis: the characteristics of institutions that determine human-forest interaction.

2.2.3 Institutions: The Critical Variable that Structure Relations of Human and Forest

Generally, institutions represent the critical module in relations of human and forest as they can provide determinations and regulations defining human access to forest resources by saying who of a group has which particular right to use which forest resource to what extent, to denote manners in which way goods and services are to (or not to) be used, as well as conservation measures that are to be accomplished. In that way, institutions are not neutral. They may oppose individual's attempts for short-term benefits and can exclude or include individuals or groups from access to resources (Carswell, de Haan et al. 1999). Hence,

analysing institutions needs to address matters of imbalances between actors and conflicts arising out of it, especially when resources are central to appropriators' livelihoods (Watson 2001). Accordingly, institutions demand explicit enforcement, which entails that beyond their pure existence, they need to be complemented by harmonising implementation and enforcement instruments which foresee consequences in case of contravention (GTZ 2004: 28).

This research commences with the underlying postulate that Ethiopian coffee forest resources face a 'dilemma' in which they are subject to rapid depletion and deforestation[6], and that from a socio-economic and ecological point of view more sustainable, efficient, and equitable coffee forest handling is desirable. In other words, the outcome of the local action arena does not correspond with the situation preassigned as optimal. Hence, we have to identify which variables contribute to the unwanted outcome, whether attributes of the forest resource, of the community or the institutions, or - more probably - a combination of them hold responsibility.

This research is solution-oriented. In that understanding, after naming of 'how do things go wrong', the issue of 'how can things be improved' has to be tackled. Applying the IAD framework, a number of exogenous variables influence the action arena. Change of variables characteristics will generate different conditions which entail modification of the action arena's outcomes. Hence change of these variables presents a potent tool in order to 'improve things', namely to move towards the ideal of more sustainable, efficient, and equitable coffee forest handling in Ethiopia.

But which variables provide potential to be changed? Putting the IAD systematisation in the forefront, attributes of the forest resources, the actors and the institutions are the three clusters which provide potential for change. Above discussed attributes of the resources are naturally given, and fixed by principle. In the past, the attributes of the community based on its historical, cultural, social, and economic background were identified to be main determinants for loss of primary forests in the so-called developing countries, and therefore entry points for change. Focus was primarily drawn to demographic (population growth) together with economic (increased market pressure) factors. In this connection, research repeatedly concluded by labelling humans activities merely as a threat for forests, hence in order to avoid imminent loss of forests, an ever-growing population with ever-growing demands needs to be prevented from (over)using forest resources. In practice, this argumentation bolstered the "ecology first" perspective, offering justification for exclusionary forest conservation

[6] Due to FAO definition, the term degradation is used for depletion of forest flora in which the forest canopy is removed for not more than 90 percent; deforestation stands for activities that go beyond (FAO 2002). In practice, however, forest degradation and deforestation are interviewed trends.

approaches, often associated with nationalisation of forestland. Nevertheless, when it came to practical implementation, these approaches have proved to be not a promising base for maintaining forest resources (Poteete and Ostrom 2002: 2).

Nowadays, the assumption that demographic and economic factors are the paramount driving forces for forest destruction has been relativised, decisively by works of Arun Agrawal (Agrawal 1995; Agrawal and Yadama 1997). Research revealed that despite population growth and increasing market pressure, some communities are able to keep their forest resources in a sustainable way, while others - in a situation in which the overall situation is similar - overuse and destroy them. For this reason, to explain the complex and cohesive picture of forest destruction and to come up with practical ideas of 'how can things be improved', additional factors have to be taken into consideration.

There is strong evidence that institutions are the 'missing factor' in this regard. Institutions are able to direct demographic, social and economic pressures within a given environment and to link them with the variables sustainability, effectiveness and equity (Agrawal and Yadama 1997). They work by providing incentives and disincentives which can define human action in regard to forest resources and can therefore - under certain conditions - make actors operate in a way that reduces forest overuse and destruction. On this account, institutions play a critical role in forest resource use, management, and conservation. This coherency has already been investigated in case studies, e.g. in an interdisciplinary work by Örjan Bodin, Maria Tengö, and Thomas Elmqvist in Southern Madagascar, in which they revealed that existence and enforcement of institutions are more important in regard to forest loss than population increase is (Bodin, Tengö et al. 2005).

A focus on institutions offers the tools for understanding local-level processes and outcomes better, and give concrete points for intervention which can act as an entry point to think about change in order to put 'better' human-forest interactions into practice (Agrawal and Gibson 1999: 639).

In the last two decades, the necessity to take institutional determinants into account when irreparable loss of forest resources is at stake also emerged in decision maker circles. Institutional issues increasingly pertain to governmental and non-governmental forest policies and activities, particularly the domain of PFM where it posed the greatest challenge to the development of effective and democratic norms of local level governance over forest resources (Wily 2002: 2).

After asserting the necessity to study institutions, first of all, the notion of institution has to be discussed in an appropriate theoretical framework. Thereafter, different characteristics of

institution which tend to bear a meaning in the specific field of research are independently discussed. Namely, these are formality, origin, effectiveness, voluntariness, and enforcement, as well as whether they are located on the operational, collective choice or constitutional level.

2.2.3.1 The Challenge to Investigate Institutions

"*Institutions bring order into disorder.*" (Nørgaard 1996: 33)

Institutions bring order by providing a structure within which humans can interact by means of enabling as well as constraining factors. Nevertheless, an institutional structure is highly complex, interrelated and intertwined and typically does not follow a simple 'allowed' or 'forbidden' array. Institutions operate configurally, the multifaceted mutual interrelations often take place between different levels. Some institutions are built upon or within a structure of other institutions, and are influenced by or depend on them. At the same time, the structure itself influences or creates others. It can cover a prolonged or a short period of time before disappearing temporarily or forever.
Consequently, research on institutions has to analyse a multi-level web with no definite starting or ending point. To make it even more intricate, institutions are influenced by many other variables such as 'history' or 'power' with similar conceptual complexities, which all have to be taken into consideration when analysing institutions (Ostrom 1999a; Ostrom 2004: 2).

Practical research on institutions faces numerous and specific challenges. The foremost complication that appears when scientifically tackling institutions concerns the circumstance that they belong to no single discipline and that the analytical viewpoint very much depends on the thematic background. Therefore, if we want to comprehensively analyse institutions relevant for one specific field of study, on the one hand, we have to work within a wide range of scientific domains, each discipline with its own scientific background, language, definitions and methods, and on the other, in order not to lose ground in this broadness, we have to limit research to the concrete research topic.
Institutions are hard to grasp. Beyond their multifaceted mutual interrelations mentioned above, they are non-material, not visible and - when they evolve as unwritten norms or rules in use - have a character of implicit knowledge. In addition, the notion institution is exceptionally abstract. These factors cause that people associated with/affected by a certain

institution are often hardly ever conscious about it and the direct unswerving question ‘Which institutions determine your forest use practices?’ would merely provoke shrug of shoulders or obscure and misleading answers. All these circumstances make institutions exceedingly difficult for outsiders to observe (Poteete and Ostrom 2002: 6).

Institutional analysis may also be misled by the factor that the mere existence of institutions does not imply their effective function, as they can always be ignored - consciously or not -, violated or solely incompletely enforced. That is why in the initial research phase, there might be many institutions that appear to be of considerable relevance, but then prove to have little or no effect in reality. Others however, that tend to play no or a minor role in the early stage of a research, may actually prove strong impact (ibid.).

The first challenge which has to be tackled when working with institutions is that even within single disciplines differing views and opinions exist of what institutions actually are. Research on institutions therefore very much depends on the underlying definition.

2.2.3.2 Trying to Tackle Institutions: The Problem of Definition

Studying institutions has a long established tradition among scholars interested in social science and economics. Aristotle for example, three hundred years B.C., was concerned with which political institutions produce the best outcomes. Ever since, a great number of diverse approaches from various disciplines evolved, but ended up with different definitions based on different theoretical frameworks with no common research programme or methodology (Immergut 1998). Even through a renaissance of interest in the concept of institutions has been evolved in recent history accompanied by a rapidly increasing quantity of literature trying to provide clear understanding of what institutions actually are, there is still no crystal-clear all-embracing definition, and critical commentary still may perceive institutions to be ‘all and nothing’.

Generally speaking, the term refers to numerous entities within the wide spectrum of human actions. What people with different backgrounds - whether academic or not - understand to be an institution ranges from codes of conduct such as hand shakes, to formal rules and regulations such as wording of a law, up to world-spanning international organisational bodies such as the United Nations. Hence, institutions may cover social systems from simple informal norms to most complex formal organisations (Calvert 1998: 57). In order to work with the term we have to be aware of this wide scope and narrow down its meaning.

The major divergence exists between points of view that comprehend institutions as being merely organisational bodies and those who use the notion in a broader sense as rules which

direct human activities. The former is limited to organised sets of individuals involved in applying rules, the latter refers to the rules itself. In this thesis, the latter understanding is used, which is also deployed by Kiser and Ostrom in the IAD framework (Kiser and Ostrom 1982). In that way, the ground concept of institutions to be 'rules of the game' is applied, which delineate institutions as:

> "*Humanly devised constraints that shape human interaction* [and] *structure incentives in human exchange, whether political, social, or economic* [as well as] *define and limit the set of choices of individuals.*" (North 1990: 3,4)

This concept was basically developed by economist Douglas North, leading figure of "New Institutional Economics" (NIE), who won the Nobel Prize for Economics in 1993 for his contributions to institutional economics, collected in his publication "Institutions, Institutional Change and Economic Performance" (1990). In his own words, his concept "builds on, modifies and extends neo-classical [economics] theory" (North 1995) and provides understanding on institutions and their role in economic development, arguing that institutions arrange incentives and disincentives in human exchange, whether economic, social or political, and that economic growth is not naturally taking place, but depends on defined non-market institutions, such as property rights, legal system, and social insurance. In this sense, North suggests that achievements of the 'western' political and economic model are based on the particular institutions developed in these societies. Nevertheless, although North developed the definition of institutions within a context of economic science, his understanding of institutions is compatible with other (neo-) institutional approaches and has also been taken over by scientists that study how institutions impact on use, management and conservation of natural resources, Elinor Ostrom among others (Ostrom 2004).

2.2.3.3 Attributes of Institutions

The precedent discussion addressed the question why institutions are important in the concerned field of research, and how they can be defined. In the following, bearing on IAD framework systematisation, I concentrate on the question what attributes of institutions provide incentives or disincentives that motivate or discourage actor's behaviour towards forest resources.

2.2.3.3.1 Formality of Institutions: Concluding the Discussion on Formal and Informal

The attribute of institutions which is mostly highlighted in literature is their degree of formality. Different institutional theories (including North's NIE approach) comprehend classification of institutions due to formality which led to bipolar itemisation of 'formal' and 'informal'. In this understanding, formal institutions are defined as:

> "*The law sphere,* […] *constitutions and regulations,* [which reinforcement] *is guaranteed by the legal system.*" (Tridico 2004: 6)

Hence, formal institutions are directly linked to the political and economic structure such as governance, property rights, and the judiciary system.
Informal institutions are defined as:

> "*Arrangements or rules of behaviour such as sanctions, customs, traditions, and codes of conduct.*" (North 1991 in Marsh 2003: 3)

Pejovich (1999) and Tridico (2004: 5) draw attention to the evolution of informal institutions by defining them as being "carriers of history" which have "passed the test of the historical time". Other authors understand informal institutions to be extensions, elaborations, or modifications of formal ones, hence disparage them as mere appurtenances (Elnaiem 2004: 5). In the context of natural resource use, older literature neglected and underestimated the substance of informal institutions (Hardin 1968) or characterised them as being chaotic and conductive to environmental degradation. The other way around, much contemporary literature applauses informal institutions, particularly the body of indigenous rights and regulations, by highlighting their robustness, possibility to adapt to precarious and changing micro-environments, risk-aversion, historical rootedness within societies, as well as their potential to regulate natural resource use (Watson 2001: 6). Nevertheless, both extreme standpoints entail qualified critique.
The degree of formality does not earmark institutions to be good or bad per se. Sticking to the research subject, reality has shown that neither formal nor informal ones are panacea by themselves to prevent depletion and destruction of forest resources, and that their interlinkage, hence the appropriate 'mix' of institutions of different formality, is the key factor determining whether institutions are 'successful' or not.

This thesis analyses natural resource governance in traditional societies in rural Ethiopia, in which occurrence, differentiation as well as connection of formal and informal institutions are utterly unlike those in urban-dominated social reality in what is labelled 'modern' western societies. In rural traditional societies, generally speaking, informal institutions play a much greater role for human behaviour and formal ones are much less developed, potent and historically embedded. Thereby, it is vital to be conscious that informal institutions are no substitute for formal ones for the reason that traditional societies are un-, or ill-served by lacking or limited formal institutions, as argued by Jütting (2003: 11) and Marsh (2003: 31). Rather than that, informal institutions are in most ways definitive and 'original' institutions, which even might have been formal in the past, but are now amended or suppressed by 'real' formal ones. Another equivocal postulation on the interrelation of formal and informal institutions is that once adequate formal institutions are built up, informal ones will meet their terms. This assumption is merely applicable in certain circumstances of 'modern' western societies, but does not correspond with reality in traditional African societies (Dia 1996; Ogo Ujomu n.d.).

Furthermore, differentiation between formal and informal institutions greatly depends on the standpoint. In perspective of Ethiopian forest resource users for instance, formal institutions might be equated with coming from 'outside', whether or not fulfilling 'formal' criteria. The other way around, institutions which are labelled informal, and traditionally derived from within the community (hence likely to be perceived as 'from within') might have a high degree of formality, including written by-laws.

In general, criticism is justified that the formal and informal dichotomy is derived from 'western' historical experiences and points of view, and by some means adhere to the notion that traditional 'twaddle' informal institutions subordinate under 'modern' and steady formal ones. Therefore, the level of formality does not provide an appropriate distinguishing mark for institutions in traditional rural societies. Consequently, this classification does not do justice to the actual state of affairs in Ethiopian institutional scenery at large, and institutions shaping forest related human behaviour in particular.

2.2.3.3.2 Origin of Institutions: How and Where?

Rather than highlighting the level of formality of institutions, this research recognises the question of their genesis to be of higher relevance to provide incentives or disincentives regarding actor's behaviour towards forest resources. Distinction can be made between the two concepts 'how' an institution came into being, and 'where'.

The first notion basically addresses the question whether an institution is of organic or pragmatic origin, whether a by-product or designed, or an unintended or intended result of human action (Quéré 2003: 12). The 'where' question is concerned with the 'place of origin', hence the institutional setting and the background in which the formation of an institution took place. Is an institution initiated by foreign supremacy, national political elites, conflict or cooperation within the local community? 'Where' an institution is initiated tends to be an attribute that critically determines an institution's 'success', hence its susceptibility to conflict, endurance, potential to change, and not at least its enforceability. Jütting (2003: 4), for example, argues that it is more difficult and costly to enforce institutions derived from the state and intended to be assured by the legal system than others. He further elucidates that when state-initiated institutions overlap with institutions enforced by the community, the latter will take priority and enforcement costs of the former will increase. In this work, a terminology is applied that incorporates the notion of origin and thereby breaks up the categorisation of formal and informal, criticised above.

2.2.3.3.3 Practical Relevance: Effectiveness of Institutions

According to Max Weber, human action can be systemised in four different categories. These are a) *zweckrational* (which can be roughly translated as 'rational aim-oriented'), in which means to achieve a certain goal are rationally chosen, b) *wertrational* (value-oriented rationality), which is characterised by striving for a goal that is pursued by rational means, but may not be rational in itself, c) *affektuell* (affective), which is positioned in the emotional state of the actor rather than in his/her rational weighting of means, and d) *traditionell* (traditional) which is guided by customary habits and thoughts, by reliance on what Weber called the "eternal yesterday" (Weber 1922: 12; Hewett School n.d.). However, boundaries between these four categories are not as distinct as theory suggests (Weber 1922: 2) and in reality, it is the combination that determines how actors act in certain situations. Although Weber's thoughts were primarily concerned with the European 'western' society of the early 19th century, they do also justice to the existing diversity of motives for how actors use, manage and conserve coffee forest resources in Ethiopia.

This sociological perspective makes clear that institutions established to determine actors' forest use, management and conservation activities merely 'channel' human preferences, rather than removing free choice, and that the pure existence of institutions does not inevitably include their impact on human behaviour per se. Actors can always break the 'rules of the game' in an action situation either passively by ignorance and/or mischance or actively

due to deliberate disregard in order to gain personal advantage. Therefore an absolute guarantee can never be given that institutions are complied with the actors involved. This predication is of superior importance since universally valid for all kinds of institutions over time. Practical relevance of institutions is only given when they are effective, hence when they are obeyed by a sufficiently large number of actors. Consequently, an important attribute of institutions is whether they are - beyond their de jure existence - de facto effective or not. The effectiveness of an institution in the field of human-forest interaction depends on attributes of the forest resource, and those of the community, but decisively on attributes of the institution itself. In the following, I will elaborate on two attributes which tend to be of high relevance in this regard, namely voluntariness and enforcement.

Voluntary institutions tend to be more effective and to require less enforceability measures than involuntary ones, as generally, participating actors feel more content with them, resulting in more motivation to obey them and fewer counteractive measures and conflict. Voluntariness is an elastic term and the question if and to what extent an institution is voluntary, is in practice difficult to answer. The equation that state-initiated institutions are less, and community-initiated ones more characterised by voluntariness has to be regarded with the utmost caution as it neglects the fact that also community-initiated institutions might be built upon authoritarian 'top-down' structures which imply involuntariness as well, and deserve high degree of enforceability.

Enforcement of institutions limits deviant behaviour and increases their effectiveness. For this reason "institutional guarantees should ensure that deviant behaviour will be punished" (Goglio 1997: 22) and that breaking rules risks being sanctioned. Enforcement provides this punishment 'tool'. Evidence from empirical research conducted on CPR regimes emphasises the importance of enforcement to build up, maintain or increase effectiveness of institutions in regard to forest activities, but also provides evidence about difficulties and differences in terms of enforcement costs. For example, institutions specifying opening and closing dates of seasons for use of specific forest resources are less expensive to enforce than are institutions that specify a quota for each appropriator in regard to quantity of appropriation activity. Institutions that bring together those who would be tempted to cheat and those who would be mostly harmed by that cheating are easier to enforce than are institutions that is based on detection of an offender by someone who is not harmed directly (Ostrom 1990: 204).

Enforcement of institutions is a difficult task as it addresses various aspects of actors' mindsets, as trust and rule obedience to authorities, and the "general willingness to honour contracts and refrain from corrupt or criminal behaviour" (Brett 1995: 204). In the extreme,

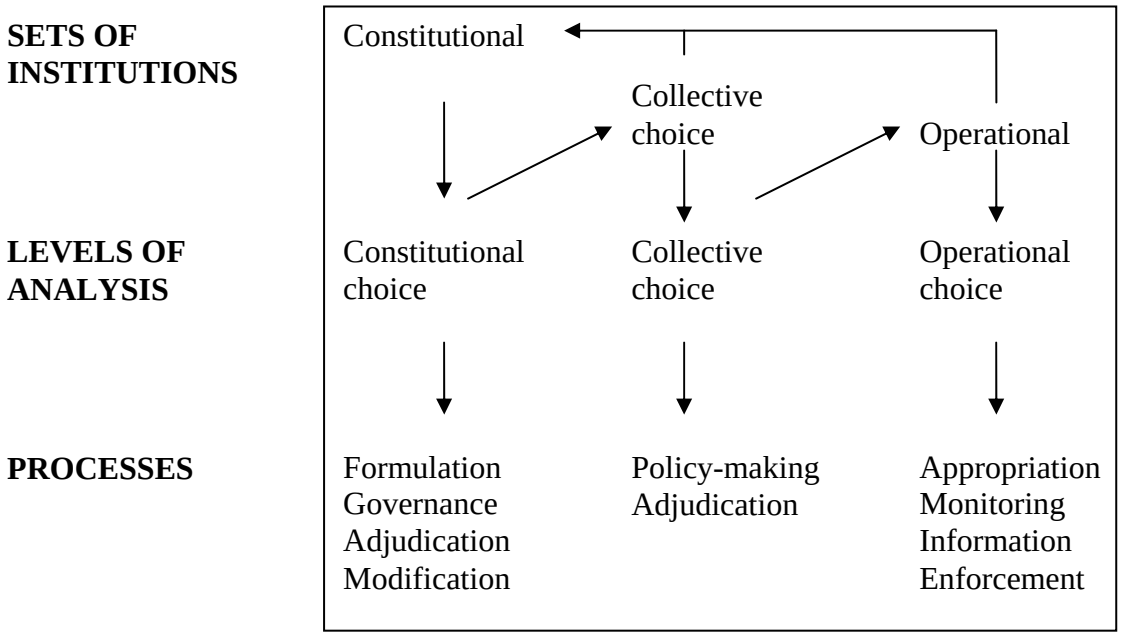
where larger numbers of actors permanently continue to disregard an institution, a "culture based on malfeasance will develop and undermine the basis for effective cooperation and institutional survival" (ibid.).

Questions of enforceability are critical in the concerned field of investigation, because institutions which are intended to determine forest use, management and conservation of Ethiopian coffee forests are fairly divergent in terms of enforceability and their effect in practice. There is empirical evidence that a rapid decline of ecological resources can to a certain degree be attributed to "weak or non-existent environmental institutional enforceability" (Fahlén n.d.). The questions whether or not this correlation applies to the situation in the Ethiopian coffee forests, which attributes of the institutions determine enforceability and how these factors can be altered to increase enforceability will play a major role in this work.

2.2.3.4 Three Worlds of Action: Levels of Human Interaction that Institutions Address

Actors behaviour within the action arena is determined by three different interrelated sets of institutions, namely operational, collective choice, and constitutional. Each set depicts one level of analysis on which choices are made which in turn determine processes which are in practice taking place. One can think of linkages between the sets of institutions, the related levels of analysis at which humans make decisions, and the processes which are activated as pictured in Figure 8.

Figure 8: Linkages among institutions, levels of analysis and processes



own presentation based on Ostrom (1990: 53)

The operational set of institutions directly affects day-to-day choices made by actors about when, where, and how to appropriate forest resources, who should monitor actions of other actors and how, what information must be exchanged and how does enforcement function, e.g. by rewards or sanctions assigned to different combinations of actions and outcomes. In that way, choices and performance of actors in an operational situation directly determine forest resource use, management and conservation activities.

The collective choice level contains those institutions which are used by actors to make policies - the operational set of institutions -, of how to use, manage and conserve forest resources and to adjudicate in these issues. In that way, collective choice institutions regulate how forest related decisions are made, for example in order to adjudge the level of harvesting or the financial or technological input (Carlsson 2001).

The constitutional set of institutions comprises those institutions which prescribe how collective choice institutions can be made or changed (Ostrom 1990: 52). They specify the legal framework of who is entitled to have access to the forest and to share the benefits which emanate from use of its resources (Carlsson 2001).

Figure 8 clearly pinpoints the linkage between the set of institutions, the related analytical levels at which actors make choices and the processes which emanate from these choices. Moreover, it depicts the interactions between the 'three worlds of action' in the way how the choices made in one 'world' define how the other one works, and how 'lower worlds' feedback on 'higher' ones. Accordingly, operational institutions are an outcome of collective choice, whose institutional basis in turn emanates from constitutional choice, and feedback from operational and collective choice levels constantly operate, adjust and influence the constitutional level (Carlsson 2001). Actors switch between these three 'worlds' just as "managers of production firms switch back and forth between producing products within a set technology, introducing a new technology, and investing resources in technology development" (Ostrom 1990: 50). In regard to this theoretical understanding, a comprehensive study on institutions needs not only to distinguish between three different 'worlds' but also between sets of institutions, levels of analysis and the processes which emanate from these levels of analysis.

After introducing and discussing the notion institution, elaborating on attributes which provide incentives or disincentives for human behaviour on forests, and the three levels of human interaction that institutions address, in the following, I combine the theoretical concepts of institutions and apply them to the practical issue of property rights, which are a

specific set of institutions located at the constitutional level, impacting on the collective choice and operational level. The rationale for theoretically focusing on property rights is that - following Lipinsky (1993: 22) - they are the central element of the agrarian constitution and decisively determine the livelihood of people in rural areas. Consequently, property rights are considered to be strong determinants influencing use, management and conservation of forest resources in practice, in the way that they provide answers to the question "who owns the forest resource?" (which should not be mistaken for the succeeding question "who uses the forest resources?") that is fundamental in this work. Hence, property rights are seen to be relevant as 'core' institutions in this work.

2.2.3.5 Property Rights: Who Owns the Forest Resources?

> "*A property right is an enforceable authority to undertake particular actions in specific domains*." (Ostrom 2000: 332)

Applied to the concept of institutions, property rights can be understood as a bundle of institutions at the constitutional level, that are of different origin, time horizons, objective targets and practical value. Putting it more precisely towards the research topic, property rights are the set of critical institutions which not only relate people to one another, but link or separate society and nature. Thereby, they have the potential to coordinate human and natural systems in a complimentary way in order to achieve long ranging human and ecological objectives (Hanna, Folke et al. 1996: 9). They can entitle actors to the benefits derived from a given resource and by which they may deny these benefits to others (Bromley 1986).
Forest resource property rights determine rights of individuals to forest resources, hence to ascertain who holds authorized access to forest resources and who will at present or later benefit from them. The other way around, use of forest resources depends on and is regulated by property rights, sometimes overlapping and contradicting each other. In the following, the four forms of property rights - identified in a land property right orientation guideline developed by the GTZ (1997) - are discussed and put into the concrete context of this work. Namely, these are private property, state property, open access and common property.

2.2.3.5.1 'My own': Private Property

Private property - the ownership of property (or other assets) by individuals or corporations (Stiglitz and Walsh 2002) - is considered by economists to be an essential ingredient in economic development, due to the production incentives associated with diverse kinds of

property relationship. Accordingly, the growth of 'wealthy' and 'modern' societies is in part explained as the result of changing property rights from open access and common property to private property (Ostrom 2000: 334). However, in the case of natural resource use, management and conservation in Africa, private property has not proved to be a guarantee for economic development, nor for ecological maintenance, but rather comes along with the risk of conflicts between individual interests and socio-economic disparity because of speculation and land accumulation in the hands of few owners mixed with insecurity due to state interventions (Petermann and Geuder-Ilg 2002).

2.2.3.5.2 L'état et la Terre: Property of the State

State property is a relatively recent phenomenon for African forest resources. Commencing after the surge of independence in the 1960s, concern for the protection of forest resources mounted, and several African countries in one way or another took efforts to nationalise their forests. In Ethiopia, which was not colonialised by Europeans, state property on forest land became an important issue with the land reform of 1975, that implied nationalisation of all land holdings, and - although considerably modified - still dominates today's forest property rights. With the land reform, also institutional arrangements that have previously shaped forest resource property rights (mainly common and individual property regimes) lost their legal standing and were replaced by different arrangements of state property regimes. These changes in property rights undoubtedly resulted in fundamental problems in governing and monitorng forest resources and in legal pluralism in which different institutional arrangements bring different - often contradictory - rules and regulations that coexist or interact within a single social setting.[7] Forest resources that have previously been under *de facto* property of individuals or groups of local users, were *de jure* transformed into state property regime, but in many cases spawned *de facto* open-access regime (Ostrom 2000: 337).

2.2.3.5.3 No Ones Property: Open Access

The fundamental issue of open access regimes is that no one has the institutionalised right to deny somebody else the use of a resource. In a total open access regime, no one has the incentive to limit his resource extraction or to invest in improvements, hence misuse and over consumption are likely to prevail depending on extraction rates and population density (Ostrom 2000: 336). Therefore, clear differentiation has to be made between open access regimes and common property.

[7] For an extensive discussion on legal pluralism see John Griffiths captivating article "What is legal Pluralism?" (Griffiths 1986).

A central question in this regard is whether the *de facto* situation 'on the ground' is really open-access and no entity - whether individuals, community, or the state - laid claim to legitimate rights to a natural resource. In practice, the situation that natural resources are 'real' open-access, holds true just for some worldwide resources as for example the open sea. In many cases, as mentioned beforehand, open access is not *de jure* but *de facto*, predominantly caused by an incongruous institutional framework with low level of enforceability. In this regard, Ostrom (2000: 336) and Dales (1968) define three types of open access:

- Open access regimes lacking effective rules defining property rights by default.
- Open access regimes which are the consequences of conscious public policies to guarantee the access of all citizens to the use of a resource within a political jurisdiction.
- Open access regimes resulting from the ineffective exclusion of non-owners by the entity assigned formal rights of ownership.

In the case of Ethiopian coffee forests, it is expected to find no open access *de jure*, but a high level of *de facto* open access, predominantly assigned to the third type (Beshir 2002: 6).

2.2.3.5.4 Team Work: Common Property

Common Property Regimes is based on a definition of property rights over a resource where ownership rights are held by a certain group rather than an individual. These property systems appear to be most adequate to ensure best possible use of above introduced Common-Pool Resources (CPRs). It is important not to mistake the notion of Common Property Regimes for CPRs, since the first one is a set of institutions which determines use (or non use) of the latter. Many activities related to forest resources occur under *de jure* common property regimes. This implies that in practice, tenure rights are possessed by a certain local community rather than by individuals or the state, and access to the resources is determined collectively. Institutions governing the use of Common-Property Regimes contain spatial, temporal or product related components, which determine different access to different resources for different individuals at different times. Access may be restricted to certain groups of individuals by some means or other, e.g. by origin, ethnicity, or socially defined factors. For the typically perfect common-property forest resource, user communities freely negotiate, define and accomplish institutions that determine time, place, technology used and amount of

forest resources extracted (Redford, Godshalk et al. 1995). This implies that members of a clearly demarcated group have the right to exclude non-members from using a forest resource. Nevertheless, there is empirical evidence that in regard to African forest regimes, many institutions presiding over Common-Property regimes are based on traditional implicit knowledge evolved over long periods of time, but merely defined for and obeyed by the concerned community. Concomitantly, concerning institutions often lack recognition and adherence of 'outsiders' and are rarely given any status in legal codes of African countries (Ostrom 2000: 336). This makes them susceptible to being marginalised by institutions initiated by 'outsiders', foremost the state, defining other types of property systems and resource access for the concerned forest resource, as presented in Chapter 2.2.3.5.

In conclusion, it can be stated that there is no 'good' or 'bad' property right regime concerning forest resources. Recent literature has very much focused on common property regimes, virtually as a panacea against social problems and forest destruction. Nevertheless, dissent from these positions, community based property right approaches must not necessarily provide more sustainability and social-economic equity than individual property or state control systems (Stone and Andrea 1998). Empirical evidence regarding Ethiopian forest resources, however, firstly revealed that there is rarely one single type of property right related to one particular forest area but rather different layers of property rights intertwined, and secondly that rights more often refer to the characteristics of forest products than to a certain forest area.

In the preceding chapter, institutions were identified as important factors which provide incentives or disincentives for human behaviour. Furthermore, it was explained why and how institutions can work ineffectively and how this might critically affect human-forest interaction in practice.

2.2.3.6 Seeking for Change: Institutional Dynamics

This work goes beyond describing the as-is state, and intends to come up with ideas and recommendations of how to reach (or to move forward) the underlying descriptive normative goals (cp. Chapter 1.2), hence to positively change the situation. Applying IAD framework terminology, if the outcome of the local action arena does not correspond with the defined goals, consequently, it has to be examined how its influencing exogenous variables can be changed. As the attributes of the natural resources and the attributes of the actors are given

and unchangeable to a large extent, from all conceptual units identified by the IAD framework, the variable 'institutions' is believed to have the highest potential in regard to change. Change of institutions, which is modification of existing institutions or the establishment of novel ones, is therefore acknowledged as an instrument to adjust the action arenas' outcome with the defined normative goals. The practical 'tool' in this regard is the creation of stronger incentives for designated actors' behaviour and stronger disincentives for unwanted one.

This is, however, easier said than done, as the process of institutional change often interferes with unintended, unanticipated developments (GTZ 2004: 51). Academics highlight the exceptional complexity of institutional change, in which a great many of interrelated factors determine whether institutional change is 'successful' or not, and that institutional change should always aim at a positive ratio between benefits and costs (e.g. Schlüter (2001) who investigated the transformation of the agrarian sector in the Czech Republic). In that understanding, in the following chapter, a theoretical discussion on institutional dynamics will be provided, followed by the identification of key factors which tend to decide upon its 'success' or 'failure' in practice.

2.2.3.6.1 Institutions and Change: An Antipodal Notion?

Dealing with dynamism of institutions and explaining its underlying reasons and mechanisms is a critical task, since most institutional theories explains more stability than change. Many definitions of institutions highlight them as being long-lasting and enforced, with a high profile (Kasper and Streit 1999: 28). Nonetheless, many institutions do not fulfil these conditions and have proved to be rather unstable, not or hardly enforced and not well-known to concerned actors.

Also the applied understanding of institutions to be constraints that "structure incentives in human exchange [and] define and limit the set of choices of individuals" (North 1990: 3,4) highlights regularisation which implies certain limitation of freedom of action and wilful change. By that means, the applied theoretical notion of institutions and the idea of change are rather antipodal than compatible. When institutions socialise actors, how can these actors then change these institutions? (Immergut 1992; Immergut 2001: 2). When institutions provide certainty for repetitive situations which make daily live easier, how can individuals than stand up for institutional change which is risky and involves efforts, failures, learning from mistakes, repeated efforts and so on (Nelson and Sampat 2001). The core question thereby is

what determines the alteration of certain structures, or put simply, why do some institutions frequently change, and others persist over centuries against great odds.

Institutionalist scholars from a variety of perspectives have published an extensive range of descriptive and analytical literature containing statements on and explanations of these questions. In the following, five sets of answers which are considered to be of relevance for the concerned action arena are picked up and discussed, namely psychology, history, information, origin and power.

2.2.3.6.2 Psychology Matters: Hesitation to Change

When institutions regulate access to forest resources which are highly relevant for human livelihood, one might assume that in a limited and competitive environment, those who do not permanently hunt for innovative institutional options that can ameliorate their benefit are ousted by those who are more successful in developing or adopting better institutions. Furthermore, in the concrete case of forest resource (over)use, one might anticipate that when actors are confident that resource exhaustion is pending and they face clear indicators that this will bring future harm to them, new institutions will be adopted that restrict actors appropriation manners (Ostrom 1990). So why is institutional change that prevents actors from future harm not automatically asserted in the action arena by the actors themselves?

One reason is found in psychology. The level of vagueness when applying new institutions is great, greater than for example the level of uncertainty when selecting new pricing strategies on markets in which demand and supply are fixed (Ostrom 1990: 208). The outcomes in innovative institutions are not achieved on all accounts, as they depend on countless future choices made by a lot of different actors as to whether or not they will apply the institution, or how they interpret its meaning, how they monitor each other or impose sanctions on disregard. Due to this vagueness, individuals' potential for alteration is often inhibited by a certain degree of dilatoriness to change. In this atmosphere, appropriators pay more attention to recent events and gains than to those which are more distant in time. Potential losses of institutional change are weighed more than potential benefits of the same quantity and therefore individuals even refrain from initiating or supporting institutional change when they would gain net benefit in the future (ibid.208).

2.2.3.6.3 History Matters: Institutions and Path Dependence

More answers to elucidate institutional change are unquestionably found in history. As valid for all social interactions and systems, the notion that traits of history will not disappear also applies to institutions. History not only matters because of what can be learned from it, but

because present time and future are linked to the past by continuity of institutions. In that way, history determines setting up, performance as well as future development of institutions, and consequently provides stimuli or limitations for institutional change.
Concerning this matter, the work of Douglas North has to be brought up once again. In "Institutions, Institutional Change and Economic Performance" he developed the model of path dependence and elucidated:

> "*Path-dependence means that history matters. We cannot understand today's choices without tracing the incremental evolution of institutions.*" (North 1990: 98)

The presence of learning creates path dependence in ideas, ideologies, decisions and then in institutions. In that understanding, every institutional development is path dependent and each change becomes the foundation for the next (Ostrom 1990: 141). Once a particular path is adopted, it becomes more and more difficult to switch to another. This is why most attention has to be given to initial phases of institution building (Pierson 2004).
Path dependence is also a critical factor that influences which actors are able to change or to retain institutions. As path dependence limits actors' bargaining flexibility, it may enable relatively weak actors to decide whether institutional change takes place or not. In extreme cases, this might result in institutional deadlocks (Levi 1990: 403). In that way, the path dependence model turns away from neo-classical theory which alleges that all unintended 'forces' are shaken off in the process of achieving long run equilibrium, by depicting that positive feedback effects may lead to suboptimal outcomes (De Vries n.d.: 79). However, North (1990: 98) states that if the "foregoing story sounds like an inevitable foreordained account, it should not", thereby alluding that despite being influenced by 'historical ballast', institutional change is still a question of individual choices and option of alternatives.
Exploring sources and consequences of path dependence helps to comprehend driving forces for and incompetence or resistance against institutional change. Furthermore, it provides understanding of the consequences which originate from the emergence of specific institutional arrangements. Accordingly, path dependence theory forces us to contemplate temporally distant incidences or processes, and to integrate them into analysis of the current state of affairs. When focusing on human-forest interaction, path dependence exemplifies the overall importance to understand not only history of forest resource use, management and conservation but moreover umpteen other historical correlations which provide help to

analyse current situations, such as inertia and 'stickiness' of institutions, e.g. why traditional land property rights prevail over decades against great odds.

2.2.3.6.4 Information Matters: Institutional Change and Information Deficiency

An appealing theoretical approach which examines reasons and development for institutional change is asserted by Shepsle (1989). Affiliated with the discussion on restrains of actor's rationality due to an imperfect information base, he highlights lack of information as a main determinant influencing institutional change and argues that not all important parameters are known to each actor and that institutions are established with "extreme information incompleteness" (ibid.). This complicates coordination between actors and aggravates difficulties to appraise unmeant outcomes of institutional change (Poteete and Ostrom 2002: 9). New information of objects and subjects in the world may change the position of the individual and the community and will activate new self-definition, communication, practices and technology, which will in turn lead to the establishment of new institutions or the mutation of existing ones (Wegerich 2001: 10). Thus, information has to be regarded as one essential driving force or constraint for institutional change, notably in transforming societies as the Ethiopian, in which dissimilarities of actors' information base is on the increase, as some actors gain rapid surge of information availability and processing capabilities whereas concerning conditions of others remain unchanged.

2.2.3.6.5 Origin Matters: Institutional Change and Derivation of Institutions

Another central aspect concerning this subject matter is the question of how institutions evolve and where they are originated. Therefore, the above-mentioned discussion on the origin of institutions (cp. Chapter 2.2.3.3.2) will briefly be restated.

The origin of institutions significantly influences their stability and potential for change. Institutions that evolve unplanned and spontaneously within a group of executing individuals are likely to be more inertial and to need more effort and time to change than institutions that are designed knowingly and planned from 'outside' (Jütting 2003: 6). Thus, in many cases of institutional change, there is evidence that the former 'lag behind' the latter. When applying this theory on institutions influencing forest-human interaction, it helps to clarify why traditional community-initiated forest use institutions tend to be more stable than the state-initiated institutional framework in this regard.

2.2.3.6.6 Power Matters: Institutional Change and Rural Elites

Besides psychologically-reasoned hesitation to change, path dependence, lack and change of information and the origin of institutions, focus is finally drawn upon one more feature that impacts institutional change, namely power and the behaviour of power holders, respectively. This factor is anticipated to take up an important role when explaining and analysing institutional change as power can directly exerted by humans in order to prevent or accomplish institutional change, which is in contrast to the aforementioned factors. In order to commence with the discussion on institutional change and power, the term 'power' has to be defined and briefly discussed beforehand. In this thesis, 'power' is understood as:

> "*Having control over resources, which could be either natural, financial and labour, but also networks, information, upward and outward mobility*." (Wegerich 2001: 3)

In the concerned local action arena, actors hold different degrees of power due to a melange of social status and relationship, political influence, and economic wealth. Although these factors are highly linked in practice and exert positive feedback on each other, each relates to one of the sectors community, state and economy. Power holders discontented with the existing institutional situation can evoke and control the development of institutional change. Hence, a debate of power structures and relations has to be incorporated when discussing institutional change.

Power is not distributed equally in communities, but centres on particular actors, in this context named key power holders. In case of traditional rural societies, power is predominantly kept by patriarchal and clan systems, whereas in so-called modern societies, expertise and professionalism act as main legitimisation (Marcus 1983: 52). Key power holders take position within different institutions where they use their power resources to put decisions through the collective choice level. It is important to note that in many cases, holding one power position goes in line with holding another, hence most power holders are multiple key power holders.

In the following, suchlike key power holders are denominated as elites, which are understood to be "groups situated in a social system, in which they, as elites, dominate an institutional order" (Marcus 1983: 12). Elites interact with other elites across institutional boundaries, and develop systems which are not necessarily serviceable for the institutions or correlate with

recognized institutional hierarchies (Wegerich 2001: 19). In that way, elites manage to modify one kind of institution through the creation of another one of another type "in order to make institutions to serve their interests, however defined" (Marcus 1983: 42). In this regard, institutional change is presented as an evolutionary process radiated by elites, as they are able to retain and expand their role as key power holders by dint of institutional change.

As this thesis is dealing with human-forest interaction, it has to be elaborated on the issue how local elites support or resist against resource utilisation from 'outside'. In this connection, Blowers and Leroy (1994) provide an example of which role local elites can play in regard to 'local unwanted land users', arguing that resistance against these land users very much stands or falls according to the support of the local elite.

This example brings in two new concerns, that of motivation and that of inegalitarism within society. The point of motivation is crucial, as "every institution favours some interests and ideas over others, and therefore the advantaged are generally loath to change the status quo" (Steinmo 2001: 9). Hence, it appears to be obvious that elites only tolerate or support institutional change "if these changes do not change their position or [- even better -] enhance their status in their community" (Wegerich 2001: 20). However, history taught us that also 'disadvantaged' non-power holders may decide to prefer the status quo instead of facing an uncertain future.

Secondly, there is evidence that the more unequally power is distributed within a group of actors, the more key power holders stand up for keeping the status quo, hence the more constant are institutions and the more rarely and more problematic institutional change emerges. This correlation is confirmed by Das Gupta who states that "institutional change is considerably more difficult in highly inegalitarian settings" (Das Gupta 2001: 21). In line with that, Harriss argues that hierarchical social relationships with social fragmentation can slow down institutional change, or even prevent it (Harriss 2002). The other way around, in certain cases, conflicts, born out of power asymmetries can be seen as a birthplace for new institutions (Knight 1992: 26).

2.2.3.6.7 Institutional Change versus Stagnation in the Ethiopian Context

The correlation between power and institutional change leads us to the discussion of institutional change vs. stagnation. Theorists acknowledge that it is possible for a society to get 'locked in' a certain set of institutions because of the interest of power holders in their reproduction. What might be positively branded as continuity does in reality often turn out as persistence of inefficient institutions (Harriss 2002).

Generally, institutional change is permanently going on in all societies (De Sadeleer 2002: 583). However, degrees of change and how it impacts on society vary considerably, and different institutions change at different pace. In the case of Ethiopia, one will find both extremes, rapid institutional change as well as long withstanding institutional persistence, which might negatively be labelled as stagnation. Many political, economic and social institutions are undergoing a long-standing process in which central elements of their institutional scenery are altered. This development affects the operational, collective choice, and constitutional levels, and can therefore be designated as transformation (Diermeier, Ericson et al. 1997: 38). In this sense, transformation is a very intense, multidimensional and long-standing appearance of institutional change. To define the starting and ending point of a transformation process is a difficult task. It can be argued, however, that the transformation process in Ethiopia started as early as with the takeover of the *derg* government in 1974, is still ongoing and has no foreseeable ending. Schlüter (2001: 7) describes the dilemma that transformation implies to be temporary, but no explicit statement can be given about when the process has come to an end.[8] Transformation has affected and still affects the institutions which are relevant in this work in different ways. Some have been dismantled (e.g. feudal landlord system, Peasant Associations), others significantly altered structure and scope (e.g. NGOs, cooperatives), or remained widely unchanged (e.g. legal land property rights).
At any rate, general equation of institutional change to be positive and institutional persistence to be negative is over simplistic and the question to what extent it can be refuted in the context of coffee forest handling in Ethiopia will be subject of this thesis.

The preceding chapter on institutional change ought to demonstrate how the existence of institutions and their change relate to each other, how the actual process of institutional change functions and which factors expedite the proceeding or prevent and decelerate it, respectively. In the following, focus is zoomed out of the discussion on institutions and their change, towards another conceptual unit of the IAD framework, namely the outcome of the action arena.

[8] The Worldbank defines the end of a transformation process when a country has shifted from planned economy to free market economy and when private property dominates the markets (Schlüter 2001:7). From this perceptive, Ethiopia, where markets (as the coffee market or the land tenure system) are still widely state regulated and dominated, has to be viewed as being right within the transformation process.

2.3 What Actually Happens? The Outcomes of the Action Arena

The outcome of the action arena is what actually 'happens'. It describes how human-forest interaction comes about under the prevailing circumstances, default by characteristics of actors and the action situation in the action arena as well as influencing exogenous variables discussed in the on the forgone pages.

The outcome of the action arena can be itemised with the three features of human-forest interaction, namely 'forest resource use', 'forest resource management' and 'forest resource conservation'. Clarification and unmistakable differentiation is essential when examining human-forest interaction, especially when elaborating on questions of sustainability, hence how equilibrium between human needs and regenerating forests resources can be kept or achieved. The term 'forest resource use' which has already come into play refers to:

> "*The function that forest resources serve or the uses to which they are put.*" (Redford, Godshalk et al. 1995)

'Forest resource management' implies that the particular forest resources - beyond pure use - are directed and controlled. Therefore, the term forest management is applied for situations in which an integrated and coordinated series of actions are undertaken, oriented to achieve particular objectives. More precisely, FAO defined forest management to be:

> "*A process which effectively integrates the biological, social and economic factors which influence the decisions leading towards the implementation of one or more specified objectives.*" (FAO 1998)

In that understanding, use of forest resources is solely the extraction of products or services, e.g. just picking ripened coffee berries in the forest without conducting any yield-enhancing activities, whereas management goes beyond and includes more active measures such as pruning, slashing the undergrowth etc. Management, therefore, implies higher human labour and capital input, and more complex institutional arrangements, but is, however, likely to be more efficient than mere resource use.

For the third concept, ‘forest resource conservation’, the following definition is applied which understands forest resource conservation to embrace:

> *“All activities to preserve and rehabilitate forests, in particular activities designed to protect or restore the biological diversity and ecological functions of the forest ecosystem, while securing as far as possible their current and future value for mankind and in particular for forest-dependent people."* (European Parliament 2000: Art 2)

This definition, which also guides ‘green projects’ of development agencies such as “Gesellschaft für Technische Zusammenarbeit” (GTZ), not only focuses on preservation of forest ecosystems, but also includes aspects of forest resource use and forest resource management, and hence amalgamates the three concepts. This is easier said than done, as in practice, extreme features and policies of ‘forest resource use’ (e.g. intensive exploitation of forest resources without management or conservation measures) and ‘forest resource conservation’ (e.g. establishment of ‘no go areas’ which do not foresee any forms of human use and management) exist and strongly contradict each other, as different actors draw foci on either one of them, with entirely different underlying intentions and timeframes.
The need for this research project is grounded on the argument that although all three categorisations are found in certain actors preferences, collective outcome of the concerned action arenas is a good deal more dominated by forest use than forest conservation, which is – taking the underlying descriptive normative goals of this work into account (see Chapter 1.2.) - considered to be negative.

2.4 Concluding Theory and Rushing towards Empirics

This chapter aims at introducing, defining and discussing terms and theoretical concepts which appear to be most relevant in regard to the field of investigation. Using the IAD framework classification as a central theme, three clusters of variables are discussed which are anticipated to impact on the local action arena. Thereafter, the possible outcomes of the action arena are itemised and elucidated. The way these outcomes are thought to be obtained is located at the conceptual unit ‘institutions’. Institutions provide a framework which ease and simplify complex situations by forcing predefined codes of conduct for all involved actors. Predefined constancy reduces need for negotiation and communication, which in turn saves cost and time and provides certainty for perseverative situations. Nevertheless,

institutions are dynamic and develop over time. They emerge, linger on and disappear, have a definite origin and an ending. As human-shaped systems, they are capable of being modified into different forms and adjustments. Therefore, institutional change is acknowledged as an integral part when elaborating on institutions.

The CoCE project has been ushered in with the presumption that institutions are important variables which determine human-forest interactions and that institutions on the constitutional, collective choice and operational level can be - readopting the distinction between situations and dilemmas - decisive for which forest resources face a dilemma and which one a situation.

Furthermore, it is alleged that the as-is state of human-forest interaction concerning coffee forests in Ethiopia is not concordant with the underlying normative goals of sustainable, efficient, and equitable coffee forest handling. Consequently, understanding of the relevant institutional framework permits comprehension of human-forest interactions, which in turn helps to understand sources of unwanted outcomes. In line with that, change of the particular institutional arrays which provide incentives for unwanted actors' behaviour are taken as a relevant and potent tool to positively influence the circumstances on the ground. Which measures are suitable for which particular setting very much depends on the particular action arena, the action situation and the attributes of the forest resource, the community and the institutions which are found in empirical research.

3 ‘In the Field’: Ethics, Methods, and Data Quality

This chapter does not set out to be a purely methodological chapter. Besides elucidating the case study selection process and describing the research methods applied, a profound critical and self-reflexive discussion on ethical concerns in development research fieldwork is provided. This is justified, since extensive fieldwork was carried out in a highly challenging intercultural environment in rural areas of the so-called “fourth world”.[9] At the end of this chapter, I elaborate on difficulties and obstacles related to the accuracy and validity of data that were encountered during field research.

Conducting research is a continuing learning process in which the recognition of unanswered questions most likely escalates faster than the questions answered (Mikkelsen 2000: 35). Learning, however, is not self-induced; it requires reasonable activities. Similar to schools that supply different structures in order to enable children to systematically learn different subjects (teachers, class schedule, blackboard, books etc.), researchers have different mechanisms at hand to learn about their subject that enable them to answer specific questions and to solve different scientific or practical problems (ibid.223). To be precise, a distinction between methods, techniques and tools has to be drawn in which methods stand for a “comprehensive set of approaches to gather evidence and to analyse specific problems” (ibid. 223). Techniques are understood as the practical way to collect data, tools as the procedures and physical items used in a technique (ibid.). Which methods, techniques and tools are applied where and when depends on the specific research context, and thus on the research discipline, topic, motive, and area. In addition, time and cost limitations are important factors, and - particularly in ‘fourth world’ development research - constraints of practical feasibility play a considerable role.

In order to do justice to the interdisciplinary research character and the complexity and multidimensionality of the topic, this research did not follow a predefined methodological approach but employed a methodological mix, including various qualitative as well as quantitative techniques. In that sense, I did not explicitly use predefined methodological catalogues such as the “Participatory Rural Appraisal” (PRA)[10] or its precursor, the “Rapid

[9] The term ‘fourth world’, though debatable, is in the following used interchangeably with Least Developed Countries (LDCs).

[10] PRA is a methodological approach geared to the self-determination and self-mobilisation of local communities, designed to ensure that marginalised groups gain an equal share in decision making and participation in development activities (Conroy 2002).

Rural Appraisal" (RRA)[11] approach, but took different techniques from different methodological modi operandi.

The controversy whether to apply qualitative or quantitative methods, which preoccupied social science in the 1970s and early 1980s, can nowadays be viewed as historic and hence be placed ad acta (Lentz 1992: 317). Ever since, many social scientists have perceived that an either/or distinction between qualitative and quantitative methods is too schematic and static. Practice provided evidence that interplay and interaction, hence the combination of both approaches is most beneficial for goal-oriented social science development research (see Lentz 1992; Tarrow 2004). In this sense, the methodological approach used in this research is congruent with the state-of-the-art in social science methodology.

3.1 Ethics and Fieldwork in LDCs Development Research

According to Lee-Treweek and Linkogle (2000: 8), the process of collecting data in empirical social science risks four key categories of danger, namely physical, emotional, professional, and ethnical. In regard to the fieldwork conditions concerned, the latter issue is found to be of particular relevance, basically due to the development-oriented project approach, the focus on qualitative research techniques and the extraordinary inter-cultural research situation.

Each empirical social science development research in (and on) other cultures raises ethical problems. However, many researchers - not only in former times - have not concerned themselves with ethical considerations. Some opine that it does not come under their discipline in which they study 'hard facts and problems', others that integrating cross-cultural dialogue and participative approaches tackles the issue sufficiently, and again others argue from a fatalistic point of view that ethical concerns can not be solved anyway (Mikkelsen 2000: 251).

Not only from an anthropological perception, ethical concerns have to be considered fundamental when conducting intercultural development research in any region of the world. When conducting research or even prompting for change from outside, the elementary ethical principle that people in the target community are not first and foremost 'actors' or 'information carriers', but persons that deserve the same rights and respect as all other people in the world inevitably appears on the agenda. With regard to intercultural development

[11] RRA is a collection of techniques that are committed to animate communication between 'insiders' (the target community) and 'outsiders' (research and development workers) and to encourage active participation of the former in decision making processes. Its basic difference to PRA is that it is geared towards the rapid survey and analysis of data relevant to action by a team of experts, whereas in the subsequent PRA, it is ideally the local community which analyses, plans and manages implementation of development measures (Conroy 2002).

research, ethical problems can be structured into two categories: (*i*) **why** to intervene in other countries and cultures at all, and (*ii*) **how** interventions are actually executed, which (unintended) consequences they may create and which ethical concern is implicated (Gullestrup 1992 in Mikkelsen 2000: 251).

In a polemic way, the 'why' question can be answered with 'help the poor' and 'bring development' or conduct research in order to initiate or improve these concerns. Hereby, questions arise what is actually meant by 'development', or whether it is merely externally imposed and eurocentric. Harsh critics, though, delineate researchers' efforts as mere pursuance of their own careers and academic degrees, which they mix with adventurism in exotic circumstances. These concerns have been copiously discussed in literature, see for example Munck and O'Hearn (1999) or Ball (2005), and - although considered to be relevant - need no repetition here. Instead, a number of issues concerning the 'how' question, hence the actual implementation of empirical development research and its impacts on the target community, which have so far been insufficiently articulated in literature, are taken up subsequently.

In principle, the 'how' question starts with the designation of the research topic, which already depicts a dilemma in itself as the topic selection process varies from researcher to practitioner, and the former is mostly freer to select his topics than the latter, but both bring their predefined topics to the local community, and not vice versa. When commencing field research in practice, the particular research topic is already linked to research objectives and questions, and alas, many researchers already have the answers to these questions in mind.[12] This is particularly problematic when questions are related to the very livelihood of the community.

Another ethical problem when conducting empirical fieldwork is the 'intervention dilemma'. Research is never neutral. Conducting research 'in the field' is always an intervention in itself, no matter what research methodology, technique and tool is applied. Hence, a practical development research project and its involved staff and apparatus always becomes a component of what it intends to investigate.

[12] This statement is based on my own experiences gathered in personal communication with researchers and practitioners of all kinds. To enter 'the field' with predefined answers and solutions in mind derived from an underlying attitude of 'we academics know best what peasants want' is - however - also pronounced with Ethiopian development practitioners and researchers.

An open interview with a member of the target group, for example, may more frequently entail after-effects than often anticipated by researchers. Imagine being an Ethiopian peasant who is asked numerous personal questions by a *ferengi*[13] (and/or his interpreter/translator[14]) on an issue highly relevant for his present and future livelihood. This instance is likely to raise a peasant's awareness on this topic, to thoughtfully reflect on it and probably even to change his perspectives and views on that topic substantially. Paradoxically, qualitative in depth techniques, currently 'en vogue' in social science as being a more empathic way of understanding coherencies in other cultures, are likely to be more intrusive and to involve greater reactivity than quantitative approaches (Patton 1990: 356). In the worst case, talking to people may not only provoke change in thoughts and views but incite behaviour which goes in the opposite direction of the researchers' normative goal.

Apart from the interview process, even the very presence of a *ferengi* researcher 'in the field' makes him/her become a part (not a member) of the researched community. Gender, age, race, culturally conditioned habits, as well as the researcher's equipment and outfit (e.g., a white jeep, "Global Positioning System" (GPS) navigation, digital camera and sophisticated outdoor clothing just to sketch the common *ferengi* researcher appearance), are likely to leave a mark on the target groups' perception and behaviour which may not be intentional. Absurdly, these changes primarily go in the opposite direction of the 'pure and unspoiled traditional life of the community', adored in many social science researchers' (not only of ethnographer's) views and publications.

Another ethical problem concerns the voluntariness and motivation of the research participants. Voluntariness, i.e., that members of the target community have to be truthfully informed about the research background and its objective and have at all times the right to choose whether to participate in research or not, described by Macklin as the "informed consent" (1999: 26), is an underlying ethical principle of the research community. But do informants really participate voluntarily? Are they sufficiently informed? Where do the incentives to take part in development research come from? Why should peasants spent hours and hours of their time telling a *ferengi* and his interpreter about personal matters when development research often does not have any directly observable results, and if at all, results mostly become reality much, much later after the study? Certainly, there are culturally and psychologically explainable reasons such as group dynamics, hospitality, curiosity or

[13] *Ferengi* (amh.) is a widely used term in Ethiopia to label a 'foreigner' or non-Ethiopian person, respectively.
[14] Although literature often depicts the terms 'interpreter' and 'translator' differently in the way that interpretation involves face-to-face interaction whereas translation works with written texts, in the following the term interpretation is used for both, written and oral communication across language frontiers.

cheerfulness that someone is interested in and listens to ‘our problems’. But beyond that, other motivations should not be neglected.

A strong one is money. Each empirical research in social science (not only in LDCs) faces the question of whether to pay informants for taking part in the research, and if so, how much is reasonable. Bernard (2002: 200-01) argues that informants invest their time and their information, which is a commodity that has its price in today’s market economy. If informants are not paid, the researcher denies the informant his legitimate share of the value of information as the researcher ‘sells’ the concerned information at a value added price as ‘my research results’. Hence, in order to retain a certain reciprocity, informants have to gain direct personal benefit from their participation. In this research, though, direct financial payment to informants is perceived to be a highly sensitive topic, due to the following reasons:

Firstly, in the long run, direct payment is likely to create a certain culture of ‘participation for money only’ in which informants try to sell their information as a commercial value. This will put projects which might have no or lesser resources to pay (which are particularly domestic research projects) at a disadvantage, and is likely to reduce the validity of the information, as informants might distort and exaggerate information in order to gain more attention and money.

Secondly, the creation of short-term income generation possibilities in which particular people can make quick money is not only likely to diminish these peoples’ eagerness to resume their previous work, but - as informants often belong to the elites - to aggravate economic differences, enviousness and conflict between informants and non-informants.

In any case, one has to be aware that the issue of paying informants goes beyond providing direct payment, but also involves “other tokens of appreciation appropriate in the given situation” as Mikkelsen (2000: 273) puts it. This starts with making photos of informants or giving them a ride with the project car, and might end in making tangible presents. In this sense, every social science field research project sooner or later comes to the point in which informants are - in one kind or another - rewarded for providing information.

In the field study of this research project, the dilemma of payment was tacked as follows: on principle, only informants living in the case study villages were paid. Rather than to pay off each and every villager who participated in the research, a village meeting was called after each research phase in which a donation was given publicly to a local community-initiated

body.[15] In both case study villages, the donation was given to the local *iddir*[16]*/ada* in which all households of the concerned villages are members. *Iddir/ada* is a kind of locally organised insurance system with formal structures in which all households of the concerned village are members and which pays in times of need, e.g., as a death grant (for a detailed discussion on *iddir* see Chapter 6.1.1.3). Hence, all households in the village potentially gain from the donation. Even though to hand out money on a collective rather than an individual basis is likely to reduce some negative side effects of paying informants, and although management and distribution mechanisms of *iddir* are assessed to be relatively transparent and grassroot-based, this mode of payment also has negative side effects as a matter of course, such as a residual risk of fraud and corruption.

Beyond direct material compensation, informants' motivation to participate in a research project is also spurred by expectations. Each empirical development research project working in 'poor' communities raises at least vague hopes and wishes of people to be part of and to gain from this 'development', which should not be underestimated as a driving force for participation.

The 'promise' of development must not be explicitly stated. Imagine a peasant who is at the beginning of the field research being told by the researcher that "we conduct development research to figure out how to implement a development project". If the peasant then participates in the research project, he certainly harbours the expectation that, if 'research goes well', it will finally lead to the development project the researcher has 'promised'. This is likely to influence peasants' behaviour towards the research concerned, but beyond that, to provoke long standing change of the peasants' perception and attitude towards any future research projects.

It is, however, virtually impossible to raise no expectations, as the sheer presence of a research team might be a promise in itself. This applies particularly to the presence of *ferengi* researchers and to the application of participatory research techniques, which both run a particular risk of raising expectations (Mikkelsen 2000: 274). In any case, a researcher 'in the field' should be aware of being confronted with high expectancy and should in any case try to avoid making promises, or when doing so, to keep them.

[15] After consultation with the interpreter/field assistant, 500 birr (which was at the time of the field study in 2003/04 equivalent to 50 €) was decided to be an appropriate amount of money to pay per research phase.
[16] Also referred to as *edir* or *edder*.

Another ethical dilemma concerns the issue that development research that is based on the intention to 'help the poor' bears the potential to put the people to be helped at risk. This is particularly critical when research - deliberately or not - makes information publicly available, which brings about negative implications for the informant, for example, ostracism by peers and neighbours or discrimination or punishment by local elites or state bodies (Mikkelsen 2000: 273). The issue of putting informants at risk by publicising their information is of considerable importance in this research, as the research topic concerns many illegal actions of economic relevance and political controversy. For that reason, names of informants are disguised in certain cases.

This issue is closely related to the question of what actually happens with the information gathered 'in the field'. Social scientists take information from their informants, cross-check, combine, structure, and analyse it and publish it under their own names. Hence, the questions who owns the data, who has access to it, who will profit economically and whose career benefits from it have to be asked and are not eliminated by writing the sentence "This book is dedicated to all informants of the village XYZ" in the publications' preface.

The ethical matters discussed above concerning how interventions are executed and what consequences they may evoke played a critical role in this field research. While it is in the nature of dilemmas that they have no easy and universally valid solution, it is important to bear some simple but effective means in mind which at least help to minimise most negative ethical implications 'in the field'. Basically corresponding to the "10 Gebote der Feldforschung" (the ten commandments of fieldwork) by Roland Girtler (Girtler 2001: 184 ff.), these are: take as much time as possible 'in the field', act consciously, carefully and with self-reflection, with common sense and an open mind. Obviously, practical working experience in similar contexts is helpful in this regard.[17]

3.2 Preparing and Commencing Field Research

Having discussed general ethical concerns and practical problems that might arise out of them, I proceed to elucidate the selection of study sites and case study villages that had to be made before starting the actual information gathering process 'in the field'. Thereafter, I briefly address the issue of 'entering the field'.

[17] Before conducting this study, the author gathered practical fieldwork experience in rural Bangladesh and Côte d'Ivoire.

3.2.1 Why There of all Places? Selection of Study Sites and Case Study Villages

Case study research is defined as an:

> "*Interest in individual cases* [implying an] *empirical inquiry that investigates a contemporary phenomenon within its real-life context* […] *in which multiple sources of evidence are used.*" (Yin 1984: 23)

When conducting case study research, the core question is which cases are chosen and why. Number and locality of cases depends on the scientific discipline, on the research questions and methods applied.

In this research subproject, the study sites, i.e., the coffee forests of basic interest, and case study villages, i.e., the communities/villages in which the research was undertaken, were selected through a process of 'progressive filtering', commencing at the national and ending at the village level. The starting point was research on Ethiopian forest coffee preceding the CoCE project, e.g., Gole, Denich et al. (2001), Teketay (2002), that identified nine montane forest sites in Ethiopia in which *coffea arabica* grows 'wild' (Geba Dogi/Yayu, Boginda-Yeba, Bonga, Berhane-Kontir, Amora Gedel, Dawo Tobi, Mankera, Maji, and Bale Mountains). The overall CoCE project is concerned with all sites; nevertheless, due to the following reasons, two study sites were chosen as focus sites for this work:

In order to cover the broad spectrum of human and nature heterogeneity that spans Ethiopian coffee forests and to gain representativeness, more than one study site is considered necessary. At the same time, research design foresees an in-depth investigation on the local level, which calls for a limitation of study sites. Time and budget constraints are additional factors that demand a small number of study sites. After a field round trip undertaken by CoCE members in February 2003, consensus was reached that under given conditions, a comparative study of two sites is best suited to comprehensively answer the research questions. Based on earlier discussions within the CoCE project, findings of preceding research and information gathered on the field round trip, the sites Bonga and Bale Mountains were selected as study sites, as they are highly different in terms of socio-economic, cultural, historical, political and environmental factors.

Each study site covers large forest areas and numerous communities living scattered in and around them, which exceeds the scope of an in-depth investigation. After the study sites were located, clear and manageable forests areas and the involved forest resource user communities

within the sites needed to be sampled. Literature offers a large number of different sampling techniques, such as maximum variation sampling, homogeneous sampling, typical case sampling, critical case sampling or sampling of politically important cases (Patton 1990: 182-83).

In this work, however, the selection of the case study villages did not follow a single sample technique. It was carried out rather on the basis of a combination of different ones, set up on different levels. Most emphasis was put on the fact that case study villages are typical within one study site and maximum variation exists between the villages in both study sites.

The decision on how many and which villages to sample was made on an explorative field trip to both study sites in June and July 2003. There, it already became clear that research in these sites could not be undertaken without or even against concerned zonal and *woreda* authorities. They are indispensable for getting research permits and - via the *kebele* - access to the villages as well as for necessary information. Finally, we inspected different forest areas in which forest coffee occurs and there are village communities in close proximity, observed forest conditions and talked to residents or people passing by. In the end, site selection was based on a number of criteria, listed as follows:

- Acceptance of the research by the local authorities, the "gate keepers"
- Relevance of forest resources for the livelihood of villagers
- Size of village community (in order to allow an in-depth study, it should not exceed approximately 50 households or 300 people)
- Degree of forest depletion and deforestation
- Impact of past and current governmental policies
- Ethnical and religious background and diversity
- Impact of new settlers/immigrants from other regions
- Existence of forest resource management projects initiated by development agencies
- Activities of other CoCE subprojects

Each criterion played a role in the selection process. Finally, I chose Komba village in Yeyebitto *kebele* in the Kaffa Zone and Kangicho village in Burkito *kebele* in the Bale Zone.[18] I spent the next rainy season (August-September 2003) in Addis Ababa undertaking literature research, establishing links to and conducting interviews with relevant NGOs, GOs

[18] Administratively, Ethiopia is divided in regional states, which are further subdivided into zones. Each zone comprises *woredas*, and each *woreda kebeles* (for details see Chapter 4).

and research institutes.[19] After the rainy season was believed to be over in South-western Ethiopia, I began with the fieldwork.

3.2.2 Let's Roll: Entering the Field

A closer look has to be taken at the phase of entering the field, as it was a critical research period in which many far reaching decisions and arrangements had to be made in quite a short period of time under new, unpredictable and often strained circumstances. This is particularly the case as this research focuses on two case study villages only, and general research conditions 'in the field' were far from easy. Bureaucratic obstacles, cross-cultural and cross-language concerns went along with initial practical organisational problems.[20]

Before actually commencing field research, the village *iddir* chairman was requested to call a village meeting in which members of all households were invited. The intention was to introduce myself and the research team (consisting of interpreter/field assistant and driver), to explain the background, objective and structure of the research project, and to solicit their participation. In fact, only about half of the households were represented at the meeting, but rumours about the '*ferengi* that wants to ask about forest coffee' spread orally among the peasants. In the main, inhabitants of both villages and their local elites signalised willingness to take part in the study. Nevertheless, in Komba village, a dispute on whether allochthonous settlers should participate in the research or not arose during the meeting.[21]

3.3 Applied Research Techniques

As already indicated above, a set of different methods and techniques was applied in this research project. Their application was destined by the nature of the study, practicalities in the field, the sort of information wanted, and informants' attributes (e.g., villager/non-villager, member of the local elite).

The field research was structured in different field phases, each of them concerned with different aims and hence different research techniques were applied. Despite numerous overlappings, they can be subdivided into three phases: (*i*) preparative phase, (*ii*) quantitative phase, and (*iii*) qualitative phase.[22] In line with this methodological concept, applied methods, techniques and tools are illustrated subsequently.

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[19] During the peak of the rainy season, fieldwork in rural parts of South-western and Southern Ethiopia is practically impossible.

[20] Problems concerned questions such as, for example, where to sleep, what to eat and drink, where to get fuel from, or how to replace a broken car key.

[21] The issue whether allochthonous settlers are 'integral' members of the local society was critically debated within the village community during the whole field research process.

[22] Several qualitative phases were conducted in Komba village.

3.3.1 Preparative Phase: Review of Secondary Data

Before, during and after entering the field, search for and review of secondary data was undertaken in Ethiopia and Germany. Quality and quantity of available data vary significantly per topic. On the one hand, plenty of social scientific studies and project reports on development, livelihood, institutions and natural resource use in rural Ethiopia, written by researchers and development organisations of all kinds do exist. On the other hand, secondary data becomes scarce when it comes to forests resource use in Ethiopia, and nearly no secondary data have been produced concerning community-based forest resource management and traditional forest property rights in Ethiopia or on historical contexts in pre-*derg* times. Furthermore, there are also considerable differences between the two study sites. Whereas secondary data on Kaffa Zone and Bonga Forest are relatively rich[23], only little valuable secondary information is available on the Bale Zone and Harenna Forest.

The review of secondary data included studies and statistical information on agriculture and forestry compiled by governmental bodies of all kinds and levels. Although a considerable number of surveys have been carried out in this connection, results are often not made public and hence availability is difficult. An illustrative example is one survey conduced in the Yeyebitto *kebele*/Bonga Forest, the documented results of which are merely available in the form of one printout in the Amharic language accessible in the Bureau of Agriculture and Natural Resources Development of the SNNPRS in Awassa, which is two days' drive away from Yeyebitto *kebele*. Apart form the accessibility of statistical data, their reliability is a second critical issue (see Chapter 5.2.2.2).

Additionally, direct exchange of primary and secondary data between different CoCE subprojects has been an important source of information. This applied especially to the Bonga Forest, in which the fieldwork of four out of six subprojects was carried out. Research studies and project reports of Ethiopian and German CoCE partners, EIAR, GTZ, and Farm Africa among others, provided a considerable source of data, too.

3.3.2 Quantitative Phase: Complete Household Census with Qualitative Elements

The quantitative field phase was dominated by a complete household census on a survey base in each of the case study villages. Thereby, basic demographic, social, economic and agricultural information from the forest resource user households were assessed in order to understand the role that forest resource use, management and conservation play for the peoples' livelihood and to identify group-internal heterogeneities. The scope went beyond

[23] Some delineate Kaffa Zone and Bonga Forest to be an 'over-researched' area.

numerous socio-economic surveys conducted on behalf of the Ethiopian government, which exhibit a thematic bias towards agriculture, with a tendency to be outdated and unreliable to some extent, and in addition, difficult to obtain from governmental bodies.

The census was undertaken face-to-face by a small research team consisting of an interpreter/field assistant and myself. The use of this technique at this early stage of the field research was not only justified by the need to collect quantitative data on the communities but to simultaneously apply and prepare other research techniques. It allowed us to walk around the community independently, to observe and partly participate in the villagers' daily lives, to meet and greet most of them at least once, and to place GPS markers. No less important, the other way around, it was a time for the community to get used to the research team being among and talking to them. Therefore, the technique of conducting a complete census face-to-face without the employment of enumerators should not be characterised as purely quantitative, but as a technique that combines a quantitative technique with benefits derived from qualitative ones.

Another reason to conduct the qualitative census 'on my own' was the omission of enumerators. It is highly challenging to find capable people in the concerned areas who have a certain scientific understanding, are fluent in English as well as the language locally spoken (Oromiffa or Kafficho), and trustworthy and accepted by the informants to be interviewed. Even when enumerators with these attributes are available, as well as able and willing to work full time on the project, the quality of collected data would be - as a matter of principle - less satisfactory than if the researcher collects the data 'on his own'.

Before starting the complete census, a pre-test was undertaken in order to test reasonability and intelligibility of questions in the specific context. During the pre-test, however, it became evident that some questions were misleading and the intention behind them was not understood by the respondents.[24] Hence the questionnaire was readjusted, questions withdrawn or reformulated.

The census was undertaken with the heads of the HH[25] using the tool of standardised questionnaires with a high proportion of open answer questions. All interviewees were asked the same standardised questions, but were encouraged to elucidate further on the topics, which gave the census a high qualitative character. When new unanticipated topics that seemed to be

[24] An illustrative example of a misunderstood question is concerned with the heterogeneity of forest coffee, in which the open answer "How many different types of coffee do you know in the forest?" was repeatedly answered with "Two: male and female".

[25] Due to absence or illness of the HHs, a few interviews were undertaken with their proxy persons, in the majority of cases their eldest son.

relevant were raised, the questionnaires' systematic approach was temporarily put aside and an open interview inserted, documented in writing on the back of the questionnaire.
The location for the census interviews was of particular importance. Environments that informants were used to were preferred to ones in which they might feel uncertain or observed by others. Therefore, most interviews were conducted in front, or - if the interviewee invited us to do so - inside his/her *tukul*[26], thus in an environment in which the informants were likely to feel comfortable and secure. Mean duration of the interviews was two hours, with significant deviations. Some households did not participate because of absence, illness, or - in Kangicho village - reluctance. Altogether, 44 HHs in Komba village/Bonga Forest and 27 HHs in Kangicho village/Harenna Forest were interviewed. Computer-based data coding was done each evening after the interviews.

One research obstacle in this regard was the fact that all members of the research team were male. Due to culturally defined gender boundaries, it was very difficult to integrate women in the research process, as women often only interact openly and freely with other women. This was particularly the case in the Islam dominated Kangicho village/Harenna Forest in which it was a great challenge to speak with one female head of a HH. In total, in the realm of the household census, we managed to interview two female HHs in Komba village, and one in Kangicho village. Nevertheless, the gender bias - not only in the household census but in the empirical data collection process as a whole - certainly constitutes a crucial bottleneck in this work, presenting the situation principally from a male point of view, and substantially neglecting women's sentiments and mind sets, as well as their cultural and social-economic background.

The complete census survey made it possible to gather plenty of valuable quantitative data but, despite the insertion of open questions and answers it is marred by several weaknesses - the problem of operationalisation among others - which have been intensively discussed in methodological literature, see Friedrichs (1980) for example. Hence, in order to portray a comprehensive picture of multidimensional and dynamic social relationships, actors' strategies and (informal) institutional networks, a number of in-depth qualitative research techniques were applied.

[26] *Tukuls* are the traditional straw covered round huts which are common homesteads all over South-western and Southern Ethiopia.

3.3.3 Qualitative Phase: Going into Depth with a Bundle of Techniques

In this research, the **'open interview' technique**, which is a central research technique in disciplines such as anthropology and political science, played a major role in the collection of primary data. Accordingly, in addition to the quantitative household survey in the case study villages, a large number of open expert interviews were conducted starting from the international to the national, regional, zonal, *woreda*, and local level. Experts were thereby understood as "people who have - starting from a specific knowledge that refers to a clearly defined sphere of problems - the ability to structure the concrete field of activities in a reasonable and practicable way" (Bogner and Menz 2002: 45). In regard to Bogners and Menz' three-piece classification of expert knowledge into technical knowledge, process knowledge and interpretation knowledge, specific research focus was put on the latter, which is defined as "subjective relevancies, rules, perceptions and interpretation of the experts" (Bogner and Menz 2002: 43).

A total number of 160 open interviews were conducted with key informants from May 2003 to March 2006 in several places in Ethiopia and Germany. The experts were either 'officials', working in international development agencies, environmentally concerned NGOs, executive as well as legislative governmental bodies, research organisations, faith-based organisations, coffee commerce and cooperative bodies, or local villagers with specific interpretation knowledge. A detailed list can be found in Appendix I.

The open interviews conducted were scheduled, in-depth, open-ended talks with a predefined list of topics. They were, however, not static and informants could answer in the way they wanted to, with "great freedom to express themselves using their own cultural constructs" (Bernard, Pelto et al. 1986: 384). This 'openness' minimised the control of the researcher on the informants' responses and hence promoted authenticity. Moreover, it implied the option of entire modification during the interview process. Relevant but unexpected issues were followed up with additional questioning or probing, which sometimes shifted the interviews focus into another direction than originally intended. Hence, this technique provided the best conditions for 'discovering' unanticipated information and coherences.

Many researchers use tape or mini-disk recorders to record their open interviews. I did not make use of these technical devices but took notes. Particularly in rural parts of Ethiopia, transmission of information is almost entirely orally, and all kinds of 'recording', whether with technical devices or pen and paper, is likely to be perceived as an 'official' procedure, which may provoke suspicion and hesitance from the informants. Hence, bringing along a recorder and asking for permission for its use is likely to distract the informant and to make

the interview situation more formal. Moreover, recorded interviews have to be transcribed for analysis, which takes a lot of time.
The duration of the open interviews varied tremendously within a range from half an hour up to three hours. Like the complete census survey, all interviews on the village and *kebele* level were conducted with the research team. Where informants were able and willing to discuss in English, mostly starting with experts on the *woreda* level, I conducted the interviews myself or jointly with other CoCE subproject staff. Similar to the census interviews, interview location was either in or around the informants' homesteads, or - if applicable - in his/her office.

Additionally to open interviews, **participatory observation** is a basic technique in ethnography and cultural anthropology. This "stalking culture in the wild" (Bernard 2002: 324) allows researchers not only to get close to people, but to build up confidence and 'normality' as well as a form of 'equity', and thereby enables the researcher to observe and record information in a situation that is not stipulated by him/herself. Using this technique, information can be gathered 'first hand' directly from where the action is.
In this work, participatory observation was applied as part of the mixed-methods approach, which combines active information gathering techniques and passive participatory observation, as put forward by Robert Aunger in his article "On ethnography - storytelling or science?" (1995). Nevertheless, the technique is not used as excessively as it is by ethnographers or cultural anthropologists, and I did not intend to 'go native' in the classical sense of anthropology (Suchman 2000: 2).
Experiencing everyday life in the case study villages, enjoying coffee, snacks and lunch together, shopping at the market where villagers sell their products are examples of participatory observation undertaken in this research. With regard to the PFM project, participatory observation was applied at different meetings and trainings. In December 2003, for example, I attended a one-week "Forestry Administration Plan Preparation Workshop" in which, inter alia, a "Forest Management Plan" was negotiated between governmental and community representatives. However, most important was the participation in forest resource utilisation, i.e. forest coffee harvesting sessions.

Transect walks through the villages concerned and the surrounding coffee forests accompanied by key informants (e.g., forest resources users, *iddir* chairmen) were conducted in order to obtain information about location, size, productivity and traditional use rights of

coffee forest areas and to validate previously acquired information. Walks lasted half an hour up to a day, often interspersed with talks with passers-by. This technique was perceived to be highly valuable in order to convey geographical impressions of daily forest resource use, e.g., how far people walk to gather forest resources, and which steep hills they climb and creeks they pass.

Visual communication techniques such as joint mapping have recently gained much attention in social science development research, particularly as a part of PRA methodology. A number of people identified as having special knowledge on concerned topics were invited to take part in group discussions. There, a map was sketched with marker pens on a poster. Methodically, 'the group holds the stick', i.e. after a basic introduction, the research team took a 'back seat' and merely encouraged the people - irrespective of their function within the group - to discuss what was drawn, and also to add something of their own (Mikkelsen 2000: 133).

Photo 1: Joint resource mapping in Kangicho village

Joint mapping was used as an in-detail technique in the qualitative phase in order to discuss and survey exact information particularly on forest resources and traditional property rights in Koma Forest and Kangicho Forest. There is rarely any written information on the

communities' history, and villagers do not associate past events with the years in which they happened. In order to obtain more information on changes in the natural, social, political or economic environment, the technique of visual timelines was applied. Key informants (especially elder people) were asked to sketch the occurrence and duration of important historical events on a time axis on which events that the informants remembered (e.g., downfall of the *derg*) were marked as reference points.

In **focus group discussions**[27], groups of people who are homogeneous with respect to a certain variable are recruited to jointly discuss particular topics. In this work, similar to open interviews and joint mapping, focus group discussion was applied for the collection of in-depth background information which could not be sufficiently addressed with other research techniques. Discussions were undertaken with three groups: forest resource users, *iddir* members, and cooperative members. The number of participants ranged between five and fifteen people; however, small groups were preferred. In some groups, discussions were lively whereas in others, people kept quiet or a 'loudmouth' led the discussion. I found it a very useful technique to discuss topics at the end of the qualitative field phase with a pool of particularly concerned and highly knowledgeable persons. Similar to open interviews, information derived from focus group discussion was documented in field notes.

3.3.4 Additional Research Tools: GPS, Photos, and Diary

Besides the research techniques mentioned above, three additional tools for gathering and recording information were applied.

No valuable map on a sufficient scale exists of the case study villages and the surrounding forests. Hence, in order to create own map material, GPS was used and relevant locations such as manmade constructions (*tukuls*, roads, paths), boundaries (e.g. between villages and forest plots) and natural phenomena (mountain peaks, ponds, creeks, forest coffee occurrence) were marked. Besides GPS-location, altitude in meters above sea level (meter asl) was recorded. Altitude accuracy ranged between 7.8 and 37.5 meters depending on weather conditions and denseness of forest canopy. A total of 140 GPS markers were taken in and around Komba village, and 50 in Kangicho village.

Photos were taken to document certain situations and events. People were always asked for permission before pictures were taken, and no photo was shot if any hesitancy was noticed. This tool was not applied as extensively as cameras are not common in rural Ethiopia and

[27] The focus group discussion research technique was basically developed by Paul Lazarsfeld and Robert Merton in 1941 at the Columbia University Office of Radio Research - to test radio programming (Lewis 1995).

people are not all used to being photographed. Hence, taking pictures made each situation more ‘official’ and less relaxed.

In addition to the field notes taken during actual fieldwork, a diary was kept. This research tool (known from ethnography), was used to document personal feelings and impressions that I found to be of sentimental value, e.g., extraordinarily funny, obscure or frightening things that happened in the field. This subjective and conclusive body of data was found to be a rich source, helping to portray insights from ‘behind the curtain’ of field research.

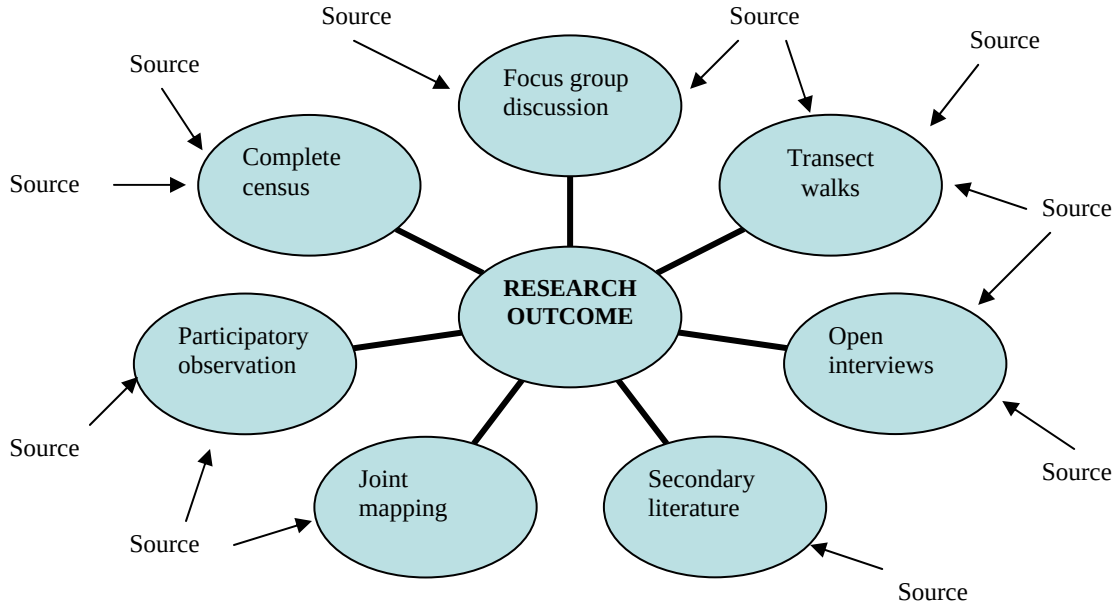
3.4 Confrontation of Techniques and Sources: Triangulation

This study follows a dialectic research approach, cross-examining the research problem from different perspectives. This is done by triangulation, an analytical concept first delineated by T. D. Jick in his article “Mixing qualitative and quantitative methods: triangulation in action.” (1979). Originally used in navigation, the term triangulation has been adopted as a metaphor for investigating aspects of a single research study with a variety of techniques from different sources, in order to maximise accuracy and completeness of the research. Today, triangulation has found its way into mainstream social science research, but is - based on Jicks’ work - for the most part associated with applying a mix of qualitative and quantitative research techniques (De Charnatony, Drury et al. 2002: 2). However, Flick (Flick 2004) argues that triangulation in research is open to embrace more levels than only mixing the applied techniques. In accordance to Patton (1990: 187), he defines four basic components of triangulation, namely:

1) Methodological triangulation (use of multiple methods and techniques)
2) Source triangulation (use of a variety of data sources in a study)
3) Investigator triangulation (use of several different researchers)
4) Theory triangulation (use of multiple theoretical perspectives to interpret a single set of data)

In this research, methodological and source triangulation was applied on the national, regional, and local level. The main motive was to gain access to different perspectives (knowledge, arguments, and activities) from different levels (basically national and local) about the research questions concerned. Figure 9 illustrates the applied triangulation concept.

Figure 9: Methodological and source triangulation applied in this research



own presentation based on Yin (1984)

In this way, the triangulation concept was particularly beneficial when information obtained from different sources was not only complementary but divergent (see Flick 2004), and where limitations and weaknesses of one method and technique were offset by the strength of another.

Due to the interdisciplinary subproject approach of CoCE, triangulation has also been undertaken between different study teams from different disciplines. For example, information on forest resource occurrence in a particular area of Bonga Forest collected with the technique of joint mapping was cross-examined with data gathered by means of a biological inventory compiled by ecologists.

3.5 Research Limitations: Major Threats to Data Quality

All research faces a number of limitations, which may challenge the fulfilment of most central criteria of positivist science, which are reflexivity, reliability, replicability and representativeness (Auger 1995: 10). A major limitation frequently encountered in social science development research concerns the primary data collected in the field. Research outcomes are as good as the data collected, and the use of ‘bad’ data sets can seriously challenge validity and accuracy of research. During fieldwork, two major threads to quality of primary data became apparent, namely difficulties related to cross-language research and to informants providing invalid information, intentionally or not.

3.5.1 The Challenge of Cross-Language Research

Ethiopia is a nation in which more than 60 languages are spoken, and English or French is virtually absent in the rural areas. Therefore, the field research met serious language obstacles. Language boundaries often not only existed between the researcher and the informant, but among different researchers, interpreters, and informants. There is, however, only little detailed literature concerning the effects of conducting research in multi-language situations (see Esposito (2001) and Temple and Edwards (2002) as exceptions).

Language is identity. It carries particular meanings whose interpretation requires experience that 'outsiders' do not have at all or only to a certain degree. Each language has a particular reality, which does not necessarily have its equivalent in the language in which it is interpreted. Therefore, language includes some people and excludes others from a common understanding, hence it is not a neutral medium (Temple and Edwards 2002: 3).

There are two approaches to cross-language research, which in practice often go together: using interpreters and learning a language. Unquestionably, the latter is preferable, but in this field research, learning the language spoken by informants was limited by two factors.

Firstly, the work schedule did not allow much time for the acquisition of language skills. I was able to attend a beginner's Amharic[28] language course in Germany and two more intensive ones in Addis Ababa, in which I gained basic conversational skills, although not sufficient to conduct field research without an interpreter. Secondly, it became apparent on the explorative field trip that Amharic is rarely spoken in the case study villages, and village informants preferred to be interviewed in Kafficho and Oromiffa.

Due to these constraints, fieldwork was primarily based on interpretation, which of course involved numerous difficulties and obstacles especially when applying a high proportion of quantitative research techniques that acknowledge the importance of reflexivity and context. The literature on these issues can be summed up in the statement that use of translators is always a potential threat to accuracy and validity and that "there is no correct translation and […] the translator is like Aladdin in the enchanted vaults: spoiled for choice" (Bassnet (1994) in Temple and Edwards (2002: 1)).

3.5.2 Obstacles Concerning the Validity of given Information

Information reliability does not only depend on the research methods and techniques or the skills of the research team, but on the individual informants. In theory, the 'ideal' informant is highly knowledgeable, highly articulate, always available, reflective, and - of greatest

[28] Amharic (Amarinya or Amharinya) is a Semitic language originated in the central highlands of Ethiopia. It was the official language of the country from beginning of the Ethiopian Empire until 1991 and continues to be the *lingua franca* of the country.

importance - trustworthy.[29] (Bernard 2002: 187). Nevertheless, in reality, informants are humans that - by nature - act with caution, are subjective and forgetful. These characteristics critically determine the reliability of information given by informants to researchers. This is a critical issue, as information might be 'true' for one informant, 'false' for another, and 'neither true nor false' for the third, and even when informants are convinced that they are telling the absolute truth, this need not necessarily be the case. However, it is important that the answers given are not labelled as 'right' or 'wrong', but that the researcher interprets the information in an adequate way (Manning 1966).[30]

One important reason why informants provide information with different reliability is the selective and forgetful human memory. Psychology elucidates that some things are easier to remember than others, e.g., bad experiences are memorised better than good ones. In this concern, Sudman and Bradburn (in Bernard 2002) distinguish two types of forgetting: simply forgetting and forward telescoping, e.g., reporting that something happened a month ago when it in fact happened two months ago. Both types of forgetting were experienced during the field research, but the latter had a more negative effect on information validity.

Empirical research in social science has to tackle not only the problem that informants unintentionally present information with low reliability, but also the problem that they do it intentionally. In practice, informants are often 'truth tellers' and 'accomplished liars' at the same time, and background motives for intentionally providing information with low reliability are nearly impossible to differentiate (Bernard 2002: 191). During the field study, four reasons for consciously reducing reliability of information provided could be identified:

- Informants tried to give the answers they thought the researchers wanted to hear.
- Informants tried to conceal illegal activities.
- Informants tried to get personal or collective benefits.
- Informants mistrusted the researchers or the official bodies though to be 'behind' them.

[29] Bernard (2002) notes the interesting view derived from his own anthropological fieldwork, that best informants are people who are cynical about their own culture.

[30] Manning states that „The respondent never lies – accurate interpretation of what he says depends on the skill of the analyst" (Manning 1966).

Informants usually have a definite idea of the reason for the research, hence what the underlying intention is. Once informants agree to take part in a survey, group discussion or transect walk, they have a personal stake in the process, which may make them want to 'do it right', and to adjust their actions and words in this direction. What is considered 'right' naturally varies according to how the researcher and the research project are perceived.
The fact that informants may try to obtain personal or collective benefits has already been discussed in Chapter 3. When research concerns a topic that is elementary for the informants' livelihood (such as the forest resources), or when informants urgently seek additional income (which does not necessarily have to be in line with their degree of poverty), validity of information may deteriorate. Both circumstances were encountered in the research areas concerned. There is evidence that some peasants concealed and/or downgraded their actual standard of living in order to portray themselves (or the villages as a whole) as in greater need of external help.

However, these issues are only one side of the coin. The other concerns the fact that the relationship between local forest resource user communities and governmental bodies is to a large extent defined by mistrust, illegality and conflict, which is historically explainable. Until the present, all Ethiopian regimes, followed - to a greater or lesser extent - an authoritarian top-down policy approach, including low constitutional legality, and rigorous, sometimes violent enforcement of development programmes unpopular with the rural population (e.g., resettlement and villagization). As one would expect, this had negative impacts on the relationship between local population and governmental institutions.
As mentioned above, this research project could only be implemented by approaching the case study villages through 'official channels', hence by asking for official letters from governmental authorities on various levels and by introduction to the village population by the *kebele* chairman. Furthermore, the only interpreter/field assistants eligible were agricultural extension workers from zone and *woreda* governmental bodies. Some villagers also noted the fact that the project vehicle had state car plates. In short, at the beginning of the fieldwork, it was nearly impossible to explain to informants that the research project was NOT a governmental monitoring and enforcement initiative. The validity of information given by village informants was, of course, not always satisfactory under these conditions.

Many of the villagers' daily activities, particularly those related to forest resource utilisation, are *de jure* defined unlawful by state bodies. In the delicate research situation depicted above,

informants tried to conceal activities that they knew to be illegal, which was - of course - a great motive for hiding information. This especially applied to Harenna Forest/Bale Zone where some forest user communities defied the resettlement ordered by the *woreda* administration.

This created a major obstacle to availability, accuracy and reliability of data, particularly in the quantitative phase at the beginning of the field research, and some data gathered were later found to have low reliability. When research techniques became more sensitive and confidential, the accuracy and validity of data gathered also increased substantially. This went along with a more trusting and confident field research atmosphere in which villagers became better acquainted with the research team and learned more about the background and aims of the research project. At the end of the field research, after conducting six field phases in Komba village and three in Kangicho village within the time span of one and a half years, the reliability of the information given was considerably higher than at the beginning.

The different field research phases on the village level were conducted from May 2003 to December 2004. This long period entails that the situations investigated changed during the research process, and that in many cases findings present rather a system in flux than merely a snapshot on a historical window.

3.6 Conclusions

All field research, even the very presence of a researcher in the field has an interventional character, which implies the ethical dilemma of 'the intention is honourable, but in practice, the researcher is the bull in the china shop'. Even when the researcher is aware of this problem, he or she becomes a component of what he or she intends to investigate, raises expectations in the researched communities, and faces practical problems such as whether to pay the informants. This is particularly critical when *ferengi*s carry out qualitative research in LDCs, as was the case in this field research.

Although there is no ultimate solution to that dilemma, critical and self-reflexive contemplation is imperative, and practical field research should be adjusted to minimise negative implications, also to prevent 'spoiling' the field for further research.

In order to conduct empirical development research on complex issues beyond a single discipline, pluralism in methods and techniques as well as high flexibility were required and applied in this fieldwork. However, there was a certain need to adapt the research approach and to limit expectations on data availability and validity according to the circumstances found in the field. Most critical in this regard are accuracy and validity of data caused by language barriers as well as by informants that - intentionally or not - provided invalid

information. This is for the most part explainable by a historically strained relationship between communities and government and the research topic ‘forest resource use’, which is legally, politically and economically highly delicate.

4 Ethiopian Coffee Forests from a Broader Perspective

This research work is designed as an in-depth local level analysis of the three determinants coffee forests, people and institutions in two selected case studies. Nevertheless, before elaborating on these concerns and plunging into investigation and comparison of the concrete situations on site, it is imperative to step back a little and review particular aspects of the overall context from a broader perspective. In that regard, this chapter provides the background information that helps to put the subject matter investigated into the right perspective and to fully comprehend the following context.

However, not all superordinate subjects that concern the broad and complex field of coffee forests, people and institutions in Ethiopia can and need to be discussed in this connection. This chapter thus focuses on the most important features: 'coffee', which is the flagship forest resource in this study, and 'state governance on land and forests', hence the overall 'formal' institutional background. These two features are extensively discussed in Chapter 4.1, 4.2, and 4.3. In Chapter 4.4, the phenomenon of Non-governmental Organisations (NGO) in Ethiopia is addressed in brief, since a NGO was found to provide another institutional cluster with relevance for use, management and conservation of forest resources in the Koma Forest study area.

The subject-matters of this chapter are discussed in a holistic manner, illuminating different concerns on different structural levels from different perspectives within different scientific disciplines. By this means, ecological, geographical, historical, political, economic matters of the resource coffee are taken up. The initial focus is on the Ethiopian coffee forests as the center of diversity of *Coffea arabica*, on coffee consumption and its role in Ethiopian culture, economy and trade, questions of coffee quality and genetic diversity, and finally, the different production systems in which coffee is utilised in Ethiopia.

4.1 Coffee: The Flagship Forest Resource

Ethiopia is not just another coffee growing country. The relationship between the Ethiopians and 'their' coffee is deep-rooted and multifaceted, and coffee production and consumption are closely intertwined with Ethiopian history, culture and economy. Coffee has been cultivated, picked, processed, traded, and consumed over centuries, and still plays a significant role in the daily life of most Ethiopians and - on the macro level - for the state of Ethiopia as a whole.

4.1.1 From Abessiniya to the World: The Cradle of *Coffea Arabica*

The highland forests of Abyssinia (present-day Ethiopia) are the cradle of *Coffea arabica,* which is today's most popular coffee species in the world.[31] The accurate 'birthplace', hence the exact area from which the *Coffea arabica* gene pool started its expansion, and the way people begun to utilise and disseminate coffee has not yet been scientifically proven.[32]
Nevertheless, legends exist in Ethiopia that explain the 'discovery' of coffee and set the place of its origin. The most complete and appealing legend which nicely portrays how coffee utilisation was discovered is 'Kaldi and the dancing goats'.[33] The Kaldi narrative locates the place of coffee origin in the Kaffa region, an area now mostly under Kaffa Zone/SNNPRS administration.

Kaldi and the Dancing Goats

Once upon a time, the young goat herder Kaldi from a little village far, far away in the Kaffa region of Ethiopia recognised that his goats grazed on certain berries and thereafter became more troublesome than usual. Kaldi tried the berries himself and experienced the same effect. He told a monk from a neighbouring monastery, who then also tried the berries, and to his astonishment, found them helpful to keep him awake during his night prayers. Thereafter, the habit of coffee chewing was soon taken over by other monks in other monasteries.

According to the legend, the etymological origin of coffee and its miscellaneous variants in different tongues - Kaffee (German), Koffie (Dutch), café (French, Portuguese), caffè (Italian), Καφές (Greek), Кофеий (Russian), コーヒー (Japanese), etc. - can be traced back to 'Kaffa', its place of origin. Paradoxically, though, most languages of Ethiopia use the idiom *bunna* to express coffee; merely in the Sidama language is coffee named *tukke* (Anbassa Enterprises n.d.).
After coffee had been 'discovered' and become integral part as a stimulant in ceremonies of the Ethiopian orthodox church, it found its way into ordinary peoples' food habits. Ancient

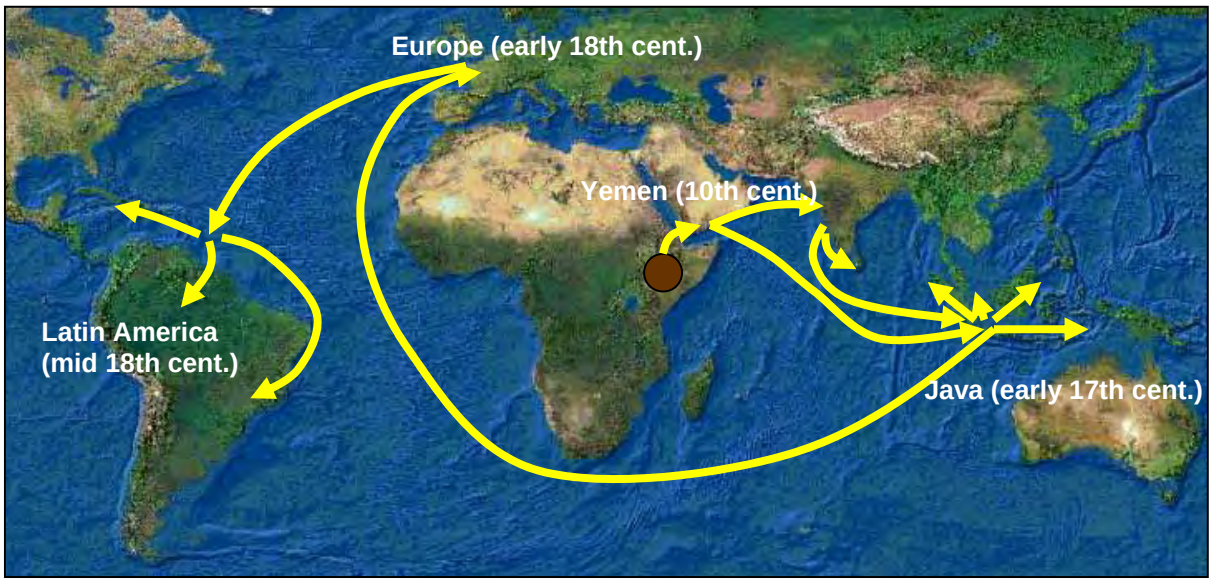
[31] *Coffea* is the major genus of the *Rubiaceae* family, which has over 6,000 species worldwide. However, only 25 of the worldwide known coffee species are marketed, and only four are presently regarded as economically important: *Coffea arabica*, *Coffea robusta*, *Coffea liberica*, and *Coffea excelsa*. Out of them, only *Coffea arabica*, the higher quality highland species studied here, and *Coffea robusta*, the lower quality lowland coffee (originating from present-day Angola and nowadays dominating coffee production in Brazil, Vietnam and West African costal states inter alia) rule the world coffee market. In the following, if not mentioned otherwise, the term coffee refers to *Coffea arabica*.
[32] CoCE subproject 2 is currently studying the extent and distribution of genetic diversity in Ethiopian coffee forests with the objective to clarify the origin of *Coffea arabica* gene-pool. Results are pending.
[33] The legend is nicely illustrated in the book "Kaldi and the Dancing Goats. The Legend of Ethiopian Coffee" (Mdahoma and Nordberg 2003).

Ethiopians mixed roasted and ground coffee with butter and made balls to be eaten during the working day. At that time, coffee plants were not managed in any way, and coffee berries were simply collected from naturally growing plants in the forests (Yernana-Berhan). Several centuries passed until *Coffea arabica* was more intensively used and consumed throughout Ethiopia and before it started its triumphal tour around the world. Spreading was not easy, since coffee seeds do not stay viable for a long time (Gole, Denich et al. 2002: 237). Around 1000 AD, enterprising traders brought coffee seedlings from the Abyssinian highland into South-western Arabia (modern-day Yemen) and Moslem monks started garden cultivating and developing the habit of consuming coffee as a beverage (Gole, Denich et al. 2002: 238).

By the XIIIth century, coffee was already consumed for stimulative, medicinal and religious purposes on the whole Arabian peninsula, in Egypt, Persia and Syria and, due to Muslim expansion in the following centuries, found its way into North Africa, Spain and Turkey. In 1475, the first coffee house was opened in Constantinople. When Venetian traders shipped coffee beans from Arabia to Christian Europe in the XVIIth century, it acquired its scientific latin name *Coffea arabica*. Coffee consumption soon became popular with the nobility in Christian Europe, but coffee production was still limited to the highlands of Abyssinia and South-western Arabia, and trade was still dominated by the Arabs.

In 1616, Dutch traders succeeded in breaking the Arab monopoly on coffee cultivation by smuggling coffee plants (some sources say it was only one plant) out of Yemen and starting coffee cultivation in their South and South-east Asian colonies. Soon after, the first plantations of *Coffea arabica* grew in the suitable climate of Ceylon (modern-day Sri Lanka) and on the Indonesian archipelago. Later, coffee plants were taken to Amsterdam, from there to Paris and as late as in 1730, a French naval officer shipped three coffee seedlings to the island of Martinique in the Caribbean from where *Coffea arabica* found its way to the American continent (Gole, Denich et al. 2002: 238). The geographical dissemination of *Coffea arabica* cultivation over time is skizzed in Figure 10.

Figure 10: Worldwide dissemination of *Coffea arabica* cultivation



Recapitulating, it can be stated that the worldwide successful dissemination of *Coffea arabica* utilisation is a consequence of the plant's ecological adaptability and human activities such as trading and colonialisation. Nevertheless, it has become clear that today's worldwide production of *Coffea arabica* can be traced back to very few coffee plants from the mountainous moist forests in South-western Ethiopia, and hence is based on a small genetic base.

4.1.2 More than Consumption: Coffee as a Cultural Heritage in Ethiopia

Ethiopians are unshakable coffee drinkers. Coffee consumption goes across all dividing lines within society, and whether male or female, rich or poor, Amhara, Oromo or Kaffa, youngster or senior, whether in downtown Addis Ababa or remote rural villages, having a cup of coffee is ubiquitous in Ethiopia. Occasionally, even animals come to know the true promise of coffee.[34] Beyond being a beverage for everyday consumption, coffee in Ethiopia is still consumed as a food and a medicine, and serves the purpose of a stimulant for long religious services, both by Christians and Muslims.

Today, approximately 53 percent of the country's coffee production is consumed domestically, and many people cultivate coffee only for home consumption (Mayne and Tola 2002: 2). The national annual usage is three kg per capita, which is the highest in Africa and in the upper middle range of the European coffee drinking nations (CTA n.d.). However, in

[34] While conducting interviews in Komba village/Bonga Forest, at noon a resident poured some coffee on the meadow adjacent to her *tukul*, to provide coffee for the cows. It was fascinating to observe how the animals were accustomed to the feeding time and enjoyed nibbling the coffee-soaked grass.

Ethiopia coffee is much more than a drink. It is an integral part of Ethiopian tradition, passed from generation to generation and inevitably mingled with what represents common Ethiopian culture beyond all ethnical, religious and linguistic boundaries.[35] There are, for instance, exact specifications of how to percolate coffee, how and where to drink it, and at which time of the day.[36] Ethiopian coffee culture peaks in the coffee ceremony, which is highly spiritualised and follows a predefined workflow. Each *ferengi* who stays in Ethiopia for more than a few days is likely to partake in a coffee ceremony, whether in the foyer of the Hilton Hotel in Addis Ababa or in a poor peasant's *tukul* in a remote rural area.

The Ethiopian Coffee Ceremony

The coffee ceremony is a particular feature of Ethiopian culture, with high religious symbolism. The hostess (mostly the woman of the family) sits on a tiny wooden stool in front of a charcoal stove. Often, lush grass is scattered on the ground and incense wafts around the room. The hostess roasts a handful of dried coffee beans, grinds them with a pestle and mortar and finally brews the coffee in a small clay coffee pot. The scalding coffee is served with sugar (in parts of Kaffa region, a dash of salt is added instead) in little cups, which are 'Made in China'. Normally, coffee is refilled two or three times, the third cup is considered to be the best. Additional snacks (peanuts, fried sweet corn, or popcorn) are frequently provided. The whole procedure may last up to one hour.

4.1.3 Big Business: Coffee as Nucleus of the Ethiopian Economy and a worldwide traded Commodity

Ethiopia's economy thrives on coffee. Beyond its importance as a consumer good and as an imperative feature of Ethiopian tradition and culture, coffee is no less than the nucleus of the country's economy. Around 400,000 tonnes of coffee are annually produced in Ethiopia, both for own (private) consumption as well as for sale. The total land under coffee cultivation is difficult to pinpoint, mainly due to the fragmented nature of coffee production (see Chapter 4.1.6) with a high degree of extensive and intercropping practices. However, conservative estimates put the figure at 321,000 ha (Yernana-Berhan).

Coffee is the single most important cash crop of Ethiopia, and entire branches of industries and services are linked with transportation, trade, processing and exportation of this

[35] The sour bread *injera*, an omnipresent staple food, might be a similar symbol of common Ethiopian food culture.

[36] Unlike the European habit to have coffee all day long except for the evening, in Ethiopia, coffee consumption is bound to explicit coffee times, which are immediate after breakfast, lunch and dinner.

commodity. On the whole, an estimated 1.2 million Ethiopians depend directly and approximately 15 million indirectly on coffee for their livelihoods, which stands for about 25 percent of the country's total population (EEA 2000). Nonetheless, these statistics are merely ball park figures, as much small-scale coffee utilisation does not show up in official statistics and an unknown amount of coffee is traded illegally, some of it ending up on neighbouring countries' black markets.

Coffee has always been Ethiopia's most important export commodity. Officially, 200,000 tonnes were sold abroad in 2004, worth approximately US$ 100 million. The export of this single commodity accounts for about 60 percent of the country's total foreign currency income, 20 percent of the governmental revenue, and four to five percent of the Gross Domestic Product (GDP) (Gole, Denich et al. 2002: 3). Most Ethiopian coffee is exported to Germany (28.7 percent of the total export volume in 2001), Japan (21.6 percent), Saudi Arabia (13.6 percent) and the US (8.4 percent) (Mayne and Tola 2002: 7).

On a global scale, coffee is the most widely traded commodity next to oil, accounting for trade worth around US$ 6.3 billion in 2003/04 (ITC 2002). It is produced in some 60 countries worldwide and constitutes the most important source of foreign currency for many African LDCs (ITC 2002). However, the bulk of coffee is produced in the larger emerging nations on the American continent, and, in international comparison, Ethiopia's coffee figures look much less impressive than it appears above. Worldwide, Ethiopia's coffee production volume ranks seventh, its export volume ninth, with a definite trend to fall behind (Klingele 1998: 6; Agrisystems Ltd 2000: Annex 17, 3).

Ethiopia's massive economic dependency on coffee exports is extremely problematic. Firstly, production fluctuates widely due to weather conditions, pests and plant diseases, as well as to the seasonal feature of the plant itself. Secondly, Ethiopia's reliance on the export of one single agricultural product makes the country highly vulnerable to the world coffee market price, which is erratic and tends to fall rather then to rise in terms of trade. In the 1990s, prices dropped dramatically, and in 2002 they plunged to a 30-years low, a decline of more than 70 percent in five years alone (Mayne and Tola 2002: 2). The nose-diving prices cost Ethiopia dearly, and the country lost about US$ 830 million of export revenue in five years (CTA).

The plunge in world market coffee prices can be traced back to changes in international supply and demand. On the one hand, the breakdown of the quota system of the International

Coffee Organization (ICO) in 1989[37] and the emergence of new producers such as Vietnam[38] have lead to massive oversupply (Bates 1998). On the other, consumption in major coffee purchasing countries (such as Germany) has reached a saturation point and worldwide demand is stagnating in spite of new markets, particularly in Asia. Between 1998 and 2000, for example, world coffee production increased by 11 percent while consumption fell by 0.4 percent in the same period of time (Agrisystems Ltd 2000: Annex 17, 3-6).

In 2004/05, however, the world coffee market experienced an upward correction in prices, particularly in the case of high-quality *Coffea arabica*. Whether this is a temporary market fluctuation or a long-term trend reversal remains unclear. Nevertheless, Ethiopia's share of the world coffee market is far too insignificant to have a stake in price change and thus, the country is condemned to watch world market arrangements of the 'big players' (e.g., Brazil and the US as the world largest coffee exporter and importer, respectively) as a 'dependent spectator'.

4.1.4 Coffee is not Coffee: Questions on Quality

Many natural and anthropogenic factors contribute to the quality of coffee. Natural factors include genetics of coffee plants, geographical characteristics of the growing area (altitude, duration and severity of rainfall, type of soil, pH-value etc.) and occurrence of pests and plant diseases. Anthropogenic factors comprise managing and harvesting methods and timing, use of fertilisers and pesticides, and type and duration of processing and storage.

Ethiopia is worldwide the coffee producing country with the highest diversity in terms of genetic variety and ecological settings. In other major coffee producing countries, such as Brazil or Kenya, a relative number of cultivars showing particular 'positive' attributes, such as good yield, have been selected over decades, which have led to great homogeneity of cultivars (Agrisystems Ltd 2000: Annex 17, 18). In Ethiopia, no significant selection process took place and thus, the heterogeneity of Ethiopian coffee varieties is unique in the world. There is a vast range of inherent attributes of which some are uniquely distinctive. This implies great differences in flavour profiles 'in the cup' between different regions as well as between different production systems (see Chapter 4.1.6). Hararghe coffee, for example, is

[37] Prior to 1989, the ICO, of which Ethiopia is a member state, controlled a quota system in order to stabilise world market coffee prices. Following the suspension of the system, production boomed and prices dropped.

[38] At the end of the 1990s, Vietnam became the world's second largest coffee exporter growing large quantities of *Coffea robusta* on highly mechanised plantations. In this regard, the country has been charged with driving down the coffee world prices by flooding the market with inferior commodities (World Information Transfer 2005).

considered an excellent premium coffee with balanced complexity, whereas Sidamo is more sweet and round, and Yirgacheffe contains a profoundly high note of acidity (Guzmán n.d.).

Another difference concerns the processing techniques. Washed coffee that is fermented is considered by wholesale buyers to be the cleanest and most desirable and obtains higher prices than sun-dried and unwashed coffee. Washed coffee, however, requires a highly selective picking process, a short interval between harvest and processing, and a sufficient number of on-site washing stations. Ethiopia traditionally produces sun-dried unwashed coffee, whereas washing is common on a worldwide scale. Although the country is trying to expand the washed coffee technique, nearly 80 percent of the exported coffee is sun-dried and unwashed (Mayne and Tola 2002: 5).

By and large, traders that sell Ethiopian coffee overseas have mixed judgments about the quality of Ethiopian coffee as a whole. On the one hand, they make out some Ethiopian coffee varieties to be among the finest, most flavourful in the world. On the other hand, inadequate and inappropriate cultivation, harvesting and processing techniques that lead to unsteadiness and defectives in quality and quantity are repeatedly criticised. According to Guzman (n.d.: 2), Ethiopian coffee has a worldwide reputation among coffee importers to be 'inconsistent in the cup'. Coffee experts, scientists and development workers repeatedly argue that, with regard to plunging world market coffee prices, Ethiopia's future on the world coffee market may head away from standardised and mediocre coffee towards fine, distinctive unique gourmet and organic coffee (Mayne and Tola 2002; Guzmán n.d.: Annex 17, 18). Although, specialty and organically certified coffee currently accounts for not more than 10 or perhaps 15 percent of the world market, in the long run, shares are anticipated to increase considerably in the most important consumer countries (Guzmán n.d.: 66). The coffee produced in the investigated forests areas exemplifies these considerations and hence provides the potential of coffee to be marketed in the first instance as a quality product rather than in mass quantities.

4.1.5 Genetic Diversity and Significance of the Ethiopian Coffee Gene Pool

As already stated above, Ethiopia is the home country of the *Coffea arabica* gene pool. At the same time, Ethiopia is the country with the highest genetic variability of *Coffea arabica*, which is for the most part found in-situ in the remaining coffee forest areas of South-western and Southern Ethiopia and as cultivated land races in home gardens in these regions (Gole, Denich et al. 2002: 239). Between 1966 and 1984 alone, more than 600 coffee species were collected and documented by the Ethiopian National Coffee Collection Programme. Since

then, many more species have been discovered, but the full extent of genetic variability of Ethiopian *Coffea arabica* is still unknown (Gole, Denich et al. 2002: 239).

In the context of the worldwide expansion of *Coffea Arabica* (see
Figure 10), only few coffee plants were transported around the world and taken to breed whole coffee populations. Hence, the genetic variability of *Coffea arabica* is decidedly low in most coffee producing countries, which presents a rising concern. Different coffee species perform differently with regard to pests, diseases or droughts, and homogenous coffee populations are more vulnerable to natural calamities than heterogeneous ones. For example, vast *Coffea arabica* plantations set up by the Dutch on the island of Ceylon were irretrievably destroyed by coffee leaf rust (CLR) in 1869, which forced the producers to abandon coffee production and shift to tea (Teketay 1999). CLR is endemic to Ethiopia, but destructive effects are negligible, as coffee plants are widely resistant to this disease. Even the outbreak of the Coffee Berry Disease (CBD) in 1971 could not seriously affect Ethiopian coffee production. These examples demonstrate that the genetic diversity of Ethiopia's coffee is high and has considerable potential to relatively well resist diseases and pests that have far more destructive effects elsewhere (Teketay 1999).

Since the worldwide demand for high yielding, disease- and drought-resistant coffee varieties is increasing, the Ethiopian *Coffea arabica* germplasm has high potential to play an important future role for the world coffee industry as a whole. This particularly underlines the importance of Ethiopian forest coffee populations as genetic resources for present and future breeding (Abebaw and Virchow 2003: 4).

Another positive characteristic of Ethiopian coffee is that it is by and large organically produced. This is in contrast to most other coffee producing countries in which pesticides and herbicides are necessarily required for production ("*Kenya can not grow coffee without chemicals.*" 5/8/2004: Tadesse Meskala; Oromiya Coffee Farmers Cooperative Union). Worldwide demand for organically produced coffee is expected to boom in the near future, making up a potential market for Ethiopian coffee. The coffee growing in the Koma Forest and Harenna Forest areas constitutes two biodiversity 'hot spots' of worldwide uniqueness, which makes it exceptionally worthwhile to take action for its conservation and sustainable use.

4.1.6 How does the Coffee Grow? Today's Coffee Production Systems

In Ethiopia, coffee is cultivated in four production systems, which are determined by specific ecological, historical, political, and socio-economic factors: forest coffee, semi-forest coffee, garden coffee and plantation coffee (Gole, Denich et al. 2002). Each system represents a different management intensity, with a gradual intensification in management from forest coffee to plantation coffee. In the following, the four systems are briefly depicted:

Forest coffee is a production system in which coffee that grows naturally under the full coverage of a primary forest canopy is utilised by people living in or adjacent to these forests. It is the most extensive production system with very low labour and cash input, and accordingly relatively low yields. The estimated overall amount of coffee produced in this system ranges from 6 to 10 percent of the total Ethiopian coffee production (Abebaw and Virchow 2003: 4).

Semi-forest coffee is a more intensive production system in which peasants thin the forest undergrowth and canopy to obtain a balance between sunlight and shade that is more rewarding in terms of coffee productivity. Similar to forest coffee, coffee plants grow naturally but seedlings are replanted and pruned in order to increase yield. This systems accounts for an estimated 20 to 35 percent of Ethiopia's coffee production (Teketay 1999).

Garden coffee is a mixed cultivation system in which coffee plants are planted in the vicinity of the peasants' *tukuls*, mostly interspersed with other crops, such as maize or fruit trees (e.g. avocado, papaya, banana). Garden coffee is agronomically organic, merely fertilised with composted organic waste. It represents the most important coffee production system in terms of total production and contributes with about 50 to 70 percent to the total harvest in Ethiopia (Teketay 1999).

Plantation coffee is the most intensive production system in which high yielding coffee varieties (HYVs) are planted with appropriate spacing, mulching, manuring, weeding, shade regulation and pruning. This is the only coffee production system in Ethiopia which is known to use chemical fertilisers, pesticides and herbicides. Worldwide, the coffee plantation production system is the most dominant production system in the majority of coffee producing countries. In Ethiopia, however, plantations are rare and account for less than 10 percent of the total harvest. They are either owned by the state or by private entrepreneurs.

Taking up Werner Dopplers' classification of agricultural operation systems in the tropics and sub-tropics (1991), coffee production in Ethiopia is predominantly market oriented with characteristics of subsistence-oriented systems, which are according to Doppler: a) low partition between the farm enterprise, household and family, b) risk reduction behaviour, c)

adjustment of the production to the prevailing natural conditions, d) low technical but high labour input, e) low productivity, f) dominance of household workforces, and f) diversified production (Doppler 1991: 27, 28).
Nevertheless, it is difficult to make a clear distinction between the above listed coffee production systems, as coffee production is fragmented and different systems may exist together. For example, forest coffee, semi-forest coffee and garden coffee systems may be found together on one hectare of land. In addition, households that engage in coffee production are often involved in more than one production system. For instance, a peasant may seasonally work as a day labourer at a coffee plantation, cultivate garden coffee in order to sell it on the local market and harvest coffee from the nearby forest for own consumption. In the fieldwork in this research project, a separate examination of forest coffee and semi-forest coffee was not practicable, since local peasants perceive both as *chacka bunna* (amh.), the 'coffee from the forest' (Chapter 5.2.3.1.2). Accordingly, in this work, both production systems are subsumed under the term 'forest coffee'. Garden coffee and plantation coffee, however, are reviewed independently.

Coffee production systems change over time. The aforementioned peasant may expand his work on the coffee plantation, but reduce coffee gardening activities, or stop picking forest coffee when market prices go down. Generally, evolution follows the development of the agricultural sector, resulting in a trend towards intensification. This implies a combined process of coffee domestication and forest thinning, resulting in transformation of primary forests in which coffee grows sparse to coffee plantations under shade. Nonetheless, it is important to note that dynamics in coffee production systems do not always pursue a straightforward linear process from forest coffee extraction towards plantation production and external factors - such as a decline in coffee prices or state interference - may halt or even reverse this development (Philippe n.d.: iv).

After elaborating on issues concerning coffee as a natural resource in its own right, light is shed on the relevant state-initiated overall institutional framework. Thereby, two subthemes are focused on, namely the Ethiopian land tenure and property rights system, and the country's forest management and conservation legislation and policies. The subsections are structured chronologically and focus in detail on the historical background.

4.2 Land Tenure and Property Rights: Feudal Serfdom, 'Land to the Tiller' and Beyond

Land tenure and property rights are the critical crosscutting issue in the agrarian dominated society of Ethiopia. The need to address land rights in this work stems from the fact that they strongly influence forest resource use, management and conservation, as well as the forest user livelihoods gained from agricultural activities. Whether forest land is property of the state, of an individual, a group of individuals or a combination of this features, and whether tenure and property rights are *de facto* or actually executed are highly relevant concerns in this regard. However, not only the present situation but the historical development are relevant, as land tenure and property rights are highly path dependent in the way that historical developments impact on the present situation and future prospects. Hence, the background of land tenure and property rights in Ethiopia is depicted as a whole, structured according to its historic development.

4.2.1 Ethnical Feudalism: The Imperial Age

Before the revolution in 1974, the land tenure and property right arrangements in Ethiopia were some of the most complex in the world, characterised by a great diversity, and determined by the country's cultural, ethnic, historical and geographical heterogeneity. Arrangements included kinship, serfdom, and private, communal, village, state as well as church land holding systems (EEA / EEPRI 2002: 22). Nevertheless, their full complexity has not yet been thoroughly studied. Most prevalent was the kinship-based *rist* system (dominating in the northern parts of Ethiopia) and the landlord-based *gult* system (more common in Southern Ethiopia, including coffee forest areas). As land tenure and property rights in Bonga Forest/Kaffa Zone as well as in Harenna Forest/Bale Zone have been largely dominated by the *gult* system, in the following, this is described in more detail.

Along with the foundation of the modern Amhara-dominated Ethiopian Empire by Emperor Menelik II, the country faced an enormous territorial expansion. Boundaries of the Empire were moved to the south, west and east far beyond anything that was previously under Christian Ethiopian rule. The Kingdom of Kaffa was overthrown in 1897 after a violent almost 20-year struggle (Crummey 2000: 215). The area of Harenna Forest in the Bale mountains region was incorporated in the Ethiopian Empire in the 1880s after a military campaign against the Arsi Oromo (Heur 2004). In order to ensure continuing submission and to meet the requirements of effective occupation, the conquering empire initiated political and socio-economic transformations in the occupied regions, including an extensive alteration of

land tenure and property rights. Thus, the Ethiopian state rewarded its loyal soldiers (mostly Amhara people from north and central Ethiopia) with land property rights in the conquered areas, which included the forests. This is why, until the present day, the name *neftegna* (amh.), which means 'man with a rifle' or musketeer, is used for the descendents of Amharas that settled in the south of Ethiopia (pers. com. Tadesse 2003). The *neftegna* were allowed to sell and exchange land titles, but - different from the European concept of a freehold system - had no absolute rights, as the state could at all times confiscate and reallocate land, e.g., when a *neftegna* became too powerful and fell into disgrace with the Emperor.

This newly imposed group of landowners did not cultivate the land themselves but, together with the land rights, gained lordship over a number of local peasant households - the *gebber*[39] - in order to cultivate the land (some literature refers to the *gult* as the *neftegna - gebber* system). The *neftegna* 'obtained' *gebber* in numbers according to their military rank. The landowner's possession of a *gebber* was hereditary (Crummey 2000: 223). The landlords managed their land (including forests) and its resources through their district officer, the *chiquashum*, who was mostly autochthonous (Taddese Asmellash n.d.: 4). The *chiquashum* allocated the single land plots to *gebbers*, and then demanded a full range of services, including taxes and tributes in kind and labour, threatening with eviction from the land and even imprisonment in case of failure. Obviously, this land tenure and property right system goes far beyond a voluntary land-lease agreement and resembles the extractive serfdom of the European dark ages (Hoben 1995: 1010). The *neftegna*, in turn, were committed to the state not only by paying tribute to the Emperor but also as governmental co-workers, to suppress revolts and to mobilise people in times of war. Hence, the majority of the people in the South and South-west of the Ethiopian Empire experienced the *neftegna* landlords as extended arm of the Amhara regime in Addis Ababa.

During the Italian invasion between 1936 and 1941, the Italians took first steps to abolish the *gult*. By 1939, the policy on *gult* was formalised by recognition of two types: the *gult di signoria* and *gult di diritto terriero*. The former became state lands, the latter were recognised as private property (Crummey 2000: 234). This policy was revoked after the defeat of the Italians in 1941 and the restoration of the Ethiopian Empire, but nevertheless the *gult* system was opened little by little in the way that also local elites, the *balabbat* (amh.) or *bala kaarnii* (orom.), were able to receive land titles with rights similar to those of the *neftegna* landlords

[39] *Gebber* (also *gebbar*) (amh.) refers to a tribute paying smallholder peasant.

(Crummey 2000: 224). This development described a profound weakening of the *gult* and rivalry flared up between the *balabbat/bala kaarnii* and *neftegna*, e.g., in the Bale Region.

The Bale Rebellion

One example of violent insurrection against the gult system was the Bale rebellion between 1961 and 1969. After the Bale region, an almost inaccessible mountain range rising up to 4300 meter asl and mainly inhabited by Arsi-Oromo people, was incorporated by force of arms into the Ethiopian Empire at the end of the XVXth century, the gult system was established by means of the neftegna landlord system. After World War II, more and more local Arsi-Oromo managed to gain the elite status of a Bala kaarnii and became influential middlemen between the Amhara dominated government circles and the local peasantry. In what later came to be known the Bale Rebellion, this Bala kaarnii became increasingly economically powerful and demanded greater political independence with lower tributes to the central government. Tensions finally led to organised armed upheaval, to which Emperor Haile Selassi reacted by harsh military retaliation. Only with Israeli and British military aid was it possible to suppress the subsequent eight-year guerrilla war.

In conclusion, although the *gult* system was briefly suspended during the Italian invasion and changed somewhat with the modernisation of the Ethiopian state since World War II, it can be identified as one of the most significant obstacles to the political and socio-economic development in Southern Ethiopia. It provided neither for adequate institutional framework for the development of a self-determined and equitable society, nor the potential and incentives to adopt new agricultural technologies and production systems that could substantially increase agricultural output (Gamachu 1990: 170; Kebede 2003: 5). Instead, the *gult* system promoted exploitative tenancy, arbitrary control and allocation of land, unorganised and intransparent land administration, land concentration, and land insecurity (EEA / EEPRI 2002: 22). It can be seen as the most central institutional structure for the transfer and concentration of resources from the productive classes (the *gebber*) to the newly established nobility and the Ethiopian Empire for many decades and the main mechanism through which the Amhara-dominated state affected day-to-day life of the peasantry in Southern Ethiopia until the mid 1970s (Crummey 2000: 5). In that understanding, the adherence to *gult* can be depicted as one critical cause that prepared the ground for the overthrow of Emperor Haile Selassi I and the collapse of the Solomonic Ethiopian Empire in 1974 as well as the radical changes thereafter.

In regard to the focus of this research, the *gult* system is regarded as one historical episode, which - recalling the path-dependent characteristic of institutions - is likely to have an impact on current rules and regulations that determine forest resource use and management practices in the Koma Forest and Kankicho Forest area.

4.2.2 Land to the Tiller - Land to the State

The new military government, popularly known as the *derg*[40], proclaimed the abolition of the unpopular *gult* system and the award of all 'land to the tiller', i.e., to assignment of land tenure rights to the peasants. The land reform of 1975 aimed at putting this proclamation into practice and was probably "one of the most radical land reform[s] ever attempted in Africa" (Pausewang 1990) laying the foundation of a land tenure system based on the socialist model. All land tenure and right systems in Ethiopia - including the *gult* – were abolished, landlords were dispossessed and all land holdings, whether farmland, grazing land or forests, were nationalised and came under direct possession of the state.

Many observers of the time, not only among the notably leftist, considered the land reform as a drastic but inevitable breakthrough for effectively putting an end to the age-old tenant and landlord system in Ethiopia and a chance to promote more equity and planning reliability, increase agricultural production, create employment, increase rural income and lay down the basis for the expansion of industry (EEA / EEPRI 2002: 23). In 1975, the land reform was finally sealed by proclamation No. 31/1975, including following declarations:

- Public ownership of all rural lands
- Distribution of private land to the *gebber*
- Prohibition of transfer of use rights by sale, exchange, succession, mortgage or lease, except upon death and even then only to the wife, husband, or minor children of the deceased
- The maximum land a family can posses is determined with ten hectares
- No capable adult person is allowed to use hired labour to cultivate his holdings

Administration of land property issues was vested nationwide to a newly established "Ministry of Land Reform and Administration" (MLRA). On the local level, the enactment of the "Proclamation to Provide for the Nationalization of Rural Land No. 71/1975", led to the formation of "Agricultural Producers Cooperatives" (APCs), "Agricultural Service

[40] *Derg* (or *Dergue*) (amh.) stands for committee or council used as a short form for "Armed Forces Coordinating Committee".

Cooperatives" (ASCs), and "Peasant Associations" (PAs). In the following 16 years, all three entities played a significant role in the rural areas. By 1990, as many as 3,700 APCs with about 300,000 members and 4,000 ASCs with no less than 4.5 million members were organised. However, the cooperatives served as a vehicle for the government's mass collectivisation policy and were characterised by corruption and mismanagement. In 1990, with the *derg*'s reign drawing to a close, the APCs and ASCs were dismantled and numerous cooperative offices and shops looted and destroyed (McCarthy 2001: 1). The organisational 'skeleton' of cooperatives, however, has often remained intact until the present day.

Proclamation No. 71/1975 assigned PAs as the lowest administrative units in which a number of village communities were grouped together. PAs were given full control of distributing land and from 1975 on, they gave usufruct land rights basically to peasants but also to APCs. The condition for land use rights was, however, the peasants' permanent physical residence in the PA and their capability and willingness to farm themselves and to meet administrative dues and obligations (EEA / EEPRI 2002: 23; Pankhurst 2002: 11). After the initial phase of land distribution, it soon became evident that PAs had great difficulty in reasonably balancing demand and supply of land resources and that the land reform could not achieve the above-mentioned goals as intended. In practice, land use rights were almost solely allocated in consideration of the factors 'number of household members' and 'size of land', whereas questions regarding land fertility, size of family workforce, availability of oxen or other farm assets were not given much importance. This approach indeed promoted equality in terms of person-land ratio, but strong limitations and variations in productive and intensive land utilisation. Moreover, permanent reallocation was needed, as new households appeared with additional demands for land due to demographic pressure and migration. Over the years, plot sizes were progressively scaled down[41], resulting in farm sizes that became less and less profitable under the prevailing cropping systems.

Nonetheless, although studies show that the number of households with very few land or even no land use rights increased in rural areas, massive landlessness and rural-urban migration which is a common and highly challenging phenomenon in countless other so-called developing countries, has not been a major concern in Ethiopia yet (EEA / EEPRI 2002: 20). This has to be acknowledged as the most positive achievement of the *derg* land reform.

[41] According to FAO, in 2001, an estimated 87 percent of all Ethiopian peasants cultivate land of less than 2 ha (FAO 2001). For the same year, the Economic Commission for Africa appraise the average farm size in Ethiopia to be about 1 hectare, with 62 percent of the peasant households cultivating less than that (Economic Commission for Africa 2001).

The issue of land security, however, did not change for the better after the land reform. The PAs continued to withdraw and reallocate land tenure rights, often at short notice and without claim for refund. Hence, uncertainty about whether work and investment on the land would lead to long-term benefits reduced incentives to invest in land improvement measures, aggravated the problem of soil mining, and let to short-term measures on the allotments (Marena Project n.d.a). Moreover, it did not allow peasants to take land as a collateral to secure credit, which resulted in low creditworthiness and only marginal financial investment by the peasants (EEA / EEPRI 2002: 20).

4.2.3 All remains Different: Transition and the EPRDF

After the downfall of the *derg* in 1991, it became uncertain which line the new "Transitional Government of Ethiopia" (TGE) would take regarding land tenure and property rights. The TGE itself declared that the issue would be decided in the process of developing a new constitution (EEA / EEPRI 2002: 26). With the successive political domination of the "Ethiopian Peoples' Revolutionary Democratic Front" (EPRDF), a coalition dominated by the formally Marxist rebels of the "Tigray Peoples' Liberation Front" (TPLF), the issue was proclaimed settled in favour of continuation of state land ownership. Accordingly, the new 'Constitution of the Federal Democratic Republic of Ethiopia' approved in 1995 and valid to the present day, contains the following phrase:

> "*Land is a common property of the Nations, Nationalities and Peoples of Ethiopia and shall not be subject to sale or to other means of exchange*" (Art. 40).

The prolonged commitment of the new EPRDF regime to state land ownership is particularly remarkable considering that *ab initio*, economic liberalisation (in addition to regionalisation and democratisation) has been one of the three manifested key transformation objectives of the Ethiopian government since 1991.

Besides, the constitution of 1995 states that legal rules and regulations should be enacted for the utilisation and conservation of land and other natural resources (Art. 51), and that the governments of the newly established regional states are envisaged to gain responsibility to administer land and other natural resources under the federal laws (Art. 52). Two years later, the new 'Federal Rural Land Administration Proclamation, No. 89/1997' was designed, which came into force in July 1997 and is still in force. By this proclamation, the power of land

administration, i.e., the "assignment of holding rights and the execution of distribution of holdings" (FDRE 1997: Art. 2, Sub. Art. 6), was vested from the national bodies to the regional states.

The most recent and controversial initiative related to land rights is the "User Right Documentation" in Tigray and Amhara regional state. This new regional policy is initiated within the actual legal and policy framework described above and aims at tackling the land insecurity constraint by providing legal land documents for peasants on a long-term basis. While it may be too early to make a judgement, it seems that this initiative is a step in the right direction although it does not equip peasants with many more rights than those contained in existing land policies, and retains the state monopoly on the provision of land resources (Dessalegn 2004).

Nevertheless, although the actual current legal framework can be described as seeking to tackle landlessness and concentration of landownership, it is a clear continuation of the *derg* policy of state control over all land resources, which has turned out to be inappropriate to significantly increase agricultural production and enhance living standards in rural areas. Land tenure and property rights remain an overriding concern in agriculture and rural development, which is Ethiopia's socio-economic backbone. Without doubt, there is dire need for land policy reforms. The key question, though, is not if Ethiopia's land market should be truly liberalised (with all its socio-economic consequences) but how to maintain high equality in land distribution, low landlessness, and low migration into cities on the one hand, and to achieve more land security in combination with efficient and sustainable land use on the other.

4.2.4 From Centralisation to Regionalisation and Decentralisation

For centuries, Ethiopia has been dominated by the Amharic and Tigrinyan north. Southern Western and Eastern regions of present-day Ethiopia were incorporated in the course of bloody campaigns at the time of the European 'scramble for Africa'. Centralisation has always been an instrument to hold the diverse country together, be it the feudalistic Empire or the communist-oriented *derg* regime, and all strings were pulled by the political and economic elites in Addis Ababa.

This fundamental and long lasting structure ended with the collapse of the *derg* regime in 1991. Subsequently, along with many other African countries, Ethiopia went through a period

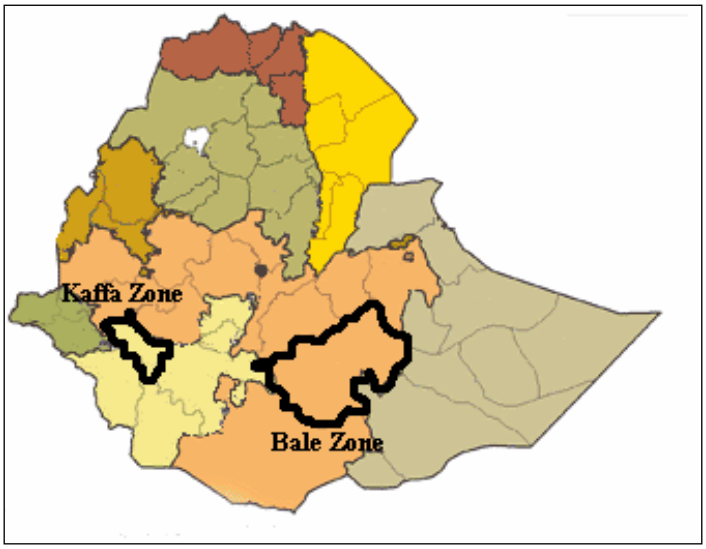
of regionalisation and decentralisation.[42] The process started when the succeeding TGE government convened a conference of political entities and ethnic-based forces in which a charter was adopted that affirmed the rights of the ethnic groups, referred to as 'nations, nationalities and people of Ethiopia', to self-determination, including the right to secede (Gebremadhin n.d.: 3). This charter was in effect until the release of the new constitution in 1995, which established a federal state structure, and included the following statements:

> "*Every Nation, Nationality and People in Ethiopia has an unconditional right to self-determination, including the right to secession.*
>
> *Every Nation, Nationality and People in Ethiopia has the right to speak, to write and to develop its own language; to express, to develop and to promote its culture; and to preserve its history.*
>
> *Every Nation, Nationality and People in Ethiopia has the right to a full measure of self-government which includes the right to establish institutions of government in the territory that it inhabits and to equitable representation in state and federal governments*" (FDRE 1995: Art. 39)

Beside these far-reaching decrees, the new constitution envisaged an entirely new administrative subdivision. As shown in Figure 11, the country was organised into nine Regional States drawn upon ethical dividing lines and two chartered cities, Addis Ababa and Dire Dawa. Each regional state was divided into zones.

[42] See "Local Organizations and Development: The African Experience" (Olowu 1999) for a detailed discussion on regionalisation and decentralisation in Sub-Saharan Africa.

Figure 11: Regional states and zones: Ethiopia's administrative structure since 1995[43]



By and large, the constitution of 1995 heralded the second massive changeover of the state-initiated institutional set up in two decades. Following regionalisation, most federal government ministries are mirrored as 'bureaus' on the regional level. The federal level has apparently become less important with regard to use, management, and conservation of natural resources, and at present many policy agendas are set, decisions taken and projects implemented on the regional level (Keeley and Scoones 2000: 110). Accordingly, the coordination between national and regional levels has become increasingly important. The decentralisation reform provided for the organisational restructuring and devolution of responsibilities not only on the national and regional level but also on lower levels. From 1995 on, regional states were subdivided into zones and a lower administrative state body named *woreda* (a mid-level administrative unit composed of 6-10 *kebeles* and comparable with districts or counties in other countries), to function as the main administrative bodies between the regional and local level. In SNNPRS, the zonal level gained particular relevance because of the region's exceptional ethnical and cultural diversity (e.g., 86 different ethnicities in SNNPRS).[44]

The lowest level of state governance, the PAs, experienced less institutional change. Their structure and responsibilities were by and large continued under the name "Peasant *kebele* association", in short *kebele* (amh.), administering some hundred HHs, serving juridical functions (by means of the *fered shengo*, the *kebele* court), organising conjoint labour (*limatiya*), collecting taxes from the peasants[45], and last but not least, distributing the arable land of the *kebele* among the inhabitants aged 18 years and above, whose livelihood depends on agriculture and who want to live on the land. They have, *de jure*, the right to life long land use free of payment. Nevertheless, 'life long' may be not for eternity (RGO 2002):

[43] Beige stands for the SNNRPS, orange for the Oromiya Regional State, grey lines are zone boundaries, black lines indicate boundaries of Kaffa and Bale Zone.
[44] 10/11/2004: Peter J. van Doren, Kaffa Development Programme.
[45] Tax collected by the *kebele* is basically an income tax, based on livestock ownership and holdings of land use rights.

> "*The use right of an individual land user shall be subject to termination only if that land is required for more important public uses*." (RGO 2002: Art. 6/4).

Kebele committee members are elected by all adults living in the *kebele*, but their nomination and function basically depends on the *woreda*, which has the mandate to 'evaluate' *kebele* committee members. This is practically an instrument to bring the *kebele* committee politically in line with the ruling party (Carswell, de Haan et al. 1999: 74).

In some cases, regionalisation and decentralisation provided more room for manoeuvre and the opportunity to reinterpret and transform policies coming from upper levels in order to adjust them to local conditions. With regard to the forest resource use, management and conservation, it has often been seen as a chance for the development of more local control. Practically, however, political, institutional and financial constraints limit such opportunities, and in many parts, regionalisation/decentralisation primarily gave rise to more bureaucracy as well as to confusion and confrontation about responsibilities among different institutional levels (Keeley and Scoones 2000: 110).
The depicted 'formal' state-initiated institutional framework is well documented and is recited with mantra-like insistence in literature and when talking to Ethiopian decision-makers. However, no tangible scientific information is available concerning the existence of authochone land use rights systems and their impact on today's land use practices in the two research areas.

4.3 Forest Management and Conservation Policy, Administration and Legislation

The following section sheds light on the different forest-related policies, institutional structures and approaches in Ethiopia from a broader perspective. Similar to the previous section, it is structured on a time axis broken down to the Emperor's, the *derg's* and the EPRDF period, the more recent the more detailed.

4.3.1 First Steps towards Conservation: The Empire

It is said that Emperor Zere Yakob implemented the earliest recorded forest conservation initiative in Ethiopia in the XVth century. The loss of tree cover in the hills surrounding his temporary capital concerned the Emperor and prompted him to initiate a conservation and afforestation programme that led to the creation of the Menagesha-Suba forest which still exists to the present day (Abebe 2003: 12). Nevertheless, in comparison to other African

countries, the development of a state-initiated forest policy and administration took place relatively late in Ethiopia. According to Kigenyi, Gondo & Mugabe (2002: 13), this can be basically traced back to the fact that Ethiopia was never colonialised by the Europeans, and hence the idea of state commitment to natural resource conservation was not introduced from 'outside'.

Nevertheless, state forest policy, legislation and administration in modern-day Ethiopia began as early as 1945 with the creation of the "Department of Forestry, Game and Fishery" (DFGF) within the "Ministry of Agriculture" (MoA). In 1964, the DFGF was dissolved and replaced by the "Wildlife Conservation Department" (WCD) with the responsibility to create and manage wildlife reserves (Abebe 2003: 13). In 1971, the WCD was renamed in "Wildlife Conservation Organisation" (WCO) and stewardship for forest management and conservation matters was outsourced and given over to the newly established "State Forest Development Agency" (SFDA, later SFoDA) (UNEP 1992: 2,3). Together with the foundation of the WCD, the "Wildlife Conservation Board" (WCB) was established in order to advice the MoA on general matters concerning environmental conservation. Between 1964 and 1977, the WCD/WCO was responsible for the foundation of nine national parks (NPs), starting in 1969 with the Awash NP and Simien NP followed by the Bale Mountains NP, which covers the northern part of Harenna Forest.

Bale Mountains National Park

Almost no scientifically substantiated information was recorded about Bale mountains area till the ecologist Leslie Brown investigated the area in the 1960s. He recommended the establishment of a national park in the Bale Mountains, primarily in order to protect its large mammals. This recommendation was acted upon, and in 1969, the WCD carried out an initial survey in which boundaries of the park were identified. Finally, in 1970, the Bale Mountains National Park was founded, covering 2,400 km² of the central Bale massif, encompassing a number of vegetation types related to varying altitudes, from the afro-alpine Sanetti plateau above 4,000 meter asl, which is mainly grassland, to montane rainforest at 1,500 meter asl, which is part of Harenna Forest. The park covers an area of high biological diversity and is prominent for the occurrence of endemic mammals such including the Ethiopian wolf (Canis smensis) and the mountain nyala (Tragelaphus buxtoni).

Nevertheless, no effective protection measures have been implemented and the park has at all times been populated by individuals, practicing pastoralism and/or subsistence agriculture. A survey in 1992 revealed 7,000 inhabitants.

(Senbeta 2000: 5; Flintan 2001)

In conclusion, during the time of Emperor Haile Selassi I, the Ethiopian government made attempts to establish an institutional framework with the objective to promote environmental protection in general and forest protection in particular. However, none of these measures was ever implemented in practice. Accordingly, we can speak of a 'dry-run' period with no actual impact on the ground.

4.3.2 Actionism without Deliberation: The *Derg*

The rise of the *derg* is partly attributed to the 1972-73 famine in Northern Ethiopia, since Emperor Haile Selassi I. and his governmental apparatus tried to conceal and understate its dimensions and reacted tardily, which "exposed the insensitivity of the ruling elites to a lot of ordinary citizens" (Gudina 2003: 77). In this regard, the *derg* regime commenced with the burden of a humanitarian and environmental catastrophe and growing public awareness of the need for more appropriate Natural Resource Management (Marena Project n.d.a).
By the end of the Ethiopian Empire in 1974, more than 75 percent of the Ethiopian forests were owned by the private sector, mostly landlords. With the nationalisation of land in 1975, as depicted above, private ownership of forests was abolished and the entire forest area of Ethiopia was handed over to the state administration. National state bodies took charge of forests larger than 80 ha, named state forests. The PAs, which had the mandate to use and conserve natural resources in their areas of jurisdiction, were charged with the responsibility for forests smaller than 80 ha, so-called community forests (Mengistu 2002: 12).

In 1977, forest and wildlife matters were again grouped together, and the SFoDA and the WCO came to be the "Forestry and Wildlife Conservation and Development Authority" (FoWCDA). This semi-autonomous authority launched a natural forest management programme, which aimed to introduce integrated forest management systems and selected five forest areas (Nunessa Shashemene, Tiro-Boter Becho, Menagesha Suba, Dindin and Megada) as pilot projects (Mengistu 2002: 9). Although this programme did not go beyond demarcation of forest land and inventorisation of these five forests, it can be seen as the pre-stage of the "National Forest Priority Area" (NFPA) approach, the most ambitious and area-wide forest conservation strategy in Ethiopia so far (Mengistu 2002: 12). It was rendered possible by the adoption of the "Forest and Wildlife Conservation Proclamation No. 192" in

1980, which repealed most preceding forest proclamations and conservation orders[46] and allowed for the demarcation, registration and administration not only of national parks, wildlife reserves and sanctuaries, but also of a new 'forest protection instrument': the NFPAs (UNEP 1992: 1). Between 1980 and the end of the *derg* regime in 1991, a total of 42 state forests with a size of about 2.2 million ha were demarcated as NFPAs on the ground with concrete pillars (Mengistu 2002). However, the dos and don'ts of forest use, management and conservation were only vaguely defined and only in a few cases was the demarcation of NFPAs followed by the setting up of management plans, and if so, these were only rudimentarily implemented.

In 1984, the FoWCDA was dissolved again and responsibility for forest issues including administration and management of NFPAs was shifted to the stewardship of the MoA. The new "Natural Resources Conservation and Development Main Department" (NRCDMD) within the MoA gained overall responsibility to issue and implement directives concerning conservation, demarcation and management of NFPAs and other conservation areas such as NPs (UNEP 1992: 3). The NRCDMD was in fact a huge entity, and the organisational commitment of the state to environmental issues reached its peak. The NRCDMD operated with a central organisation in Addis Ababa and 30 regional offices. In 1988, it employed 8,000 staff directly, including 1,000 in professional categories, with an annual budget allocation of Birr 311.3 million (about Euro 31 million), consisting of foreign donors assistance and distribution of the Ethiopian government one half each (UNEP 1992: 3). Within the NRCDMD, the "National Forest Priority Areas Coordination Division" (NFPA-CD) and the "Forest Demarcation, Inventory and Management Plan Division" (FDIM-DP) under the "State Forest Conservation and Development Department" (SFCDD) were in charge of administration, management and designation of the NFPAs (UNEP 1992).

Drawing a critical conclusion, it can be said that the nationalisation of all land holdings was the major turning point for use, management and conservation of Ethiopian forests. From one day to another, forest responsibility was shifted from private owners to newly established state bodies. In general, these new state-initiated bodies neither had the necessary organisational structures nor the experience, the expertise or the financial and infrastructural resources to tackle such a cross cutting challenge. The NFPA approach, commencing in 1980,

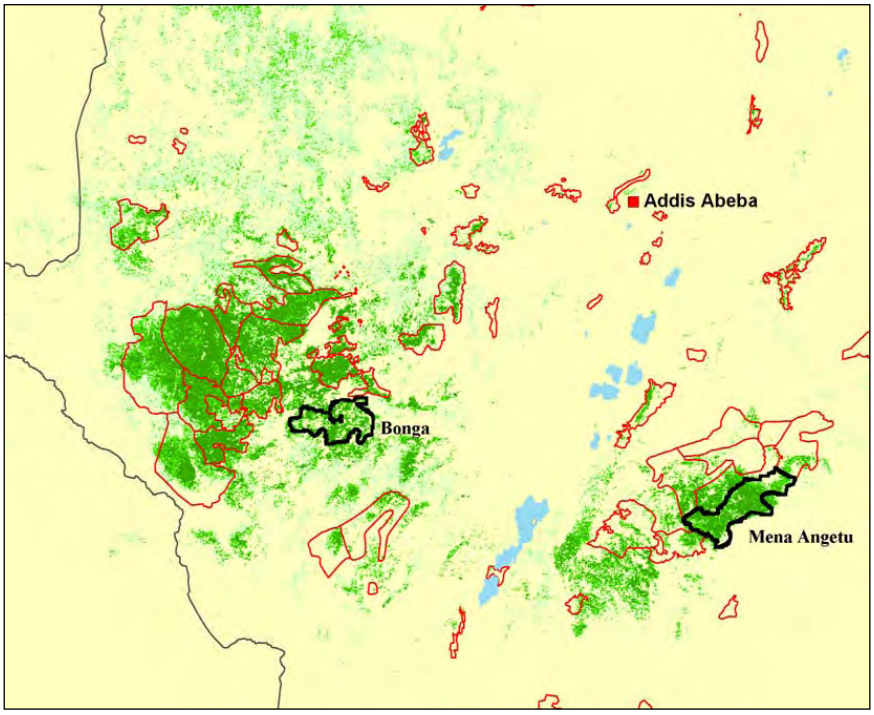
[46] The proclamation repealed Game Proclamation No. 61 of 1944, State Forest Proclamation No. 225 of 1965, Protective Forest Proclamation No. 227 of 1965, and Wildlife Conservation Order No. 65 of 1970. However, the Wildlife Conservation Regulations of 1972 and 1974 remains in force (UNEP 1992: 1).

can be historically portrayed as an ambitious attempt to tackle the problem of forest loss and degradation but, however, did not succeed in practice. The failure can be mainly traced to the fact that the attempt was made to administer and conserve forests in a top-down manner, hence by means of a centralised body most of the time under the MoA, and integrated into the overall authoritarian and Amhara-dominated political structure. Similar to nationalisation and top-down forest policies in other East African countries such as Tanzania and Kenya, also the ruling decision makers in Ethiopia overestimated the states' institutional capability, effectiveness and efficiency for implementation, enforcement and monitoring of their forest concerned policies. At the same time, the persistence of pre-revolutionary forest use, management and conservation practices was underestimated, and hence often neglected. For the most part, between 1975 and 1991 the centralised governmental control did not 'reach' the forest areas, hence rather created a muddled and ever changing institutional framework that turned out to have no or minimum actual impact (Kigenyi, Gondo et al. 2002: 14).

4.3.3 Rearrangement and Continuity: The Current Situation

By the year 1994, the number of NFPAs had risen to 58. However, it became increasingly evident that the demarcation of NFPAs no longer corresponded to the occurrence of primary forests. Forest destruction left some NFPAs totally woodless, others suffered forest loss at the outer edges and gradual forest depletion in their interiors. Figure 12 shows, based on a pre-classified satellite image (MODIS Vegetation Continous Field) the occurrence of forest cover and the delineation of NFPAs in South-western Ethiopia in the year 1994. Bonga NFPA and Mena Angetu NFPA which comprise Bonga and Harenna coffee forests studied in this work are framed by black lines.

Figure 12: Forest cover in SW Ethiopia and contours of Bonga and Mena Angetu NFPA



MODIS Vegetation Continuous Fields Satellite Image 2000

The new EPRDF-led government did not start with an environmental policy as such, but issued proclamations meant to serve as a policy basis regarding utilisation, management and conservation of natural resources. The most important regulatory framework with regard to forests that repealed all previous forestry legislations and which still is in force is the "Proclamation to provide for the Conservation, Development and Utilization of Forests", No. 9/1994 (Mengistu 2002). *De jure*, it critically revised forestry legislation and constituted a major policy change in forest ownership, tree tenure right and forest product pricing and marketing, particularly since it permits and encourages the involvement of the private sector in forest development, and recognises the necessity to ensure that communities living within or adjacent to the forests benefit from its development (Mengistu 2002). Moreover, it responded to the regionalisation process by vesting large responsibilities in the newly established regional states. Accordingly, the Forest Proclamation 9/1994 assigned five forest administration categories as outlined below:

1) **State forests**: Forest and forest land designated, demarcated and registered by a federal body to develop forest resources, protect genetic resources and conserve the ecosystem in a programme that is interregional, i.e., covers more than one region.

2) **State protected forests**: Forest and forest land designated, demarcated and registered by a federal body to make it free from human or animal interference for the protection of the environment and genetic resources.
3) **Regional forests**: Forest and forest land designated, demarcated and registered by a regional state that is not a state or state-protected forest, and is located entirely within one Region.
4) **Regional protected forests**: Forest and forest land designated, demarcated and registered by a region to make it free from human or animal interference for the protection of the environment and genetic resources.
5) **Private forests**: A forest developed by any legal person including PAs or any other association of private individuals. Private forests are administered by the regions.

The EPRDF government basically retained the NFPA concept by integrating the demarcated sites into the forest categorisation concept and the regionalisation policy of Forest Proclamation 9/1994. Accountability for numerous NFPAs was handed over to the "Natural Resources, Conservation and Development Teams" (NRCD-T) at the regional "Bureaus of Agriculture" (BoA). These NFPAs got the status of "Regional Forest Priority Areas" (RFPAs). Other NFPAs kept their status and continued to be under the stewardship of the federal MoA. However, the categorisation between 'state forests', 'state protected forests', 'regional forests', 'regional protected forests' and 'private forests' did not work out in practice, but rather created confusion between different state levels (particularly federal and national) about responsibilities.

Following the enactment of Proclamation 94/1994, the administrative framework regarding forest administration and conservation on the federal level was also subject to change. In 1994, for the first time ever, environmental issues gained 'ministry status' in Ethiopia with the creation of a federal "Ministry of Natural Resource Development and Environmental Protection" (MNRDEP). Under this umbrella organisation, different environmentally related entities were banded together, amongst them the "Ethiopian Wildlife Conservation Organization" (EFWCO) and the "National Environmental Protection Authority" (NEPA)[47]. In August 1995, however, the MNRDEP was dissolved again, and names, assignments and responsibilities changed once more. The responsibility for the forest sector was shifted to the

[47] The NEPA existed only on paper.

"Forestry and Wildlife Conservation and Development Team" (FWCD-T) within the "Ministry of Agriculture and Rural Development" (MoARD). The team entity was mandated to formulate land-use policy and draft laws and legislation on conservation and sustainable utilisation of Ethiopia's forest and wildlife resources at the federal level. At the regional level, the BoAs remained the responsible entities for administration and management of forests, except for Oromiya Region, where an autonomous "Oromiya Rural Land and Natural Resources Administration Authority" (ORLNRAA) was established in 2002 (Mengistu 2002: 12).

In all, Ethiopia has a 30-year history of environmentally concerned institutions. However, frequent changes in the institutional setting and the transfer of rights and duties from one institution to another does not necessarily bring a change for the better. Passing rules and regulations does not ensure their enforcement, and proclaiming concerned organisational bodies does not mean that they are actually effective in the achievement of their objectives.
To recapitulate, the state efforts for environmental protection in general and the commitment to primary forests in particular did not bring the intended results under any Ethiopian government. This is due to a number of factors which carry different weight from different views and are difficult to assess in general. The most notable are the vague definition of and conflicts about competences, a defective and/or incomplete implementation (e.g., NFPAs were legally established and demarcated but lacked management plans), and the non-involvement of the local forest users in decision making.
As a hypothetical strating point for this research, these above-depicted long-term institutional circumstances foster the notion that the investigated coffee forest areas are, albeit *de jure* state-governed, *de facto* open access. In the following, the role of NGOs in this context is delineated and their potential and limitation to tackle the fundamental deficiency of state-initiated action is briefly discussed.

4.4 The Phenomenon of Non-governmental Organisations

In Ethiopia, the presence of NGOs in general and their engagement in environmentally driven projects in particular is a comparatively recent phenomenon. As late as the mid 1970s, the NGO sector faced a first boom as a result of the famine disaster in Northern Ethiopia, in which international NGOs massively provided food relief. A decade later, the 1984-85 famine accounted for another surge of international aid and the further expansion and consolidation of NGO structures - a prominent example in this regard is the German NGO "Menschen für

Menschen" (People for people). However, the *derg* regime restricted the scope of NGO activities mainly to the field of relief and rehabilitation (Rahmato 2001: 106; Berhanu 2002: 122, 23).

Following the regime change in the early 1990s, the number of NGOs further grew, their working conditions improved significantly and their interest and practical involvement in environmentally driven projects increased.[48] A survey by the "Institute of Development Research" at the Addis Ababa University revealed that in 1997, there were about 32 NGOs in Ethiopia, which were interested in engaging in natural resource activities (Regasa 2000: 146).

The German international cooperation enterprise GTZ was the first international agency involved in the management and conservation of primary forests in Ethiopia.[49] Soon after, NGOs started to work in this field too, and in 2004, five substantial "Forest Resource Management" projects were at some stage ongoing in Ethiopia, of which three were NGO-initiated.[50]

However, the activities of NGOs in the environmental sector in Ethiopia should not be presented in a solely positive light, but also need to be the subject of critical discourse. The first question in this regard concerns the motivation of foreign organisations for engaging in development activities as such. Allan Hoben describes "development policies and programs" as resting on certain "enabling assumptions […] generally encoded in […] development narratives [which] are culturally constructed and reflect the hegemony of Western development discourse" (Hoben 1995: 1008). Although this statement is quite general, lumping together all development work worldwide over time, it clearly reveals the dilemma that all development activities are interventionist by character, and are more or less based on culturally constructed paradigms brought from 'outside'. Environmentally driven development work is no exception. Projects run the risk of being motivated by the 'Garden of Eden narrative' that tells how local people lived in harmony with their surroundings in the past until 'modernisation' came by whatever means. This thinking includes the danger of describing a problem and at the same to prescribing its solution and the way to get there.

Since the 1980s, one pillar of international development work has been the involvement of the local people in project planning and development. The idea defined by different slogans such

[48] Interview conducted with a representative of an international NGO (26 September 2004, Addis Ababa).
[49] Particularly in the 'Integrated Forest Management Project Adaba-Dodola', started 1995 in Bale Zone.
[50] Namely, "Adaba Dodola Integrated Forest Management Project" (GTZ), 'Chilimo Participatory Forest Management Project' (Farm Africa/SOS Sahel), 'Borana Community Forest Management Project' (Farm Africa/SOS Sahel), 'Bonga Integrated Participatory Forest Management & Reproductive Health Project' (Farm Africa/SOS Sahel) and "Belete-Gera Regional Forest Priority Area Participatory Forest Management Project" (JICA).

as ‘community-based’, ‘participatory’, ‘joint’, ‘collaborative’ or ‘people-led’ development has become so well established that it finds its way into nearly every project proposal submitted to donors. However, the question of local people’s involvement in forest resource concerned development projects goes beyond putting catchy phrases into project proposals and papers. Some critics say that despite the commitment to ‘put local people first’, the approaches of numerous development agencies remain within the classic top-down development model, and their projects provide preconceived artificial solutions rather than promote locally embedded resource use, management and conservation systems (Tache and Irwin 2003: 14). The impact of NGOs regarding the overall situation in the Ethiopian coffee forests should not be overestimated, as their contribution can only be punctual and limited to a few project areas scattered across the country. Nevertheless, first, on the local level in the project areas, they constitute strong actors creating an own institutional framework with high potential to impact on the way coffee forests are actually used, managed and conserved. Second, on the national level, NGOs have a perspective as masterminds or ‘think tanks’ (ideally independent from the state apparatus) promoting strategies and innovative ideas for more sustainable, efficient and equal use, management and conservation of coffee forest resources.

5 Going into Detail: Forest Resources and Appropriators in Koma Forest/Kaffa Zone

This chapter steps down from the superordinate consideration and narrows the focus down to the local level by providing a detailed empirical picture of the human-forest system in the first case study, referred to as Koma Forest in Kaffa Zone.

The structure of the empirical chapters follows the IAD framework. Hence, Chapter 5 focuses on 'nature' and 'people' as exogenous variables influencing the action arena. First, the numerous attributes of 'nature' discussed in the theoretical chapter that impact on the action arena are dealt with in the concrete context of the respective coffee forest area. These are the attributes of the Koma Forest that are relevant for the use, management and conservation of its resources by the local people. In Chapter 5.2, the theoretical variable 'attributes of the people' is translated into its concrete relevance for this work. It thereby encompasses characteristics of the local coffee forest resource appropriator community/ies that impact on the way these use, manage and conserve the resources of the Koma Forest. Thereafter, in Chapter 6, I proceed to a detailed delineation of the concerned action arena.

The information presented in this chapter is primarily based on my own empirical findings gained by means of a mixed research methodology depicted in Chapter 3, but also on outcomes from other CoCE subprojects working in the same forest area, and on secondary literature basically obtained from an NGO and different GOs operating on the spot. Nevertheless, the chapter should not be perceived as a comprehensive description of the ecosystem Koma Forest, nor as an extensive socio-economic assessment of the respective resource appropriator groups.[51]

5.1 The Forest and its Resources

First of all, I concentrate on natural resources. Taking the IAD framework into consideration, the attributes of these resources impact as exogenous variables on the local action arena, and hence influence the arena's outcome, in this case the way local people use, manage and conserve forest resources, forest coffee in particular. This section involves questions concerning location and size of the concerned forest area, its basic ecological characteristics, questions concerning accessibility and excludability as well as substractability and

[51] For the former purpose, the books "Management and Distribution of wild coffee Populations in the Montane Rainforest of the Bonga Region" by Christine B. Schmitt and "Biodiversity and ecology of Afromontane rainforests with wild *Coffea arabica* L. populations in Ethiopia" by Feyera Senbeta are recommended (Schmitt 2006; Senbeta 2006). For the latter, the report "Bonga State Forest – Socio-economic study" by the Ethiopian MoARD is recommended (MoARD 2003a).

renewability. In regard to the research subject, the section only refers to extractable forest resources, whereas questions of non-extractable resources and forest services are deliberately set aside.

5.1.1 Localisation: Koma Forest as part of the Ethiopian Green Backyard

The largest proportion of today's Ethiopian coffee forests is situated in the South-western part of the country, administratively in SNNPRS and Oromyia Regional State. The study area Koma Forest is part of the larger Bonga Forest, located in the north-western part of SNNPRS, some 300-350 km Southwest from Addis Ababa (see Figure 12). On a sub-regional level, Bonga Forest is found right in the center of Kaffa Zone[52], which is expected to be place of origin of *Coffea arabica* gene-pool (see Chapter 4.1.1).

The terrain of Kaffa Zone is dominated by a dissected tableland with flat to moderately undulating terrain on areas above 1,500 meter above sea level (asl), with a maximum altitude of 3,350 meter asl (Ersado 2001). The Zone enjoys some of the highest rainfall in Ethiopia, the temperature never exceeds 29° C. (Mayne and Tola 2002). With slightly more than a million inhabitants living on 13,228 square kilometre (which makes the calculative population density of roughly 75 persons per square kilometre), Kaffa Zone is comparatively sparsely populated by Ethiopian standards (Ahrens 1997; Baah, Kufa et al. 2000: 5). Population density varies significantly from place to place with highest numbers in the valleys of central Kaffa and along the road network, whereas the most mountainous hinterland is inhabited by very few people. The majority of the population is composed of the ethnic groups of Kaffa and Mandjah, but considerable numbers of Amhara, Oromo, Gurage, Tigrinya and Kambata have settled in the zone ever since its incorporation into the Ethiopian state. An all-weather road from Jimma to Mizan Teferi - initially built during the Italian occupation - traverses Kaffa Zone from west to east, and makes large areas of Kaffa Zone relatively well accessible and within reach of Addis Ababa in one and a half day drive.

The name Bonga Forest is taken from the city of Bonga, the historical capital of Kaffa region[53] and still an important market center today. The city is situated around 80 kilometres southwest of Jimma Town, which has been referred to as the 'coffee boomtown of Ethiopia' in the 1970s and 1980s, but has since been going economically downhill due to the coffee

[52] Today's Kaffa Zone is a fusion of Kaffa and Sheka Zone which were combined in 1996.
[53] Boundaries of historical Kaffa Region are not concordant with those of nowadays Kaffa Zone. Kaffa Region under the *derg* , for example, also included areas presently part of Maji and Jimma Zone. Hence, in the following, the expressions Kaffa Region and Kaffa Zone are used in different understandings.

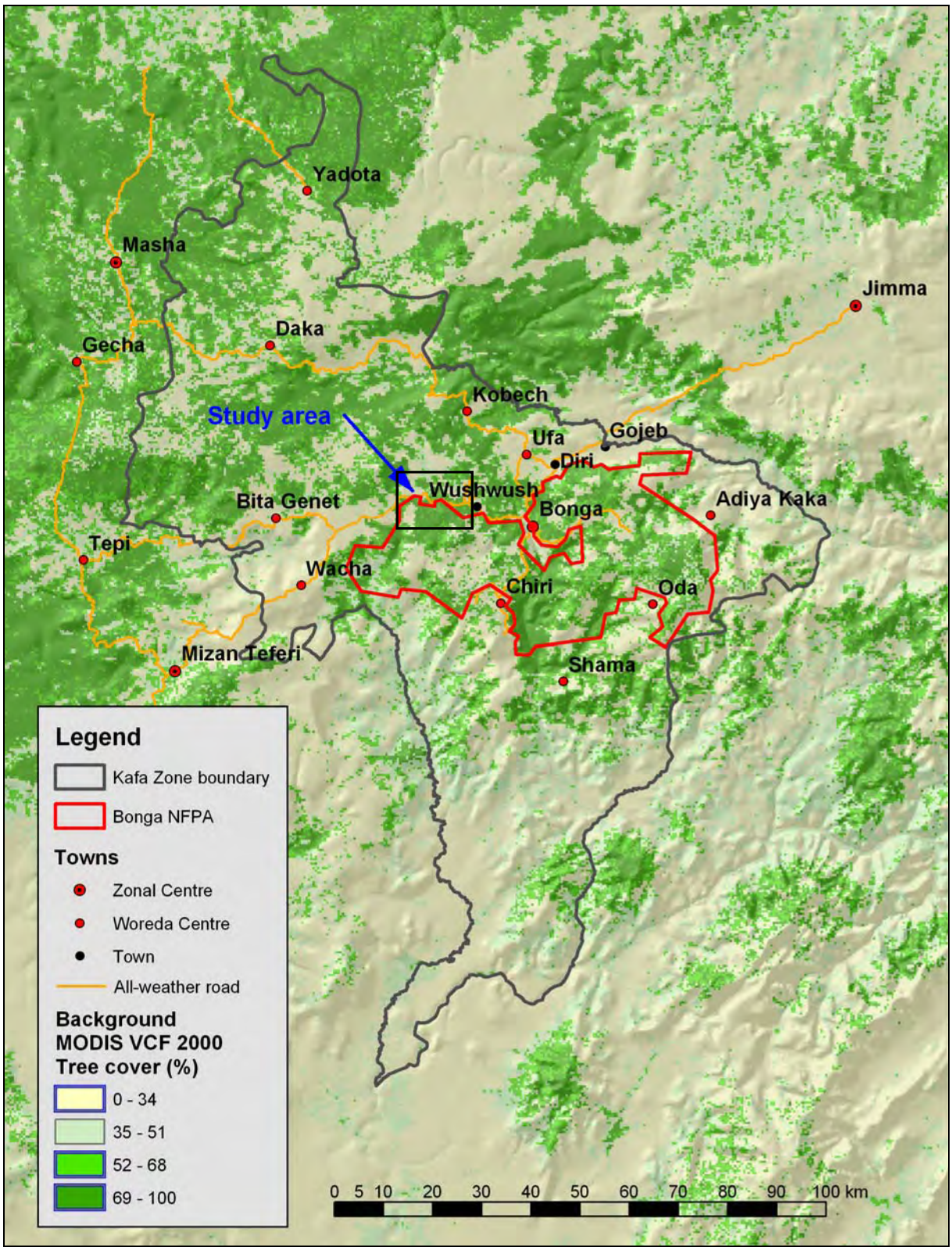
price slump. Bonga Forest should not be understood as signifying cohesive woodland, but is rather a non-figurative umbrella term that encompasses the mosaic of primary forests covering the hills around Bonga Town in a radius of about 40 kilometres. This vague definition makes it difficult to provide exact data on Bonga Forest size.

The forests of Kaffa Zone are illustrated in Figure 13 by means of the MODIS Vegetation Continuous Fields Satellite Image taken in the year 2000. Tree cover is classified into four categories: from 0 to 34 percent, 35 to 51 percent, 52 to 68 percent and more than 69 percent. It is assumed that the latter category (indicated as dark green) displays actual forest cover with maximum likelihood inference.

The red line in Figure 13 indicates the boarder of the "Bonga National Forest Priority Area"[54] (see discussion on NFPAs in Chapter 4). Bonga NFPA covers a size of 162,404 ha in central Kaffa Zone, within 07°00'-7°25'N Latitude and 35°55'-36°37'E Longitude, stretching across the boundaries of five out of six *woredas* in Kaffa Zone (Gimbo, Menjiwo, Tello, Decha, and Chena). Bonga NFPA is, at any rate, not synonymous with what is meant to be Bonga Forest. On the one hand, not all parts of Bonga Forest are under the Bonga NFPA, on the other, the delineation of Bonga NFPA does not mean that the land within its boarders is at the present day actually covered by forest vegetation. Due to a forest inventory conducted by the "Woody Biomass Project" of the MoARD, only about half the size of Bonga NFPA is forest land (78,607 ha), the other area is composed of cultivated land (68,020 ha), woodland (9,564 ha), plantation (4,528 ha), and grassland (1,685 ha) (Woody Biomass Project 2001b: 34).

[54] Another synonym for Bonga NFPA is "Bonga State Forest Reserve". However, status of Bonga NFPA is not cleared for good and some informants and references, though, refer to Bonga NFPA as "Bonga Forest Regional Priority Area", taking the ongoing regionalisation process into account.

Figure 13: Forest cover and Bonga NFPA in Kaffa Zone



presentation based on MODIS Vegetation Continuous Fields Satellite Image 2000

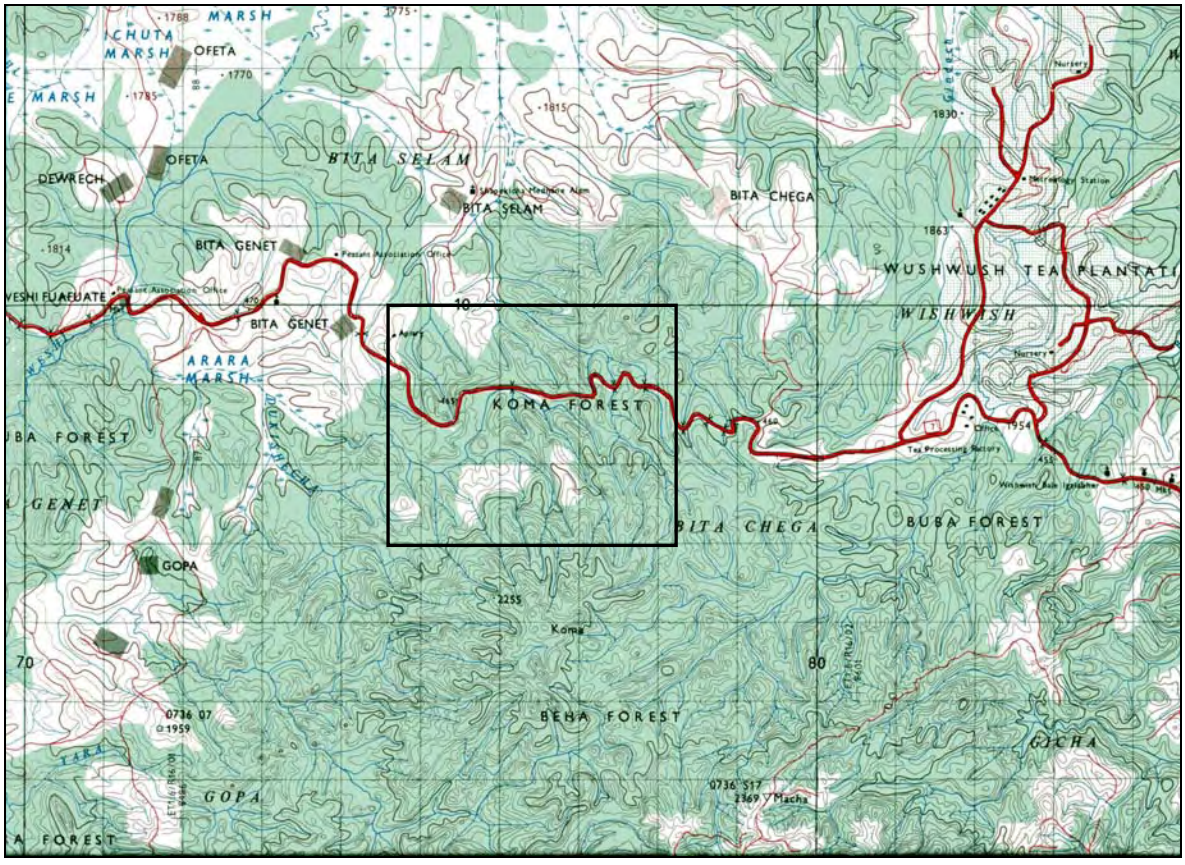
5.1.2 Getting it down to the Study Area: Koma Coffee Forest

This chapter focuses on groups of people that utilise forest resources of a certain forest area. The action (resource appropriation) radius of a group of local people is, a matter of course,

geographically much smaller than the entire Bonga Forest or Bonga NFPA, respectively. In this case study, it 'merely' constitutes a forest territory of about 1,200 ha on the north-western tip of Bonga NFPA, about 25 km west of Bonga Town, juxtaposed to the national all weather road from Bonga Town to Mizan Teferi (see blue arrow in Figure 13).

In the following, this forest area will be referred to as Koma Forest. This toponym is not only applied by respective forest resource users for 'their' forest but is indicated in the maps of the Ethiopian Mapping Authority in which it stands for the forested area between the national road and the peak of Koma Mountain about three kilometres down to the South (see Figure 14 below). However, the term Koma Forest is not standardised, and people from different villages use different idioms for the same forest area. For example, the inhabitants of Agama village, which is located West of Koma Forest (see Figure 15), denote Koma Forest with the term "Agama Forest".[55]

Figure 14: The broad vicinity of Koma Forest[56]



(EMA 1989)

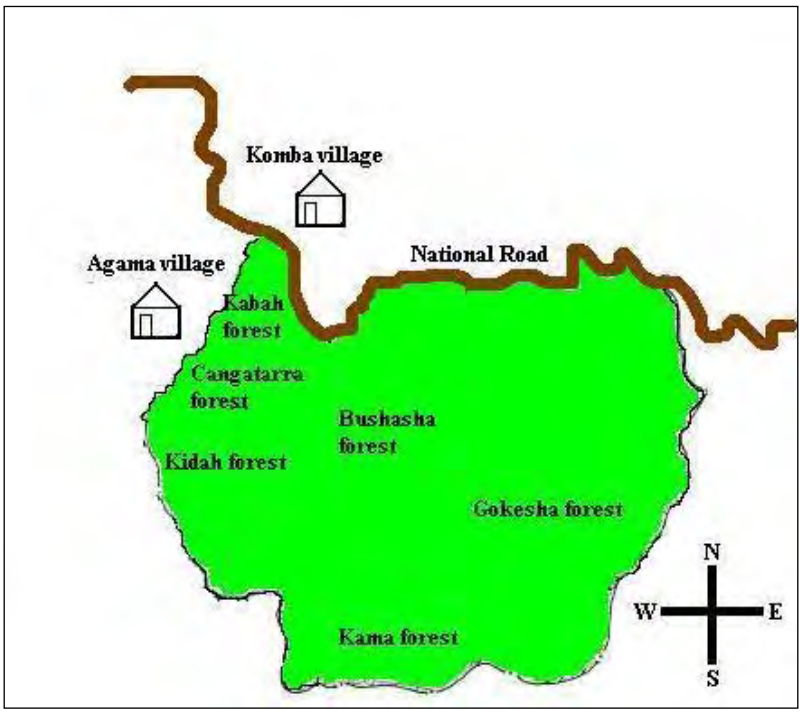
[55] In Ethiopia, forest names often refer to the names of the closest villages or adjacent streams. For this reason, the etymology of the term "Koma" is likely to be "Komba".

[56] The plan is a cut-out of an official map published by the Ethiopian Mapping Authority in 1989, and is still the most in-depth and up-to-date map of this area. Nevertheless, it is not only outdated but includes deficiencies, as for example, no or random designation of villages localities. It should therefore rather be perceived as a geographical overview of Koma Forest area, not as a detailed map of its recent status.

The boundaries of Koma Forest are subsequently defined according to the understanding of its users. In this respect, Koma Forest boundaries are designated as follows: in the South, it is bordered by the mountain range of Koma Mountain massive, in the West by the River Demi, in the North by the Bonga Town - Mizan Teferi national road and in the East by Agama village.

The topography of Koma Forest is generally characteristic of the entire Bonga Forest area. Steep hills above 1,500 meter asl, crisscrossed by gorges in which small streams rushing downhill dominate the landscape. The Koma Forest terrain goes up from North to South with an altitude range from 1,850 meter als at the national road to about 2,250 meter asl at the peak of Koma mountain.[57] The whole area drains in Northern-eastern direction, finally pouring into Weshi River, which than waters Omo River. Water bodies swell heavily during the long rainy season from June to October. Mean annual precipitation - measured in Wushwush tea plantation, about 12 km linear distance from Koma Forest - is close to 1892 mm, mean temperature 18.1° C (Ersado 2001).

Figure 15: Basic sketch of Koma Forest and its forest sections[58]



When scaling down the scope of consideration even further it becomes apparent that local forest resource users perceive Koma Forest as a mosaic of single forest sections, namely Bushasha, Cangatarra, Gokesha, Kabah, Kama and Kidah.[59] Bushasha is again divided into the forest subsections Shae, Amari, and Dibi. Gokesha comprises forest areas referred to as Ouni, Budera, and Kocha. Forest sections differ considerably in terms of size as well as in their geographical and ecological characteristics. The location and boundaries (often

[57] Altitude data has been measured by means of Global Positioning System (GPS). However, accuracy differed between 9,0 meter and 25,5 meter, due to cloudy sky, forest canopy and terrain alignment.
[58] This sketch has been developed - on the basis data of Figure 2 - by means of transect walks through Koma Forest accompanied by knowledgeable forest users.
[59] This classification is concordant with information gathered by the Farm Africa PFM project.

following small creeks) of the six forest sections are not to be found in any official maps but, however, are familiar to forest users. Accordingly, these 'unofficial' forest sections are used as geographical subunits in this research.

In the following, taking up the notion that attributes and conditions of the natural environment providing resources impact on local peoples use and management practices as well as their willingness to invest in conservation efforts, the ecological as-is state of Koma Forest is illustrated in detail. Consequently, I intend to see Koma Forest with 'forest resource users eyes', hence basically look at the use potential of the existing forest flora. The fauna of Koma Forest constitutes a natural resource in itself, but is - with few exceptions - not taken into consideration in this work.

5.1.3 Koma Forest Ecology and Forest Resources

The deep, reddish brown fertile soils of the Koma Forest area and high precipitation allowed the development of a dense natural cover, that constitutes the factor 'nature' in the researched human-nature relationship system. It consists of a luxuriant multi-strata *Olea capensis* ssp. forest made up of a species composition that is characteristic for the Afromountainious forest around Bonga Town (Senbeta 2006). Other common canopy species are *Pouteria adolfi-frederici, Albizia* ssp., *Syzygium guineense, and Prunus africana* (Schmitt 2006).

However, Koma Forest should not be considered as a homogeneous and constant entity, but a geographically diverse area overgrown with a variegated vegetation in a constant state of flux. Christine B. Schmitt conducted an ecological study in different plots of Koma Forest between 2003 and 2005 provides in her work "Management and Distribution of Wild Coffee Populations in the Montane Rainforest of the Bonga Region" (Schmitt 2006) an inventory of 100 different species from tree to herb size that are verified to occur in Koma Forest, including their vernacular names in Kaffichio[60] and Amharic. This gives an impression of the manifoldness of potential forest resources as each of the depicted species can provide one (in case of multi usage more than one) forest resource in one way or another.

The geographical dispersion and quantitative abundance of the listed forest species within Koma Forest and therefore the location and amount of potential forest resources available, is, however, not area-wide scientifically recorded by now, but is - as a matter of course - important when elaborating on local forest use, management and conservation.

At this point, the local knowledge 'universe' comes into play. Local people that use, manage, and conserve forest resource from Koma Forest hold detailed knowledge on species

[60] Language with Cushitic origin, spoken by most Kaffa people, also referred to as Kaffa language, Kefficho or Kaffiniya.

occurrence and quantity, particularly in regard to those that play a major role as forest resources. In order to elucidate on this knowledge, I invited Komba villagers to participate in the methodological technique 'joint resource mapping', to identify most important natural resources of the surrounding area, to discuss their location and quantity and to sketch the results accordingly. By this means, the following mind map came into being.

Figure 16**:** Resource mind map of the area surrounding Komba village[61]

The horizontal dashed line stands for the national road; house symbols show the current location of Komba (down right) and Agama village (top right), and - in the top left corner - of the former *gots*[62] Bushasha, Cangatarra, Gokesha, Kabah, Kama and Kidah (see Chapter 5.2.2.2). Different sketched symbols and colours stand for the location and quantity of different 'key' forest resources. Green 'trees' indicate forest, red 'bushes' the occurrence of coffee within the forest, yellow 'beehives' symbolise the areas in which honey is produced, and yellow culms the location of maize farming.

This simple drawing provides an initial idea about which natural resources play a key role for the local population of the research area, and gives a rough understanding of their

[61] In order to allow the participants of the mapping exercise a better visual understanding, this figure is - unlike the foregone one - not oriented in a North-South, but in South-North alignment.

[62] A *got* (amh.) is a community of kindred neighbours descending from a conjoint ancestor. It can be roughly interpreted with the term hamlet.

geographical location. In regard to forest coffee occurrence, two clusters can be identified in the mental map, located down left (south of the national road's elbow), and top right (adjacent to the *tukul* symbols and north of the national road). This drawing presents a first hint on the existence of forest coffee in Koma Forest.

However, in order to obtain a more detailed picture of the occurrence and distinct geographical distribution pattern of the 'flagship' forest resource *Coffea arabica*, an in-depth forest review had to be undertaken. Thereby, the basic source of information was, once again, the knowledge of local people that traditionally use forest resources from Koma Forest. This local expertise has been assessed by means of focus group discussions and key informants interviews and is presented in Table 1 in an accumulated form.

Table 1: Local knowledge on *Coffea arabica* occurrence[63] in Koma Forest

Name of Koma forest section	Description of coffee occurence
Bushasha	"*Medium coffee*"
Cangatarra	"*Most coffee*"
Gokesha	"*Medium coffee*"
Kabah	"*Very most coffee*"
Kama	"*No coffee*"
Kidah	"*Most coffee*"

Table 1 classifies forest sections of Koma Forest in regard to the occurrence of coffee in the forest sections concerned on the basis of categories developed together with the participants of the group discussion. It shows significant differences ranging from "*no coffee*", "*medium coffee*", "*most coffee*" and "*very most coffee*". These statements put the widespread notion that coffee is dispersed all across the so-called coffee forests into the right perspective. Instead, it strengthens evidence from Figure 16 that occurrence of coffee in the forest can be understood as an patchwork arrangement with few coffee 'hotspots' inside. But which factors determine the occurrence and density of *Coffea arabica* in the forest?

From an ecological point of view, coffee distribution pattern can be attributed to a number of variables categorised in a) abiotic natural factors, comprising the terrain's microclimate, altitude, slope, direction, and soil characteristics, and b) biotic natural factors like diseases and pests, as well as other plants taking coffee plants light, space and soil nutrients. The main abiotic determent of forest and semi-forest occurrence in Koma Forest is the rugged and steep terrain and the altitude ("*There is no coffee in Kama because it is highland"* (4/11/2004:

[63] The table combines and reproduces the outcome of a group discussion with Komba villagers and key informants statements (4/11/2004, Community/Resource mapping with seven peasants from Komba; 7/11/2004, Komba: Resources mapping with Abeto Mamo and Assrat Gebre Mariam; 4/11/2004 Forest walk with Abeto Mamo)

Forest walk with Abeto Mamo). The maximum elevation of coffee in this area is about 2050 meter asl (pers. com. Schmitt 2004). This is why coffee growth in Koma Forest is limited to a certain 'coffee belt' that stretches horizontally across the mountainside.

Apart from abiotic and biotic factors, coffee occurrence in Koma Forest is determined by a bundle of anthropogenic factors. Past and current human encroachment changes, more or less directly, forest density and species composition in forest areas in which coffee occurs, and thereby changes the conditions for coffee plants to grow and spawn in the forest. For example, *Coffea arabica* plants like moderate insolation with direct sun light for a limited period of the day. A mountainous moist forest without human interference provides natural partial lighting conditions in which insolation of the coffee plants in the lower forest layers is very low-level. Hence, coffee grows relatively sparsely in undisturbed forests with dense tree canopy. The removal of larger trees, allows more sunlight to permeate the forest canopy and offers more thriving conditions for the undergrowth vegetation, including coffee plants. Yet, denser understorey also means more competing vegetation for the coffee plants. A total clear cut, hence the clearance of the entire forest canopy, would put the coffee plants in danger to 'burn out' caused by excessive insolation (known as photoinhibition), and to 'dry out' due to stronger wind and lower moisture microclimate. Consequently, coffee growing conditions are best when the forest canopy is partially light permeable and competing undergrowth vegetation that may take soil nutrients or light from the coffee plants or may physically strangle them is sparse.

The preceding section depicts the manifoldness of the ecosystem Koma Forest and its resources as well as the complexity of human encroachment impacts. Effects of use and management of one forest species may influence another one or a set of others that also may have a function as a forest resource, and in the extreme, use and management of a given resource may cause extinction of another. These interrelations, however, do not only exist between the use of different plants and species, but may also concern single plants that are used for multiple resources simultaneously, even by different users.

5.1.4 People that Come: Accessibility

Accessibility of natural resources is a significant determinant that impacts on their use, management and conservation (see Chapter 2.2.1). In regard to forest, good accessibility increases the likelihood of the forests' resources being utilised and managed by humans, low accessibility in turn causes in all probability use and management constraints such as

increased transportation costs, which are likely to bring relatively lower rates of forest resource depletion. However, in some cases low accessibility of forest areas might also imply negative effects on forest density such as reduced forest fire-fighting capability. When reviewing accessibility of forests, two groups of determinants need to be differentiated: a) geographical and ecological factors, and b) anthropogenic factors. Most important geographical factor is the terrain, e.g. whether forests are located on steep hillsides or on well-accessible plains, or the occurrence of natural barriers such as river gorges.

Koma Forest is located on a steep upward landscape, crossed by river shaped valleys. The slope of its terrain limits accessibility in the way that it makes it difficult to construct infrastructure and dwellings, and hampers tillage agriculture, as steep farmland has high erosion rates and is difficult to plough by oxen. Terrain characteristics provide a major disincentive to convert large areas of Koma Forest into cultivated land.

Ecological factors comprise vegetation such as dense bushes, lianas and dropped trees that aggravate accessibility and makes most forest tracts only walkable with machetes. Nevertheless, a more important ecological factor that impacts on accessibility in Koma Forest is the existence of large wild predatory animals - lions and hyenas in particular - in the forest. People fear to enter the inner patches of Koma Forest, particularly when alone and at night time, and do not let their livestock graze within.

> "*The lion is our guard. Because when the lion is there, […] the thieves are afraid of going at night in the forest. I have seen the lion just this week.*" (11/11/2004: Komba: Yerango Ambo)

Accessibility of forest resources is also determined by preceding or current human activities. Literature argues that the construction of roads is one of the most important driving forces behind forest depletion and destruction as roads facilitate the transport of timber harvest and the creation of new farmlands (cp. Angelsen and Kaimowitz 1999; Sieböck 2001). This process is described as self-reinforcing because the construction of one road is not only likely to enhance forest depletion and land occupation within the catchment of the concerned road but to be followed by the construction of new roads (Contreras-Hermosilla 2000).

The most widely used transportation routes are more or less caved muddy footpaths that lead through the forest. However, as portrayed in Figure 14, Koma Forest abuts on the national road from Bonga to Misan Teferi, which is - in Ethiopian standards - well maintained with an all weather gravel surface, and relatively busy in terms of lorry and bus traffic. The road is

flanked by a drivable 'appendix' which is about two kilometres long and cuts Kabah and Bushasha forest in a southward direction.[64] About a decade ago, some construction works were carried out to erect a road connection that links the Bonga - Misan Teferi road with Decha *woreda* in the south, which would have carved Koma Forest into two fragments. However, after carrying out some earthworks, the whole undertaking was stopped for unknown reasons. Vestiges of the road construction are still to be found in Koma Forest, most visible in a some hundred meters long, about ten meters wide aisle that penetrates the forest to the present day.

Although this road has not been constructed, and the inner parts of Koma Forest can still not be accessed by other means than on foot or equine transport, general accessibility of Koma Forest is remarkably good due to the directly adjoining national road. This particularly holds true against the background that the average distance to the nearest all-weather road in Ethiopia is about 16 kilometres (Gebreselassie 2005: 43). This is, however, a distance that rural Ethiopians regularly cover on foot, e.g. in order to reach the next bigger market place.

Another anthropogenic factor that impacts on forest accessibility is forest fragmentation. Forest fragmentation principally shows the existence of human settlements which are likely to be centers of deforestation activities, in or adjacent to forests (Lambin and Ehrlich 1997: 3556). Fragmentation increases accessibility. In a more fragmented forest, more edge per unit area is exposed to human encroachment. This process is self-enforcing, once it has begun, it enhances likelihood of more fragmentation.

Koma Forest forms a relatively well-connected and unfragmented forest area. This can be basically traced back to the fact that - ever since the resettlement of four *gots* at the end of the 1990s (see Chapter 5.2.2.2**)** - no villages are located within the forest, and that the area is surrounded on two sides by other parts of Bonga Forest. Corrosion of forest edges is assessed as strong only at the Eastern side of Koma Forest towards Agama village.

However, in conclusion, one has to bear in mind that despite some characteristics that lead to a reduced accessibility of the Koma Forest, the quantity of *gots* scattered around the area means that the whole forest has for a long time been in the range of human interference activities. Hence, there is no (more) natural retreat area in which the forest ecosystem, including the flagship species *Coffea arabica*, can be found 'out of human reach', and hence truly unaffected by any use and management activities of the local population.

[64] This road has been detected and gauged by means of transect walks. It is not to be found in Figure 2 or any other 'official' maps.

5.1.5 Not For Everybody: Excludability of the Resources

Another attribute that impacts on utilisation, management and conservation practices of natural resources depicts the difficulty of excluding 'outsiders'. In that context, exclusion of 'outsiders' is understood in the way that potential users of a natural resource can be denied or excluded from using certain resources (see Chapter 2.2.1.2).

Different natural resources have different characteristics concerning excludability. Concerning this, the major attribute of forests is that it is highly difficult to exclude outsiders from them, as they typically constitute large areas with long and often unclear borders and a maze-like interior with high potential to take cover. For that reason, efforts to exclude outsiders from forests are often too costly to make exclusion economically efficient (Gatzweiler 2005: 206).

Koma Forest is no exception. It is characterised by extremely low excludability, also due to the forests evergreen and dense character and the exceedingly hilly terrain. In fact, all forest boarders are penetrable and potential forest resource users can roam around in Koma Forest with very little chances of being detected by others, and chances are even further reduced early in the morning, in the late evening, and at night. These natural conditions make effective measures to exclude potential resource users from access to Koma Forest resources - be it fencing and/or positioning of guards that patrol along the outskirts of the forest – difficult, costly and ineffective.

5.1.6 Either Mine or Theirs: Substractability and Regeneration

As mentioned earlier in Chapter 2.2.1.2, substractability is understood as rivalry in consumption, in which subtraction of a resource by one appropriator reduces the potential benefit available for the other (Ostrom and Ostrom 1977). Hence, the attribute substractability is based on the fact that there is more than one potential resource appropriator and that the availability of the respective resource is finite.

Koma Forest resources are generally characterised by a high degree of substractability, but emphasis has to be given to that fact that different forest resources differ with respect to their degree of rivalry in consumption. The forest resource *Coffee arabica* is highly substractable, in the way that it gives fruits only once a year at the most, and yield quantity and quality depend on prior use and management activities. For example, if coffee berries are inappropriately picked from the twig, harvest of this plant decreases significantly for the proximate years. In other words, when forest coffee trees are harvested incorrectly, it not only

takes at least one year to allow somebody else to harvest the same plant, but the next harvest is likely to be considerably reduced.

This example shows that substractability of natural resources is directly linked to their natural regeneration rate. In regard to forests, each forest plant is obviously characterised by different natural regeneration rates, but in general, primary forest ecosystems are characterised by relatively low regeneration rates.[65] In Koma Forest, this is not only attributed to slow growth rates of certain plants, but to the specific and diverse species composition, hence the high level of biodiversity, which makes it – irrespective of the regeneration time - debatable whether the ecosystem can regenerate at all after considerable human encroachment.

5.2 The People: Forest Resource Appropriators' Attributes

Attributes of the forest resource appropriators[66] constitute the second cluster of determinants influencing the action arena as exogenous variables. In that understanding, after elaborating on Koma Forest as a potential natural resource itself, in the following, focus will be made on attributes of the individuals who utilise forest resources from Koma Forest, are actually involved in its management and have practical means to conserve it.

Appropriators' attributes impact in multiple ways on the manner forest resources are used, managed and conserved. Some attributes, however, are likely to have more bearing than others. But which have to be considered as most relevant in this connection?

Most studies that apply IAD framework focus on factors that affect the likelihoods of cooperation among appropriators, whereas others more generally focus on attributes of the community that enhance the likelihood of sustainable resource use. However, both highlight questions of number and homogeneity of resource appropriators and their dependency on the resource to be most vital (Wendel 2004).

Nevertheless, despite the fact that research has made considerable progress in identifying factors that affect prospects for sustainable forest use, management and conservation, no consensus is reached about the exact role that number and heterogeneity of appropriators play in this regard (Poteete and Ostrom 2004). The same applies to the factor dependency. Some scholars depict high dependency on the resource as an incentive to invest in it and its maintenance, e.g. by participating in collective actions (Wendel 2004). Others, though, state that high dependency on a resource along with a lack of alternative means of income is likely

[65] This is particularly apparent in comparison with eucalypt plantations which are frequently used in Ethiopia as an exceptionally fast growing source for timber and firewood.

[66] Appropriators are understood as those people with a concrete stream of benefit from a certain resource.

to increase depletion of the resource and to reduce opportunities to invest in its management. Hence, from literature, it can merely be concluded that appropriators' dependency on the resource may either facilitate or impede overutilisation and loss of the concerned resource (cp. Tang 1992: 20ff). This exemplifies the difficulty to make generalisations on the impact of particular attributes of the appropriator community on use, management and conservation of forest resources, and the need for further research that focuses on multiple factors. Therefore, in this work, Komba village community is investigated and analysed in a comprehensive manner, including demographic, historic and socio-economic factors.

5.2.1 Who and how Many? Basic Features of the Appropriators

This work centers its attention on the forest resource appropriators that are the 'original' people of Koma Forest area, and at present live closely to it. These are the people of Komba village. This declarative statement will be further corroborated by empirical findings in the following sections, but most relevant is the fact that Komba village is actually an amalgamation of the four *gots*, Bushasha, Gokesha, Kama and Kidah, which were located within Koma Forest before the Ethiopian calendar[67] year 1991 (1998/99 Gregor. cal.), and were then resettled to a place beyond the forest border (the resettlement issue is extensively discussed in Chapter 5.2.2.2). Historically, Komba villagers are the autochthone inhabitants of Koma Forest area and descendants of the *gebber* that received forest use rights from the *neftegna* and *balabbat* respectively in Haile Selassie's time (see Chapter 4.2.1). However, empirics also document that forest resources from within Koma Forest are not exclusively used by Komba villages, but to a certain degree also by allochthonous individuals living in Agama village close to Koma Forest.[68]

The link between the number of people that use forest resources of a certain area and forest resource depletion and forest loss, respectively, have been controversially discussed among scientists of different disciplines in recent years and is still not definitively clarified yet. Respected researchers and international organisations such as the World Bank and the World

[67] The Ethiopian calendar year consists of 365 days, divided into twelve months of thirty days each and one additional month of five days (six in leap years). Ethiopian New Year's Day (*addis amahd)* falls on the September 11th. From September 11th to December 31st, the Ethiopian calendar year runs seven years behind the Gregorian calendar, and thereafter the difference is eight years. In this research, most empirical time data has been given in Ethiopian calendar. In order not to tamper with the data unknowingly, I present dates in Ethiopian calendar including their Gregorian calendar equivalent.

[68] No tangible information concerning (other) external appropriators which are not bound to geographical closeness to Koma Forest could be assessed in the framework of this study, nor is available from secondary literature. Therefore, although external appropriators remain to a greater extent a potential externality to Koma Forest use, management and conservation issues, it is not perceived as a concrete event, and, hence not included in the research framework.

Wide Fund for Nature (WWF) see in "human population pressure […] the most crucial underlying cause of deforestation" (Laurance 1999: 89). Their point of view bases on the argument that high population figures stand for high numbers of forest users that bring high extraction rates. Growing population consequently leads to increased demand on forest resources and hence to increased forest use, and overuse. Other sources, however, warn against establishing a simple link between population growth and forest depletion. Besides the often cited work "Population Pressure = Forest Degradation: An Oversimplistic Equation?" of Arun Agrawal (1995), on this note, Lambin states that "simplistic views that establish a direct causal relationship between increasing population density and the degradation of land should be subjected to critical scrutiny" (Lambin 1994: 61). More recently, Contreeras-Hermosilla supports this understanding by writing that population increase is "not simply an independent variable that acts alone in influencing the fate of forests" (Contreras-Hermosilla 2000: 19). In recent years, the notion that underlying causes of forest depletion are more connected to the institutional arrangements of forest use, management and conservation than to the number of forest users gained more and more currency, not only in institutionalist circles.

It is always a difficult undertaking to assess exact numbers of people that extract forest resources from a particular forest area, particularly in LDCs. For the most part, there are no reliable official figures, nor is it an easy task to collect primary information. Forest use combines different activities by different people, often fluctuating over time, and the set up of a threshold to distinguish forest users from non-forest users is problematic. Last but not least, in many cases, use of forest resources is bound to be a matter of lack of legal clarity or illegality, which makes resource appropriators likely to conceal their activities.

In order to get relevant information on autochthone appropriators' attributes, a total household survey was conducted in Komba village. It revealed that all households[69] (HHs) of Komba village utilise resources from Koma Forest in one way or another. At time of the survey in September/October 2003, this included 290 individuals in total, living in 44 HHs.[70] Nonetheless, 'village' is no administrational entity by itself in Ethiopia, and 'belonging' to a certain village is not so much fixed by the geographical location of the permanent domicile, but rather by the historical background and kinship relations. Hence, there is no clear definition of which HH is part of what village, and in some cases, people whose *tukul* was at time of survey not sited within or close to Komba village but in neighbouring villages,

[69] In the rural Ethiopian context, households are understood as a group of kinfolk that dwell together in a *tukul*, frequently share meals and are mostly organised around a patriarchal authority.

[70] This gives an average household size of 6,59 persons, which is close to the figure for Ethiopia as a whole.

considered themselves to be Komba villagers. I approached this challenge for data collection in the way that I consulted elders and *iddir* representatives in order to ascertain affiliation of certain HHs to Komba village.

Concerning the total population size of Yeyebitto *kebele*, there is, indeed, secondary data available assessed in a study conducted by the "Forest, Wildlife, Soil, Landuse and Technology Regulatory Department" within the MoARD in the Ethiopian calendar year 1991 (1998/99 Gregor. cal.). According to this study, 2,146 people living in 429 HHs inhabited Yeyebitto *kebele* at time of the census (MoARD 2003a: 43). Nevertheless, these figures may give a general idea about population size in the research study side in general, but do not provide precise information on number of allochthone appropriators. The Catholic priest of Agama, however, estimated the number of households in Agama village with 60 HH of which most are of Kambata[71] ethnicity. The existence of a Kambata people community on this spot is a result of the governmentally-enforced resettlement programmes in the 1980s in which people from drought-prone areas in Ethiopia were resettled to forest areas of South-western Ethiopia, such as Kaffa Zone (see in-depth discussion in Chapter 5.2.2.2). Due to the fact that research intended to limit itself only to one forest resource appropriators village community per study site, they have not been intensively investigated.

The above discussion on basic features of forest resource appropriators illustrates that resources from Koma Forest are not merely utilised by one group of resource appropriators, but at least two. Reality is even more complex, and needs further breakdown and classification, particularly in regard to the internal set up of 'the Komba villagers'.

5.2.2 Internal Differentiation: Appropriators as a Heterogeneous Group

As a matter of course, every group of people is heterogeneous to some degree, and levels of variability, hence horizontal and vertical intra-group dividing lines, are likely to increase and deepen with a larger group size (Wendel 2004). Effects of larger group heterogeneity include more complex group-internal social dynamics and institutional arrangements (e.g. due to more organisation and negotiation efforts) and increased likelihood of conflicts, which may influence natural resource use, management and conservation activities (see also theoretical discussion on heterogeneity in Chapter 2.2.2.1).

[71] Also known as Kambatta or Kembata.

In the discussion above, autochthone and allochtonous forest resource appropriator groups have been taken as consistent entities and questions of intra-group diversity have not been illuminated hitherto. When investigating local level forest resource use, management and conservation matters, however, the question comes to the fore whether and how intra- and inter-forest resource user group' diversity (e.g. in terms of ethnicity, caste, religion, or origin) provides different incentives and hindrances (motivations) that impact on the individuals' decision making and behaviour reality. In that sense, in the following, attention is drawn to the question of heterogeneity within the respective forest resource appropriator groups. Thereby, according to the research design, focus is put on authochthone Komba villagers, whose relatively small quantity - in comparison to numbers of people investigated in other anthropological and sociological research - gives reason to assume low intra-group heterogeneity.

5.2.2.1 Ethnic and Religious Heterogeneity

Literature deduces the Kaffa people to be the original inhabitants of Kaffa region. This statement holds true to some extent, though, it is rather simplified. Kaffa people indeed share a common language known as Kaffichio[72] and a common religious background, which is affiliation to the Orthodox Church. However, common socio-cultural mutuality stop at this point. In the following, the image of the Kaffa people as a coherent society is put into perspective by focusing on the internal hierarchical differentiation. Diversity can be basically boiled down to the subdivision into two castes, the Kaffa 'main group'[73] and the subgroup of the Mandjah[74]. In literature, Mandjah are considered to be the original 'forest people', that are by tradition more involved in forest-related activities such as beekeeping and firewood collection, and less in agriculturalism than Kaffa people. This goes together with an explicitly lower social status (for a detailed discussion see Lange 1982). Hartmann compares the Mandjah to the untouchables in India and describes them to be the "most marginalised group in Ethiopia" (2004: 2). They are estimated to represent about 10 percent of the total population in Kaffa Zone (Hartmann 2004: 2).

Komba village population consists of both castes, Kaffa and Mandjah, with 34 Kaffa HHs (77.3 percent of the total), and 10 Mandjah HHs (22.7 percent). Concordantly with the views in above cited literature, Mandjah in Komba village have a lower status in terms of social

[72] Kaffichio, also termed Kaffa language, belongs to the Omotic language family and uses the Amharic alphabet.
[73] In the following simply referred to as Kaffa.
[74] Also known under the terms Manjo or Manja.

standing, and are to some degree discriminated by the Kaffa, most notably justified by different feeding practices. This is exemplified in the following statement of a Kaffa:

> "*The Mandjah have no religion. They eat everything, also wild animals which is not written in the Bible*" (24/6/03: Bonga: Seyoum Tefera)

The ostensible habit of eating wild animals from the forests - particularly guereza monkeys (*Colobus guereza*) - is found to play a significant role in the exclusionary relationship between Kaffa and Mandjah, and is for example presented as the argument why Kaffa and Mandjah do not eat in each others' company (cp. Pankhurst 2001). Anyhow, investigation in this field of caste-based cultural distinctions appeared to be a 'hot potato'. As soon as I raised questions on related issues, field assistants as well as discussion partners from both castes became short-spoken or even recommended changing the subject because it may evoke distrust and conflict. Hence, very little primary information could be obtained on actual relationships between Kaffa and Mandjah people in Komba village and whether Mandjah from Komba village in fact hunt and eat wild animals from Koma Forest these days.

Both castes dwell in separated *tukul* ensembles within Komba village, with a distinct social distance, in which, for example, intermarriage is unimaginable. That does, however, not mean that there is no social interaction or exchange of goods. On the contrary, both castes seem to live in a traditional socio-economic interdependency, or even 'symbioses'. Nevertheless, differentiation between the two castes Kaffa and Mandjah forms the most elementary segregation in Komba village.

Affiliation to religion is another social-cultural feature that binds groups of people. A contingent of 28 out of 44 HHs (63.6 percent) of Komba village population follows the Ethiopian Orthodox belief. The remaining are catholic (10 HHs, 22.7 percent), protestant (5 HHs, 11.4 percent), one HH is muslim (2.3 percent). This shows no definite confessional assignment of Kaffa and Mandjah, both castes are religiously split up. Inter-confessional marriage is taking place, brides take over their husband's confession. However, these statistics depict only the 'official' religious convictions. Behind the idea that one religion expels the other, syncretism between naturalistic traditions and monotheistic religions plays a greater role. However, the prevalence and actual meaning of Animistic traditions and faith for Komba villagers is somehow a 'taboo' and hence remains unclear by many means. The only tangible information in this matter is the fact that there are two sacred sites in Gokesha and Bushasha forest sections. They cover about a quarter of a hectare each, and are habitually visited by

Komba villagers in order to pay tribute to what is referred to as 'the ghosts'. According to a Komba villager, these sanctuaries are excluded from forest resource utilisation:

> "*Nobody touches the religious sites, they are fenced*" (28/11/2004: Komba: Assrat Gebre Mariam)

On the *kebele* level, ethnic and religious affiliation looks slightly different. Data surveyed by the MoARD depicts 79.8 percent of the Yeyebitto *kebele* population to be of Kaffa (including Mandjah caste), 10.1 percent of Kambata, 8.6 percent of Oromo, and 1.5 percent of Amhara ethnicity. This composition principally reflects overall population pattern in Bonga Forest area with the exception of the high percentage of Kambata people. This particularity is attributed to the existence of the Kambata community in Agama village. Their ethnic, cultural and religious background is considerably different from Kaffa and Mandjah people. The Kambata, for example, speak the Cushitic Kambata language, and are without exception affiliated to Catholic Christianity. As mentioned above, the Kambata people came as late as in the Ethiopian calendar year 1980 (Gregor. cal. 1987/88) in the context of a governmentally-initiated national resettlement programme. This leads the discussion towards the issue of appropriators' place of origin as well as on state-initiated resettlement as a policy meant to solve environmental, economic and political problems in Ethiopia.

5.2.2.2 Who is the Original? Resettlement and Heterogeneity

Taking the theoretical notion of path dependency into consideration (cp. Chapter 2.2.3.6.3), history of forest user communities is likely to provide a strong determinant not only for present-day forest resource use, management and conservation, but, by impacting on resource appropriators' options, willingness and resistance to change also on concerning future developments. The major issue in this regard is the historical affiliation of forest resource appropriators with the forest concerned, which is very much determined by the 'rootedness' of a community in a concerned area and answers to the question: "who is the original population of the forest area?".

As is the case with most distant events from Ethiopian history, the historical origin of Kaffa and Mandjah people are difficult to trace back and reconstruct as - apart from some orally transmitted legends - there are almost no recorded data or archaeological relicts and little literature. Bieber (1920/23) depicts the Mandjah to be the original inhabitants of present-day Kaffa region and the Kaffa as immigrants that came to the area between 1350 and 1400 AD,

overthrew the Mandjah sovereignty and banished the Mandjah from their homesteads.[75] The displaced Mandjah fled into remote forest areas and became 'forest people'. From now on both groups lived in separate communities but exchanged goods and services in which the Mandjah carried out poorly respected and arduous forest related work such as hunting and firewood provision. Bovensiepen (2003) sees Mandjahs' social position as further deteriorated after the Amhara invasion and Christianisation at the End of the XIXth century.

The most critical event in recent history of Komba villagers, both Kaffa and Mandjah people, was a governmentally-forced resettlement action in the Ethiopian calendar year 1991 (1998/99 Gregor. cal.). Since this event was not only an abrupt change in the historically-grown population distribution of the Koma Forest area and a major disruption in the lives of Komba villagers but also fundamentally changed forest use, management and conservation matters, it needs to be given close attention here.

Prior to the resettlement, present day Komba village community permanently[76] settled within Koma Forest, in the four scattered *gots* of Bushasha, Gokesha, Kidah and Kama, located in homonymous forest sections. Indirect evidence of the past existence of these *gots* is found in Figure 14, in which three white spots indicate the existence of non-forest land right within the Koma Forest area. Evidently, human settlement at these places seems to date back at least several generations:

> *"I am born in Gokesha. I am 75 years old. […] All my children have grown up in Gokesha. All my family and grandfathers are originated from there"* (6/11/2004: Komba: Life history of Woldemariam Ambo)

Due to information of the two Komba *iddir* chairmen (8/10/2003: Komba: Hailemariam Gebre and Abeto Mamo; 12/11/2004: Komba: Hailemariam Gebre), Gokesha *got* was once inhabited by 17 HHs (20 HHs)[77], Bushasha *got* by 10 HHs, Kidah by 6 HHs, and Kama by 4 HHs. People of the Kaffa and Mandjah caste both lived in Gokesha *got*[78], the other *gots* were

[75] In 1938, Max Grühl depicted this historical event in a flowery narrative: "Aus dem Wald kam der Intrigant, aus der Steppe der Kämpfer. […] So wie die Kaffichio, die die Mandjah besiegten, als sie nach Kaffa kamen. […] doch heute sind auch sie [Kaffichio] durch das Waldland besiegt, ihre Kraft starb und der Wald blieb Sieger." (Grühl 1938: 353).

[76] Nomadism did not play a role in recent history of the area.

[77] Another informant insisted that it was 20 HHs (6/11/2004: Komba: Livestory of Woldemariam Ambo).

[78] The Mandjah of Gokesha lived in the forest subsection Budera.

solely inhabited by Kaffa people. Accordingly, population of present-day Komba village is an amalgamation of four groups of HHs that originate from Koma Forest.[79]

State-organised resettlement and villagisation programmes have a long history in Ethiopia and were often used as a tool to bring scattered rural communities under tighter control of the executive (cp. textbox "The *Derg*'s Resettlement Programme" below). In case of Koma Forest resettlement, it is necessary to keep in mind that Bushasha, Gokesha, Kidah and Kama *gots* were located within the Bonga NFPA's boarders while Komba village is not. In that sense, the removal of the four scattered forest user communities can be seen as a forest conservation measure aligned with the existence of Bonga NFPA.

The details of the Koma Forest resettlement, however, look different from different perspectives. There is the 'community version' (reported by resettled people) and the 'official version' (hawked by GO and NGO employees). Both groups of informants concordantly agreed in reporting a gunfight in Koma Forest as the initial point for resettlement, but it is not clear whether this violent incident was actually the underlying (and reasonable) driving force for resettlement or rather an ostensible justification.

Beside the motive question, also the degree of the resettlements' voluntariness is questionable. In the perception of the relocated people, resettlement was an involuntary, governmentally-forced banishment from the 'place of the forefathers' for which they got unsatisfactory compensation. A former chairman of Komba village told the story as follows:

> *"In 1991* [Ethiopian calendar year], *Gokesha, Bushasha, Kama and Kidah gots were resettled. All came to Komba. All were resettled because of the same reason, at the same time. The reason was as follows: four people were killed with a gun. The killers came from Bushasha. The government told us to settle elsewhere. We asked for compensation for our crops, still we are struggling for the compensation. Still now I am paying tax for 6 ha of land, but here I have much less land. Still we are struggling to go back to Gokesha. The kebele and the woreda obliged us to come here. We were afraid of the government, so we went. We complained against resettlement for one year, but then the resettlement took two months. We left our houses there, and build new ones here. […] The kebele selected this area and they gave it to us. […] During the derg, some people (Kaffa) lived here, but they left for Chana woreda. They left voluntarily. When we came here it was a bit bushy, but not dense forest. There*

[79] The number of HHs in Komba village at the time of field research is slightly higher that the sum of HHs from Bushasha, Gokesha, Kidah and Kama *got* as new HHs have been set up ever since resettlement.

> *was some coffee when we came here. But we planted more coffee."* (12/11/2004: Hailemariam Gebre, chairman of Komba *iddir*)

Other Komba inhabitants related the resettlement narrative in similar ways, all of them emphasised that resettlement was involuntary and that they would like to remigrate, first and foremost because resettlement changed their HHs economic situation for the worse. An elderly described the economic consequences situation as follows:

> *"When I was young, Gokesha was a very rich village. […] After we had to leave the place, we became poor. We become poorer and poorer. We do not have money to buy clothes. After our arrival here, we sold all our cattle and our resources for food.*" (6/11/2004: Komba: Livehistory of Woldemariam Ambo)

Rationales behind the impoverishment process were repeatedly attributed to the loss of farmland which was located around the *gots*. The resettled households were provided with alternative farmland located outside Koma Forest by the Yeyebitto *kebele* administration, but field size was, however, considerably smaller than before.

> "*The houses* [in Gokesha *got*] *were also as close as today* [in Komba village], *but there we had wider farm areas, like seven to eight hectare*." (12/11/2004: Hailemariam Gebre, chairman of Komba *iddir*)

Nowadays, after five years of fallow, the former homesteads and agricultural areas of Gokesha, Bushasha, Kidah and Kama *gots* are in the process of turning into forest land and are already overgrown by dense scrubland. However, the exact place of the four *gots* can be still located by means of relicts found at the abandoned places. For example, one former inhabitant of Gokesha showed the overgrown and half-rotten pole of his former *tukul* as well as his wildered bamboo grove and coffee garden around (see picture below). (5/11/2004: Komba: Forest walk with Abeto Mamo and Assrat Gebre Mariam).

Photo 2: Overgrown and half-rotten *tukul* pole in the former Gokesha *got*

Evidence suggests that Koma Forest as a whole - together with the former residential and agricultural sites - has ecologically recovered and became denser over the past years since the resettlement. Almost in unison, 29 out of 30 interviewed Komba villagers said that Koma Forest ecology has changed for the better over the last five years.[80]: "*But now the forest is denser than in previous years, because now nobody goes into the forest.*" (6/11/2004: Komba: Livehistory of Woldemariam Ambo). To what extent the underlying reasons for forest regeneration can actually be found in the out-migration of Komba villagers, or whether they are more attributable to present-day state or NGO-initiated forest management and conservation efforts, could not be assessed in this work.

The 'official version' of Koma Forest resettlement sounds slightly different, especially in regard to the question of voluntariness and justification. A NGO employee from Bonga Town (who is working part-time for the Kaffa Zone administration) told the story in these words:

> *"In Bonga forest, there was an accident. A family was killed by others. They were far in the forest. […] Gimbo woreda and Yeyebitto kebele decided to voluntary pick them* [the inhabitants of Koma Forest] *up and mix them with the other kebele people.* […] *The resettlement is related to security and not to forest destruction."* (10/11/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

However, the draft paper "The re-demarcation of Bonga National Forest Priority Area. A step towards achieving conservation of the forest through participatory (joint) forest management." composed in November 1998 by the "Bonga Forest Conservation and Development Project"

[80] 30 Komba villagers were asked "How have forest conditions in Koma Forest changed over the last 5 years?". 29 interviewees responded with "*they improved*", one with "*I do not know*".

(BFCDP)[81] under controlling interest of the NGO Farm Africa, brings another background story to the fore. This document justifies re-demarcation of Bonga NFPA boarders as:

> "*a first essential step in a process of developing a more sophisticated system of participatory forest management*" (BFCDP 1998: 2)

Accordingly, a part of Bonga Forest located in Yeyebitto *kebele* was assigned to the Bonga NFPA in 1998. This implied removal of forest dwellers in this area. The paper states:

> "*There were no villages within the forest boundary, apart from the fourteen families.*" (BFCDP 1998: 10)

The 'fourteen families' is meant to denote the inhabitants of Bushasha, Cangatarra, Gokesha, Kabah, Kama and Kidah.

> "*The fourteen families inside the forest asked to be moved and resettled because they had suffered bandit attacks. A site for resettlement has been selected by the Kebele Administration and they are continuing for farm only until the move takes place. After that the land will be allowed to revert to forest.*" (BFCDP 1998: 10)

This written chronicle suggests that Komba resettlement was indeed part of a forest management plan initiated by the NGO Farm Africa in cooperation with the local state administration, and sort of prearrangement for the Agama PFM project, which lead to the foundation of a "Forest User Society" (FUS) in Yeyebitto *kebele* (see Chapter 6.3).
However, the Koma Forest resettlement narrative provides an idea about the divergence of different standpoints and 'realities' in the relations between the state and local communities. Furthermore, pros and cons of forest out migration became obvious: on the one hand, forest dwellers were relocated by force, did not obtain adequate compensation and their economic HH situation worsened considerably after the event. On the other hand, from an environmental point of view, there are signs that the perpetual out-migration of four entire forest user communities has had a positive impact on the Koma Forest ecosystem.

[81] The BFCDP was "established to test participatory forest management […] as a means of conserving this [Bonga] forest" (BFCDP 1998: 1). It is the precursor of the "Bonga Integrated Participatory Forest Management & Reproductive Health Project" conducted by the NGOs Farm Africa and SOS Sahel.

The history of Agama community is interwoven with state-initiated resettlement as well. As mentioned above, most of Agama community belong to the Kambata ethnicity, and came to Yeyebitto *kebele* as late as in the late 1980s. In contrast to the short-range forest out-migration of Komba villagers, however, Kambata people migrated far-distance from Kambata region in Central Ethiopia[82] in the context of a national resettlement programme, imposed by the former *derg* government.

The Derg's Resettlement Programme

The resettlement programmes of the derg time were one of the largest state-initiated resettlement efforts in Africa ever. The programme started up as a response to deteriorating ecological conditions and increasing population pressure in the highlands of Northern and Central Ethiopia that led to severe land degradation, food insecurity and recurrent famines. With a peak at the end of the 1980s, hundreds and thousands of people were relocated from the drought stricken areas to relatively fertile and lower populated areas of South-western Ethiopia, Kaffa region with its large forested areas in particular. During 1985-88 alone, about 50.000 households with approximately 250.000 people were brought to Kaffa region (Alemneh 1990: 180-1). Critics complained that the derg's resettlement policy has been driven more by political imperatives than by humanitarian or economic objectives, as it was seen as an instrument to depopulate areas that harboured militant resistance groups and to make people inordinately dependent on the government and its facilities. In practice, it became obvious that people were often relocated involuntarily and that the programme was by and large poorly prepared, implemented and maintained.

The Catholic priest of Agama village who is of Kambata origin described the resettlement as follows:

> "*I arrived here in 1980* [Ethiopian calendar year] *from Kambata. We came here because of drought and scarcity of land with a governmental rehabilitation plan*." (24/11/2004: Tadesse Kasa, Catholic priest, secretary of FUS)

[82] Kambata administratively belongs to Sidama Zone in the most eastern tip of SNNPRS, and is characterised as one of the most densely populated and impoverished regions of Ethiopia.

In conclusion, the illustrated events of Komba and Kambata resettlement provide two characteristic cases of state authority - local community interaction in Ethiopia. Although both events originated under different national governments and in a different geographical and organisational context, they are both radical top-down policies justified by questionable motives, and with socio-economically and/or ecologically problematic outcomes, in combination with a refusal to allow local people concerned to have any say or raise any objections.

5.2.3 What else than Forest Resources? Other Means of Subsistence and Household Economy

Livelihood of appropriators does not solely depend on resources from Koma Forest. Besides, HHs of that area apply a wide range of mixed farming agriculture practices for both, subsistence and as a source of income, and are - to a certain extent - engaged in employment for private entities or the state. On the one hand these activities may provide alternative goods and income that reduce the dependency of HHs from forest resources, on the other they may contribute to forest depletion and destruction, e.g. due to the need for agricultural land.

5.2.3.1 The Second Leg to stand on: Agriculture

When discussing the role of agriculture in Kaffa region, two long-term trends have to be taken into consideration which are a) the gradual development from an economy based on forest resources to an agrarian economy, and b) the development from *enset* (a plantain-like perennial crop endemic to Ethiopia, in literature often referred to as "false banana") based agriculture towards a more grain-based cropping system. In historical Kaffa region, forest resource use was the dominant source of livelihood, supplemented by *enset* based agriculture. With the incorporation of Kaffa region in the Ethiopian Empire at the End of the XIXth century and the influx of new settlers from other parts of the country, new agricultural production techniques (tillage farming in particular) and crops like maize and *teff* (*Eragrotis tef*, the 'Ethiopian national cereal'), were introduced and gradually adopted by local Kaffa and Mandjah people. Generally, ever since, farming engagement of the 'original' population grew over time, and agricultural practices aligned with those of the new settlers resulting in a combination of *enset* and grain-based cropping systems, the so called "hoe and plow agriculture" (Brandt, Spring et al. 1997: 4). Nevertheless, differences in extent of and dependence on farming activities, as well as agricultural production systems between single communities are still great, basically along ethnic dividing lines.

Land is the most important agricultural production asset, and questions of access to land are the key for most rural peoples livelihood in Ethiopia (see discussion on land tenure and property rights in Chapter 4.2). 41 out of 44 HHs in Komba village (93.2 percent) hold use rights for farmland distributed and licensed by the *kebele* authority. Out of the three remaining HHs, two expect land use rights soon to be distributed and one HH makes its living from land for which its offspring hold the use rights. Accordingly, total landlessness is no critical concern in Komba village.

HHs use their land basically for subsistence farming, hence their most important objective in terms of agriculture is to ensure food security for the members of the own HH. Selling of products on the local markets in order to add to the HHs cash needs plays an ancillary role.

The 41 HHs of Komba village combined reported to hold a size of 32.25 ha of crop farming land, which would make an average of 0.79 hectare per HH. These figures are outcomes of the total survey conducted among all HHs in Komba village. Nevertheless, there is evidence that respondents drastically understated their land holdings in fear of additional taxation and that calculated figures are therefore skewed. True figures are likely to be higher, but difficult to assess.

The chairman of Komba village stated that Yeyebitto *kebele* provided all resettled HHs from Gokesha, Bushasha, Kidah and Kama *gots* equally with 1,5 ha of agricultural land located north of the national road in the vicinity of Komba village (Interview Komba #7, Assrat Gebre Mariam). This is, exactly the average landholding size in Ethiopia (The Commission for Africa 2004).

Some interviewees reported that "*We, the Mandjah are given less land*" (Interview Komba #16, Mengesha Mamo), and "*land was not equally distributed, the one who likes the kebele most got more land"* (Interview Komba #10, Asrat Mamo), which indicates that land distribution was ethnically biased. Findings of the HH survey, however, do not show any significant difference between farmland size of Kaffa and Mandjah people in Komba village.

As often in Ethiopia, low farm holding sizes come together with low agricultural production input. Peasants of Komba village produce seeds and seedlings themselves or obtain them by other HHs from within the village of from neighbouring villages (see also Kumar, Baah et al. 2000: 4). "High Yield Varieties" (HYVs) are not used, and none of the Komba peasants reported to use chemical fertilisers, pesticides or herbicides for any of the crops, as expensive.

5.2.3.1.1 The Basics: Food Crop Farming

Komba people use their small land holdings to grow a large number of different food crops, basically for subsistence. Subsequently, the crops that are most important for Komba peasants' livelihood are briefly depicted, structured in a) cereals, b) the root crop *enset*, and c) horticulture.

Cereals provide the main source of staple food in Komba village, although land for tillage farming is limited due to steep geography of some farmland ("*Some areas cannot be ploughed because they are too steep*" Interview Komba #16, Mengesha Mamo). Tillage is carried out by oxen pulling the *maresha*[83], a traditional plough consisting of an iron tine and a wooden arm which is fastened on a wooden neck yoke. Except for the metal tine which needs to be bought from a blacksmith, peasants construct the ploughs by themselves by using resources from Koma Forest, preferably the extremely hard and stable timber of the *weira* (amh.) tree (*Olea welwitschii*).

Maize is the most utilised cereal crop and the predominant staple food in Komba village. 38 out of 41 HHs grow maize, the total area under maize production was declared to be 19.84 hectare which makes an average of 0.48 hectare per HHs. According to the local crop calendar, maize is sown out between the Ethiopian months of *thaisas*, *tir*, or *yekatit* (mid-December to mid-March) and harvested right before the rainy season which normally starts in *seneh* (mid-June to mid-July). Harvest is usually self-consumed by the HHs, only four HHs reported to have sold parts of their last harvest on the local market. Cash earnings were declared to be between 15 and 120 birr. Barley is the second most utilised cereal crop. 16 out of 41 HHs in Komba village grow barley, all in crop rotation with maize. *Teff* does not play the dominant role in Komba village agriculture that it holds in Central and Northern Ethiopia. Merely 12 out of 40 HHs grow *teff*, mostly in crop rotation with maize. Only one HH in Komba village grows sorghum. This is mainly due to the fact that sorghum allows no crop rotation with maize.

Enset has traditionally been grown in Kaffa region. It takes three to five years to become fully grown, needs little maintenance (besides occasional manure application), and can be harvested throughout the year (cp. Kumar, Baah et al. 2000: 3). Its robustness and unseasonality makes *enset* an important "crisis food" that helps to bridge times of food shortages which occur due to insufficiency yield of cereals. 30 out of 41 HHs in Komba

[83] The *maresha* is characterised to be cheap, easy to transport and simple to use, but rather inefficient compared to mouldboard ploughs (Temesgen 1999: 1).

village plant *enset*, mostly in high density around their homesteads, and process the thick pseudo-stem to a sough starchy food eaten in the form of bread, locally named *kocho*. *Enset* is used exclusively for own consumption, no interviewee reported to sell *enset*-based products on the market. In addition to cereals and *enset* cultivation, HHs exercise small-scale subsistence horticulture in the vicinity of their *tukuls*. Most popular are beans, oats, peas, cabbage and pepper.

The main cross cutting issue that links all above depicted agricultural activities with forest concerns are wild animals, particularly baboons, apes, wild pigs and porcupines, which exist in Koma Forest and other adjacent forests. Informants reported these animals to be a major threat for their agricultural yield, as they habitually destroy a significant proportion of the annual harvest. In that context, Komba villagers complained that killing of these animals needs a license from the *kebele* administration which is, however, difficult to get. Nevertheless, I could not assess to what extent these rules are actually observed.

5.2.3.1.2 Cash Crop Farming: Garden Coffee

Cultivation of coffee in a garden coffee production system (see Chapter 4.1.6) is an important source of cash income in Komba village. 37 out of interviewed 40 HHs grow garden coffee - referred to as *yeyebet bunna* (amh.), or 'at house coffee' to translate literally - to one extent or another. The number of coffee trees and size of coffee gardens ranges from "*very few plants in between the enset*" (Alemayu Haile, Test 1) to "*about 2000 plants on 1 ha*" (Interview Komba #39, Wolde Michael Gebre). Generally, garden coffee trees of Komba village are not limited to the garden area around the *tukuls*, but stand scattered throughout the agricultural land, intercropped with the other crops, mostly cereals and *enset*. Anyhow, as the case with forest coffee, also garden coffee production is conditioned to the availability of shade trees. All, except for three, of the 40 garden coffee growing HH acknowledged that their garden coffee is under shade provided by the trees species *berberra* (*Milletia ferruginea*), *di'o"/wanza* (*Cordia africana*), *shedo"* (*Sapium ellipticum*), *wago"/bisana* (*Croton macrostachys*), and *yaho"/weira* (*Olea welwitschii*).

> "*The best shade tree for coffee is berberra* […]. *Its leaves are thin, and they let some sun through.*" (Interview Komba #10, Asrat Mamu)

The need for shadow trees in garden coffee production is not only economically important since respective trees serve multi purposes (e.g. provision of timber or to hang beehives), but has ecological meanings in the way that a certain amount of larger standing trees needs to be maintained, and agricultural land is not totally 'clear-cut'.

Annual harvest of garden coffee was reported to range from nothing[84] ("*it did not give any product last year*" Interview Komba #17, Alemahu Dehachu), to the amount of two quintal, which makes about 200 kg of dried coffee. The cumulative harvest of all 37 garden coffee cultivating HHs was quoted to be 1,291 kg in 2002. As peasants are in need for the cash earnings and do not have adequate storage facilities to wait for better prices, they are forced to sell the coffee unprocessed shortly after harvest when the coffee prices are on an all year low.
An important topic is the peasants perception of garden coffee in regard to forest coffee, semi-forest coffee or 'wild' coffee, respectively. It became apparent in many interviews that local coffee producers do not make clear distinctions between these production systems.

> "*The garden coffee has been forest coffee before, the trees have been taken put and the coffee remained.*" (30/11/2004: Komba iddir group discussion)

> "*If peasants take coffee trees out of the forest and plant them somewhere else, they still call it wild coffee*" (3/11/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

Also in regard to the post-harvest handling, peasants tend to draw no dividing line between *yebet bunna* and *chacka bunna* (amh.), the 'coffee from the forest'.

> "*We do not distinguish between forest coffee and garden coffee. We mix them. There is no difference in the taste. Garden coffee berries are bigger than forest coffee, but both are wof arach.*" (30/11/2004: Komba iddir group discussion)

The expression *wof arach* (amh.) literally says 'brought by the bird', which is synonymous with naturally spread. This provides evidence that garden coffee is for the most part actually not planted, but naturally grown on what is now agricultural land.

[84] No yield because coffee plants were too young to develop berries.

However, the separation between the four coffee production systems forest coffee, semi-forest coffee, garden coffee and plantation coffee seems to be a rather scholastic one, not shared by the coffee producing local peasants. They rather draw the line of distinction between *wof arach* and non-*wof arach* coffee, which are for example newly introduced coffee varieties.

> "*But now we got improved varieties from Farm Africa, this is not wof arach.*"
> (30/11/2004: Komba iddir group discussion)

This gives a first hint that the NGO working in Yeyebitto *kebele* is actively engaged in distributing new coffee varieties in the area. Both, the blending of *yebet bunna* and *chacka bunna* as well as the introduction of alternative coffee varieties does not have much relevance in regard to the conventional coffee market chain, in which the concept 'quantity over quality' rules the day. It has, however, implications when contemplating quality and origin of coffee from that area, e.g. in the realm of coffee speciality markets.

5.2.3.1.3 Risk Reduction: Livestock and Poultry Farming

Livestock and poultry traditionally constitute a major part of the mixed farming system and another source of livelihood for Komba HHs. Valuable in providing food for subsistence, as a source of cash income, for draft and transportation power, as a source of raw materials (wool, hair, hides etc.) and by and large as a way of asset accumulation used as a hedge against risk - or in other words - a safety net on a household basis. Moreover, animals play a significant role in major live-cycle expenditures, such as dowry for the bride.[85] The animal species kept are cattle, goats, sheep, horse, donkey and chicken. Fodder with high nutritional value is naturally occurring in and around the village. Additionally, livestock keeping is linked to crop production as animals graze on harvested fields and are fed with crop residues.

Oxen are the most valuable livestock for Komba villagers. The access to oxen is an important latent variable critical for food production as the animals provide all traction for tillage cultivation. Nevertheless, ownership of oxen is rare, as costly, with a market price of 350 up to 800 birr[86]. Oxen ownership is predominantly organised in partnership with kindred and/or neighbouring HHs. All in all, 15 of 44 interviewed HHs in Komba village own at least a share of an oxen, and total number of oxen was assessed to be 13, which makes an average flock size of 0.33 oxen per HH. HHs that have no holding in an oxen are impelled to rent animals

[85] In Ethiopia, dowry is usually paid to the brides' family.
[86] The market price ranges are estimates of the interviewees, and vary according to the animals' attributes and seasonal fluctuation.

for ploughing purpose. Common rent arrangements foresee as much as half of the harvest to be paid to the oxen owner. This major burden puts HHs concerned under severe stress to produce sufficient quantities of food and illustrates the fundamental importance of oxen as production inputs for local peasants.

Cows are most valuable for meat, milk and skin production. 17 out of 40 HHs own at least a share of a cow, the average flock size (without calves) is 0.5 animals per HH. Share arrangements are complex, for example, if somebody owns a quarter of a cow, he/she gets a quarter of its milk production and a quarter of the cows' breed. Also 'outsourcing' of cow fattening has been reported in the way that some HH raises the other HHs' cow and gains half of the cows milk plus a fourth of its breed. Market prices are evaluated to be 350-900 birr per cow, and about 100 birr per calves.

Goats and sheep play a minor role in livestock husbandry. Only three out of 40 HHs reported to own goats and two to have sheep. Average flock size was as small as 0.3 and 0.2 per HH.

Equines provide the most widely used means of transportation in rural areas of Ethiopia. However, in Komba village, only three HHs own a horse or a donkey. Market prices were assessed to be between 300-700 birr for a horse and 250-500 birr for a donkey.

19 HHs of Komba village practice chicken raising. Exact number of chicken was difficult to assess, interviews show an approximate number of 60 chicken which makes a flock size of 1.5. Chicken gain 5-15 birr on the local markets.

Grazing grounds are abundant in and around Komba village. Livestock graze around the *tukuls*, in the *enset* and garden coffee groves, and on fields that lie idle. Additionally, there is a communal grazing field located in the center of the village, defined by the *kebele* administration. Some interviewees reported to provide additional fodder in the form of *yudo"* (*Dracaena steudneri*) which they collect from Koma Forest. None of the respondents mentioned Koma Forest to be a grazing ground for the livestock, also transect walks though the forest did not give indication for that.

Beside *enset*, livestock and poultry husbandry constitutes the second string on the Komba villagers bow in case of crop failure. Akin to crop farming, it is characterised by low productivity levels and very low flock sizes. The long-term trend of livestock population is difficult to access, but there is evidence that there has been a decline of flock sizes ever since resettlement. When asked on the tendency in their flock sizes, 23 respondents argued that their HHs experienced serious livestock decline. The most frequently mentioned causes were

a) disposal of livestock because of food shortage and need for house construction materials, and b) livestock losses due to wild animals.

> "*Wild animals come out of the forest. Lions kill the cattle. But the government forces us not to hunt wild animals*. (29/6/2003: Agama: Tadesse Kasa)

Wild predators ripping domestic animals is not a 'natural' phenomenon for communities living in or close to an extensive primary forest, but according to villagers' information, this problem is on the increase. This can be an indicator that predators' retreat areas and/or the amount of wild prey are on the decrease.

5.2.3.2 Beyond Subsistence: Cash, Employment and Credit

The previous sections illustrated that the nature of livelihood of Komba village HHs is mixed subsistence farming backed up by little cash crop production. Nevertheless, the romantic notion of African villagers living in and around forests in a fairly non-monetary manner, in the way that people get everything needed from the forest, their fields and gardens, is deceptive. Despite products gained from forest utilisation and agriculture, HHs in Komba village depend on cash money for a wide range of different purposes. When asked about the three main expenditures of their HHs, interviewees responded as shown in Table 2.

Table 2: The main expenditures of households in Komba village[87]

Expenditure named	Scoring points	Remarks
Food	92	Maize, *teff*, meat, salt, oats, and sorghum from the local market; primarily during starvation time; between 10 and 25 birr per week
Clothes	85	
Land Tax	45	Between 32 and 110 birr per year
School fee/materials	12	
Health treatment	7	At the health center in Wushwush
House building materials	3	
Religious ceremonies	2	

Table 2 provides evidence that HHs in Komba village actually live below the food subsistence threshold. In general, local food production is not sufficient to support the HH members all the year round and a considerable amount of money is necessary to fill the 'foodstuff gap' by

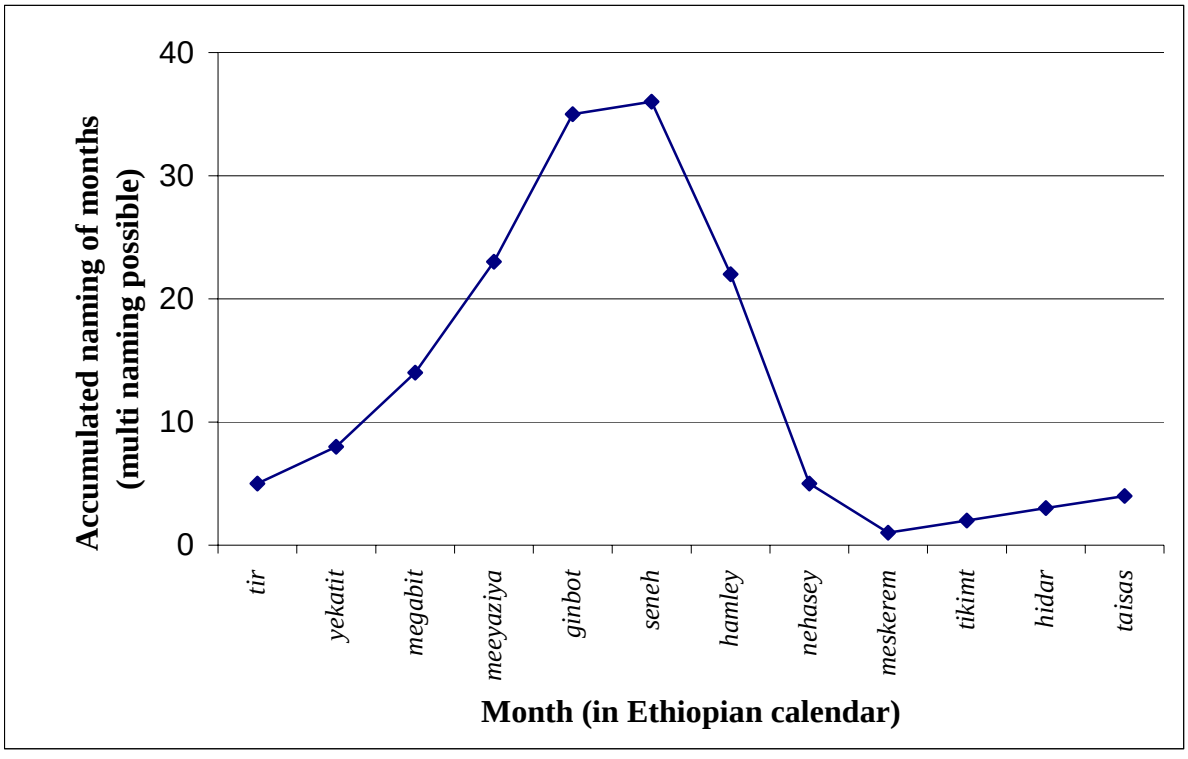
[87] The first, second, and third answer is awarded three, two and one scoring point respectively and the scores are added to rank main expenditures of Komba village HHs.

purchasing staple food on the local markets. Komba villagers reported to make use of three markets in Yeyebitto *kebele*, Wushwush and Bonga town. At the first market, conventional stable foods are exchanged among HHs from within the *kebele*. The second, about 14 kilometres down the national road (see Figure 14), basically serves as an upper level trading place for honey, coffee and spices, whereas at the Bonga market (approximately 30 kilometres down the national road to the west, see Figure 13), a broad variety of goods including 'speciality' ones - such as school materials or import clothes from China - are available. It was experienced that villagers either walk or hitchhike there.

Nonetheless, despite market accessibility and availability of certain amounts of money, malnutrition and hunger can not be avoided. All interviewees in Komba village reported that their HHs experience malnutrition/hunger to one extent or another.

Figure 17 illustrates how Komba villagers perceive the relative fluctuation of food availability throughout the year. This concerning, the interview partners were ased "which months of the year are most problematic in terms of malnutrition/hunger?". Accordingly, malnutrition and hunger is a low concern between the Ethiopin months nehasey and *tir* (regularly from 7th August to 8th February), becomes gradually more critical afterwards and reaches its peak in *ginbot* and *seneh* (regularly from 9th May to 8th July). On closer examination, this time cycle is attributed to the cropping calendar of maize, the main staple food. In simple terms, Komba villagers go hungry when maize harvest is eaten up.

Figure 17: Fluctuation of malnutrition/hunger in Komba village throughout the year



The tense economic situation delineated above puts Komba HHs under stress to find supplementary sources of cash money. However, along with the sale of honey, coffee and spices from Koma forest or HHs gardens, two means of cash provision, namely labour employment and raise of credit, play a substantial role for HHs of Komba village.[88]

Labour employment opportunities in the research area are scarce, poorly paid and seasonally fluctuating. However, income from dependent work increasingly provides a source of cash for forest resource appropriators' households. Casual farm labour on larger commercial tea and coffee plantations in the wider vicinity of Komba village plays the main role in this regard.[89] Time of labour demand is for the most part limited to the harvesting season, with its height between the Ethiopian months of *meskerem* and *hidar* (regularly from 11th September to 10th December), and is fluctuating from year to year. Wages are about 4 birr per day, but rarely accumulate beyond 30 birr per month during the season. No precise data is available on the number of Komba HHs that in fact gain this additional income from time to time. My personal estimates range from about one fourth to the half of Komba HHs. In addition, two interviewees reported to be salaried by the "Ethiopian Road Authority" as construction workers engaged in maintaining the Bonga – Misan Teferi national road (12/11/2004: Komba: group discussion; data from HH survey).
Even so income from dependent work can provide an additional financial backing in certain times of the year, but is not sufficient to entirely overcome forest users HHs need for cash, particularly in times when food is running short.

The raising of credit provides an instant means to overcome financial bottlenecks and the last 'resort' when all other coping mechanisms are exhausted. In total, 17 out of 40 HHs stated they had borrowed cash money within a year's period, particularly to overcome food shortages. However, the financial system in rural Ethiopia is characterised by the dominance of private moneylenders, tremendously high interest rates, and re-payment in kind. Often, Komba villagers are urged use their expected coffee harvest both as a security as well as a means of loan repayment and interest redemption.

[88] Assistance from more affluent relatives does not play a great role as a source of cash for Komba village HHs. Only two out of 40 HHs answered in the affirmative (Q: **"**Did you get cash money from relatives within the last year?")
[89] Important in this concern is the Wushwush team plantation about 7 kilometres west from Komba village (which is actually the largest tea plantation in Ethiopia), and the 'Green coffee plantation' about 3 kilometres to the east.

"*In ginbot and seneh I borrowed 120 birr last year with 50% interest rate. I pay in kind, when I harvest the coffee, but the coffee is worth double.*" (Interview Komba #4, Hailemariam Gebre)

Also the honey harvest was mentioned as being disposed of before actually being produced. The credit sources are varying, ranging from coffee, honey and spices merchants 'in town' that act as professional moneylenders to 'elders' from within Komba village.

"[I borrowed from an] *elderly,* […] *for food and clothing, 60 birr and I have to repay 2 feresula*[90] *of honey."* (Interview Komba #28, Mekuria Habte)

5.3 Conclusions

Koma Forest is a relatively dense primary mountainous moist forest which is highly diverse in terms of geographical and biological factors and provision of forest resources. Some areas provide high density of forest coffee occurrence, some are more degraded than others, and the abandoned *gots* of Gokesha, Bushasha, Kidah and Kama including their adjacent agricultural areas are in the process of gradually turning into forest land again.

There is, however, a varied picture regarding the factors known from theory to be conductive either to the maintenance or overuse and loss of natural resources. On the one hand, the fauna of Koma Forest is relatively intact (except for Cangatarra and Kabah area), and provides a full range of potential and actual forest resources which are the basis for Komba and Agama villager's livelihoods. The use of different forest resources is connected to each other, e.g. an entire loss of tree cover would cause dwindling output of the both major cash crops coffee and honey. People fear lion attacks and sheer mountain gorges make encroachment difficult and reduce the potential to be converted into agricultural land. Moreover, Koma Forest is flanked on two sides by other forest areas and ever since the late 1990s, devoid of habitants. These natural conditions stand for 'forest-conserving factors' in the way that they either provide incentives for the maintenance of Koma Forest ecosystem by its users, or make depletion and removal of the forest more difficult, or less valuable.

On the other hand, there are anthropogenic factors that are referred to forcing the pace of forest destruction, namely road construction and resettlement. The northern part of Koma Forest is easily accessible by vehicle due to the bordering national road. The argument, though, that road accessibility is likely to enhance forest depletion cannot be confirmed in this

[90] One *feresula* is equivalent to 17 kg.

case. There is no evidence that the forest sections closer to the national road are more severely depleted that the far-off ones. In the 1980s, allochthonous people settled to an area west of Koma Forest and started using its resources particularly in Cangatarra and Kabah. However, what is remarkable about these forest tracts is that they are among the most depleted ones in Koma Forest and are most densely occupied with forest coffee.

Komba village consists of a small number of HHs which are - despite an ethnic dividing line between Kaffa and Mandjah - relatively homogeneous in terms of historical background and socio-economic livelihood circumstances. Koma Forest constitutes a main pillar of income for all HHs, by providing an enormous range of forest resources. However, the forest does not supply much foodstuff. In view of that, Komba villagers do not live from forest resources alone but are engaged in smallholder agriculture, horticulture, livestock/poultry farming, and - from time to time - in day labour employment. However, the combination of small land holding and low productivity, scarce and poorly-paid employments as well as large HH sizes makes Komba village HHs vulnerable to food deficits that recurrently escalates to malnutrition and hunger.

Subsistence agriculture supported by agricultural-related means of cash income is highly vulnerable to seasonal and annual fluctuations. Accordingly, availability of food and cash in Komba HHs is unsteady by nature. This is particularly critical in regard to the maize and coffee cropping calendar, in which times of cash need (when maize reserves run short) and times of cash income availability (during and after coffee harvest) do not coincide with each other.

The main question in regard to use, management and conservation of Koma Forest resources concerns the impact that poverty, budgetary problems and seasonal food bottlenecks of Komba village HHs have on their forest-related decisions and activities. To live ‘from hand to mouth’ in an uncertain future implicates short-term horizons in which HHs propensity to spend available commodities and financial resources straight away on basic consumption rather than on long-term hedging strategies increases. This tendency is further aggravated by exceptionally high interest rates which promote short-term money spending. The natural resources of Koma Forest, in contrast, grow slowly. Accordingly, their management and sustainable use have long-term payoffs, which are likely to go beyond the time scope of local people.

6 The Koma Forest Action Arena

The people of Komba village do not act arbitrarily in a vacuum. All their actions regarding forest resource use, management and conservation are the outcome of an individual decision process, which is - according to the IAD framework - influenced and determined by:

- Attributes of the Koma Forest resources
- Attributes of the Koma Forest resource appropriators (groups)
- Institutions

The previous chapter elaborated on the first two matters. Chapter 6 provides a stakeholder and relationship analysis focusing on the third matter, the institutions which decide - in a more or less direct manner - on the dos or don'ts of forest resource use, management and conservation. A large number of institutions have been assessed to be relevant in the concrete case study, ranging from a small group of villagers with particular functions in the village society to 'official' state-run organisational entities. Relating to their genesis, they can be placed into three clusters, namely:

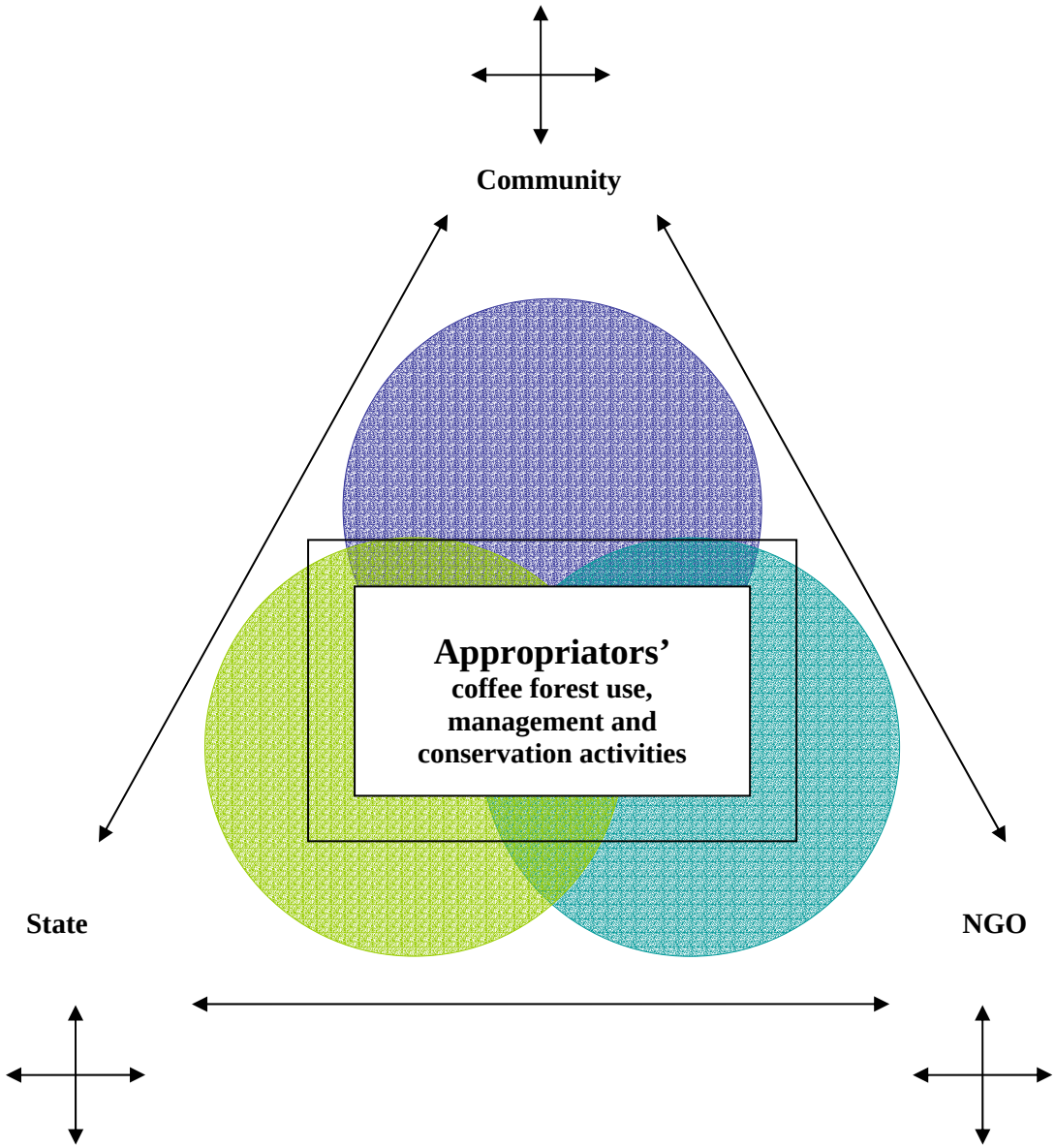
- Community-initiated institutions
- State-initiated institutions
- NGO-initiated institutions

Questions of forest resource property rights, access, decision making and enforceability of each of these groups impact on the way how Komba villagers use, manage and conserve Koma Forest resources and are therefore discussed. Each cluster stands for a different historical phase and approach of forest use, management and conservation in Ethiopia, which are a) the 'local people use the forest' approach of the Emperor's time, b) the 'government is responsible for the forest' approach of the *derg* period (1974-1991), and c) the 'conjoint' approach promoted and established by international donors and NGOs since the mid-1990s. The chapter is structured according to this elemental chronology.

However, the institutional cluster and historical periods respectively cannot be perceived as totally independent units as they do not act in an empty institutional space. They are path dependent, linger on after each historical phase and thereby continue to influence resource appropriators' use, management and conservation activities in the present and the future. Hence, some institutions emerged in phase a) play a role in phase b), and both, institutional clusters are also relevant in phase c). Accordingly, institutions do not only affect appropriators' activities directly, but also indirectly in the way that one institution influences on the other one, intra-cluster as well as inter-cluster, which then in turn influence forest

resource use, management and conservation activities. Figure 18 illustrates the triangular theoretical concept of the Koma Forest action arena.

Figure 18: The theoretical concept of the Koma Forest Action Arena



6.1 Community-initiated Institutions: The Universe of Tradition

Behind the façade of state-initiated institutional structure, live in rural Ethiopia is very much determined by a 'universe of tradition' bound together by reciprocal relationships and social networks of local people. This includes a great many of institutions that have different roles and functions, operate in different ways and have different rules and responsibilities in groups of local people. However, the ideal type of a traditional institution originates from within the local society, derives its legitimacy from history, is adapted to local realities, and is locally

rooted. In the following, in order to better readability, I will refer to this cluster of institutions either as traditional or community-initiated.

The fact that traditional institutions in rural Africa persisted decades of influence and interference from 'the outside', e.g. European imperialists or the centralised national state, is not new as such. However, in respect to the research topic, two key questions are not satisfactory understood: a) how does this 'local institutional world' work with respect to utilisation, management and conservation of coffee forest resources, and b) how does it relate to the state and its institutional framework regarding coffee forest land tenure and resource protection.

6.1.1 Social Systems and Decision Making

In this section, focus is drawn to community-initiated institutions that play a key role in regard how the inhabitants of Komba village utilise, manage and conserve resources from Koma Forest. Thereby, two groups of community-based institutions were identified to be of specific importance. These are a) practical 'working' institutions which are particularly designed for local people's conjoint utilisation and management of forest resources, e.g. forest coffee harvesting or building a *tukul* house with construction materials taken from Koma Forest. The pure organisation of communal forest related activities, however, depicts merely the apparent institution relevant in this regard. More relevant in terms of decision making are b) legislative and judicial structures that provide the operational set of institutions which then impact on the forest resource appropriators' performance, hence on the action arena's outcome. According to the definition of institutions to be the "rules of the game", this includes both, organisational structures as well as rules, regulations and norms.

6.1.1.1 Reciprocal Labour: Communal Working Groups

In many African societies, one of the benefits to belong to a community is the access it provides to the labour of other community members on a non-cash basis (Tache and Irwin 2003: 9). In Komba village, the two reciprocal working groups *daddo* and *dabbo* were identified to provide a short-term work force beyond kinship ties on the basis of equal labour exchange in times of high labour demand. Both labour groups operate on the request of their participants. If an activity of a HH requires a larger workforce at a specific time, the respective HH can ask for work assistance of other HHs. In both working groups, the HHs being assisted are expected to provide sufficient food (maize, *kocho*) and beverage (coffee,

tella[91]) for the workforce involved, hence the arrangements provide for a certain 'food for work' aspect. All HHs in Komba village are engaged in *daddo* and *dabbo* at any one time. By practical means, however, labour is exclusively carried out by adult men, whereas women are busy to prepare food and beverage for the workers. Due to ethnic dividing lines, Kaffa and Mandjah working groups are independently organised and do not work together. Their organisational structure is, however, congruent.

A daddo working group is a neighbourhood working group, consisting of three to five people. Time scope of *daddo* was reported to be from one to two days up to 30 days a year, mostly part-time for some hours of the day. *Dabbo* is "*much bigger than daddo*" (Alemayehu Ketto, secretary of Komba *iddir*) in terms of workforce and expenditure of time. It might be as much as 30 to 40 people coming together as often as 40 times a year. Besides, the action radius is larger than with *daddo*. People from Komba village can work together with people from neighbouring villages (including Agama village) in Koma Forest. Jointly conducted activities of *daddo* and *dabbo* can be labour-intensive activities such as land tilling, but also activities related to the nearby forest. Collective beehive making, harvesting of forest coffee, and tree cutting for house construction are the main activities in this regard. Both, *daddo* and *dabbo* do not come off spontaneously and unscheduled but are very much institutionalised. Both working groups are particularly affiliated to the *iddir* association (a social system copiously discussed below) in the way that this institution provides the platform on which *daddo* and *dabbo* are organised and related problems and disputes are negotiated and solved.

> "*During our iddir meetings somebody can stand up and ask the committee* […] *and say that he has work to do"* (7/10/2004: Hailemariam Gebre, chairman of Komba *iddir*)

By practical means, e.g. if one community member wants to have his coffee harvested and needs a definite quantity of people for a certain period of time, he will give the request over to the *iddir* in charge. He will then be:

> "*put on a list and the people will help him at that time.*" (7/10/2004: Hailemariam Gebre, chairman of Komba *iddir*).

[91] A self-brewed light beer.

However, *daddo* and *dabbo* are temporary task-oriented community-initiated institutions which have the capability to provide short-term labour for activities that go beyond the HH or kinship level. This is the case with many labour-intensive forest resource use and management activities. Nevertheless, both institutions are linked to and backed up by the community-initiated institution *iddir* that provide the necessary guidelines lines and the organisational structure.

When elaborating on the 'universe of tradition' that impact on decisions and activities of a particular group of forest resource appropriators, the community-initiated authority and social control systems need to be taken into consideration. They not only tend to have a share in retaining internal traditional customs, but in acting as gate-keepers, they render possible or impossible influences and change coming from outside. An important institution in this regard is the group of the 'elders'.

6.1.1.2 Wise Trouble-shooter: The Group of the 'Elders'

By tradition, village societies in Ethiopia are gerontocratic. Age is accorded a high socio-political value, and in particular, older men who possess greater economic resources occupy a high social status (Vaughan and Tronvoll 2003: 39). This is expressed in respect towards and influence of this group of people not only within HHs and extended kinship networks but in local communities as such. Nevertheless, although being a *shimagile*[92] often coincides with 'being older', their reputation comes less from their seniority, but more from being a 'wise' and 'rich man'. This tends to coincide with belonging to an influential family clan[93] and a status in which they "*do not fear others any more*" (4/5/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk). In order to get a first idea about the institution 'elders' in Komba village, Table 3 provides some basic personal data of their representatives.

[92] *Shimagile* (amh.) literally means 'old man'.
[93] Clan is understood as a number of HHs with social ties bound together by a tight kinship network.

Table 3: The group of 'elders' of Komba village[94]

	Sex	Religion	Age[95]	School attandance[96]
Kaffa elders				
Jaquob Abi	male	orth.	54	9
Woldemariam Ambo	male	cath.	75	-
Woldemichael Ambo	male	prot.	70	-
Henerasha Gebre Mero	male	orth.	92	-
Mandjah elders				
Hailemariam Mamo	male	orth.	50	-
Mekuria Mamo	male	orth.	37	5
Asrat Mamo	male	orth.	30	6
Alemayehu Dehacho	male	orth.	44	4

In Komba village, a total number of eight elders were identified. Four belong to the Kaffa and Mandjah ethnicity, all are male. Formal education, age and religious affiliation are diverse. However, one must keep in mind that elders are not democratically elected, and that they do not in themselves represent the village community as a whole. Women, the younger and poorer persons, and persons from less influential family clans are excluded (cp.Vaughan 2004: 25). The family names (Abi, Ambo …) in Table 3 indicate that Kaffa elders are from three different kinships groups, whereas the group of Mandjah elders is composed of people from two family clans, dominated by the Mamo clan. This information provides first hints on which clans in Komba village tend to be the most influential ones.

This village internal social structure can be defined to be the lowest legislative and judical body beyond mere kinship relations in Komba village. 'Elders' hold considerable authority in decision making and enforcement of traditional norms and rules, and manage the affairs of the villager to a certain extent. In regard to use, management and conservation of the coffee forest, the 'elders' hold a definite teaching and advising function, in the way that they pass on local knowledge to the local forest resource appropriators and to monitor its compliance.

> "*The shimagile teach us to maintain the trees and to handle it in a good manner*." (26/11/2004: Woldemariam Gebre, Kaffa peasant)

> "*The shimagile give advice how to manage the trees, not to cut them on a very early stage.*" (25/11/2004: Yerango Ambo Gedawo, peasant)

[94] Information obtained in key informant interviews with the *iddir* chairmen (7/10/2004: Hailemariam Gebre, chairman of Komba iddir; 8/10/2003: Gokesha: Accompagned forest walk. Hailemariam Gebre and Abeto Mamo. chairmen of the *iddirs* in Komba).
[95] Ages are people's own estimates.
[96] In years.

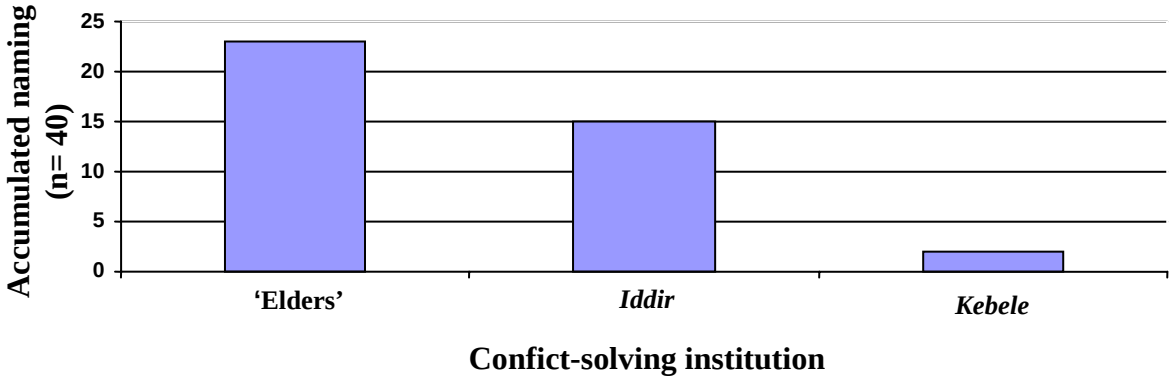
"*The shimagile said we did not have to disturb the trees. For cardamom they told us to clear every unwanted material from the plant. They restricted to cut wanza trees* [important for lumber, equipment and furniture making]. *They did not pronounce penalties, but they give us warnings not to do again*."
(26/11/2004: Abeto Mamo, vice chairman of Komba got, Mandjah *iddir*)

The primary role of the 'elders' within the village community is, however, to preside over cases related to disputes or conflicts that go beyond the scope of nucleus families and remain outside state courts.

"*The elders are respected people to negotiate quarrel.*" (30/11/2004: Komba iddir group discussion)

The importance of the 'elders' as mediators and traditional juridical bodies in Komba village is also corroborated in the outcome of the quantitative survey in which the open-answer question "If some of the villagers have an argument, who can solve it?" was posed to the head of the HHs.

Figure 19: The most important conflict solving institutions in Komba village



The above figure depicts the 'elders' as the main conflict-solving entity within Komba village. The *iddir* is ranked second and the *kebele* third. Village-internal disagreements can arise from many sources, as in every society. Regarding the specific research topic, the focus is on forest and forest resources related disputes, between HHs as well as between HHs and the community-initiated institutions. However, the forest and its resources is a perpetual source of disputes since it traditionally plays a fundamental role in Komba villagers' lives. This implies debates and - inevitably - also quarrels over the question who is allowed to use

which forest resources on which forest plots to what extent, over the exact boundaries of plots, or over forest resource sharecropping arrangements.
However, how does village-internal troubleshooting function when it comes to disputes over forest use, management and conservation? What is the particular position of the 'elders'? Before elucidating on these matters, I introduce and elaborate on *iddir*, which is the most significant legislative and judicial structure in Komba village.

6.1.1.3 More than Funeral Insurance: The Social System of *Iddir*

> "*Without iddir you lack social acceptance.*" (7/10/2004: Hailemariam Gebre, chairman of Komba *iddir*)

This statement of the (former) *iddir* chairman of Komba village exemplifies the fundamental importance of the community-initiated institution *iddir* as a means of social identification for local HHs. Membership of *iddir* is factually not compulsory, but literally a must. Accordingly, all HHs in Komba village are affiliated to *iddir*.[97]

Iddir is an Ethiopian phenomenon. It is found all over the country (even among Ethiopian communities abroad), across all social classes, ethnicities, and religious boundaries. Nevertheless, *iddir* is not an ancient institution. Literature says that *iddir* associations developed in urban areas during the Italian occupation from 1936 – 1941. Only thereafter, it spread over rural Ethiopia and was adopted to a larger scale (FGRCP 2000: 32; Pankhurst 2002: 6). Concordantly, the notion of *iddir* as an "invented tradition" (Abbot, Hailu et al. 2000: 6) is qualified.
There is, however, no clear and congruently definition of what *iddir* actually is. Literature vaguely describes it as a financial institution informally organised by local communities, and cheers it to make especially members in rural areas less dependent from and vulnerable to usurious moneylender. Dejena Aredo from Addis Ababa University, for example, defines *iddir* to be:

> "*an indigenous institutional arrangement in which members regularly contribute to a common pool with a view to supporting a needy member*" (Aredo n.d.: 196)

[97] A study conducted by Carswell, de Haan et al. (1999) in Southern Ethiopia figured out that between 84 and 94 percent of all HHs are member of an *iddir*.

In fact, there are many different types of *iddirs* that vary in regard to their organisational arrangement and effort, their aims, their rules and regulations, as well as their social and economic importance for their members. There are, for example, *iddirs* which primary function is to provide its members financial and organisational assistance in event of death (funeral *iddir*) or reimburse loss of valuable assets (oxen *iddir*, horse *iddir*). Some *iddirs* are open to all people of a community, others are restricted to a certain group of people (women *iddir*, youth *iddir*).

In Komba village, there is only one sort of *iddir* which is, however, multifunctional. All HHs are members as a whole, represented by the head of the HH.[98] The most apparent function of *iddir* in Komba is to serve as a burial association, expressed in the statement:

> "*Everybody […] has to be a member of iddir, otherwise if he or somebody from his house dies, nobody will bury him.*" (7/10/2004: Hailemariam Gebre, chairman of Komba *iddir*)

Iddir members remit a share on a periodic payment mode and get financial and organisational assistance for the funeral ceremony after the death of a household member.[99] Nevertheless, research in Komba village gives evidence that Komba village *iddir* serves at least three different institutional functions, of which the two latter are less apparent and hence less often discussed in literature. Beyond being a) a funeral insurance system, the *iddir* association holds and executes significant function as b) an administrative and management body and c) as a juridical institution. In doing so, *iddir* massively impacts on its members' day-to-day activities also in regard to use, management and conservation of Koma Forest resources.

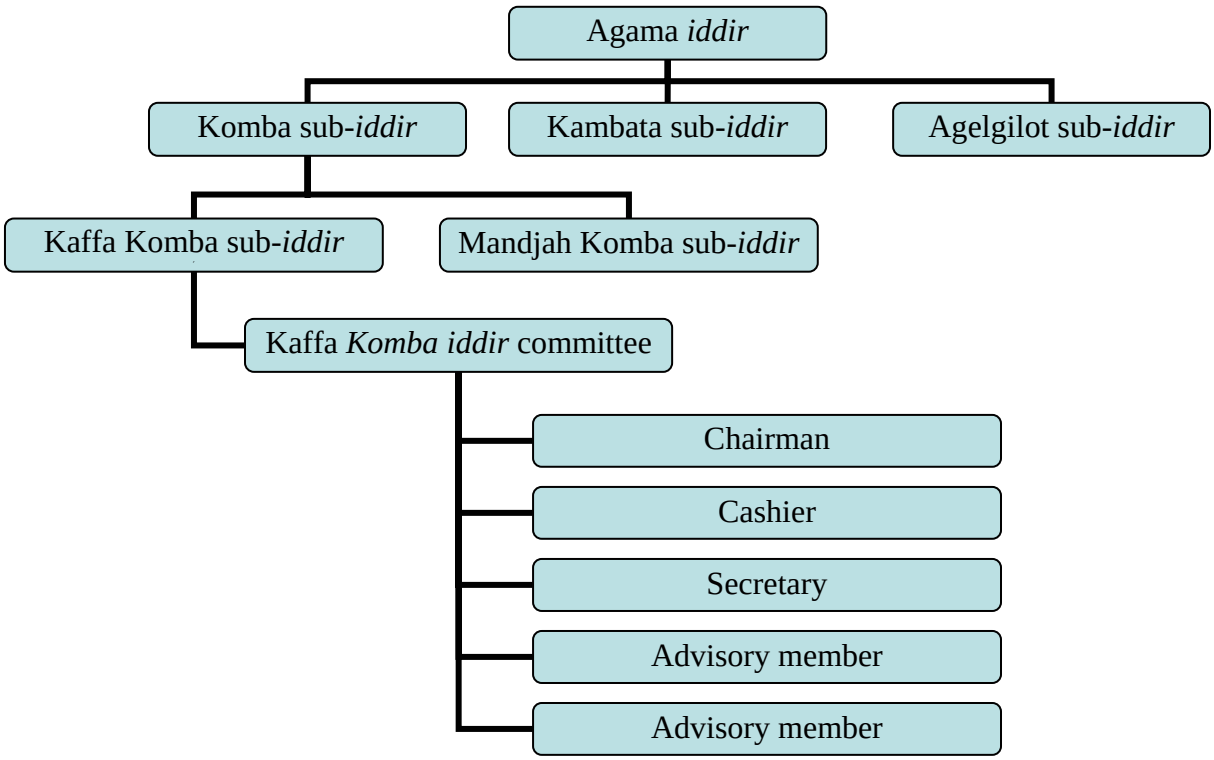
Komba *iddir* is highly formalised. It follows explicit rules and regulations, and has a clear organisational structure, including a (hand) written register of members. HHs members are bound to compliance of the *iddir* statute by signing (or fingerprinting) the register.
The *iddir* in Komba village is a sub-*iddir* of the Agama *iddir*[100]. Membership of a sub-*iddir* implies membership of the higher level one, hence:

[98] This includes female headed HHs. In Komba village, there is no pure women *iddir* as found in other communities in Ethiopia.
[99] In Ethiopia, funerals are major social events connected with great expenses. Mourning time may last up to a week and during that time, board and lodging for extended kinfolk needs to be provided.
[100] Agama *iddir* is one out of five 'umbrella' *iddirs* in Yeyebitto *kebele* (Agama, Hindata, Gaha, Mulah and Godja).

"*If you are a member of Komba sub-iddir, you are also a member of Agama iddir.*" (7/10/2004: Hailemariam Gebre, chairman of Komba *iddir*)

Following the stringent ethnical differentiation in Komba village (cp. Chapter 5.2.2.1), Komba *iddir* is in fact subdivided into one *iddir* for Kaffa and one for Mandjah people (subsequently termed Komba Kaffa *iddir* and Komba Mandjah *iddir*). Both are governed by an *iddir* committee, composed of five committee members each, namely chairman, cashier, secretary and two additional members with advisory functions.

Figure 20: Organigram of the *iddir* association in Yeyebitto *kebele*



The *iddir* committee is nominated, elected and dismissed by the *iddir* members. Voting takes place by show of hands in general *iddir* assemblages. There is no legislative period. However, it seems as if *iddir* committee members stay in charge for relatively long.[101]

"*When some committee member make bad things, he will be substituted by another person.*" (7/10/2004: Hailemariam Gebre, chairman of Komba *iddir*)

[101] The chairman of Komba Kaffa *iddir* was in charge from 1991 to 2004. There is, however, no information concerning the reasons behind his abandonment.

At time of the field research, at the end of 2003, the committee of Komba Kaffa *iddir* consisted of the following people.

Table 4: The Committee of Komba Kaffa *iddir*[102]

Name	Position	Sex	Religion	Age	School attendance
Hailemariam Gebre	Chairman	male	orth	35	6
Woyadjo Wolde Senbet	Cashier	male	cath.	40	1
Alemayu Keto	Secretary	male	orth.	42	4
Yerango Ambo	Advisory member	male	orth.	35	1
Alemayu Haile	Advisory member	male	orth.	42	3

The comparison of the data in Table 4 with that in Table 3 brings interesting insights. Komba Kaffa *iddir* committee members are in general not only younger (between 35 and 42 years old) and more formally educated than the 'elders', but also belong to other family clans. Given this, it can not be taken for granted that *shimagile* and *iddir* are driven by one or a few family clans' interests, or that *shimagile* are in the position to 'scoop' posts in the *iddir* committee on to their family clan members or vice versa.

The general *iddir* assemblages take place once the month under a trees shade on a communal grazing ground located in the centre of Komba village. However, they are not only being held for the appointment of internal positions, but serve the function of 'plenary sessions' in the broader sense. A regular point on the agenda is the payment of the monthly membership contribution to the *iddir* cashier. Both, Komba Kaffa and Komba Mandajah *iddir* fees amount to 0.25 birr per HH (about 0.025 EUR), payable in cash.

Admission of new members is another duty undertaken at the general *iddir* meetings. In case of newly founded HHs that stem from within the *iddir,* the case seems rather simple:

> "*When a son* [offspring of a HH which is *iddir* member] *gets his own house he directly becomes an iddir member*." (30/11/2004: Komba iddir group discussion).

However, admission of new settlers coming from 'outside' requires a fairly more strict procedure in the way that applicants have to present a letter of recommendation from their previous *iddir*. Thereupon, the 'umbrella' *iddir* committee will decide on the admission.

> "*When he does not have the letter, we will refuse him.*" (7/10/2004: Hailemariam Gebre, chairman of Komba *iddir*)

[102] Information on the Komba Mandjah iddir committee members could not be obtained.

A larger cluster of new settler households can ask for the incorporation of their own sub-*iddir* under the existing 'umbrella' one. This happened to be the case with newcomers from Kambata who formed a separate sub-*iddir* as shown in Figure 20.

As mentioned above, scope and purpose of Komba *iddir* goes beyond being merely a funeral association. In fact, the association constitutes the main administrative management body of Komba village. *Iddir* has the mandate and authority to gather its members on special occasions and to provide a platform for discussions and negotiation of a wide range of issues that affect the village and its inhabitants by some means. One example in this regard is the practical implementation of this research project. The fieldwork in Komba village could not have been accomplished without the involvement of the local *iddir* (or even against its interests) since the association proved to be the 'door opener' to the community and provided for indispensable information and organisational backup. For example, before starting the first research phase, the *iddir* chairman summoned a general *iddir* meeting in which the research project's background and objectives were introduced and discussed, and participation of Komba *iddir* members requested. In this regard, *iddir* association also holds a key position for any other 'projects' coming from 'outside', whether with a background in research or practical implementation.

Thirdly, *iddir* has a definite juridical function. In this functionality, the association serves as a community-initiated conflict solving institution, which is, however, strongly linked to the institution of the 'elders'.

> "*Firstly the iddir is informed about a problem, then the elderly come and talk to the iddir head, than the elderly take the persons of the dispute to other places and then they report to iddir*." (30/11/2004: Komba iddir group discussion)

> "*If two people have a quarrel, I* [the *iddir* chairman] *try myself to solve the problem, if not possible, I call the iddir committee. The committee tries to solve the problem, but if they fail then they give the problem to the elders.* […] *They report to the iddir chairman what their decision is and if they failed* [to get a

decision] *I will give it to the kebele."* (7/10/2004: Hailemariam Gebre, chairman of Komba *iddir*)

These short text passages illustrate that there is a specified 'protocol of respect' which provides for the conciliation of problems arising in Komba village. *Iddir* and 'elderly' thereby form a bipolar legal framework which is - until a certain point - autonomous from the juridical system of the Ethiopian state. The traditional code of conduct foresees the engagement of *iddir* and the 'elderly' in any village internal affairs that lies between responsibilities of a single HH or family clan and the *fered shengo*, the *kebele* court tribune.

Theory says that the effectiveness of institutions is very much linked to the actual availability of punishment 'tools' that can be applied in case of rule-breaking. In regard to forest coffee use, management and conservation activities of the Komba villagers, research results show that the community-initiated case law system has three kinds of pressure and disciplinary mediums to exert its functions, namely a) exclusion, b) fining, and c) directing a case to the *fered shengo* for arbitration. The most radical sentence that *iddir* can impose on its members is membership revocation, hence the permanent exclusion of a HH from the concerning *iddir* association. In reminiscence to the initially formulated citation "*without iddir you lack social acceptance*", it is obvious that execution of this sentence is tantamount to stigma and social ostracism, and hence depicts a strong pressuring instrument. However, according to the Komba Kaffa *iddir* chairman, this sanction is the *ultima ratio* and has not been applied in recent history of the Komba sub-*iddir*. A more frequently applied sanction for behaviour that is judged to be objectionable is fining. The amount of fines increases with repeated indictment and was reported to peak at 75 birr. However, juridical cases can also be referred from the community-initiated to the state-initiated law system. This comes about when the community-initiated juridical system cannot reach consensus to resolve the case, or on the request of the accused. Getachew Fule and Mesfin Tadesse (1996: 7) also found evidence for local level cooperation of the community-initiated and state-initiated juridical system in Ethiopia, although with a somewhat different institutional setting and course of action.[103] This issue is of particular relevance as one of the initial research hypothesis of this work was that both local level 'institutional worlds' exist and act parallel to each other or even contradictory.

However, *iddir* is not only a community-initiated institution to organise collaborative work but (in collaboration with the 'elders') a platform for negotiations, mediation and decision making on which base Komba village HHs forest-related activities are structured, managed,

[103] In the concerned village located in the Rift Valley area of central Ethiopia, juridical cases are at first brought forward to the *kebele* which then hands them over to the 'elderly' (Getachew Fule and Mesfin Tadesse 1996: 7).

approved, and prohibited. But what are the rules and regulations that *iddir* and 'elders' decide upon? Research in Komba village brought evidence that *iddir* is actually less obliged to state-initiated "rules of the game" coming from 'above', but more to a traditional law sphere, which is in some respects invisible and concealed for 'outsiders' behind the myth that the state and its institutions hold the sole responsibility for the Ethiopian forests.

6.1.2 Traditional Law Sphere: Governing Forest Property and Access

As elucidated in Chapter 4.2.3, all land in Ethiopia, including forests, is by constitution legal property of the Ethiopian state, and state entities are responsible for forest use, management and conservation. This is, however, only one side of the coin. When limiting the research scope to the institutions on the micro level, it shines through that parts of the forest land tenure system which was in force prior the *derg* revolution in 1974 is still effective and regulate forest resource use, management and conservation in some Ethiopian forests particularly by assigning forest property rights to local HHs. This system mirrors the institutional scenery and 'formal' land distribution pattern from End of Emperor Haile Selassie's reign and persisted 30 years of external (state-) interference - such as nationalisation of land, influx of new settlers - in a legal grey area.

The 'unofficial' and 'illegal' character of the traditional law sphere makes it particularly difficult to study. During my first field research in Komba village, I faced a cloak of silence concerning questions of traditional forest institutions. Instead interview partners referred to state-initiated institutions like a mantra. Little by little, when good rapport has been established between research team and Komba villagers, more and more background information concerning the 'secret world' of traditional forest related law sphere was obtained. These insights are considered to be the most significant findings within the scope of this research. They are subsequently discussed in detail, by applying the categories "traditional forest property rights" and "forest resource access institutions" for analytical reasons.

6.1.2.1 *"This is my forest"*: Traditional Forest Property Rights

Today's traditional forest property rights have their roots in history. During Imperial times, a *neftegna* resident in Bonga town was owner of all land around Bonga including Bonga forest. His district officer, the *chiquashum*, managed his belongings in the area between Weshi River and Wushwush, which includes Koma Forest (see Figure 14). Within Koma Forest, the *chiquashum* in turn enthroned local representatives - in Kaffichio referred to as *gacheukurro* - who were responsible for Bushasha, Cangatarra, Gokesha, Kabah, Kama and Kidah *got*

respectively. The *chiquashum* assigned not only use rights for agricultural land, but for certain forest areas to the *gebber* and, in return, obtained payment in kind (see Chapter 4.2.1).
Population of today's Komba village is composed of former *gebber* (or their descendants) from Bushasha, Cangatarra, Gokesha, Kabah, Kama and Kidah *got*, who hold land use rights in Koma Forest in Emperor's time. The former chairman of Komba Kaffa *iddir* narrates the historical context as follows:

> "*First, the forest belonged to the chiquashum, but he distributed it permanently to the farmers. But I got my land from my father. The gacheukurro once gave it to my father and my father gave it to me. […] The chiquashum gave the order to give 10 percent of our harvest to him. For all crops. When we collected coffee from the forest, he got 10 percent, also from the honey. […] I had to pay 5 kg honey per year for the forest use to the chiquashum (for my 70-80 ha). At Haile Selassi's time, we used the honey to pay the chiquashum, now we have the honey for ourselves*." (12/11/2004: Hailemariam Gebre, chairman of Komba *iddir*)

After the revolution in 1974, the institutional set up fundamentally changed, *neftegna*, *chiquashum*, and *gacheukurro* were dispossessed and lost their privileges, PAs were established and a land reform conducted (see Chapter 4.2.2). Also former *gebber* of the six *gots* in Koma Forest were provided with a certain area of agricultural land.

> "*The derg gave land to all people that they could live equally. The derg gave some land to me. I got six ha of farm land only, but there was no reform on forest land.*" (12/11/2004: Hailemariam Gebre, chairman of Komba *iddir*)

This narrative provides a remarkable insight into how the regime change of 1974 and the following land reform was perceived and experienced as a local *gebber* and forest resource appropriator in Koma Forest. The description gives a first hint that the *derg's* land reform in fact sorted out the re-distribution of land that was meant for overall agricultural purpose, not including primary forest land. The PAs *de jure* took over responsibility for Koma Forest, but new rules and regulations concerning its use, management and conservation were not enforced. Consequently, the former *gebber* perpetuated their forest use rights during the *derg* period, in the understanding that:

> "*During the derg, the forest belonged to the farmers. Starting from Haile Selassie's time the forest belonged to us.*" (12/11/2004: Hailemariam Gebre, chairman of Komba *iddir*)

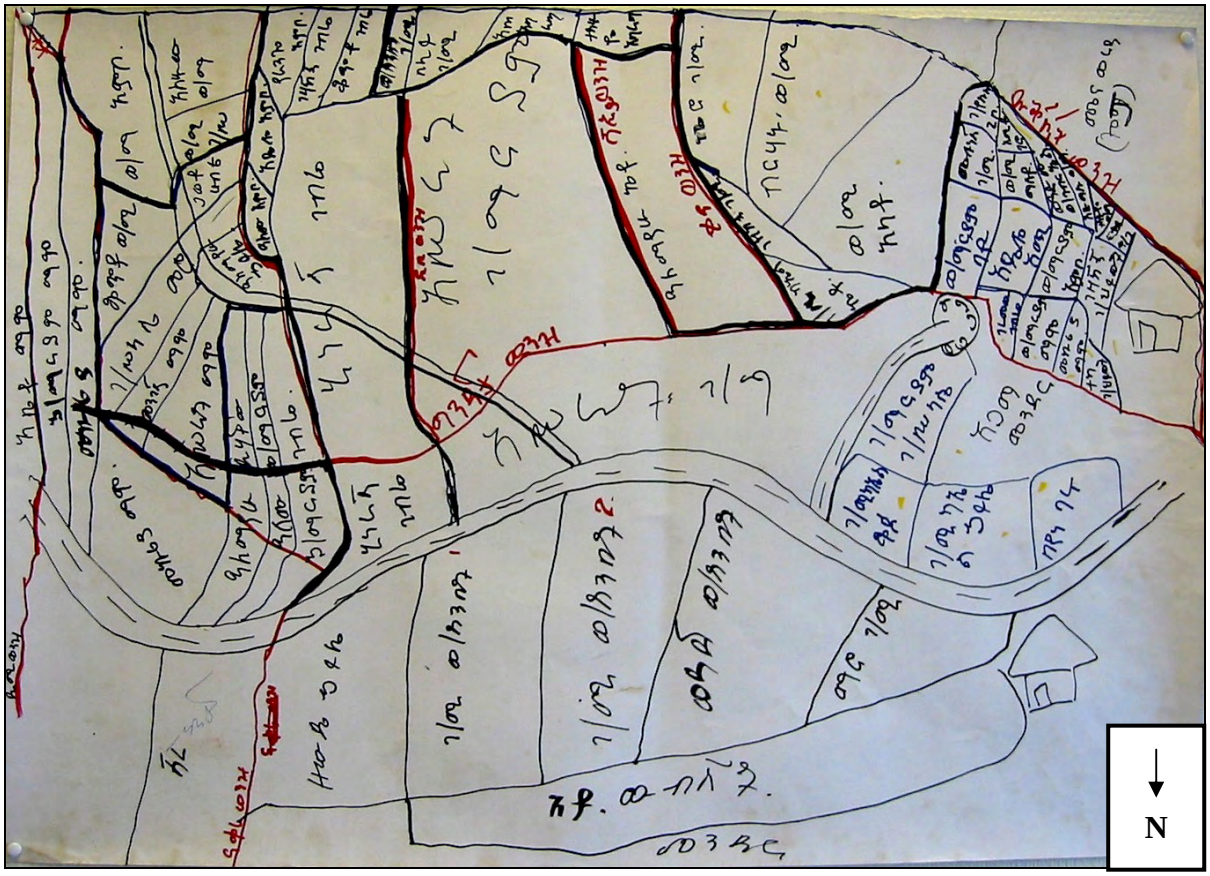
From the mid-1970s onwards, traditional and state-initiated forest property right systems drifted apart and created legal pluralism in which the former *gebber* continued to execute forest resource use, management and conservation on the base of traditional forest property rights rather than within the scope of the newly established local PAs or other state-initiated institutions. This institutional arrangement consolidated in the way that traditional property rights were transferred to the next generation, mainly by patrilinear inheriting.

> "*When a father divides his forest, the first son gets the most, the second and third etc. less. The boys who are engaged in school or in governmental jobs often get no forest.*" (5/11/2004: Komba: Forest walk with Abetu Mamo and Assrat Gebre Mariam)

There is, however, no evidence that traditional property rights in Koma Forest have been subject to disposal. On the one hand, the transmission of forest land rights by inheriting implicates a certain commitment to the forefathers and is likely to impact on the emotional relatedness and binding of forest owners with 'their' forest plot and hence their forest related decisions and activities. On the other hand, this system is highly self-contained and does not render possible the involvement of people from 'outside', as allochthonous newsettlers. There was no case reported in which a newsettler HH obtained traditional forest property rights in Koma Forest.

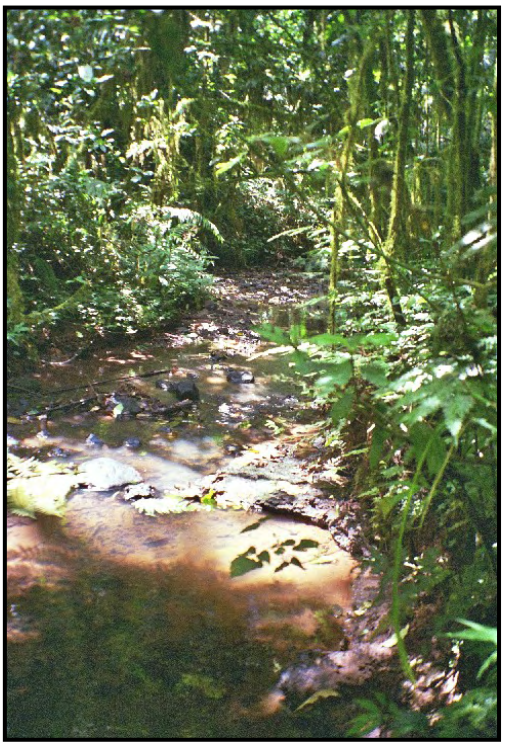
The existence and distribution pattern of traditional property right plots is part of the specific local people's common knowledge and so far in no way formally recorded or documented. In order to bring this knowledge to the fore and to gain a better understanding of the traditional property rights, the technique of 'property rights mental mapping' was conducted. The result is depicted in Figure 21.

Figure 21: Mental map of traditional forest property rights in Koma Forest



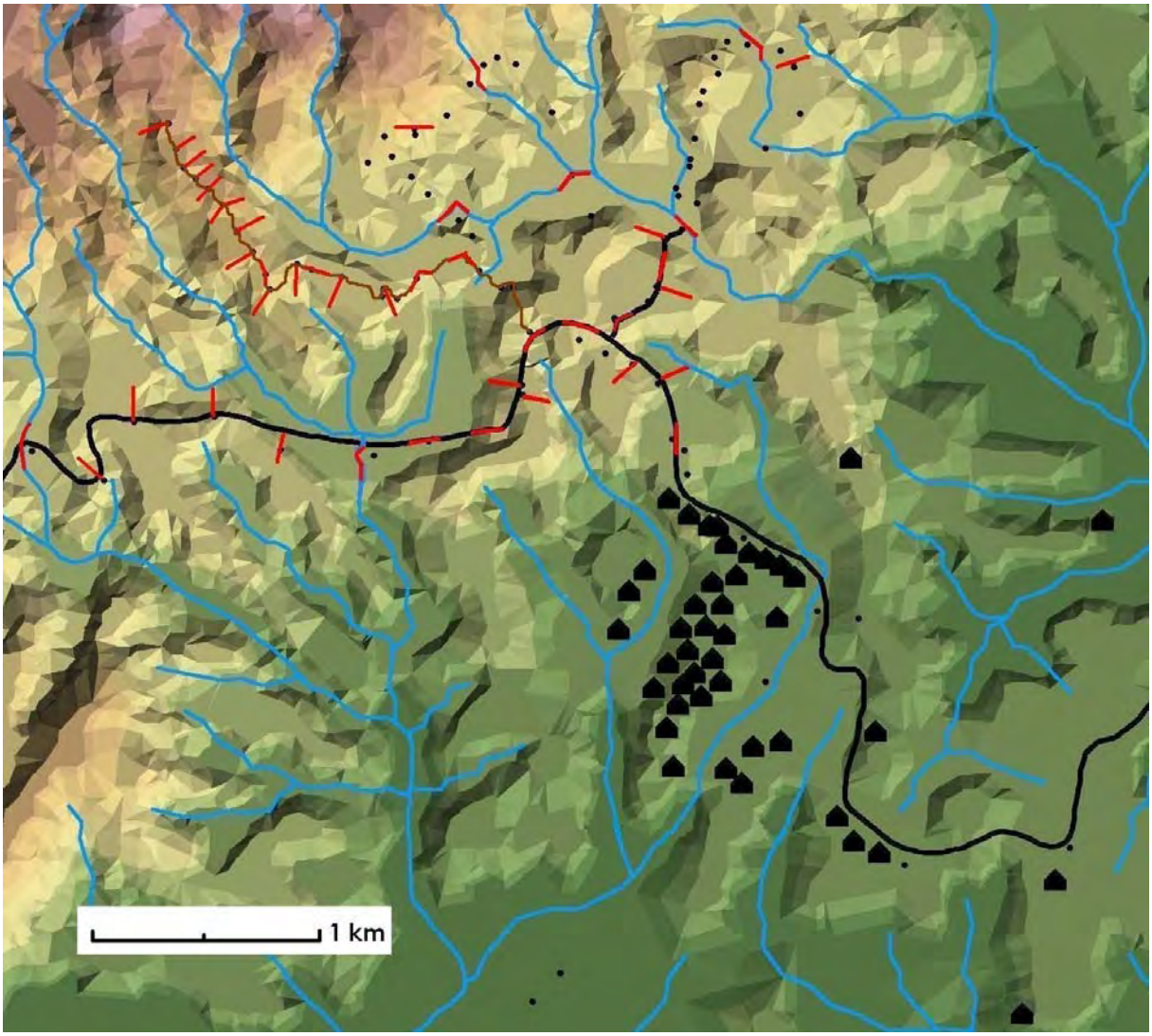
This mental map is the outcome of a several-days long ‘property rights mapping’ exercise with Komba villagers. Participants were encouraged to discuss and sketch their knowledge regarding to which HHs ‘own’ which areas of Koma Forest. Its geographical scale is similar to the one of Figure 16, the horizontal dashed line stands for the national road from Bonga town to Misan Teferi, the house symbols show the location of Komba village (down right) and Agama village (top right). Black double lines indicate major paths and the red lines small streams. The forest boundaries are shown as single lines in black, the Amharic words indicate the full names of the respective forest ‘owner’, hence of the head of the HH that holds traditional property rights of this plot. Although Figure 21 is a hand painted sketch which settings are not geographically precise in terms of proportions of the plots and run of the boundaries, it provides a coherent picture of the pattern of traditional property rights in Koma Forest. Thereafter, the entire Koma Forest (south of the national road) is divided into a mosaic of 54 forest plots (listed in Appendix II). In reality, however, plot boundaries are not demarcated by any means, and are hence invisible to non-privied ‘outsiders’. As shown in Photo 3 and Photo 4, roads, small paths, streams, or big trees function as boundary earmarks instead.

Photo 3 and Photo 4: Forest plot boundaries in Koma Forest: A small stream and a path



In order to enhance preciseness of the geographical dispersion of the traditional forest plots sketched in the mental map above, the information was verified ‘on site’, i.e., in the forest. This was undertaken during forest walks through the respective forest area, accompanied by key informants from Komba village. The informants were requested to confirm the concrete boundaries of the traditional forest plots, which were then recorded with GPS technique. Additionally, in order to provide a better idea of the spatial distribution of the entities ‘Komba village’ in relation to ‘Koma forest’, all *tukuls* of Komba village were mapped using GPS. Then, with ArcView GIS, all GPS points taken were interpolated into a digital elevation model created from the ‘official’ map of this area, see Figure 14 (EMA 1989).

Figure 22: GPS-confirmed boundaries of traditional forest property rights in Koma Forest



The horizontal black line illustrates the course of the Bonga Town - Misan Teferi national road, each black house symbol stands for one *tukul* in Komba village, and the red lines indicate the surveyed boundaries of traditional forest property rights in the Koma Forest.

Beyond the geographical dispersion of forest plots and the name of the plot 'owner', Komba villagers were interviewed on additional information concerning the forest plots, namely the place of residence of the forest 'owner', the name of the forest area in which the plot concerned is located, the estimated size of the plots, and the estimated area of each plot covered with forest coffee populations. The obtained information is provided in table form in Appendix II.

Analysis of this data render possible to calculate the rough figures on total size of each forest section and on the percentage of the respective forest section that is covered by forest coffee.

Table 5: Forest plots and coffee occurrence[104]

	Size of forest section (ha)	No. of plots	Origin of plot 'owners'	Coffee forest per section (ha)	Percentage of section covered with forest coffee
Bushasha	453	8	All from Komba	7.25	1.6
Cangatarra	198	16	All from Agama	10.00	5.1
Gokesha	422	16	All from Komba	7.75	1.8
Kabah	63	5	All from Agama	5.00	7.9
Kama	140	4	Three from Agama, one from Komba	No coffee	0.0
Kidah	145	5	All from Komba	2.00	1.4
Total	1,421	54		32.00	

6.1.2.2 Who's got Access to which Resources?

The dissection of Koma Forest into traditionally 'owned' plots is a very important pillar of the traditional forest related institutional setting. However, what does it mean to obtain a forest property right for a certain plot in regard to its use, management and conservation? Is the forest plot 'owner' free to act according his own will? Can all forest resources on a certain plot exclusively be used by the 'owner'? Which rights and duties are applied to 'ownership' of a forest plot? These concerns are addressed by a variety of detailed traditional institutions on the bases of the traditional forest property rights. They say who is allowed to take which action in which forest plot.

Questions regarding access to forest resources were posed to a great many of local people with different backgrounds, by applying open interviews with key informants, transect walks and focus group discussion. The outcomes give evidence on three important matters:

- Not all forest resources on a certain forest plot can exclusively be used by the plot's holder. Instead, there are different traditional institutional arrangements for different forest resources
- Kaffa, Mandjah and newsettlers have different knowledge and different opinion on the validity of traditional institutions concerning forest use, management and conservation
- The local *kebele* administration is not only aware of these traditional institutional arrangements but involved in their compliance effort

The first issue makes the view relative that forest property rights are merely individually held and directs the focus of interest to the heterogeneity of forest resources. The traditional institutional arrangements foresee exclusive right ownership, hence exclusive resource

[104] The figures base on information provided in Appendix II.

utilisation only in case of the three forest cash crops coffee, honey, and spices. Use, management and conservation of other forest resources - firewood and house construction materials above all - follows a right system which is more based on open access for subsistence purpose. Generally spoken, the scarcer and more valuable a forest resource is, the more limited is its open access character.

Thereafter, gathering firewood and woody construction materials from Koma Forest is legitimate regardless the delineation of traditional forest plot boundaries. This does not, though, mean that utilisation of wood resources is unrestrained. First, 'open access' only applies for personal need, hence not for economic purpose. Second, cutting and removal of larger forest trees e.g. for house construction is a labour intensive undertaking that goes beyond the single HHs facilities, and is only accomplished through *daddo* or *dabbo* which hence provides a definite social control of timber cutting. Thirdly, open access to wood resources only holds true for 'local people', hence people from the neighbouring villages Komba and Agama.

> "*People from other villages did not come to my forest because it's too far, rules are simply for the neighbours*." (25/11/2004: Yerango Ambo Gedawo, Kaffa peasant)

On the one hand, Koma Forest plot owners do not possess the right to extract larger quantities of wood in their sole discretion. On the other, although extraction of wood materials works on a basis of 'first come, first served', there is no true 'open access' situation as wood resources are a common good of 'the neighbours' hold together by the social systems 'elderly' and *iddir*.

Local people's knowledge on and opinion of traditional institutional arrangements is diverse, and clusters according to ethnical and historical background of the people. Table 6 subsumes the research findings by confronting the different perceptions of Mandjah, Kaffa and newsettlers regarding traditional access regulations of the five most important forest resources for Komba villagers, honey, forest coffee, firewood, house construction materials, and valuable spices by name.[105] The fifth row depicts the view of Yeyebitto *kebele* administration representatives (discussed in Chapter 6.2.2).

[105] The listing of the five most important forest resources bases on answers to the question: "What are the main benefits of the nearby forest for the population of this village? Please list the three top benefits in order of priority".

Table 6: Forest resource property rights in Koma Forest

	Mandjah	Kaffa	Newsettlers	*Kebele* administration
Honey (hang beehives)	EXCLUSIVE Share-cropping	EXCLUSIVE Share-cropping	EXCLUSIVE Share-cropping, ("*if the owner is serious*")	EXCLUSIVE Share-cropping
Forest coffee	EXCLUSIVE	EXCLUSIVE (in productive areas)	OPEN ACCESS	EXCLUSIVE
Firewood	EXCLUSIVE	OPEN ACCESS (for personal need)	OPEN ACCESS	OPEN ACCESS (for personal need)
House construction materials	OPEN ACCESS (for personal need)	OPEN ACCESS (for personal need)	OPEN ACCESS (for personal need)	OPEN ACCESS (for personal need)
Valuable spices[106]	EXLUSIVE	EXCLUSIVE Share-cropping	OPEN ACCESS	EXCLUSIVE

The answers given in regard to honey extraction, hence the right to hang beehives in a particular forest plot, are pretty similar. When it comes to forest coffee utilisation, though, Mandjah people declared the extraction of forest coffee to be an exclusive right of the forest plot 'owner', Kaffa people state that the individual right to extract forest coffee is given but geographically limited to highly productive forest areas. Allochthonous newsettlers predominantly expressed that forest coffee in Koma Forest can be used in an 'open access' manner - despite the system of forest property rights. According this institutional stetting, forest coffee utilisation on Koma Forest follows two strategies. The 'exclusive' one, in which people recognise the demarcations plots and just pick coffee on their own plots, and the 'open' one, which follows more a 'first come, first served system, when people do not know about or deny the ownership rights or when the forest area is not productive in terms of coffee.

Table 6 illustrates that newsettlers are aware of the existence of certain traditional regulations concerning use of different forest resources, but generally perceive them to be more 'open access' than autochthone people do. Newsettlers are 'outsiders' in the sense that they do not hold traditional forest property rights by their own, and are less involved in, bound to and knowledgeable about the traditional institutional stetting regarding forest resource use, management and conservation than Mandjah and Kaffa people. This coincidence is

[106] Namely Ethiopian cardamom (*Aframomum corrorima)*, wild pepper (*Piper capente)*, and buckthorn *(Rhamnus prinoides)*.

conflictive, especially with the background that HHs of all groups depend on natural resources from Koma Forest for their livelihood.

Theory suggests that existence of institutions not automatically imply their adherence by all actors involved, especially when the group of actors is heterogeneous (see Chapter 2.2.2.1). This seems to be the case with traditional forest property rights and access to forest resources in Koma Forest. The issue of disobedience of the traditional forest related institutions is, as a matter of fact, a delicate one, and took much effort and time to be investigated. A major question in this regard is what happens in the case of non-compliance. Do violators need to fear any penalty when they use the forest due to their understanding? How are the above depicted institutionalised authorities involved with the resolution of concerning conflicts between different forest resources appropriators? To elaborate on these issues, two different 'truths', the one of allochthonous and authochthonous people are presented in the form of interviewees' statements. Firstly, perception and experience of newsettlers is presented as follows:

> "*I do not know the forest boarders.* […] *I get firewood from everywhere within Koma Forest, also coffee and spices. I do not have to ask for permission. Also for house construction materials I simply go into the forest. The owner does not complain. Also the forest owner thieves coffee somewhere else. Even the hanging of beehives is sometimes possible without permission, otherwise the owner is very serious. The serious people kick the thieves and take all the products from the thieves. But the forest is not controllable, that is why I do not want to have my own forest.*" (28/11/2004: Anbese Ambo)

> "*The forest owners just go into the forest and watch. When they catch a thief, they bring him to the iddir, the elderly and kebele. The elderly say it is forbidden to take over other ones forest products.* […] *But there is no punishment for thieves. The owner takes back his stole forest products, and nothing happened to the thief. He only got advice*." (24/11/2004: Agama: Tadesse Kasa, catholic priest, secretary of FUS)

> "*Anybody can pick coffee, it is impossible for the owner to prevent from thieving. But the owner does not try to prevent. Sometimes they go into the forest, and if they see a thief they take the products from him and give him a*

> *warning. Both firewood and house construction materials were also possible to use. But timber for selling was forbidden. Timber thieves would have been brought by the owner to the kebele and accused.* […] *There are demarcations, but I do not know where the plots are."* (28/11/2004: Mekuria Wolde, 'newsettler')

As a matter of fact, the issue of traditional forest property rights and 'thieving' of forest resources respectively, looks different from an autochthone point of view, hence from the perspective of a forest plot owner. A Mandjah peasant who grew up in Gokesha *got* told the 'thieving narrative' from a rather contrarian angle.

> "*Others are not allowed to take coffee, to take firewood, to hang beehives, spices, fruits, medicinal plants. Four days in a week (Tuesday, Thursday, Saturday, Sunday), I keep my forest from thieves by patrolling. When I meet the thief, I will catch him. He begs me not to bring somewhere, then I allow him to go, but he has to give* [the forest product] *what he gathered. After the third time I will bring him to the kebele. The kebele will punish him. They put him into prison for two to three days and give him advice not to do it again. I did not allow other people to take materials, only house construction materials, or for ploughing material, I gave permission to any people of my kebele. If people from different kebeles were thieving, I bring them to my kebele, and they will write a letter to the other kebele*." (26/11/2004: Abeto Mamo, vice chairman of Komba got, Mandjah *iddir*)

The above statements provide evidence that the traditional community-initiated rules and regulations do not form a completely self-contained institutional 'world' but are connected to the state-initiated institutional setting in the way that the local *kebele* administration is by some means involved in governing the traditional forest property rights of Koma Forest. This matter is particularly remarkable since the traditional ownership of forest area is formally illicit in regard to the legal framework of Ethiopia, and hence deserves more detailed investigation.

6.2 The State: Responsibility exceeds Capability

Since the *derg* revolution in 1974, all land including forest land is nationalised in Ethiopia. After the regime change in 1991, the EPRDF government had a prolonged commitment to state ownership of land. Consequently, ever since the mid-1970s, the state is the 'owner' of the Ethiopian forest by formal means and a full range of state-institutions are *de jure* in charge of its use, management and conservation (see Chapter 4.3.3).

6.2.1 From the Federal State to the *woreda*

Since the mid-1980s, large parts of Bonga forest is a gazetted reserve, registered as a NFPA. After the regionalisation process in the mid-1990s it is decreed by constitution that:

> "*The management of natural resources is issue of the 'Bureaus of Agriculture' at the regional states.*" (31/7/2003: Gashaw Tadesse, Environmental Protection Authority, Regional Environmental Affairs and coordination service)

In view of that, Bonga NPFA was declared as RPFA and the "Forestry, Soil and Water Conservation Team" (FSWC-T) within the regional "Bureau of Agriculture and Natural Resources Development" (BoANRD) became the responsible body for controlling, protecting and managing Bonga forest resources on behalf of the regional government of SNNPRS. The office of the FSWC-T is, however, located in the region's capital city Awassa, located some 400 kilometres away from Koma Forest, which is considerably far in regard to the poorly developed infrastructure in Ethiopia. Research provided evidence that the regionalisation process should be seen more as an 'undertaking on paper' and did not bring a practical change in forest resource governance:

> "*The forest belongs to the region only by name.*" (28.7.03: Attu Million, Ministry of Agriculture, Natural Resources Regulatory Department)

When discussing the issue more intensively with other decision makers from state- and NGO bodies, it became apparent that responsibility for forest resources including the governance of the NFPAs/RFPAs has actually not been shifted to the regions but to 'nowhere', and that Ethiopian regions formally got the responsibility for forest resources but are not provided with practical means to act upon, hence:

"*People do practically no regionalisation.*" (4/5/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

In line with that, the status of Bonga NFPA/RFPA, and hence of the study area Koma Forest, remains unclear until the present day, or spoken in the words of an NGO worker from Bonga town:

"*Bonga forest has been National Forest* [NFPA], *now it should be Regional Forest* [RFPA], *but it is stuck somewhere in the middle.*" (25/11/2004: Peter van Doren, KDP)

This 'middle' is a competence vacuum. On the one hand members of the federal MoARD complain that "*I can not make any decision here*" (28/7/2003: Attu Million, Ministry of Agriculture, Natural Resources Regulatory Department) and on the other that "*the regions have no real power*" (4/5/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk). The only practical permanent implementation measure regarding conservation is the putting up of signs.

Photo 5: Sign indicating Bonga NFPA/RFPA, literally "Bonga State Reserve".

In total, this picture depicts an extensive example of failure of institutional change and led not only to unclear responsibilities but to practical effortlessness of the state in regard to forest resource use, management and conservation.

6.2.2 Yeyebitto *Kebele*: Stuck between Tradition and the State

The *kebele* administration provides the state-initiated institutional framework through which governmental policies ought to be implemented 'on the ground' (cp. Chapter 4.2.4). In regard to use, management and conservation of forest resources, the *kebele* is vested with the authority to enforce state-devised operational institutions, hence rules and regulations meant to guide concerning activities of forest resource appropriators its area of responsibility. This includes monitoring of forest appropriators activities in the area demarcated to be a NFPA/RFPA, such as Koma Forest, and - in case people do something found to be illegal due to state law - their accusation. But how does the *kebele* execute this mandate in practice? What happens to people found to conduct forest related activities illegal due to state law? To elaborate on these questions, interviews were conducted with the person that holds the position in which the *kebele* apparatus culminates: the *kebele* chairman.

> "*The kebele can not catch the people* [the 'illegal users'], *they hide themselves.* […] *From 1986-89* [1992/93-1995/96 Gregor. cal.] *I was vice kebele chairman, from 1994* [2000/01 Gregor. cal.] *up to now main chairman.* […] *We never catched anybody, because the forest is very vast. When we wanted to catch them, they threw everything and run away.*" (29/11/2004: Mengisto Mamo, *kebele* chairman)

This statement portrays the low implementation capability of the *kebele* - which is *de jure* responsible for maintenance of state 'law and order' - in regard to enforcement of forest resource conservation state policy. According to the *kebele* chairman, ever since the early 1990s, no single person has been accused in Yeyebitto *kebele* for disobedience of forest conservation state laws. This illustrates that the responsibility of the state exceeds its capability' dilemma (discussed in Chapter 4) mirrors on the local level.

But how does the *kebele* administration addresses the issue of traditional forest property rights within its own area of responsibility? Is there - what shines through the words of above cited forest resource appropriators - interaction and even cooperation between the two institutional

'worlds'? When the *kebele* chairman and vice-chairman were confronted with the issue of local traditional forest property rights, they stated:

> "*The kebele knows the traditional forest division, but the traditional users do not pay forest use taxes.*" (29/11/2004: Mengisto Mamo, Yeyebitto *kebele* chairman)

> "*Even if the land officially belonged to the state, it unofficially belongs to the people. The kebele knows and accepts it.*" (24/11/2004: Yeyebitto Agelgilot: Abebe Abafogi, Yeyebitto *kebele* vice-chairman)

Given the institutional circumstances, these statements are pretty remarkable. Traditional forest property rights are by no means contemplated or acknowledged in the legal state-initiated institutional framework, hence can be characterised as formally illegal. However, the above sentences show that the respective lowest institutional state legislative is not only knowledgeable about the existence of traditional institutions that govern local forest use, management and conservation, but does not disapprove or take action against them. However, it needs to be taken into account that *kebele* staff themselves originate from Yeyebitto, have manifold and deep kinship and peer relationships on site, and that also their own HHs depend on the extraction of resources from Koma Forest. To put it into the provoking words of an NGO representative:

> "*The use of forest products is allowed by the kebele because also kebele leader use them.*" (4/5/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

The contiguous question whether and how far this toleration turns into collaboration in the way that traditional forest property rights can institute legal proceedings at the *kebele* court, the *fered shengo*, could not be fully ascertained. The *kebele* chairman expressed the circumstances in the statement:

> "*The traditional demarcation is not documented, and there are no written documents. But the fered shengo acknowledges the traditional rights, if the*

> *forest owner comes with tangible evidence*." (29/11/2004: Mengisto Mamo, *kebele* chairman)

However, this seems to be more a theoretical notion than a practical reality:

> "*Since I am the leader of the kebele nobody came to me with traditional forest issues.* […] *People say 'my honey, my coffee etc. is stolen', but they do not bring the thieves.*" (29/11/2004: Mengisto Mamo, *kebele* chairman)

Accordingly, Yeyebitto *kebele* in practice does not take action on recognition and respect of rules and regulations regarding to forest use, management and conservation wheather in regard to state law nor to traditional forest property rights. However, the *kebele* leaves the basic responsibility with the above pictured community-initiated institutions 'elders' and *iddir* which get their authorisation primarily from historically developed social standards and morals. Forest-related rule and regulation compliance is more ensured by traditional mechanisms of social sanctioning, which are powerful in a traditional and relatively cohesive society with common norms and values. Similar findings are corrobated by Alula Pankhurst who did research on irrigation in South Wello/Central Ethiopia. He writes: "Generally, if conflicts are internal, communities attempt to solve them using indigenous informal institutions and seek to avoid letting the matter reach formal state institutions. For instance, disputes over irrigation tend to be solved by elders, with the threat of sanctions by burial associations [namely *iddir*] in recent years. Only if the matter cannot be resolved informally, […] the case be taken to government institutions." (Pankhurst 2002: 15).
When bringing together the *kebele* representatives' and the forest appropriators' statements, it becomes evident that there is no stringent division between community-initiated and state-initiated institutional 'worlds' in regard to their cognisance on forest resource use, management and conservation activities, and both institutional systems are permeable and compliment each other in some regard. In other words:

> "*Kebele is the linkage between informality and government*." (4/5/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

In Chapter 6.1 and 6.2, the institutional framework of and conditions for traditional and state-initiated forest resource use, management and conservation systems are illustrated and

discussed. However, evidence suggests that there is an entire historically evolved and community-initiated institutional structure for regulating use, management and conservation of the respective coffee forests, which execute certain administrative, resource management and juridical functions on the local level and thereby - in parts - fills out serious institutional and implementational shortcomings of the Ethiopian state. However, the research results also indicate that the community-initiated institutional system rests on social sanctioning and consensual conventions limited to groups of autochthone people only, rather than on tangible and universally accepted agreements among all people using forest resources in the Koma Forest. This provides the respective traditional institutions with little practical assertiveness, and - consequently - results in the creation of a local level power vacuum in which both, state-initiated as well as community-initiated forest use, management and conservation rules and regulations are habitually violated by local forest resource appropriators, leading to ongoing forest degradation and loss. Remedies in the form of institutional change should imperatively provide local level community-initiated bodies, particularly the *iddir*, with greater authority to act and decide on use, management and conservation of the adjacent coffee forest. Formal appreciation and legal backup by the state would be a first step in this direction.

6.3 The 'Third Way': NGO-initiated "Participatory Forest Management"

The following section elaborates on performance and limitation of institutional change within the above portrayed local level action arena. Thereby, the concrete case of an NGO trying to unravel the unsatisfactory terms of forest use, management and conservation of Koma Forest and to fill the institutional vacuum by means of a "Participatory Forest Management" project is taken as a case study example. In the following section, first, the project' general approach and its practical implementation measures are be depicted in a non-judgemental manner. Second, its actual and potential restraints are identified and critically discussed.

6.3.1 Institutional Re-Construction: Give Exclusive Rights and Responsibilities to the Community

In 1996, the "Bonga Integrated Participatory Forest Management and Reproductive Health Project" (Bonga IPFMRHP), in short Bonga PFM project, was set off in Kaffa Zone with the establishment of a local headquarter in Bonga town. Implementing and funding organisation is the UK-based NGO Farm Africa. Imitate stimulus for the project was experience gained from successful "Joint Forest Management Projects" in different parts of India.

At first, the NGO tried to achieve forest conservation by providing forest appropriators with alternative incomes (e.g. by means of distributing high yield garden coffee, or poultry) in order to reduce HHs dependency and outtake from the forest. However, it was realised through experience that first, this welfare-based approach was not effective to achieve forest conservation goals since it was not directly linked to the forest and created more an additional than an alternative income, and second that it took too many subsidies and was hence not economically sustainable (MoARD 2003b). Thereafter, Farm Africa revised their strategy and focus was drawn on "Participatory Forest Management".

The initial phase of Bonga PFM was characterised by long-winded negotiations with state bodies on different levels as well as project-internal personal and organisational restructuring. The project's practical implementation phase was reached as late as in 2003. However, in the words of the project manager:

> "*The long time was learning time, now we plan one sub-project in three months, it goes faster and faster. The long period is no counter argument.*" (4/5/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

End of 2004, Bonga PFM consisted of four sub-projects concerning different parts of Bonga forest, all administratively located in Gimbo *woreda*/Kaffa Zone. One of the sub-projects, the "Agama Community Participatory Forest Management Project" (Agama CPFMP), in short Agama PFM, is concerned with use, management and conservation of forest resources in Koma Forest/Yeyebitto *kebele*, hence exactly the forest area which is subject to this research work. Nevertheless, the PFM project refers to Koma Forest as Agama Forest.

The underlying inspiration of Bonga PFM project is to:

> *"Harmonise rights of the communities to use and develop the forest together with the governments mission of protecting natural resources.*" (Farm Africa 2004b: 1).

In this understanding, the applied PFM approach promotes conjoint forest management through partnership with community-initiated as well as state-initiated institutions by applying a range of advocacy, training and network activities.[107] The major instrument is

[107] See www.farmafrica.org.uk/subject.cfm?SubjectID=1

made up of far-reaching institutional change and reorganisation concerning the legal, organisational and administrative local level framework of forest resource use, management and conservation. The cornerstone is laid with the setting up of three successive and coordinated institutional tools, namely:

- "Forest User Society" (FUS)[108]
- "Participatory Forest Management Agreement" (PFMA)
- "Forest Administration Plan" (FAP)

FUS is an institutional instrument designed to bind forest resource appropriators' interests on a particular forest area together in a legal organisational entity positioned to negotiate with governmental authorities, so to say a 'statutory body'. By theory, FUS membership is open to all:

> "*households living around the forest and depend on the forest for their livelihood.*" (Farm Africa 2004b)

Practically, number of members is limited to size and productivity of the forest area concerned and prevalent forest resource use and management systems. In case of Agama PFM, the group of FUS members is composed of all HHs of the two villages Komba and Agama without exception, hence FUS members are recruited from the Mandjah and Kaffa as well as from Kambata newsettlers community. The rationale behind was told by the why project's coordinator as follows:

> "*Distance matters. We choose primary users. Regularly use is important. The Agama option is the nearby forest*." (22/12/03: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

However, which HHs should be members of the FUS has been hotly debated in the "Forest Administration Plan" preparation process and remains to be a critical issue. In fact, the Agama FUS initially consisted of 216 original members, of which seven have been voted to form an executive committee (Farm Africa 2004a).

[108] Also known as "Forest Beneficiaries Association".

Table 7: The Agama FUS committee[109]

Name	Position within FUS	Sex	Village	Other positions
Woldemichael Gebre	Chairman	male	Agama	-
Tadesse Kasa	Secretary	male	Agama	Catholic priest of Agama
Hailemariam Gebre	Reporter	male	Komba	Chairman of Komba Kaffa *iddir*
Mengisto Mamo	Committee member	male	Agama	*Kebele* chairman
Abebe Abafogi	Committee member	male	Agama	*Kebele* vice-chairman
Gesegeyn Gebrehiot	Committee member	male	Agama	-
Woldemariam Ambo	Committee member	male	Komba	'Elder' in Komba

The persons assembled in the Agama FUS committee are no 'local nobodies'. The table's fifths column shows that most of them hold positions in relevant local institutions as the *kebele*, the *iddir* association, the 'elders' and the Catholic church. Some other positions of FUS committee members may not have been figured out in this research.

With creation of Agama FUS in Yeyebitto *kebele*, Koma Forest action arena gained an additional entity in charge to administer Koma Forest area, to coordinate and decide on its resource use, management and conservation issues and - as the first legal act - to perform as a legitimized negotiation body for the arrangement of the "Agama Participatory Forest Management Agreement" (Agama PFMA) between the state and the organised forest appropriators. The overall objective of the PFMA agreement is:

> "*To make the local society participate in the forest administration and to create strong base for the legal use and common responsibility bearing*" (Farm Africa 2004a: 1)

At the end of 2003, Agama PFMA was debated and negotiated - under mediation of Farm Africa staff - by the Agama FUS committee and representatives from Kaffa Zone, Gimbo *woreda*, and Yeyebitto *kebele*. Locality was the communal assembly house in Yeyebitto *kebele*. The negotiation's outcome vested the Agama FUS with governmentally-authorised and exclusive long-term rights on use and management of Koma Forest resources, but also with responsibilities regarding their conservation, which are set out below.

[109] Information obtained in household survey and key informant interview (7/10/2004: Hailemariam Gebre Chairman of Komba *iddir*).

Table 8: Rights and responsibilities of the Agama FUS as defined in Agama PFMA

Right to:	**Responsibility to:**
➢ Use the forest resources and rehabilitate it	➢ Prevent/protect the forest from human made destruction/ deforestation, new settlements, and changing/ transforming forest land to other purposes
➢ Inhibit and prevent other people other than the FUS members from using or getting benefits from the forest	➢ Isolate and identify the users of the forest other than FUS members
➢ Share benefits from the forest	➢ Inform any natural hazard to the concerning body on time
➢ Make an agreement with the government on how to use the forest based on the forest's capacity [Forest Administration Plan]	➢ Coordinate with the [*woreda*] Agricultural and Natural Resource Bureau
➢ Administer and use the forests according to the administration plan set by the administration group	➢ Keep and respect the 'Participatory Forest Management Agreement'
➢ Set regulations on how to control and protect, rehabilitate the forest area according to the plan	➢ Preserve the 1.200 hectares of natural forests, to administer and prevent reduction in species found in the forest
➢ Appear before court and claim compensation	➢ Preserve the currently average 1.000 trees found in one hectare
	➢ Bear primary responsibility for any non-natural destruction on the forest starting from the time they were handed over to the FUS

Translated from Amharic and compiled from Farm Africa (2004b: 5)

Finally thereafter, Agama PFMA was signed by all members of the Agama FUS, responsible staff from Kaffa Zone, Gimbo *woreda*, and Yeyebitto *kebele* as well as representatives from Farm Africa.

Photo 6: Agama FUS membership meeting

After Agama PFMA became operative, actual and definite institutions regarding forest utilisation, management and conservation were determined in the "Forest Administration Plan", composed of a "Forest Development Plan" (FDP), a "Forest Management Plan" (FMP), and a "Forest Protection Plan" (FPP), each particularly designed for every section of Koma Forest. Every plan designate multifaceted interrelated rules and regulations, specifying precisely which development activities (e.g. reforestation, nursing forest coffee), ways of management (which type of forest product should be used to what extent in which forest section), management conditions (e.g. which resources can be used individually and which ones collectively by FUS members) and conservation efforts (which forest sections need prevention from which activities) have to be undertaken (McNeely 2003). All three plans have been developed and agreed upon in several-days-long negotiations between representatives of state bodies and the FUS committee, arbitrated by Farm Africa personnel. The locality of the several-days-long plan preparation process was again the community assembly house in Yeyebitto *kebele*. In regard to the institutional set up of Koma Forest resource use rights, the Agama Forest Management Plan foresees the arrangements listed in Table 9.

Table 9: The Agama Forest Management Plan

Forest resource	Utilisation through
Wood for beehives	FUS; but one has to consult the Development Agent (DA)[110]
Wood for agricultural instruments (ploughs etc.)	Individuals; but one has to report to the FUS
Wood for house pillar	Individuals; by permission of the FUS
Firewood	Individuals; without asking permission
Goods for households	FUS; including DA
Timber	FUS with DA; people have to report to the woreda, FUS has to be strict, only Wanza trees allowed
Coffee	FUS, DA is not needed here
Valuables Spices[111]	FUS
Acho	Individuals; not to ask permission
Inguday (mushroom)	Individuals; not to ask permission
Tasma (honey)	FUS
Livestock grazing	FUS
Grass for house roofing	FUS
Fencing materials	Individuals; but one has to report to the FUS
Charcoal	Only dead wood by taking FUS permission
Medicine	Individuals; not to ask permission

Notes taken at the "Forest Management Plan" preparation process (22/12-25/12/2003)

The Agama PFM project does not spotlight on in-situ conservation of forest coffee as a particularly valuable resource but on sustainable use and management of all resources provided by the Koma Forest ecosystem. Accordingly, Agama FAP and FMP delineate forest coffee as one forest resource among others. Following the Forest Management Plan, responsibility for managing, harvesting, processing and selling of forest coffee has been allocated to FUS supervision and all regarding activities previously carried out individually or in *daddo* and *dabbo* neighbourhood working groups are now undertaken collectively. This novel institutional arrangement has been incorporated into the Agama FAP and permits ways to monitor and streamline the whole process in order to do justice to both, guaranteeing peoples gain from forest coffee as well as provide ecologically sound management practices and sustainable extraction rates.

6.3.2 Limitations of and Critique to Agama PFM

Unquestionably, a project such as the Agama PFM and the assignment of forest use rights to members of a newly found entity has manifold impacts on the socio-economic situation and

[110] Development Agents are local extension workers employed by the *woreda* rural development office.
[111] *Korrorima"* (*Aframomum corrorima)*, *timiz* (*Piper capense)*, and *gesho"* (*Rhamnus prinoides)*.

power structures within village communities and between them. The first problem concerns the question which HHs are allowed for FUS membership, and hence in future participate in and gain from utilisation of Koma Forest resources. In fact, disputes concerning the matter already erupted during the FAP preparation phase. The debate centred on issues as commitment of FUS members, reflected in statements as:

> "*There are some people in the forest society* [FUS] *who are against the actions to be taken. There are people with their own honey trees and others without, which is problematic.*" (24/12/2003: Yeyebitto: Statement of a village 'elder' during the forestry plan preparation process)

Controversies exist between forest resource appropriators that traditionally own forest plots in Koma Forest and those who do not, hence between autochthone and allochthone people.[112] In tendency, the former perceive PFM more in the way that "*our forest is taken over*" (2/11/2003: Komba: Statement of a Komba villager).

> "*The people who previously did not own the area now benefit from the forest. The Komba and the Agama people are together now and therefore we are in worst condition. Our share from the forest is less now. We are not interested to be together with the Agama people concerning the forest.*" (5/11/2004: Komba: Forest walk with Abetu Mamo and Assrat Gebre Mariam)

Accordingly, there seem to be stark disparities in appreciation of, engagement in and adherence to the newly established institutional system including the FAP regulations, between these two groups. However, this problem is obviously known to staff of the implementing NGO:

> "*The Kambata had no forest claim rights, because they are newcomers. The previously non-users are now users.*" (22/12/03: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

[112] Information based on participatory observation during the FAP preparation process (December 2003, Yeyebitto).

These FUS internal difficulties seem to persist over long periods of time. Obviously, it was still a concern when I conducted an interview with a Farm Africa representative one year after the Agama FAP has been negotiated and approved.

> "*Some people claim the forest is theirs. But Ethiopia has not a customary law.*" (10/11/2004: Mesfin Tekle, Farm Africa/Kaffa Zone Rural Development Desk)

These FUS internal dividing lines, of course, impact on the PFMs long-term prospects and its potential success. On the one hand, they put a risk on the FUS' internal cohesion which tends to result in an outbreak of conflicts and to bring non-compliance of the FAP regularities. Obviously, also in the case of NGO-initiated institutions, pure existence does not mean practical adherence by each and every person concerned, and one year after the approval of the FAP, an (unknown) number of FUS members continued to use forest resources individually, which is according to the newly established institutional setting labelled as thieving.

> "*There are thieves who are making problems in the society. We have to know where and when they go into the forest.* […] *The thieves are from among us. We have to put the thieves into prison.*" (8/11/2004: Coffee picking with the FUS, Meeting afterwards with Farm Africa people)

On the other hand, this brings the FUS in a bad position to act and argue with one tongue, whereas 'the state' presents a rather homogeneous cluster, and is hence more able to follow one voice. Accordingly, conflict of interest and lack of trust among different PFM stakeholders can be identified to be a core challenge for the design and the success of the whole undertaking of institutional change and PFM. Tache and Irwin (2003: 3) provides similar findings from Borana Zone in Southern Ethiopia. Koontz (2003: 8) depicts the problem from a broader, more theoretical aspect.

When having a closer glance on which individuals participated in the FAP preparation process, who raised his or her voice, and which statements were given, it becomes evident that already during plan preparation phase, regnant local power structures of Yeyebitto *kebele* are reflected in Agama PFM. Concordantly, also the line up of the FUS committee (see Table 7) shows that this key decision making body is dominated by the male local elite. Presumably, these people will not decide and act against their own interests. The question of administrative

positions and influence within the FUS was also raised and criticised during the FAP preparation process.

> "*Only 20 to 30 of the 147 FUS members are good, the others just want to get administrative posts."* (25/12/2003, Yeyebitto: Statement of a religious leader during the forestry plan preparation process).

The project enforcing NGO finds itself in a catch 22 situation between the implementation of their own conceptual approach, interests of the prevalent local power elites which are deeply ingrained in their specific historical, socio-economic, political, ethnical and religious structures, and the interests of state bodies and representatives. Thereby, the issue of who is actually involved in so-called 'participatory' decision making processes and which role the mediating body ought to play needs to be critically examined. Beyond, the overall question can be raised how far well-meant (and well-sounding) approaches as 'participation', 'grassroots democracy' or 'transparency' bear up in a traditional rural society which values, norms and beliefs often run counter. Nevertheless, reorganisation of the institutional framework that defines access to forest resources which are crucial for local people's livelihood can not evade provoking conflict-prone discussion and involves creating internal and external beneficiaries and displeased, hence determines certain groups of 'winners' and 'losers'.

7 All the Same Case? The Situation in Kankicho Forest/Bale Zone

Ethiopia is a heterogeneous country in which different areas differ considerably in terms of ecological as well as cultural and socio-economic factors. This also applies to the country's coffee forest areas scattered around the Southwest and South, in which attributes of forest resources, of communities and institutions show major differences, resulting in a different set up of Coffee Forest action arenas. In order to gain a deeper empirical understanding of the composition and functioning of concerning local action arenas and to elaborate on differences as well as similarities of Ethiopian coffee forests, this chapter provides another case study, namely Kankicho Forest in Bale Zone.

The structure of this chapter follows the conceptual IAD framework, discussed and applied in the earlier chapters. Accordingly, attributes of Kankicho Forest resources are discussed and analysed first, followed by attributes of the forest resource appropriators. Despite blatant ecological and anthropogenic differences between the situation in Koma Forest and Kankicho Forest, evidently there are a number of similarities and thematic cross cuttings. Both case studies are mountainous moist forests with forest coffee occurrence and have similar floristic characteristics. The same applies to 'attributes of the people'. Despite apparent ethnical, cultural and historical differences, both are traditional village communities that live in far-off rural areas and gain their livelihood mainly from NTFPs and smallholder subsistence agriculture. Hence, in order to avoid repetition, focus of this chapter is more drawn on issues that have found to vary between the two case studies than on similarities.

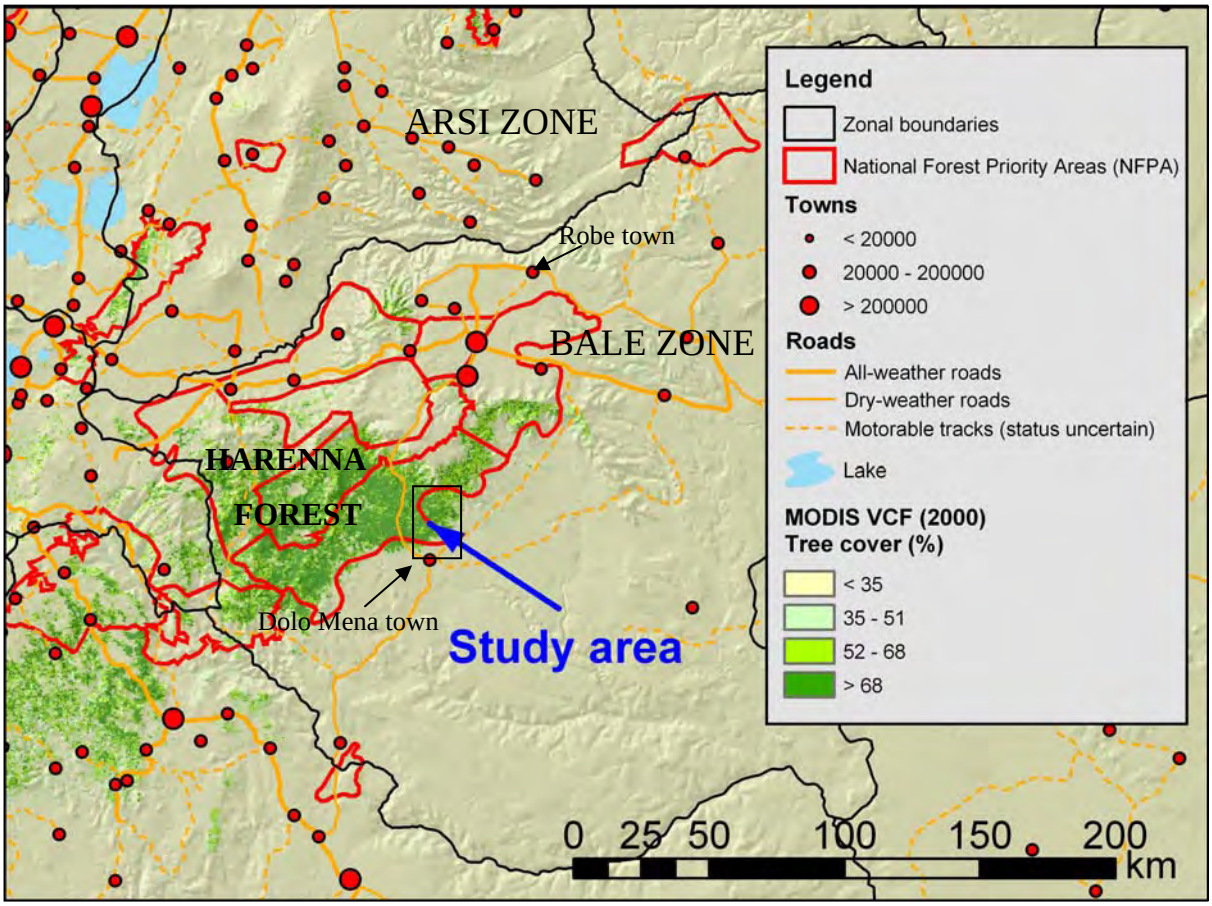
7.1 The Forest: Kankicho Forest/Bale Zone

Bale Zone is named after the Bale Mountains massif, located approximately 300 km south-east of Addis Ababa, and about 400 km east of Bonga Forest/Kaffa Zone. Bale mountains are peaked by the afro-alpine Sanetti Plateau which reaches up to 4,300 meter asl. South of the plateau, at an altitude between 1,300 and 3,000 meter asl, Harenna Forest is located which is one of the largest connected mountainous moist forests within Ethiopia stretches with an estimated size of circa 1,000 square kilometres (Senbeta 2006: 18). The soil of Harenna forest is noted as dark reddish-brown silt-clay rich in basic exchangeable cations. Annual rainfall is about 1,000 mm. Rainfall pattern is bi-modal with a short rainy season in March/April, and a longer one from August to October (Senbeta 2006).

Administratively, Harenna Forest is located in Bale Zone of Oromiya Regional State, spread over different *woredas*. In regard to state-established environmental protection delineations,

the greater Harenna Forest complex is made up of five different NFPAs and the "Bale Mountains National Park" (BMNP) - as already illustrated in Figure 12. The subsequent Figure presents a more detailed picture of Harenna Forest and its surrounding, using the MODIS Vegetation satellite image from the year 2000.

Figure 23: Forest cover and the study area in Bale Zone



presentation based on MODIS Vegetation Continuous Fields Satellite Image 2000

In congruence with research conducted in Koma Forest/Kaffa Zone, also Harenna Forest is not investigated as a whole, but focus is drawn to one particular forest area which is mainly used by the inhabitants of only one village (indicated in Figure 23 with a blue arrow). Both, the forest and the village are named Kankicho, literally for 'free space' in Oromiffa language. Kankicho Forest is located in the South-eastern part of Harenna Forest, within the triangle between Awagirro River in the north, Mulka River in the west and Irba River in the east. In the South, the forest ends at Burkito village.

Kankicho Forest is part of the Mena Angetu NFPA, which is the fourth largest NFPA in Oromiya Region, and the biggest that makes out Harenna Forest. Mena Angetu NFPA covers an area of 180,548 ha, out of which 91 percent is forest land. The remaining area is covered by woodland, shrubland and cultivated land respectively (Woody Biomass Project 2001a: 61).

However, Mena-Angetu NFPA is not demarcated and no management plan has been put up by now (ibid.). Ecologists consider Harenna Forest to be a biodiversity hotspot in Ethiopia. It presents a prime example of an Afromontane *Podocapus* forest and is characterised by a high species richness[113] and occurrence of plant species not known elsewhere in Ethiopia, *Filicium decipiens* and *Alangium chinense* among others (Woody Biomass Project 2001a: 18; Senbeta 2006). Harenna Forest's ecological importance is also due to the occurrence of naturally grown *Coffea arabica* populations with high physiological variability as a dominant under story shrub. However, microclimate conditions limit coffee occurrence to the so-called 'Harenna Coffee Belt' that stretches at an altitude between 1,400 and 1,600 meter asl. (pers. com. Dereje 2003).

According to a socio-economic survey undertaken by the "Mena Angetu *woreda* Rural Development Office" in 2003, Kankicho Forest is the major coffee production area in the *woreda*, and contains 1,333 ha of coffee land, almost unexceptional semi-forest coffee. The local name of the coffee variety that is found in this area is *haaboopi bunna*, no improved varieties are planted, and no chemical fertilizers are used by the coffee users (pers. com. Fayyissaa 2003).

Robe town, the capital city of Bale Zone (see Figure 23), is within reach of Addis Ababa in one and a half day drive mostly on bumpy roads. However, to reach Harenna Forest, it needs an additional cumbersome half a day drive over the Sanetti Plateau to Dolo Mena town. Finally, from there, Kankicho Forest is only accessible under dry weather conditions by 4 x 4 drive Jeep, as seen in Photo 7. Otherwise, however, Kankicho village can only be reached by a two hours walk through the forest.

[113] Species richness in Harenna Forest is 289, which is similar to Bonga Forest with 285 (Senbeta 2006).

Photo 7: The road to Kankicho Forest

The terrain of Kankicho Forest is relatively plain with a small slope to the north and no major river gorges or other natural barriers. This concerning, most forest land would be practically suitable for tillage agriculture. Also ecologically, Kankicho Forest is characterised by relative good accessibility. Vegetation is less dense, as under story shrub has often been removed, machetes are rarely needed for encroachment. There are no lions in Kankicho Forest. The largest wild predatory animal is the hyena, which puts a threat to livestock but has, however, not been mentioned by Kankicho villagers to be a limiting factor for forest accessibility.

Other general issues regarding multiple use, excludability, substractability, and regeneration rate of Kankicho Forest resources are comparable to those of Koma Forest/Kaffa Zone discussed in 5.1.2. – 5.1.6., and hence need no repetition here.

7.2 The People: Forest Resource Appropriators' Attributes

The village Kankicho has been chosen as a local level case study as it is situated right within both, the 'Harenna Coffee Belt' and the Mena Angetu NFPA, and is relatively concise in terms of its HH size. Kankicho village stands on a glade right within Kankicho Forest, at an altitude of about 1,400 meter asl, approximately 10 km north of Dolo Mena town (see Figure 24). Forest coffee can be found within an area of about two hours walking distance to the north as well as two hours to the south of the village. Administratively the village belongs to Burkito *kebele*, which covers an area of about 25,000 ha - out of which 16,000 ha are inside the NFPA, and 1,312 ha are classified as coffee forest by the *woreda* agricultural office.[114] Burkito *kebele* is inhabited by approximately 500 HHs and administrative part of Mena-Angetu *woreda* (pers. com. Kafiyalew 2003; pers. com. Mohammed, Kamal Hadj 2004). Figure 24 is a cut-out put together by two maps published by the Ethiopian Mapping

[114] Burkito *kebele* Socio-Economic Survey 2003. Mena Angetu *woreda* Agricultural Office. Department of coffee and fruits.

Authority in 2000. It indicates Kankicho village as a white dot right in the middle of the Burkito *kebele* forest.

Figure 24: The broad vicinity of Kankicho village[115]

(EMA 2000a; EMA 2000b)

[115] The plan is the most in-depth and up-to-date map of this area. Nevertheless, it is not only outdated but includes deficiencies, as for example, random designation of villages localities. It should therefore rather be perceived as a geographical overview not as a detailed map of its recent status.

7.2.1 Demography and Permanence

Kankicho village consists of 35 HHs, out of which 27 HHs could be interviewed in the HHs survey. Unfortunately it was not possible to interview more than one female-headed HH.[116] Polygamy is common. At time of survey in November 2003, 178 inhabitants lived in the surveyed HHs, which makes an average household size of 6.6 people. Population growth rate could not be assessed, but is estimated to be as high as in the whole of Oromia Regional State, which is about 3 percent annually (Tefera, Ayele et al. 2000).

Photo 8: View of Kankicho village

However, not all HHs permanently dwell in Kankicho village. Every year in the dry period from *tir* to *yekatit* [mid-January until mid-March], one-third to half of the village inhabitants temporarily leave Kankicho for a place called Gargarra which is located within the boundaries of the BMNP; about seven hours walking distance from Kankicho Village uphill to the north. Motivations for the temporary move are found in a more moderate climate as well as provision of natural resources:

> "*We go with our cattle and children for search of honey and fodder for cattle.*" (Interview Kankicho #18, Muhammed Ali Hassan)

> "*We let the cattle in the forest, because in the north there are less coffee trees, we go for 2-3 months, in tir, yekatit* [Mid-January until Mid-March], *we have temporary houses there.*" (Interview Kankicho #17, Roba Wario)

The Burkito *kebele* chairman knows about the periodic encroachment of Kankicho people into the BMNP, but perceives it to be "*not a big problem*" (9/11/2003: Burkito *kebele* chairman, Interview).

[116] This is due to the fact that the research team members were male and Kankicho people have a strong affiliation to Muslim tradition promoting separation of male and female sphere of life.

7.2.2 History: Forest Burning, Resettlement and Conflict

Recent history of Kankicho village is dominated by a several year long struggle of the villagers with state bodies over the displacement of the whole village from within the forest to its outside. In the following, the conflict situation will be illustrated by presenting the views of both the Kankicho villagers and the *kebele* representatives.

In 1992 (1998/99 Gregor. cal.) large-area forest fires devastated parts of Mena Angetu NFPA[117]. In this connection, all Kankicho villagers were evacuated to a place outside of the forest, close to Burkito village, around 6 km to the south of Kankicho village. However, interviewed Kankicho villagers state that evacuation was not voluntary and that many of them tried to avoid it. However, the consequence was violent excesses and short-term imprisonment of some Kankicho villagers.

> "*The students of Burkito came and destroyed our houses. I got prison for one week and again for two weeks because I refused to go. Around 20 people went into prison.*" (Interview Kankicho #10, Mohammed Kadir Burisso)

Along with Kankicho village, also the villages Habubi, Tschaffaere and Mayete were resettled from within the Mena Angetu NFPA to the outside, but Kankicho was the biggest of them in number of households. After the fire incident, the Mena Angetu *woreda* urged the Kankicho villagers not to return to their original home places but to permanently settle outside of the forest. Due to a statement given by the Burkito *kebele* chairman, this was reasoned to prevent further deforestation.

> "*They* [Kankicho villagers] *cut trees and plough the land.*" (9/11/2003: Mohammed Hussein Ibrahim, Burkito *kebele* chairman)

However, the *kebele* provided each resettled HH with eight *mideh*[118] (approximately one ha) of farmland around Burkito village as compensation (per. com. Mohammed 2003). The Kankicho villagers, though, continued to resist against the resettlement and about one year later, went back to their ancestral living place within the forest. According to a Kankicho

[117] Forest fires increase with human interventions. Naturally, ecology of Ethiopian primary moist forests is neither adapted nor dependent to forest fire. Causes found involve forest dwellers' careless and deliberate activities in order to clear farmlands, get rid of wild animals, to induce new re-growth of grasses for pasture or the smoke out of beehives (Lemessa and Perault 2001).

[118] A *mideh* is a locally used land size unit which defines the area which two oxen can plough in one day (11/12/2004: Forest walk with Ali Wario and Ahmed Rachoo).

'elder', also the inhabitants of the villages Habubi, Tschaffaere and Mayete went back to their place of origin. To come to the point, one interviewee from Kankicho village depicted the conflict such as:

> "*In 1992* [1998/99 Gregor. cal.] *the forest burned, we all left the area, we were given a bad place and we turned back*" (Interview Kankicho #2, Adam Hussein Mohammed.

The Burkito *kebele* chairman, however, complained that Kankicho villagers continue to utilise the farmland which was provided for compensation even after they returned to their original homesteads in Kankicho Forest.

> "*The Kankicho people went back to their forest place in 1993* [1999/00 Gregor. cal.], *but kept their farmland here in Burkito village*." (9/11/2003: Mohammed Hussein Ibrahim, Burkito kebele chairman).

At the time of my second field stay in Kankicho village in November 2003, the case of resettlement was still pending. A Kankicho village 'elder' stated that:

> "*The court punished us to pay 75 birr, now we can stay here.*" (Interview Kankicho #10, Mohammed Kaddir Burisso)

However, due to state representatives, the case has been referred from the *kebele* to the *woreda* level, and Mena Angetu *woreda* filed an action at the court in Dolo Mena which was, at that time, awaiting.[119] Since the issue continued to be unsolved since years and Kankicho villagers still fear to be resettled by force, the relationship between the village community and state bodies, particularly the *kebele*, is disrupted and led by mistrust. On a par with a worsened situation of the international coffee market, tend to have lead to the glorification of the former military regime:

> "*At the derg, the price for coffee was much better, about 900 birr, and the nowadays government wants us to go somewhere else.*" (Interview Kankicho #10, Mohammed Kadir Burisso)

[119] Burkito *kebele* Interview 9/11/2003; Mena Angetu *woreda* Rural Land and Natural Resources Administration Office, interview 7/11/2003

7.2.3 Internal Homogeneity and External Tensions

The population in Bale Zone in general and in Kankicho in particular is relatively homogeneous in terms of ethnicity, culture, and religion. 26 out of 27 of the interviewed heads of the HHs (and hence their HH members) are affiliated to the Oromo ethnicity. The Oromo are one of the Cushitic speaking ethnicities in Southern and Central Ethiopia with variations in physical characteristics ranging from Hamitic to Nilotic. They make up the largest ethnic group in Ethiopia, with an estimated total population of over 30 million people in 1995 (Melbaa 2002: 3,5).

All interviewed HHs in Kankicho village except one are Muslims. One is member of the Ethiopian Orthodox Church. Eight out of 27 heads of the HHs reported that they do not originate from Kankicho village. Time of arrival as well as places of origin are divers, ranging from "*a forest area that is 13 hours away by foot*" (Interview Kankicho #2, Adam Hussein Mohammed) to the most nearby town Dolo Mena. In general, settlement was no organised single event but HHs from different areas individually came into the village. Nevertheless, Kankicho forms a relatively homogeneous group of HHs and newcomers seem to be well integrated into the village community. No village internal split between the 'original' and 'non-original' inhabitants has been observed.

Pervasive tensions between different forest appropriators' groups rather flare up on the inter village level, thus between Kankicho people and people from neighbouring villages. Use of forest resources from the surrounding forest plays a key role in this regard, and conflict potential increases with forest resources becoming scarce. In the course of the fieldwork, people from Kankicho village repeatedly accused neighbouring communities with a different ethnical background to overexploit the resources of Kankicho Forest. This attitude is illustrated in the following statements:

> "*Forest conditions deteriorated over the last years because of deforestation, nobody controls, outsiders come and deforest*" (Interview Kankicho #13, Jelam Kadir)

> "*The forest deterioration is due to intervention from outsiders from Burkito*" (Interview Kankicho #17, Roba Wario)

In this mindset, particularly the Waradube (also known as Borodube) people fulfil the image of the 'destructive outsiders'. According to information of the Burkito *kebele* chairman, there are about 140 Waradube/Borodube HHs living in Burkito *kebele*, in a *got* about 8 km south-west of Kankicho village. They originate from Arsi Zone which is north of Bale Zone (see Figure 23) and came to Burkito *kebele* in Haile Selassie's time (pers. com. Mohammed, Kamal Hadj 2004). Kankicho villagers identified the Waradube/Borodube people as the main forest destructors of Kankicho Forest.

> "*They* [the Waradube/Borodube] *cut the trees and sell them as lumber to Dolo Mena.*" (Interview Kankicho #22, Adam Barisso Kotoobo)

To further emphasise the differences between the different forest resource appropriator groups, the Waradube/Borodube's different putative physical appearance is emphasised, and they are described as:

> "*Black, they are not Oromo as we are, they are more Somali.*" (Interview Kankicho #21, Mohammed Barisso)

However, also the *kebele* chairman (who is of Oromo ethnicity) accused Waradube/Borodube's to gain their livelihood from charcoal and timber production and to transmit the 'habit of deforestation' to authochone people.

> "*Borodube produce charcoal and timber […]. If we catch them, we send them to the woreda prison house. It is difficult with them. Even the locals learn deforestation from them.*" (9/11/2003: Mohammed Hussein Ibrahim, chairman of Burkito *kebele*)

These statements certainly base on long-term prejudices. It could not be clarified in the realm of this research work to what extent the given information is based on true facts and which role the Waradube/Borodube actually play in forest resource utilisation and depletion in Kankicho Forest. However, similar to the situation in Koma Forest/Kaffa Zone, the area of Kankicho Forest is used and managed by two groups of forest resource appropriators with different historical and ethnical background, with the consequence of inter-village tensions.

7.2.4 Agriculture in the Middle of the Forest

In addition to the utilisation of forest resources, livelihood of Kankicho villagers is based on self-employed smallholder agriculture. The most important food crop in Kankicho village by far is maize, followed by *teff*, wheat, and haricot beans. *Enset* is not grown. The total HH survey assessed an average land size of 2.9 *mideh* (approx. 0.4 ha) farmland per HH, with variability between none and eight *mideh*. This is much less than initially expected as a research team that conducted a study for the "DGIS-WWF Ethiopia" Project in other *kebeles* of Mena Angetu *woreda* in 2003 assessed average sizes of agricultural land to be 1.67 ha per HH (MoARD 2003b: 11). This concerning, Kankicho peasants perceive the scarcity of farmland as their main problem regarding their farming activities.

In addition to the utilisation of coffee from the surrounding forests, people of Kankicho village cultivate garden coffee. The differentiation between the two production systems garden coffee, locally named as *bunna nanno mana* (orom.: 'Coffee around the house') and forest coffee, *bunna bosona* (orom.: 'Coffee from the forest'), is, however, difficult to make. Kankicho village is on all sides surrounded by forest, agricultural land merges into forest land with no clear boundaries, and coffee management intensity gradually decreases from the village interior to the deeper forest. Therefore, the definition of *bunna nanno mana* and *bunna bosona* was left to the interviewees. However, 12 interviewees mentioned to cultivate garden coffee on an accumulated area of 1.8 ha. In season 2002, their combined garden coffee harvest was 26.4 quintal, which makes a calculated 14.6 quintal per ha.

Beyond food crop and garden coffee farming, livestock and poultry raising plays an important role for the livelihood of Kankicho people. The forest provides an abundant grazing area. Most relevant are oxen for ploughing, cattle for meat and milk, and equines for transport. The average Kankicho HH holds one oxen, 2.2 cows, 0.7 equines and 3 chicken. Goats and sheep play an insignificant role. Nevertheless, the accuracy of these figures can be subject to certain suspicion as some interviewees evidently 'underestimated' their belongings. This difficulty has also been faced and depicted by researcher of the "DGIS-WWF Ethiopia" Project. They experienced that given figures are "often underestimated because respondents tend to hide the actual income earned in fear of consequences like additional tax imposition" (MoARD 2003c: 21). However, relative flock sizes were found to be considerably higher than in Kankicho village than in Komba village/Kaffa Zone, with about three times more oxen, and four times more cattle per HH.

7.2.5 Household Economics: Coffee to Cash - Cash to Taxes, Food and Clothes

Livelihood of people in Kankicho village stands on two pillars: cash income gained by coffee and honey production, and maize and animal husbandry for food purpose. Cash income was assessed to be overwhelmingly dominated by the selling of coffee, both from forest and garden coffee production systems. In 2002, the average income of Kankicho HHs from coffee selling was 789 birr, with an average price on the open market in Dolo Mena town of 138 birr per quintal. In the same year, average income from honey selling was reported to be 71 birr per HH, hence ten times less than income from coffee vending. Income from the selling of self-made beehives and bananas are found to play some role for particular HHs, but is insignificant for the village as a whole.

The potential to obtain cash income from non-farm activities is pretty limited for Kankicho villagers, as general in rural Ethiopia. Two interviewees reported to work as day-labourers in other people's coffee forests and to get one-third of the coffee harvest. No other means of alternative sources of cash income were reported. On the expenditure side, Table 10 depicts what do Kankicho HHs dispense their cash income on.

Table 10: The main expenditures of households in Kankicho village[120]

Expenditure named	Scoring points	Remarks
Land tax	63	
Food	44	Maize, *teff*, salt, pepper, oil, soap from the local market
Clothes	42	
House building materials	1	Nails

Despite the fact that agricultural land of Kankicho villagers lays right within Mena-Angetu NFPA/RFPA and status of the village is uncertain or even illegal as a whole, all HHs of Kankicho pay land tax to the *kebele* administration. Yet, land tax was assessed to be the main expenditure, ranging from 25 to 166 birr annually, with an average at 45 birr per HH.

However, income which Kankicho HHs gain from coffee sale and production of food (mostly maize), does not meet their entire expenses all the year round. As a result, 24 out of 27 interview partners answered that they and their household members have to starve at some time of the year. As both, maize and coffee are seasonal crops, food and cash availably fluctuate tremendously over the year, with the most problematic times being between *ginbot* and *seneh* (mid-May until mid-July), shortly before the harvesting of maize.

[120] The first, second, and third answer is awarded three, two and one scoring point respectively and the scores are added to rank main expenditures of Kankicho village HHs.

> ”*We starve, in the time we don't have maize.*” (Interview Kankicho #17, Roba Wario)

On local markets, staple food reaches maximum prices in these times, and villagers have to limit their food intake.

> “*I eat two times a day, breakfast and dinner, I have to skip lunch.*” (Interview Kankicho #22, Adam Barisso Kotoobo)

Borrowing cash money is a widely used practice to overcome times of food shortage, although true extend was difficult to assess.[121] In the course of the household survey, about the half of the interview partners (15 out of 27) replied that they borrowed cash money within the time period of last year. Coffee traders in Dolo Mena town were identified to play the dominant role for loan allocation. Depth is mostly being paid back after the harvesting time in form of coffee. Though, no evidence can be provided that this system indirectly involves exceptionally high interest rates.

> “*I lend 200 birr from coffee trader, I gave him 1.5 quintal coffee for it.*” (Interview Kankicho #15, Kadir Ali)

Hence, the acquisition of cash money is interlinked with the expected yield of coffee, in other words, much coffee from Kankicho Forest is sold before harvested. Other, less often mentioned sources of loans are neighbours, richer peasants from other villages and - for the single Orthodox HH - the *iddir* society.

In sum, the economic situation of Kankicho HHs is quite similar to that found in Komba village/Kaffa Zone. Agricultural production is based on few crops and characterized by low input - low output vicious circles that bring about longer periods of starvation. The three main expenditures coincide with those assessed in the other case study area, as does the dependency on loans from private moneylenders/coffee traders.

[121] In Islamic-stamped cultures, lending money, paying and receiving interest rate is often found to have a negative image.

8 Kankicho Forest Action Arena

This chapter depicts the Kankicho Forest action arena. It is concerned with the question which institution is relevant to decides upon the dos or don'ts of forest resource use, management and conservation in Kankicho Forest. The institutions assessed to be relevant originate from the 'traditional world', hence are initiated and maintained by the local community itself. Beyond, a cluster of state-initiated institutions is assessed to play a role.

NGO-initiated institutions are not at place in the area. The DGIS-WWF project which was intended to implement PFM in Harenna Forest has been dismantled in 2003. There is no other domestic or international development-oriented organisation working on forest conservation or PFM in the whole area, which is partly due to its relative inaccessibility and 'unexploredness' - compared to Kaffa Zone.

8.1 The Traditional 'World'

8.1.1 Communal Social Systems: Working groups, Elderly, *Ada* and Family Clans

Kankicho people are organised in a number of complex and overlapping community-initiated social systems. In the following, the ones which have been identified to directly or indirectly impact on forest resource utilisation, management and conservation are shortly depicted particularly in regard to the role they play in decision making of the forest resource appropriators.

As the case study is conducted in an area were the ethnic population of the Oromo is very much dominant, first of all, attention was drawn to the *gadaa* system, thought to play decisive key role in influencing forest resource use, management and conservation practices of Kankicho people. Literature describes *gadaa* as an arrangement that traditional organises Oromo communities by age and sex into seven (sometime up to 11) groups, with different rights and responsibilities in the society. This system has dominated and structured the entire social, political, economic and religious life of the Oromo population for centuries, but, though, started to decline in the 18th century and lost parts of its relevance due to introduction of Islamic belief, Orthodox Christianity and cultural values imposed by the Amhara people. Within the 20th century, *gadaa* system was gradually deprived of most of its superordinate political and juridical power and reduced to a more community 'internal' cultural and ritual institution (Giday Degefu Koraro 2000: 66, 67; Melbaa 2002)

However, although initially expected to be influential, in the case of Kankicho village, *gadaa* was by no means found to be relevant in regard to forest resource use, management and conservation activities of the villagers. This stands in discrepancy with research findings from other areas of Oromo dominance, such as Shewa region and Borana region in Central and far Southern Ethiopia respectively, in which certain administrative elements and decision making species as well as cultural elements of the *gadaa* system still exist by some means (Olana 2000).

As also known from Komba village/Kaffa Zone, the most direct impact on forest use, management and conservation comes from neighbourhood working groups, in Kankicho village called *dschiga* or *gurmu*.[122] The work which is done collectively in *dschiga/gurmu* includes manifold activities, including cutting trees for house construction as well as slashing the forest's undergrowth in order to provide forest coffee plants better growing conditions.

Photo 9: Kankicho villagers producing beehives in *dschiga*/*gurmu* working group

Another traditional local level institution already depicted in the first case study are the 'elders', here known as *yarsa* (orom.: 'old men'). This group of people has found out to be the most respected and powerful institution in Kankicho village with enormous influence in the forest-related decision making processes. The *yarsa* present the internal village 'leaders' that mediate between villagers and to judge on village affairs, and punish people that violate against traditional forest resource use regulations and access rights.

> "*The elder punish according to our culture. They say: Why did you do like this? You never do it a second time. If you do it a second time, they give you to the kebele*." (13/12/2004: Abdurro Burisso, village 'commander')

The elderly' also represent the village interests to the outside, and act as gate -keepers when approaching the village from extern. Beyond being an inevitable contact person e.g. to *ferengi*

[122] No difference between *dschiga* and *gurmu* could be assessed, hence "*gurmu is the same as dschiga*" (Hussein Warriyoo, Bale #9).

researchers, more importantly, they act as the local negotiating party for the *kebele* and *woreda* bodies. An interesting fact in this regard is that Kankicho 'elders' are involved as a supporting unit in the state tax pay system in the way that they are in charge to estimate the annual tax payment that each HH in Kangicho village has to pay according to his property. Concordantly with Watson (2001) who found similar evidence in Borana Zone/Oromiya Regional State, this again provides evidence that on the local level community-initiated and state-initiated institutions are not necessarily incompatible or even antagonistic to each other, but in certain practical functions capable to collaborate.
Using the interview question "if some of the villagers have an argument who can solve it?", the four people Mohammed Kaddir Burisso, Ali Wario, Wato Wako and Roba Wario where identified as *yarsa*. The first is the most wealthiest man in Kankicho village in terms of cattle and agricultural land, the Wario brothers are sons of the former landlord and chairpersons of the *ada* system.

All household in Kankicho contribute to the *ada* system. Literally 'tradition' in Oromiffa, *ada* fulfils similar community-initiated insurance functions as *iddir*, but is less organised, has no definite membership and no periodical payment mode. *Ada* is coming to action if a member of the community passes away. In this case, money is collected in Kankicho village and each household pays the fixed sum of two birr. Additionally, a contribution for the funeral ceremony can voluntarily be made, the amount depends on the willingness and ability of the contributor. Interview partners reported amounts between 5 and 20 birr.

> "Two *birr are fixed, but for the other it depends, if I have money and he was a good friend, I give 20 birr.*" (Interview Kankicho #22, Adam Burisso Kotoobo)

In this sense, the *ada* system does not directly impact on forest resources use, management and conservation activities of Kankicho villagers. It has, however, a high potential of putting up social pressure in case of whatever misconduct of its members, and - as a worst case scenario - exclusion from the local *ada* would be similar to remain without 'tradition'.
The *ada* system is administered by a group of *ada* chairpersons. In response to the question "who is the chairperson of the *ada*" interviewees mentioned seven different individuals from within Kankicho village. Ali Wario, one of the *yarsa*, though, was named in 19 out of 27 interviews, and the brothers Mohammed and Abdurro Burisso from the Burisso family clan were mentioned second and third most often.

When looking on the family names of people who form the 'elderly' assembly and hold functions at *ada*, it becomes apparent that some family names appear several times. This brings us to the local institution that dominates the social and economic life in Kankicho village 'from the background', including decision making on forest related issues: the patrilinear family clans. Influence and power of a family clan is made up by a number of factors. Historic events and situations which are path dependent (e.g. the clan's influential position in the Emperor's time), the clans current economic strength (e.g. in terms of coffee forest holdings, or whether clan heads can 'afford' to have several wives and many children), and, last but not least, the influence that family members currently execute in the 'elderly' or *ada* system.

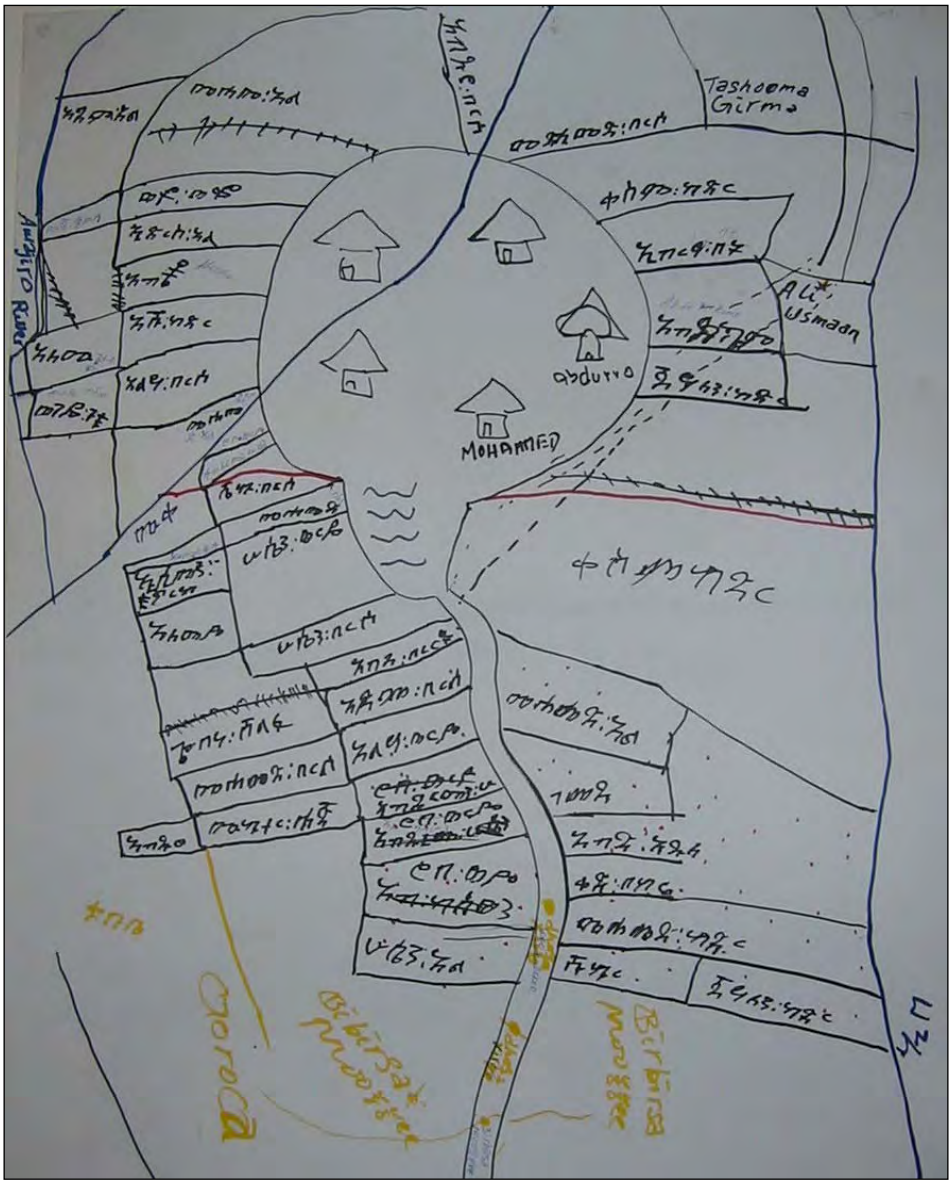
In Kankicho village, the three families Wario, Burisso, and Kaddir are found to be most influential in these regards. The Wario clan are descendants of the former Kankicho landlord, who governed the area until the End of the Emperor's reign. Despite the fact that this clan is not the 'richest' clan in the village any more, they still seem to be quite influential. Two sons of the former landlord belong to 'the elderly', two of them are *ada* chairpersons. One of the influential family clans is "not originally from here" (as the members themselves pointed out) and came to this village in the mid-1960s (early 1970s Gregor. cal). To conclude, there are three powerful family lines in the Kankicho community that dominate the decision making process and enforcement of institutions within the village as well as towards the outside.

8.1.2 Traditional Forest Resource Use Regulations

Similar to the situation in Koma Forest/Kaffa Zone, actual forest use, management and conservation in Kankicho Forest is in the first instance determined by a traditional law sphere with defined traditional forest property rights and rules of access. Kankicho Forest is divided into individually held forest plots. The location and the respective 'owner' of plots located close to the village and adjacent to the road southwards towards Burkito village is illustrated in

Figure 25.

Figure 25: Mental map of traditional forest property rights in Kankicho Forest



The five *tukul* symbols stand for the location of Kankicho village. The blue line stretching from the centre top to the left indicated the course of Mulqua River, the blue line at the left corner Awagirro River and the blue line at the right border Irba River which is the boundary between Burkito *kebele* and Irba *kebele*. The black lines indicate the forest plot boundaries, the black writing the names of the forest owners. When analysing the names of the forest owners, it becomes apparent that plots located close to the village mostly belong to village inhabitants, and more distant plot are more often owned by people that actually do not live in Kankicho. The complete listing of the forest plots is to be found in Appendix III. However, forest plot delineation is part of the specific traditional knowledge of Kankicho villagers

particularly in the workable age. Inhabitants of neighbouring villages seem to be less knowledgeable about the course of traditional forest boundaries.

> "*Most of Kangicho people know the boarders of the forest. In Burkito only a few persons know*." (13/12/2004: Interview with Abdurro Burisso, commander)

> "*We work together in dschiga, therefore we know the coffee forest boundaries*." (Interview Kankicho #10, Mohammed Kaddir Burisso)

When asking whether this traditional institutional arrangement can be generalised on other forest areas in Bale Zone, a notable correlation between forest plot ownership and forest coffee occurrence was found. Thereafter, the traditional forest division is limited to coffee forests.

> "*The forest which is covered with coffee is totally divided but forests without coffee has no owner and is only controlled by the kebele*." (13/12/2004: Interview with Abdurro Burisso, commander)

This statement shows that coffee forests have a distinctive institutional feature which is bound to the occurrence of a valuable NTFP and not to the existence of forest alone.

Ownership of a forest plot does not mean that the owner stands alone with his forest resource use, management and conservation decisions. Resource access rights are more complex and distinguish between exclusivity and open access. Table 11 shows the information collected in numerous open interviews with Kankicho villagers in this regard.

Table 11: Forest resource property rights in Kankicho Forest

	Kankicho people's appraisal
Forest coffee	EXCLUSIVE
Honey (hang beehives)	EXCLUSIVE (only relatives can hang beehives)
Cattle grazing	OPEN ACCESS
Firewood	OPEN ACCESS (only dry wood, no cutting)
Timber	[no clear statements obtained]
Fruits	EXLUSIVE
Medicinal plants	OPEN ACCESS

The above figure shows that collection of forest coffee, hanging beehives for honey production, and the gathering of wild fruits fall under exclusive right ownership, whereas cattle grazing, firewood collection and the gathering of medicinal plants follows 'open access'. Statemets regarding the use of timber were not congruent.
However, forest coffee is found to be the most individually 'owned' forest resource and violation of the traditional rules is seriously prosecuted. Kankicho villagers reported that in case of 'coffee thieving', the *kebele* administration and not the traditional institutions such as the 'elders' is responsible for rule enforcement concerning their individually held forest coffee plots.

> *"If we catch somebody picking our coffee, we will bring him to the kebele. But the people around here are no thieves, they have their own coffee. Three years ago I catched six people from Kalegulba kebele* [in Mena Angetu *woreda*]. *I brought them to the kebele and they said we did not know that the coffee was owned by somebody. The kebele told them not to come again and let them go. The thieves are always from other areas, not from Kankicho."* (Interview Kankicho #10, Mohammed Kaddir Burriso)

Also the right to hang beehives in a certain plot of Kankicho Forest is individually held, and limited by the forest plot owner.[123] This is not only because honey production of the plot 'owners' might be reduced by hanging additional beehives but because the traditional method of honey production is harmful to other forest resources.

> "*When you hang beehives, maybe coffee is broken down, trees are cut, fire comes etc., so it is harmful to the forest. So I can not hang beehives in other forests.*" (Interview Kankicho #5, Abdurro Burssiosso)

In contrast, it is legitimate to let cattle graze on the forest plots. Coffee forest plot owner even stated that they appreciate cattle grazing, because reduces plant density and creates better growing condition for coffee.

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> "*It is not forbidden to let cattle in my forest. Maybe they will eat the small coffee, but we do not like more density than this* [shows at plantation-like

[123] Two forest owners reported that they allow their relatives to hang beehives on their forest plots.

coffee trees with about two meters open space around].” (11/12/2004: Forest walk with Ali Wario and Ahmed Rachoo)

Firewood collection is open to all. However, it is difficult to make a clear distinction between wood allowed to take for heating and cooking and timber for which extraction is much more restricted. Practically, appropriators differentiate between wood ‘picking’ and wood ‘cutting’.

“*When you pick dry firewood it is no matter. But if you cut wood I catch him.”* (Interview Kankicho #5, Abdurro Bursioo)

There is strong agreement among the villagers that cutting timber from Kankicho Forest is a destructive activity which needs to be prosecuted.

“*Cutting of big trees is forbidden, we are around it and protect it, if we get somebody we will bring him to kebele.*” (Interview Kankicho #10, Mohammed Kaddir Burriso)

This statement indicates not only that the forest plot owners have an interest to prevent other people from cutting timber on their plots but that they perform as ‘forest guards’ in the forest areas concerned, backed by the *kebele*. Other respondents reported that timber cutters are first brought to the Kankicho ‘elderly’ which then - if they perceive the case as serious - accuse the offenders to the Burkito *kebele* administration. The case seems to be different regarding wooden materials needed for house construction. When asking the question where the stems for the *tukuls* in Kankicho village originate from, when it is forbidden to cut timber in Kankicho Forest, it became apparent that the access to timber is more open access in case of own need.

“*When I build a house, I use fallen trees, but for smaller parts of the house, I cut small trees. When it is necessary, I cut the green tree but I do not ask anybody.*” (Interview Kankicho #5, Abdurro Bursioo)

However, it could not be fully assessed whether these timber extraction rules actually emanate from the traditional community-initiated institutional system or whether they have been adopted from state law, but practically not adhered. To sum it up, the traditional institutional

arrangements foresee exclusive right ownership only for the valuable NTFPs except for medicinal plants.

> "*Medicinal plants are nothing, because not all persons know about medicinal plants. I do not know about the use, so if he wants, he can collect*." (Interview Kankicho #5, Aburro Bursioo)

Firewood and cattle fodder, which is both a highly important forest resource for local HHs, are open access, which might be due the relative abundance in the area.

8.2 The State and the Forest

State institutions constitute the second cluster which is analysed for its impact on the forest resource use, management and conservation activities of Kankicho villagers. Similar to Chapter 6, this chapter is segmented into the upper levels, from federal to *woreda*, and the lower level, the *kebele*.

8.2.1 *"We can't control"*: From Federal to the *woreda*

In the 1990s, responsibility for most NFPAs has been shifted to the Regional States. Accordingly, in case of Mena Angetu NFPA, the body in charge is the ORLNRAA located in Addis Ababa. However, practical policy implementation is devolved to the lower state levels zone, *woreda* and *kebele*. In Robe town, the zone's capital (see Figure 23), the body in charge is the "Zonal Natural Resources and Rural Land Administration Desk" (ZNRRLAD) under the "Zonal Agricultural Development Office". However, the official in charge for Mena Angetu RFPA has little means to conduct practical forest management and conservation measures in the far away forest areas:

> "*I haven't been to the protected forest area since four years.*" (12/11/2003: Husien Idrien, Zonal Agricultural Development Office)

On the *woreda* level, the "Mena Angeto Rural Land and Natural Resources Administration *woreda* Office" (MARLNRAWO) is responsible to administer Mena Angetu NFPA, but the situation is similar to those of the zonal level.

> "*We can't control the forest area, we don't have enough budget.*" (6/11/2003: Kafiyalew Simeny, Rural Land and Natural Resources Administration)

This statement can be approved when looking on the allocation of financial resources within the Mena Angetu *woreda*. In the year 2002/2003, the total budget of Mena Angetu *woreda* was about 5 million birr (approx. 500,000 EUR). Out of that, the share of agriculture and rural development including natural resource conservation was about 800,000 birr (approx. 80,000 EUR). The "Rural Land and Natural Resources Administration *woreda* Office", in turn, received total financial resources of about 90,000 birr (approx. 9,000 EUR), which accounts for only two percent of the whole *woreda* budget (MoARD 2003c: 38). As a matter of course, this money does not allow the authority to undertake effective large-scale forest conservation activities. Accordingly, the MARLNRAWO lacks manpower, expertise as well as motorised means of transport. E.g. in 2003, the office in Dolo Mena had four technical staffs only (MoARD 2003b: 16). However, it is known to the "Rural development and agricultural officer" in Mena Angetu that Kankicho coffee forest is traditionally divided among its resource appropriators:

> "*Many farmers own forest land in Burkito kebele, so they come only once and harvest all the coffee*." (6/11/2003: Fayyissaa Maggarssaa, *Woreda* Rural Development Office)

Although the *woreda*'s executive function in forest use, management and conservation is assessed to be pretty limited, however, it plays a decisive juridical role in cooperation with the local *kebele*.

8.2.2 The Burkito *Kebele*: Practical Attempts to Protect the Forest

The *kebele* is the local level state body responsible for implementation of forest use, management and conservation state policies in Kankicho Forest. However, in contrast to other state bodies and to the situation found in Koma Forest, in Burkito *kebele*, the NFPA/RFPA forest conservation rules are executed in practice, in the way that some offenders are actually accused and convicted.

> "*We try to protect our forest. Now, five people are in prison because of charcoal and timber making and nine are under court at the woreda. They are*

> *from this kebele, from both ethnic groups* [Oromo and Wardube/Borudube]." (11/12/2004: Mohammed Hassan, *kebele* committee member; and Kamal Hadj Abdul Kadir, *Kebele* public affairs representative)

Moreover, the *kebele* administration provides frequent advisory forest conservation training courses for the local people, including the villagers of Kankicho village. However, the *kebele* chairman acknowledges that these trainings seem to have small positive impact on forest appropriators' actual behaviour.

> "*We advice them environmental things but if they go back to their villages, they behave as before. We told them on every meeting. During coffee harvesting there is one meeting every two months. During the rest of the year we give advice every month.*" (9/11/2003: Burkito: Mohammed Hussein Ibrahim, Chairman of Burkito *kebele*)

In conclusion, the rules and regulations that say who is allowed to use which forest resource in which forest area of Kankicho Forest are principally the same as those in Koma Forest, some 400 km away. Traditional forest property rights originated from pre-revolutionary times geographically disseminate forest plots, and community-initiated rules are thought to regulate the access to the forest resources on the plots. Although not officially approved by state bureaucracy, this traditional property right system collaborates with state bodies in the way that forest resource appropriators found to offend traditional rules were given over to the *kebele* administration.

The *kebele* itself is active in implementing state-initiated forest management and conservation policies on the ground, which is, first of all, remarkable regarding the state of the institutional framework illustrated in the previous chapters. The concrete forest conservation measure consists of a combination of providing training courses in sustainable forest management for the local forest resource appropriators and punishment in case of destructive behaviour, such as timber logging. However, training does not seem to change forest users' behaviour, and presumably only a very small number of rule offenders actually faces punishment. Hence, it can finally be stated that even the institutional 'interworking' of the traditional institutional system with the local state administration and the deterrence effect of imprisonment does not seem to be sufficiently effective to significantly curb forest degradation in Kankicho Forest.

9 So What? Key Findings, Superordinate Conclusions and Practical Relevance

The Ethiopian highlands are the worldwide centre of origin of *Coffea arabica*, one of the economically most important agricultural products on the globe. The mountainous moist forests of south-western and southern Ethiopia accommodate naturally spreading populations of 'wild' *Coffea arabica*, providing unique genetic resources. However, the Ethiopian coffee forests are being rapidly depleted and irreversibly deforested, largely due to overuse of their resources by subsistence-farming peasants living in or adjacent to the forests. Beyond identifying the strained socio-economic living conditions of the local population as the key incentive for forest overuse, this book focuses on the institutional framework that determines (or is at least thought to do so) the forest resource use and management activities of the local people. The research scope is narrowed down to fulfil two concrete objectives. First, given the hypothesis that decisions on the use, management and conservation of the Ethiopian coffee forests are in reality (not on paper) for the most part made on the village or even household level, rather irrespective of formal rules and regulations put up by the national state, this study aims at creating scientific knowledge of the legal framework that *de facto* determines forest resource use, management and conservation activities of the local people in two case study coffee forests. The second objective is to provide decision makers in governmental or non-governmental bodies with information and recommendations, which have practical value for the adjustment, planning and implementation of projects and programmes concerned with the sustainable use, management and conservation of the Ethiopian coffee forests.

After providing the necessary theoretical background in Chapter 2 and elaborating on the applied research methodology in Chapter 3, first, the history of the relevant state-initiated institutions on the national level, namely land tenure and property rights as well as forest management and conservation policy, administration and legislation, are portrayed and assessed. Thereby, massive structural weaknesses and inconsistencies of the state-initiated institutions become obvious, especially the lacking consultation and involvement of the local communities and their traditional means of forest resource use, management and conservation. In general, although - by constitution - all Ethiopian coffee forests belong *de jure* to the state, the state institutional framework is identified as a 'paper tiger', with little or insufficient implementation of its forest resource use, management and conservation policies on the ground. In the subsequent four empirical chapters, the concrete situation in the two

case study coffee forests Koma Forest in south-western and Kankicho Forest in Southern Ethiopia is portrayed in detail. These forests were selected on the basis of secondary literature and information gathered in the explorative field trip to cover a spectrum that spans different Ethiopian coffee forests and to gain a certain level of representativeness. Accordingly, research findings allow some comparable, superordinate statements regarding the situation in the coffee forests of Ethiopia as such.

9.1 The two Case Studies: Koma Forest and Kankicho Forest

First of all, it has to be put forward that the categorisation of different types of forest resource appropriators that describes the varied nature of relationships between people and forest resources, and the identification of 'primary' appropriators of a certain forest area is a difficult undertaking which can only be accomplished with extensive local level field research. When trying to answer the question which (and how many) people actually use resources from what coffee forest area, it becomes apparent that 'the local population' can not be simply equated with 'the forest resource appropriators', and that 'artificial' entities such as state-indicated forest conservation areas ("National/Regional Forest Priority Areas", or NFPAs/RFPAs, in the cases under consideration) or the *kebele* as the lowest level administrative unit of the state do not delineate people's forest related activities. Accordingly, the population of a *kebele* in which the respective forest stands on is by no means synonymous with the people that actually use, manage and conserve all forest resources. In this research, however, evidence is found for the correlative of geographical distance and intensity of forest use. In both case studies, coffee forest resources are primarily used and managed by people from the most nearby village(s). However, the stress is on 'primarily'. In both case study areas, there is no single group of the 'forest resource appropriators' but different groups of appropriators make use of different resources in different ways and magnitudes. This goes along with different interests in forest resource management and conservation, and to some extent with long-term tensions and accusation of 'malfeasance' interwoven with ethnic prejudices.

Basic differentiation can be drawn between local people who, in addition to other forest resources, use and manage forest coffee and engage in apiculture, i.e., focus on "Non-timber forest products" (NTFPs), which are the traditional forest cash crops, and those who centre their activities more on wood resources. NTFPs require more long-term oriented management and more know-how than, for example, the collection of firewood or livestock grazing in the forest. In both case study areas, forest utilisation and management practices can be linked to the historic origin of the communities, in the way that autochthone people are more involved

in and concerned to the use, management and, last not least, the conservation of NTFPs than allochthone ones. This implies different incentives or disincentives to conserve concerned forest resources in a sustainable manner. In sum, findings from both case studies show evidence that major dividing lines in forest resource use, management and conservation run less between ethnicities or religious boundaries but more between authochon and allochtone communities.

The institutional framework that determines which local people are allowed to use and manage which forest resources to what extent is - despite remarkable differences between both case study villages in terms of language, religious affiliation and historical background - amazingly alike. The most striking feature is that ever since Emperor Haile Selassie's time, both coffee forests are entirely divided into forest plots held by local households from adjacent villages. A clear distinction has to be made between these forest plots and farming land for which peasants officially get land use rights from the *kebele* administration. The traditional forest division follows kinship and - in case of Koma Forest - ethnic lines. Rights are primarily inherited, some plots in Kankicho Forest are obtained by purchase. In both areas, this land holding system fundamentally runs counter to official state laws, which foresee land to be a "common property of the Nations, Nationalities and Peoples of Ethiopia" (FDRE 1995: Art. 40), hence to be administered by the state, and second, designate both forest areas as protected NFPAs/RFPAs in which settlement and most forest use and management activities are forbidden.

The link between the traditional institutional set-up of forest division and the resources found in this forest is striking. Autochthone forest plot owners tend to adhere stronger to these institutions when the forest provides valuable NTFP resources, i.e., forest coffee and honey above all. In the case of Kankicho Forest, the occurrence of forest coffee determines the traditional forest property rights in the way that "*forests without coffee have no owner*".

In both areas, however, traditional plot ownership does not mean that the plot owner exclusively preside over all forest resources in the respective forest plots. Exclusive use rights are limited to a few NTFP cash crops, mainly coffee and honey, whereas utilisation of other forest resources follows more open access tenureship. From an institutionalist point of view, it is hence important to perceive and analyse coffee forests less as a natural resource by itself but as a diverse set of resources not only with different ecological characteristics but with different institutional settings that impact on their particular use, management and conservation.

9.2 The Persistence of Tradition: Forest Plot Ownership and Access Rights

In the early years of institutional research, traditional institutions were largely ignored or described as chaotic, weak and liable for environmental degradation (cp. Hardin 1968). Later, scholars tended to identify them as well adapted, flexible and sustainable environmental management systems (cp. Ostrom 1990). Research findings in hand identified traditional institutions to be of particular importance for today's utilisation, management and conservation of coffee forest resources in Ethiopia. In regard to the above-mentioned three positive characteristics of traditional institutions, however, the picture is not consistent and much more complex and multifaceted.

The investigated traditional institutions are set up 'internally' by the local village communities, hence without any external pressure or authority. The fact that they origin from the 'place of action' makes them particularly adapted to local level anthropogenic and ecological conditions that determine the local human-forest relationship since living memory. However, both case study areas are undergoing rapid socio-economic, demographic and environmental changes, partly emerging from 'within', party from 'outside', most notably population growth. This sets traditional institutions under pressure for structural adjustment and reform.

On the village level, two community-initiated institutional entities are identified to have key decision-making capabilities in regard to use, management and conservation of the respective forest resources: the 'elders' and *iddir*/*ada*, a social arrangement between 'village insurance' and 'open council'. Findings from both case studies congruently show that these two traditional bodies not only continue to play a key role in solving internal village disputes over forest resource use, management and conservation, but that they are flexible and capable of adjusting to changing socio-political environments. The *iddir* in Koma Forest area proved particular ability in this concern, as it was found to have strong linkages with the *kebele* administration.

It looks different in regard to the traditional forest resource property rights and access systems found in Koma Forest and Kankicho Forest. Empirics show that the relevant traditional institutions persist over long periods of time with relatively few dynamics. This has to be traced back to a structural 'internalisation', reasoned by the traditional system of father-to-son inheritance of forest resource property rights, and the fact that knowledge on traditional institutions is orally passed down person-to-person primarily within the village communities.

Both diminishes capacity of the traditional institutional system to react on internal and external changes, e.g. the possibility to assimilate allochthone forest resource appropriators into what is called the 'traditional world'. Therefore, research results do not necessarily confirm traditional institutions to be particularly flexible.

The same applies to the perception of traditional institutions as sustainable environmental management systems. The above depicted 'world' of local level traditional institutions shows a complex number of rules and regulations that says which forest resource can be used and managed or should not be used and management by whom in what way. On the one hand, these institutions are found to stand for environmentally sustainable use and management practices as they forbid certain 'destructive' activities, both by autochthone villagers and 'outsiders'. This leads to the reverse argument that forests governed by these traditional institutions are environmentally in a better shape than those for which merely state bodies are responsible.

This statement holds true only to some degree, and traditional institutions should not be seen as the panacea of sustainable forest management which has by all means been preferred to the other institutional 'worlds'. As all institutions, they also have to deal with question of adherence and enforceability and their pure existence does not mean that they provide for the sustainable use of forest resources. The heterogeneity of forest resource appropriators implicate that traditional institutions of one group mean less - or even do not count - for other groups. Apparently, this is the case with traditional forest plot ownership and forest resource access rights of authochthone settlers that have a minor stake in the allochtone settlers' forest resource use, management and conservation behaviour. In Koma Forest, allochthone forest resource appropriators' institutions are much more open access driven than those of the Kaffa and Mandjah people which are the 'original' people of that area. This becomes particularly apparent in regard to forest coffee utilisation. Mandjah people's institutions define forest coffee utilisation to be an exclusive right of the traditional forest plot owner, Kaffa people' rules see forest coffee use rights to be exclusive only for the coffee productive areas of the forest and allochthone settlers acknowledge no forest resource property rights regarding forest coffee at all. As the latter group uses forest coffee from the area which the two other groups perceive as an area for which they own exclusive use rights, this institutional set-up is likely to create inter-group tensions which potentially break out in conflicts. However, despite this correlation, new settlers can not be simply labelled as the 'root of all evil' for Ethiopian coffee forests. Since decades by now, they are a basic part of the local level situation in coffee forests and relocation (which has been state-enforced to a large extent), can not and should

not be retrieved. Their existence should not only be passively accepted but ways need to be found to set up coherent and effective local level institutional frameworks that better integrate allochthone settlers. This challenge is not at least due to the Ethiopian state and its commitment to the coffee forests.

9.3 The State and the Coffee Forests: Merely top-down Malfunction?

Despite the rapid depletion and loss of natural resources in Ethiopia, environmental issues in general and forests conservation in particular are low priority topics in the political area of the country. In contrast, greater importance is placed on the development of agricultural production for the feeding of the fast-growing population. Beyond, in regard to forest resources, general focus of key decision makers is given to agro-forestry rather than to conservation or sustainable management of primary forests ("*The prime minister says: Forestry is agro-forestry.*"; 28/7/2003: Ministry of Agriculture, Natural Resources Regulatory Department, Attu Million).

However, the current regime in Addis Ababa adheres to the paradigm of state administration and regulation of land tenure, and is *de jure* 'the owner' of the country's coffee forests. Accordingly, to notion of 'property entails obligations' implies the state's responsiblity for governance of coffee forest. In this regard, since the *derg* regime took over in 1974, a full range of organisational structures, rules and regulations were established with the aim to administrate, manage and conserve the Ethiopian primary forests including coffee forests. In long-term observation, though, it becomes obvious that the state's self-proclaimed responsibility exceeds its practical capability and that the state-initiated institutions on different levels which are in charge of forest resource governance can not fulfil their assignments and are not able to impose functioning forest conservation measures. The reasons behind are attributed to a full range of factors. Most eye-catching is a lack of financial, personal and technical resources on all levels. Organisational bodies responsible for implementation and monitoring of forest-related state policies are poorly equipped and seriously undermanned and there are cases in which the employees in charge for the conservation of a certain forest area have no means to visit the area personally, expressed in the statement "*I haven't been to the forest area since four years.*" (12/11/2003: Husien Idrien, Zonal Agricultural Development Office).

Nevertheless, no or inadequate implementation of forest conservation policies is not only due to the shortage of state resources but of institutional and structural malfeasance. There has been frequent restructuring and organisational instability in Ethiopia which is still ongoing,

deficiency of actual decision power (even at the federal level), uncertainty and misunderstanding about tasks, a lack of information exchange and effective interworking between the single institutions on different levels (especially between regional and federal level), as well as the separation of environmental policy making and implementing bodies. In combination, this brings about that state policies on forest resource use, management and conservation are not or only insufficiently implemented and do not bring positive impact in practice.

However, in regard to forest resource conservation, the problem is not only the implementation of state policies, but the policies themselves. Until recently, they very much focused on an 'ecology first' perceptive developed and activated by environmentalists and concerted by decision makers into largely exclusionary forest policy approaches. Obviously, pure environmentalists' perception of a coffee forest is different than those of local forest resource appropriators, and what environmentalists say to be problematic must not be a concern for the local people. The same applies to find answers to the problem, thus the proposed solutions to forest resource deterioration and loss. Against this background, the state policy perceived local forest resource appropriators more as exogenous 'intruder' than as parts of the natural environment which need to be involved as active stakeholders into any means of coffee forest resource conservation. In both cases study areas, this 'protective' policy approach culminated in the enforced relocation of whole villages communities from within NFPA/RFPAs to the outer side. In case of Kankicho Forest, the resettled people illicitly remigrated to their original homesteads about one year after and continue to fear beeing resettled again. In case of Koma Forest, relocation actually had the impact that the former residual and agricultural lands become overgrown and slowly convert into forest, but at the same, changed the resettled people's economic situation for the worse particularly because of smaller field sizes. The enforced resettlement did not, though, entirely take the extraction pressure from Koma Forest. To put it cynically, after being resettled, the 'original' forest appropriators continued with their forest-related activities but merely had to walk further. At the same time, the greater distance made it more difficult for them to enforce their traditional forest property rights. This entailed a situation of greater open access than before the resettlement and hence easier encroachment by people not bound to traditional forest property rights, thus leading to a greater potential for forest degradation and loss. As a consequence of these draconian policies, the relationship between state bodies and forest resource user communities - which is historically already critical in south-western and southern Ethiopia - further deteriorated.

Furthermore, the work provides evidence of non-reflexive and authoritarian top-down thinking and decision making, which is - despite certain developments for the better - still to be found in state governance of forests. This means a lack of communication linkages between the state and the forest resource appropriators' communities. Rather than to actually approach changing both, coffee forest ecology for the better and maintain (or enhance) local people's economic situation, hence to bring the situation forward to the desired win-win situation depicted in Figure 3, state activities simply pushed appropriators into illegality.

One might argue that there is a right of sovereign states to govern their forests in their own manner (cp. Kathirithamby-Wells 2005) and that a country like Ethiopia is burdened with other - more substantial - problems than to allocate its scarce resources to the conservation of its primary forests which at present only cover 2-3 percent of the country's total area. However, on the one hand, one has to counter-argue with the moral duty of national states to conserve their natural heritage as much as possible. On the other, when focus is taken away from 'total forest protection' and put towards a management of forest resources which is ecologically sustainable, it renders possible to bring long-term economic value - in the Ethiopian case not primarily for private logging companies - but for the local forest appropriators. Though, in practice, as depicted in both case studies, forest resource appropriators' communities walk on the tightrope between (over-)utilisation of forest resources and appallingly small-scale subsistence agriculture which in both case study areas entails structural poverty and annual times of food shortages and hunger. Long-term strategies are loose where poverty directly affects human lives. Hence, on the one hand, appropriators badly depend on these benefits of forest resources in the future, and on the other, their actual situation does not provide much room to manoeuvre on a longer economic time horizon and diminishes opportunities for sustainable forest use. This dilemma has to be not only acknowledged but tackled in policies and projects concerned.

9.4 Antipodal Cohesion: Relationship between the State and 'Tradition'

The relationship between the two institutional clusters 'state' and 'tradition' is an area of critical concern in this work since it has multiple impacts on the way how Ethiopian coffee forest resources are used, managed and conserved by local people.

Long-term events in Ethiopian history bring about that many rural people in south-western and southern Ethiopia in general and forest resource appropriators in particular have collectively internalised negative feelings towards the state (or what they perceive to be the state). These views can be subsumed under the heading 'we have bad experiences with the

state, it should leave us alone'. In turn, this promotes local internalisation and dissociation from local state bodies. In both case study villages, involuntary resettlement initiated and enforced by state bodies worsened this relationship even more.

During the process of this research, however, the research focus underwent a change and concerned research findings became more multidimensional and complex than expected in the beginning. Initially, based on literature review, it was assumed that state-initiated and traditional institutions form two independent 'worlds' in rural Ethiopia with antipodal attributes, backgrounds and motivations. Hence, at first, focus was drawn on conflicts arising out of that dichotomy. When conducting practical field research, it became more and more apparent that both institutional systems do not necessarily contradict each other but coexist side by side and even 'work in concert' in certain ways. This is meant to be a continuation from the local institutional setting in the time of Emperor Haile Selassie I, in which minor disputes were solved by village-internal discourse whereas serious juridical cases, murder for example, were taken to the *chiquashum*, the local state representative (Pankhurst n.d.: 12).

In issues related to resources of Komba and Kankicho Forest, corporation between state and traditional institutions was found to involve the executive and judiciary sector. When holders of traditional forest plots observe other trespassers conducting 'illegal' activities on their plot (e.g. forest coffee picking) they can first bring the case to the 'elderly', the *iddir* or *ada*, and second, to the *fered shengo*, the *kebele* court, which then may accuse the offender according to state forest laws. In case of Koma Forest, however, it became evident that state and traditional law systems that determine coffee forest resource use are indeed not totally separated, in the way that the local "*kebele court acknowledges the traditional rights, if the forest owner comes with tangible evidence.*" (29/11/2004: Mengisto Mamo, *kebele* chairman).

This institutional arrangement brings together the local adaptation and organisational capability of traditional institutions with the juridical legitimacy of the state. It is hence assessed to potentially provide a first step for an effective role in preventing overutilisation of coffee forest resources emanating from classical 'open access' situations. It takes the traditional forest plot owner on board, in the way that they act as 'forest patrolling guards' controlling illegitimate encroaching into 'their' coffee forest, which is more efficient than guards installed by the state or other 'outsiders' such as NGOs. From this point of view, resettlement of the traditional forest plot owners out of the forest is meant to have a contrarian effect, in tendency leading to more forest depletion and destruction, not less.

9.5 Move on with Participatory Forest Management?

In Ethiopia, the international discourse on innovative ways to tackle forest conservation in combination with the specific ecological and socio-economic situation is translated into a handful of "Participatory Forest Management" projects, which aim at changing the fabric of forest resource use, management and conservation activities of local communities through institutional change. However, sustainable projects are time-consuming by nature. This particularly applies to institutional re-creation involving notions of community participation and concerned with issues central for the target groups' livelihoods. The Bonga PFM project assessed in this research, commenced in the year 1996, but the first participatory forest management agreement was signed as late as September 2003. However, this considerable 'slow motion' - in regard to the rapid depletion and destruction of forest resources in Ethiopia - can be attributed to the project's pilot character, and forthcoming PFM projects are expected to (and need to) be much more timesaving.

The key measure of the Bonga PFM is the setting up of the three successive and coordinated institutional tools "Forest User Society" (FUS), "Participatory Forest Management Agreement" (PFMA) and "Forest Administration Plan" (FAP) in order to "make the local society participate in the forest administration and to create a strong base for the legal use and common responsibility bearing" (Farm Africa 2004a: 1).

However, the implementation of the project faces serious difficulties, which make it questionable if the new institutional framework will function as intended. Although the author approves the notion that complex situations deserve complex answers, the intended institutional setting is seen to be too complex with few incentives for adherence to its regulations, particularly by the autochthone members of the FUS. The project design does not pay tribute to the heterogeneity of the FUS. Already during the mediation phase, however, disputes emerged concerning the question of who should become a FUS member. These internal tensions (mainly autochthone vs. allochthone people) are likely to linger and to weaken the new institution in the long run. At any rate, the FUS looks internally fragile, and it gains its power and legitimation primarily from the implementing NGO and the local state administration and less from within the community. It is hence highly questionable if this structure has the potential to fulfil the criteria of sustainability.

Another debatable issue is the idea of participation. The results of this study show that the only way to conserve the Ethiopian coffee forest is to involve the forest resource appropriators and to encourage sustainable forest management instead of 'total' forest protection. Nevertheless, in critical words, this runs the risk of having a project implemented

on the basis of specific ideas of how the local society should be organised (democratic, discourse-led etc.) and structured (homogeneous in their cultural and historical background). These pre-conditions are rarely to be found in practice. That is why caution is necessary to avail the well-sounding term 'participation' as a rhetoric anchor, while the project runs the risk that it mirrors existing community power structures in which local elites may benefit most from the intended institutional change.

9.6 Recommendations for Future PFM: Make Tradition local Forest Governance

The fundamentally new idea of PFM in Ethiopia is to put the local forest resource appropriators at the centre of any forest use, management and conservation strategies. This has always been the Achilles heel of state-initiated forest conservation efforts in Ethiopia, and is currently and in the future an absolute must for all forest conservation approaches worldwide. However, future projects must act on the assumption that forest user communities in Ethiopia are exceedingly heterogeneous in terms of their forest-related perceptions, activities and institutions, and that the 'open access narrative' needs critical consideration as - under the 'layer' of state forest governance - an entire traditional institutional world persists and continues to play a significant role in how local people use, manage and - not at least - conserve the forest resources. In regard to the failure of externally initiated institution building and the strength of path dependency in Ethiopia, instead of creating entirely new local level institutional structures, which tend to have template character, any future PFM projects concerned with use and conservation of the Ethiopian coffee forests should engage in local forest governance by strengthening already existing community-initiated local level structures.

In view of the research results at hand, the traditional institutional setting in which local peasants hold individual rights to use particular forest resources in delimited coffee forest plots should be translated into official forest management arrangements, hence 'put on paper'. Accordingly, projects ought to lobby for and engage in conveying traditional forest use arrangements 'out of illegality' through the provision of definite legal backing. The forest resource use arrangements would implicate a mixture of individual use rights for NTFPs important for income generation, restricted for autochthone households vested with the necessary traditional knowledge and emotional ties to 'their' forest plots, and collective use arrangements for other forest resources, especially wood, and applicable for all households around a forest area. A similar *modus operandi* holds true to the local level organisational mechanisms to administer and monitor these forest use arrangements. This concerning,

instead of establishing a new artificial entity such as the FUS, already existing structures should be ‘taken on boat’ and bolstered. Research findings present evidence that the *iddir*/*ada* bodies provide most potential in this regard, as they constitute self-governing structures that have been proven in practice for decades, involving both autochthone as well as allochthone households. The role of international or domestic forest conservation concerned agencies should mainly focus on the negotiation and coordination of such local forest governance arrangements and guiding assistance towards their enforcement.

9.7 Scientific Outlook: Recommended further Research Work

This research is considered to be a ‘door opener’ for understanding the actual local level institutional settings and coherences of forest resource use, management and conservation in the Ethiopian coffee forests. However, as a matter of fact, the present study does not answer all questions of academic and practical relevancy. In view of the rapid degradation and loss of the worldwide unique coffee forest ecosystem - still continuing while writing these lines - and largely promoted by long lasting fundamental institutional disarrangements, the knowledge spectrum unquestionably needs to be broadened beyond the scope of this study.

In particular, further research needs to focus on the question how community-initiated and state-initiated institutional ‘worlds’ on the local level can be synchronised and the legal pluralism, which results in acute friction losses, can be brought to an end. This issue is particularly pertinent when it comes to the implementation of the above recommendations for future PFM. Moreover, the impact of state-organised relocation of citizens from other regions of Ethiopia to the coffee forest areas (which is still going on) should be urgently scientifically investigated and critically evaluated. Although certainly not ‘the root of all evil’, this study reveals the long-term impacts of the resettlement policy on the local level, with disintegrating traditional institutions and more open access forest resource exploitation, as negative effects.

A more wide-ranging concern which should be tackled in future research is the issue of comparability and universality. It needs to be investigated how far the institutional situation depicted in this study is site specific by scaling out the research findings to other primary forests in Ethiopia and - what is particularly interesting - to other forest areas in Africa and the so-called developing world.

Appendices

Appendix I: List of Conducted Open Interviews

No.	Date of interview	Name of interview partner	Organisation/function	Location of interview
1	29/05/2003	Dr. Demel Teketay	Ethiopian Agricultural Research Organisation (EARO)	Addis Ababa
2	09/06/2003	Dr. Girma Balcha	Institute of Biodiversity and Conservation Research (IBCR)	Addis Ababa
3	09/06/2003 (GD) [124]	Afework Hailu	EthioWetland	Addis Ababa
		Prof. Adrian Wood	University of Huddersfield/UK	Addis Ababa
		Els Bognetteau-Verlinden	Wetland Action for sustainable Livelihoods and Resource Systems	Addis Ababa
6	11/06/2003	n.n.	Ethiopian Mapping Authority (EMA)	Addis Ababa
7	12/06/2003	Dr. Fikru Deksisa	Oromiya Regional Natural Office	Addis Ababa
8	14/06/2003	Dr. Jonas Yemishaw	Ethiopian Agricultural Research Organisation (EARO)	Addis Ababa
9	17/06/2003	Atto Million	Jimma Agricultural Research Center (JARC)	Jimma
10	18/06/2003	Eric van Waveren	Sustainable Poverty Alleviation in Kafa-Sheka Zone (SUPAK-S)	Bonga
11	19/06/2003	Atto Abiyu	Zonal Department of Agriculture	Bonga
12	20/06/2003	Assefa Gebremariam Yesho	Kafa Development Association (KDA)	Bonga
13	21/06/2003	Jonas Abata	Sustainable Poverty Alleviation in Kafa-Sheka Zone (SUPAK-S)	Bonga
14	24/06/2003	Seyoum Tefera	Zonal Department of Agriculture	Bonga
15	24/06/2003	Atto Abiyu	Zonal Department of Agriculture	Bonga
16	25/06/2003	Mengistu Mamo	*Kebele* chairman	Yeyebitto
17	28/06/2003	Atto Gobeseh	Peasant	Bita Chega
18	28/06/2003	n.n.	Catholic Mission	Bonga
19	29/06/2003	Tadesse Kasa	Catholic priest	Yeyebitto
20	30/06/2003	Atto Salomon	Farm Africa	Bonga
21	30/06/2003	Eric van Waveren	Sustainable Poverty Alleviation in Kafa-Sheka Zone (SUPAK-S)	Bonga

[124] GD stands for group discussion.

	Date of interview	Name of interview partner	Organisation/function	Location of interview
22	01/07/2003	Olami Edessa	Farm Africa	Chilimo
23	07/07/2003	Atto Fetene	World Wide Fund for Nature Ethiopia (WWF)	Addis Ababa
24	11-12/07/2003	Olami Edessa	Farm Africa	Chilimo
25	15/07/2003	Husien Idrien	Zonal Agricultural Development Office	Robe
26	15/07/2003	Abire Haile	World Wide Fund for Nature Ethiopia (WWF)	Goba
27	15/07/2003	Dereje Tadesse	World Wide Fund for Nature Ethiopia (WWF)	Dolo Mena
28	16/07/2003	Ali Gilo	*Kebele* administration	Chiri
29	16/07/2003	Abdul Lahi	*Kebele* administration	Chiri
30	17/07/2003	Adam Ali Kiddir	Peasant	Kankicho
31	17/07/2003	Fayyissaa Maggarssaa	*Woreda* Rural Development Office	Dolo Mena
32	27/07/2003	Atto Salomon	Ministry of Agriculture and Rural Development (MoARD)	Addis Ababa
33	27/07/2003	Ibrahim Mohammed	Ministry of Agriculture and Rural Development (MoARD)	Addis Ababa
34	27/07/2003	Atto Nikodemus	Ministry of Agriculture and Rural Development (MoARD)	Addis Ababa
35	27/07/2003	Atto Fata	Ministry of Agriculture and Rural Development (MoARD)	Addis Ababa
36	28/07/2003	Atto Million	Ministry of Agriculture and Rural Development (MoARD)	Addis Ababa
37	28/07/2003	Gebre Methin	Woody Biomass, Inventory and Strategic Planning Project (WBISPP)	Addis Ababa
38	31/07/2003	Wondwossen Santeyehu	Environmental Protection Authority (EPA)	Addis Ababa
39	31/07/2003	Gashaw Tadesse	Environmental Protection Authority (EPA)	Addis Ababa
40	01/08/2003	Assefa Tigneh	Coffee and Tea Authority (CTA)	Addis Ababa
41	04/08/2003	Dr. Eyasu Elias	Sustainable Agricultural Research Management (SARIM)	Addis Ababa
42	05/08/2003	Tadesse Meskala	Oromiya Coffee Farmers Cooperative Union (OCFCU)	Addis Ababa
43	17/08/2003	Christian Kasper	Deutscher Entwicklungsdienst (DED)	Addis Ababa
44	21/09/2003	Eric van Waveren	Sustainable Poverty Alleviation in Kafa-Sheka Zone (SUPAK-S)	Bonga

	Date of interview	Name of interview partner	Organisation/function	Location of interview
45	23/09/2003	Atto Abiyu	Zonal Department of Agriculture	Bonga
46	25/09/2003	Dr. Tasfa Bogale	Jimma Agricultural Research Center (JARC)	Jimma
47	02/10/2003	Habte Mamo	*Kebele* Cooperative Desk	Yeyebitto
48	03/10/2003	Woldemariam Gebre	*Kebele* Service Cooperative	Yeyebitto
49	04/10/2003	Zelalem Temesgen	Farm Africa	Bonga
50	04/10/2003	Teka Wolde Dawid	*Woreda* Development Agent	Wushwush
51	07/10/2003	Tadesse Mengesha	Zonal Agricultural Desk	Bonga
52	07/10/2003	Hailemariam Gebre	Kaffa *iddir*	Yeyebitto
53	07/10/2003	Atto Saloh	Commercial coffee trader	Wushwush
54	08/10/2003	Abeto Mamo	Mandjah *iddir*	Yeyebitto
55	10/10/2003 (GD)	Gadisa Kombi Robi	Chairman of primary cooperative	Yeyebitto
		Woldemu Woldesenbet	Vice chairman	Yeyebitto
		Hailu Tadesse Kombi	Manager & secretary	Yeyebitto
		Hailemariam Gebre	Cashier	Yeyebitto
		Aberadewoch Waysero	Committee member	Yeyebitto
		Tako Baro	Committee member	Yeyebitto
		Adetu Ambo	Committee member	Yeyebitto
		Kasa Woldesadik	Committee member	Yeyebitto
		Mengistu Mamo	*Kebele* chairman	Yeyebitto
		Tekle Woldemichael	Cooperative storekeeper	Yeyebitto
		Gero Haile	Cooperative purchaser	Yeyebitto
		Abdemur Ahmed	Cooperative millworker	Yeyebitto
67	10/10/2003	Alemayu Alemu	Zonal Agricultural Desk	Bonga
68	10/10/2003	Mesfin Tekle	Farm Africa/Kaffa Zone Rural Development Desk	Bonga
69	26/10/2003	Dr. Meserat Wendemuh	Eastern African Fine Coffee Association	Addis Ababa (via telephone)
70	27/10/2003	Atto Taye	Institute of Biodiversity and Conservation Research (IBCR)	Addis Ababa
71	28/10/2003	Hailu Teka	VOCA	Addis Ababa
72	28/10/2003	Nicolas Petit	European Union	Addis Ababa
73	06/11/2003	Fayyissaa Maggarssaa	*Woreda* Rural Development Office	Dolo Mena
74	06/11/2003	Kafiyalew Simeny	Rural Land and Natural Resources Administration	Dolo Mena
75	06/11/2003	Iob Gesahim	World Wide Fund for Nature Ethiopia (WWF)	Dolo Mena

	Date of interview	Name of interview partner	Organisation/funtion	Location of interview
76	07/11/2003	Kafiyalew Simeny	*Woreda* Rural Land and Natural Resources Administration Office	Dolo Mena
77	09/11/2003	Mohammed Hussein Ibrahim	Burkito *kebele* chairman	Burkito
78	11/11/2003	Girma Taffa	Commercial Coffee Trader	Dolo Mena
79	11/11/2003	Amin Janollo	Commercial Coffee Trader	Dolo Mena
80	11/11/2003	Atto Girma	World Wide Fund for Nature Ethiopia (WWF)	Goba
81	12/11/2003	Husien Idrien	Zonal Agricultural Development Office	Robe
82	13/11/2003	Daniel Dana	Regional Bureau of Agriculture and Natural Resources Development	Awassa
83	16/11/2003	Andrea Fütterer	GEPA. FairTrade Handelshaus	Addis Ababa
84	19/11/2003	n.n.	National Liquoring Unit and Coffee Auction	Addis Ababa
85	19/11/2003	Asmake Bekele	Sidama Coffee Cooperative Union	Addis Ababa
86	19/11/2003	Yosef Woku	Yirgacheffee Coffee Cooperative Union	Addis Ababa
87	02/12/2003	Zelalem Temesgen	Farm Africa	Addis Ababa
88	04/12/2003	Tesfaye Hunde	Forestry Research Center	Addis Ababa
89	22/12/2003	Mesfin Tekle	Farm Africa/Kaffa Zone Rural Development Desk	Bonga
90	26/04/2004	Peter Grosch	BCS Öko Garantie	Nürnberg (via telephone)
91	12/05/2004	Dr. Hassan Jemal	BCS Öko Garantie	Addis Ababa
92	16/05/2004	Dr. Yihenew Zewdie	World Food Programme	Addis Ababa
93	16/05/2004	Akalu Woube	Tomaca Coffee Roasting Enterprise	Addis Ababa
94	27/05/2004	Dr. Hans Langenbahn	Meskal. Äthiopische Kaffeespezialitäten	Stuttgart (via telephone)
95	05/08/2004	Dr. Günther Augustini	Evangelischer Entwicklungsdienst (EED)	Bonn
96	27/09/2004	Hans Bailer	Deutsche Welthungerhilfe	Bonn
97	21/10/2004	Dr. Hans Langenbahn	Meskal. Äthiopische Kaffeespezialitäten	Addis Ababa
98	22/10/2004	Winfrid Zarges	Gesellschaft für Technische Zusammenarbeit (GTZ)	Addis Ababa

	Date of interview	Name of interview partner	Organisation/function	Location of interview
99	25/10/2004	Atto Kinfe	Gesellschaft für Technische Zusammenarbeit (GTZ)	Addis Ababa
100	26/10/2004	Bernhard Meier zu Biesen	Deutsche Welthungerhilfe	Addis Ababa
101	28/10/2004	Dechassa Lemessa	OCHA/United Nations	Addis Ababa
102	29/10/2004	Tsegaye Tadesse	Gesellschaft für Technische Zusammenarbeit (GTZ)	Addis Ababa
103	29/10/2004	Dirk Hoochstra	International Livestock Research Institute (ILRI)	Addis Ababa
104	1-2/11/2004	Hiroyuki Tanaka	Japan International Cooperation Agency (JICA)	Belete Gera
105	04/11/2004	Mengistu Mamo	*Kebele* chairman	Yeyebitto
106	05/11/2004 (GD)	Abeto Mamo	Mandjah *iddir*	Yeyebitto
		Assrat Gebre Mariam	Kaffa *iddir*	Yeyebitto
108	06/11/2004 (GD)	Abeto Mamo	Mandjah *iddir*	Yeyebitto
		Assrat Gebre Mariam	Kaffa *iddir*	Yeyebitto
110	06/11/2004	Woldemariam Ambo	Agama *iddir*, Forest User Society Committee	Yeyebitto
111	07/11/2004 (GD)	Abeto Mamo	Mandjah *iddir*	Yeyebitto
		Assrat Gebre Mariam	Kaffa *iddir*	Yeyebitto
113	07/11/2004	Chaney Asmare	Peasant	Yeyebitto
114	08/11/2004	Kochito Gebre	Peasant	Yeyebitto
115	10/11/2004	Mesfin Tekle	Farm Africa/Kaffa Zone Rural Development Desk	Yeyebitto
116	10/11/2004	Peter J. Van Doren	Kaffa Development Programme (KDP)	Bonga
117	10/11/2004	Admasu Alemayu	Kafa Zone Cooperative Desk	Bonga
118	11/11/2004 (GD)	Jörg Volkmann	Amber Foundation	Bonga
		Patricia Ehret	Amber Corporation AG	Bonga
120	11/11/2004	Mesfin Tekle	Farm Africa/Kaffa Zone Rural Development Desk	Bonga
121	11/11/2004	Engida Mekonnen	Jimma-Bonga Catholic Secretariat.	Bonga
122	11/11/2004	Yerango Ambo	Komba *iddir* committee	Yeyebitto
123	11/11/2004	Zawde Haile	Peasant	Yeyebitto
124	12/11/2004	Hailemariam Gebre	Komba *iddir* chaiman	Yeyebitto
125	12/11/2004	Tesfaye Abadati	Peasant	Yeyebitto
126	12/11/2004	Atto Abadati	Peasant	Yeyebitto
127	12/11/2004 (GD)	Abeto Mamo	Mandjah *iddir*	Yeyebitto
		Assrat Gebre Mariam	Kaffa Iddir	Yeyebitto
129	12/11/2004	Woldemariam Ambo	Forest User Society Committee	Yeyebitto

	Date of interview	Name of interview partner	Organisation/function	Location of interview
130	22/11/2004	Alemayu Dehachu	Elder	Yeyebitto
131	23/11/2004	Alamayu Dehachu	Elder	Yeyebitto
132	23/11/2004	Tadesse Mengesha	Zonal Agricultural Desk	Bonga
133	24/11/2004	Tadesse Kasa	Catholic priest	Yeyebitto
134	24/11/2004	Abebe Abafogi	*Kebele* Association	Yeyebitto
135	25/11/2004	Yerango Ambo Gedawo	Komba *iddir* Committee	Yeyebitto
136	25/11/2004	Peter van Doren	Kaffa Development Programme	Bonga
137	26/11/2004	Abeto Mamo	Mandjah *iddir*	Yeyebitto
138	26/11/2004	Woldemariam Gebre	Komba *iddir* Committee	Yeyebitto
139	26/11/2004	Tadesse Mengesha	Zonal Agricultural Desk	Bita Selam
140	26/11/2004	Mesfin Tekle	Farm Africa/Kaffa Zone Rural Development Desk	Bonga
141	27/11/2004 (GD)	Gesahign Gebre Madin	Cooperative chairman	Yeyebitto
		Abara Dabotch	Vice chairman	Yeyebitto
		Safi Hailu Tadesse	Cooperative secretary	Yeyebitto
144	27/11/2004	Memere Mengistu	Orthodox Priest	Bita Selam
145	28/11/2004	Anbese Ambo	Peasant	Yeyebitto
146	27/11/2004	Mekuria Wolde	Peasant	Yeyebitto
147	28/11/2004	Assrat Gebre Mariam	Kaffa *iddir*	Yeyebitto
148	29/11/2004	Mengisto Mamo	*Kebele* Association	Yeyebitto
149	29/11/2004	Assrat Gebre Mariam	Kaffa *iddir*	Yeyebitto
150	30/11/2004	Beshir Abdalla	Zonal Department of Agriculture	Bonga
151	30/11/2004	Atto Abiyu	Kafa Forest Coffee Producer Farmers Cooperative Union	Bonga
152	10/12/2004	Abdurro Burisso	Village 'commander'	Kankicho
153	11/12/2004 (GD)	Mohammed Hassan	*Kebele* Association	Burkito
		Kamal Hadj Abdul Kadir	*Kebele* Association	Burkito
155	11/12/2004 (GD)	Ali Wario	Elder	Kankicho
		Ahmed Rachoo	Peasant	Kankicho
157	13/11/2004	Abdurro Burisso	Village 'commander'	Kankicho
158	14/11/2004	Mohammed Kadir	Elder	Kankicho
159	14/12/2004	Abdurro Burisso	Village 'commander'	Kankicho
160	29/03/2006	Fayyissaa Maggarssaa	*Woreda* Rural Development Office	Addis Ababa

Appendix II: Traditional Forest Plots in Koma Forest[125]

No.	Name of head of the HH	Place of residence	Forest area	Plot size	Forest coffee	
					Area	Harvest in 2003
1	Adelo Ati	Agama	Cangatarra	20 ha	1 ha	
2	Woldemichael Wodachu	Agama	Cangatarra	8 ha	0.5 ha	
3	Alemu Gebremichael[126]	Agama	Cangatarra	15 ha	1 ha	
4	Gebre Jesus Giboh	Agama	Cangatarra	10 ha	0.5 ha	
5	Woldemichael Maletto	Agama	Cangatarra	10 ha	0.5 ha	
6	Emito Barro	Agama	Cangatarra	15 ha	0.5 ha	
7	Geremo Gebre	Agama	Cangatarra	15 ha	0.5 ha	
8	Woldemariam Mamo	Agama	Cangatarra	25 ha	1 ha	
9	Woldemariam Ambo	Agama	Cangatarra	30 ha	1 ha	
10	Mekuria Mamo	Agama	Cangatarra	10 ha	0.5 ha	
11	Teka Gebre Hiwot	Agama	Cangatarra	15 ha	0.5 ha	
12	Wendemu Wolde Gabriel	Agama	Cangatarra	15 ha	0.5 ha	
13	Admassu Woldemariam	Agama	Cangatarra	10 ha	0.5 ha	
14	Tesfaye Woldemichael	Agama	Cangatarra	10 ha	0.5 ha	
15	Gesahign Gebre Hiot	Agama	Cangatarra	10 ha	0.5 ha	
16	Fekadu Woldegabriel	Agama	Cangatarra	10 ha	0.5 ha	
17	Bejene Baro	Agama	Kabah	10 ha	1 ha	
18	Gebre Michael Haile	Agama	Kabah	8 ha	1 ha	
19	Gebre Michael Kopi	Agama	Kabah	15 ha	1.5 ha	
20	Gebre Michael Gebre Selasse	Agama	Kabah	10 ha	0.5 ha	
21	Woldemariam Bayu[127]	Agama	Kabah	20 ha	1 ha	
22	Assrat Gebre Mariam	Komba	Dibi	60 ha	1.5 ha	7 *feresula*[128]
23	Atto Abadati	Agama	Kama	40 ha	No coffee	
24	Tesfaye Abadati	Agama	Kama	30 ha	No coffee	
25	Belay Gebre Mariam	Agama	Kama	45 ha	No coffee	
26	Woldesenbet Gebre Michael	Komba	Kama	25 ha	No coffee	
27	Alemayu Ketto	Komba	Shae	50 ha	1 ha	
28	Gebre Michael Ketto	Komba	Kidah	35 ha	0.5 ha	

[125] All data provided bases on information obtained in open interviews and forest walks with local informants. Plot size and coffee forest figures are estimations of the interview partners.
[126] Government employee, therefore the forest plot is managed by his sister, Mulunesh Gebre Michael.
[127] He was given the forest plot by Fekadu Gero.
[128] One *feresula* is equivalent to 17 kg.

No.	Name of head of the HH	Place of residence	Forest area	Plot size	Forest coffee	
					Area	Harvest in 2003
29	Gesahin Gebre Michael	Komba	Kidah	30 ha	0.5 ha	1 *feresula*
30	Kerro Gebre Michael	Komba	Kidah	25 ha	0.25 ha	
31	Woldemichael Alato[129]	Komba	Kidah	40 ha	0.5 ha	
32	Berhanu Woldemichael	Komba	Kidah	15 ha	0.25 ha	2 *feresula*
33	Hineracha Gebre Mamo	Komba	Bushasha	60 ha	1 ha	
34	Gesahegn Gebre Michael	Komba	Bushasha	30 ha	0.25 ha	
35	Kochito Gebre	Komba	Bushasha	40 ha	0.5 ha	1 *feresula*
36	Alemu Ambo	Komba	Amari	25 ha	0.33 ha	1 *feresula*
37	Adello Ambo	Komba	Amari	25 ha	0.33 ha	
38	Yerango Ambo	Komba	Amari	18 ha	0.33 ha	
39	Alemayu Haile	Komba	Gokesha	18 ha	0.25 ha	60 kg
40	Kochito Wolde Michael	Komba	Gokesha	2 ha	No coffee	
41	Makuria Habte	Komba	Gokesha	4 ha	0.25 ha	2 *feresula*
42	Gebre Selassi Merro	Komba	Gokesha	25 ha	0.5 ha	
43	Mangesha Mamo	Komba	Gokesha	50 ha	0.5 ha	1 *feresula*
44	Asrat Mamo	Komba	Gokesha	16 ha	0.5 ha	1 *feresula*
45	Gaweto Habte	Komba	Gokesha	6 ha	0.25 ha	
46	Alemu Woldemariam	Komba	Kocha	8 ha	0.5 ha	
47	Makuria Mamo	Komba	Kocha	35 ha	0.5 ha	
48	Alemayu Dehachu	Komba	Kocha	16 ha	0.5 ha	60 kg
49	Hailemariam Mamo	Komba	Kocha	35 ha	0.5 ha	5 kg
50	Hailemariam Gebre	Komba	Kocha	28 ha	0.5 ha	3 *feresula*
51	Abeto Mamo	Komba	Budera	50 ha	2 ha	60 kg
52	Woldemariam Ambo	Komba	Ouni	25 ha	0.5 ha	
53	Asseffa Woldemariam	Komba	Ouni	25 ha	0.25 ha	
54	Woldemichael Gebre Selassi	Komba	Ouni	4 ha	No coffee	

[129] Uses the forest plot together with his son-in-law, Arega Woldemichael.

Appendix III: Traditional Forest Plots in Kankicho Forest[130]

No.	Name of head of the HH	Place of residence	Forest area	Plot size
1	Jelam Kadir[131]	Kangicho	Kangicho, around the village	1.5 *mideh*[132]
2	Ali Osman[133]	Burkito	Kangicho, around the village	4 *mideh*
3	Abdo Kimmoo	Kangicho	Kangicho, around the village	5 *mideh*
4	Quasim Kadir[134]	Kangicho	Kangicho, around the village	5 *mideh*
5	Ibrahim Bati[135]	Habubi/Irba *kebele*	Kangicho, around the village	3 *mideh*
6	Teschome Girma[136]	Dolo Mena	Kangicho, around the village	4 *mideh*
7	Mohammed Burisso[137]	Kangicho	Kangicho, around the village	6 *mideh*
8	Abduro Borisso	Kangicho	Kangicho, around the village	2 *mideh*
9	Mohammed Ali	Kangicho	Kangicho, around the village	20 *mideh*
10	Wato Wako	Kangicho	Kangicho, around the village	20 *mideh*
11	Washe Tosso	Wabero *kebele*	Kangicho, around the village	2 *mideh*
12	Adam Ali	Kangicho	Kangicho, around the village	2 *mideh*
13	Idris Ali	Kangicho	Kangicho, around the village	4 *mideh*
14	Atto Abicho[138]	Dolo Mena	Kangicho, around the village	15 *mideh*
15	Ashu Kadir[139] (female)	Kangicho	Kangicho, around the village	3 *mideh*

[130] All data provided bases on information obtained in open interviews and forest walks with local informants. Plot sizes are estimations of the interview partners.
[131] The brother of Quasim Kadir.
[132] A *mideh* is a locally used land size unit which defines the area which two oxen can plough in one day. Agricultural experts in Dolo Mena estimated one *mideh* to be equivalent to 0.1 – 0.12 ha.
[133] He never lived in Kankicho, he bought the forest.
[134] He originally came from Dharro and was the first who took this forest land.
[135] He lived in Kankicho before, but when his father died he left for Habubi.
[136] He never lived in Kankicho, he brought the forest from Mohammed Burisso.
[137] His father was the first who took this forest land, brother of Aburro Burisso.
[138] He left Kangicho one year ago. But he still comes to pick the coffee.
[139] She was Aliyyi Burissos wife, now divorced, the elderly decided that the forest land remains with her.

No.	Name of head of the HH	Place of residence	Forest area	Plot size
16	Alemu Getacho[140]	Dolo Mena	Kankicho, around the village	2 *mideh*
17	Tsegaye Bishaw[141]	Dolo Mena	Kangicho, around the village	8 *mideh*
18	Adam Ali	Kangicho	Kangicho, around the village	2 *mideh*
19	Aliyii Barisso	Kangicho	Kangicho, around the village	10 *mideh*
20	Mohammed Ali	Kangicho	Kangicho, around the village	5 *mideh*
21	Gilo Dube[142]	Kangicho	Kangicho, around the village	8 *mideh*
22	Fatuma Dube[143] (female)	Kangicho	Kangicho, around the village	4 *mideh*
23	Robi Aliyii	Kangicho	Kangicho, around the village	7 *mideh*
24	Ali Abdurro Rahman	Kangicho	Kangicho, around the village	6 *mideh*
25	Sheeku Barisso	Kangicho	Kangicho, around the village	20 *mideh*
26	Mohammed Hussein	Kangicho	Kangicho, around the village	5 *mideh*
27	Aman Obsa	Kangicho	Kangicho, around the village	6 *mideh*
28	Hussein Waariyoo	Kangicho	Kangicho, west of road	5 *mideh*
29	Osman Cirriqsa	Burkito	Kangicho, west of the road	5 *mideh*
30	Hussein Barisso	Wabero *kebele*	Kangicho, west of the road	5 *mideh*
31	Alemayu	Dolo Mena	Kangicho, west of the road	1 *mideh*
32	Adam Barisso	Kangicho	Kangicho, west of the road	10 *mideh*
33	Abdu Barati[144]	n.i.	Kangicho, west of the road	n.i.
34	Gobana Shalfa	Wabero *kebele*	Kangicho, west of road	10 *mideh*
35	Shemohammed Kombi[145]	Irba *kebele*	Kangicho, west of the road	5 *mideh*
36	Mohammed Aliyii	Kangicho	Kangicho, west of the road	10 *mideh*

[140] He never lived in Kankicho, Aliyii Barisso gave the forest land to Atto Achalew and he gave it to Alemu Getacho.
[141] He left Kankicho ca. 20 years ago, he is a relative of Aliyyii Burisso.
[142] Brother of Fatuma Dube and Roba Wariyo.
[143] Sister of Gilo Dube and Roba Wariyoo.
[144] He was given the forest plot by Hussein Barisso.
[145] He was given the plot by Aliyii Wario, because he married his sister. Now it is his property.

No.	Name of head of the HH	Place of residence	Forest area	Plot size
37	Teshome Girma[146]	Dolo Mena	Kangicho, west of the road	5 *mideh*
38	Aliyii Waariyoo	Kangicho	Kangicho, west of the road	30 *mideh*
39	Mohammed Barisso[147]	Kangicho	Kangicho, west of the road	10 *mideh*
40	Abduro Borisso[148]	Kangicho	Kangicho, west of the road	15 *mideh*
41	Waariyoo Adola[149]	Kangichio	Kangicho, west of the road	7.5 *mideh*
42	Abdi Abdullah[150]	Burkito	Kangicho, east of the road	5 *mideh*
43	Sintaya or and Alemayu Gamada	Dolo Mena	Kangicho, east of the road	5 *mideh*
44	Omar Mohammed	Burkito	Kangicho, east of the road	10 *mideh*
45	Mohammed Ali[151]	Kangicho	Kangicho, east of the road	7.5 *mideh*
46	Quasim Kadir	Kangicho	Kangicho, east of the road	> 30 *mideh*
47	Abdu Rahman Hussein	Burkito	Dhoka Lokoo Kuukee	5 *mideh*
48	Abi Kassahun[152]	Dolo Mena	Dhoka Lokoo Kuukee	3 *mideh*
49	Roba Waariyoo	Kangicho	Dhoka Lokoo Kuukee	20 *mideh*
50	Muktar Hadji Hussein	Burkito	Dhoka Lokoo Kuukee	n.i.
51	Kadi Bakere	Dolo Mena	Dhoka Lokoo Kuukee	5 *mideh*
52	Hussein Ali	Burkito	Mulka Butatoche	15 *mideh*
53	Mohammed Kadir Buriso	Kangicho	Mulka Butatoche	40 *mideh*

[146] He never lived in Kankicho.
[147] Brother of Abdurro Borisso.
[148] Brother of Mohammed Burisoo.
[149] He was given the forest plot by Aliyii Waariyoo
[150] He died, but we use his name still for the forest plot.
[151] He is from Wollo (Western Ethiopia), he was given the forest plot by his relative Waro Boto.
[152] Before he lived in Burkito.

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