

People Elephants and Forests

**Collective action to manage
an environmental wicked problem
in Kodagu, Western Ghats**



By

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Acronyms and Abbreviations

BKS	Budakattu Krishikara Sangha
CBD	Convention on Biological Diversity
CBFM	Community Based Forest Management
CBO	Community Based Organisation
CFM	Community Forest Management
CI	Conservation International
CORD	Coorg Organisation for Rural Development
CWS	Coorg Wildlife Society
EDC	Eco-Development Committee
FAO	Food and Agriculture Organisation
FDA	Forest Development Agency
FIP	French Institute of Pondicherry
Gol	Government of India
IBRAD	Indian Institute of Bio-Social Research and Development
IDRC	International Development Centre
IEP	India Ecodevelopment Project
IFS	Indian Forest Service
IMFN	International Model Forest Network
IMFNS	International Model Forest Network Secretariat
IUCN	International Union
JBIC	Japanese Bank for International Cooperation
JFM	Joint Forest Management
JFPM	Joint Forest Planning and Management
KFD	Karnataka Forest Department
KMFT	Kodagu Model Forest Trust
KSFMBC	Karnataka Sustainable Forest Management and Biodiversity Conservation
LAMPS	Large Multipurpose Society
MoEF	Ministry of Environment and Forest
MoU	Memorandum of Understanding
NAP	National Afforestation Programme
NGO	Non-governmental organisation
NTFP	Non Timber Forest Product
OBC	Other Backward Classes
PRA	Participatory Rural Appraisal
SC	Scheduled Castes
SHG	Self Help Group
ST	Scheduled Tribes
VFC	Village Forest Committee:
WCS	Wildlife Conservation Society
WWF	Worldwide Fund for Nature

INTRODUCTION

India's forest¹ cover plus other wooded land² is estimated to be around 71.8 million hectares or 24.15% of the country's land area (FAO, 2005)³. Most of India's forest lands are state-owned; FAO estimates that only 10% of the total forest lands belong to either communities (about 6%) or private owners (about 4%)⁴. The community-owned forest lands belong mainly to tribal communities settled in the northeast while the remaining ones are scattered in other parts of the country. Hence this area is "noticeably small compared to the large forest-dependant tribal and non-tribal population outside the north east" (ibid.).

Up to 1988, the British colonial government and then the Indian independent government perceived forests as a source of income for industry purposes and restricted the access of local people to forest resources on which their livelihoods were based. While forests were heavily exploited for timber, the degradation of forest lands led to conservationist laws. Under the Wildlife (Protection) Act, 1972 the Government of India has created 85 national parks and 450 wildlife sanctuaries, "which involved the forcible removal of nearly 650,000 people from their traditional habitats" (Mathews, 2005). In these areas rural people who were judged responsible for loss of biodiversity and tree cover were deprived of their rights. Today about 4.5 % of India's total land is covered under protected areas. However, the 1988 National Forest Policy and the 1990 guidelines on Joint Forest Management marked a turning point since for the first time Indian forests are no longer to be exploited but conserved as precious ecosystem. Besides rural people's rights on forests (especially the tribals) were recognised (collect of non-timber forest products, participatory forest management, etc.). This radical change in forest policy is conformed to the evolution of the international discourse on natural resources management which from the seventies has encouraged community based-management through an idealization of the community perceived as a homogeneous and apolitical entity. The assumption is that the collective action can be developed thanks to the existence of a common interest however our study demonstrates that these a priori are not automatic.

¹ FAO's definition of forest is: "land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use" (FAO, 2005).

² Other wooded land are "land not classified as Forest, spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use". (FAO, 2005)

³ France's forest cover plus other wooded land is estimated to be around 17.3 million hectares, or about 31.38% of the country's land area (FAO, 2005).

⁴ France's forest land is mostly private-owned (three quarter) whereas only one quarter is public.

This exploratory study was realised on behalf of CIRAD under the guidance of Claude Garcia⁵ and Maya Leroy⁶ in the framework of the research project Popular (2007-2009) funded by the French National Research Agency (ANR). It assembles an interdisciplinary network of French researchers⁷ on the interactions between public policies and rural management of trees and forests. Through a comparative analysis over four countries i.e. Cameroon, France, India and Morocco, the general objective is to evaluate to which extent tree and forest management in rural areas embody the concept of sustainability. In India, the research team⁸ seeks to understand the interactions between community forest management (CFM) policies and local practices over an ecologically homogeneous transect (Western Ghats range) but corresponding to three state bodies namely Karnataka (Kodagu), Kerala (Wayanad) and Tamil Nadu (Nilgiris). Our contribution to this project is an exploratory study focusing on the analysis of participatory forest management systems in Kodagu District. What were the managements systems in place earlier? How is participative forest management implemented in the field now and who are the stakeholders involved?

Participation or collective action? Our research question elaborated before the field phase was: In which extent the participatory forest management of Kodagu's forests fulfils the three objectives of CFM namely better preserves forest resources and biodiversity, increases rural populations' conditions of life and combats poverty for some of them and finally improves the local governance by empowering communities and enabling them to democratically handle control over natural resources management? Even though our exploratory study provides some leads, this question is too wide and complex to be entirely treated here hence another longer and more thorough field research is required. To obtain a clear overview of today's participation, it is necessary to develop a critical analysis of this notion. The word 'participation' is present in all international discourses, in plenty of scientific publications and also in programme and project reports of donor and executive agencies. However, one should be very cautious because such a word is not anodyne. Firstly, participation is not a new notion; this idea of involving the local people in any development activity appeared at the colonial period. Making these people "participate" was seen as an effective way to achieve a better rural development by rationalising knowledge and practises. Subsequently for each period deciders have defined their own kind of 'participation' thinking theirs would be better than the previous ones. Thus the participative model is not the prerogative of only one theoretical or doctrinal courant of development. In the name of efficacy as well as equity various donor agencies and operators sometimes very

⁵ PhD Ecology, CIRAD, French Institute of Pondicherry.

⁶ PhD Management Science, AgroParisTech-ENGREF

⁷ Including G. Michon, R. Nasi, G. Buttoud, G. Balent, L. Auclair, H. De Foresta, Y. Thomas, S. Guillerme, C. Hinnewinkel, C. Garcia and G. Smektala.

⁸ Dr Claude Garcia, Dr Sylvie Guillerme and Dr Christelle Hinnewinkel.

opposed, have affirmed their participative philosophy⁹: the World Bank, Governments, NGOs, some populist militants, etc. (Chauveau, 1994). Secondly, participation does not assure equity among the participants. Many field studies on rural development in Africa have shown that in reality in certain local communities, the participatory system introduced by development agencies -mainly through the implementation of projects- has benefited more to the people who were already the favourites in the local socio-political system (Chauveau et al., 1994; Laval, 2004). Thirdly, many different political views are hidden behind this notion. Being involved does not mean you effectively decide. What is to participate? Who decide to participate and why? Who wants people to participate and why? For Maya Leroy (2007), participation expresses a tension among three poles: the beneficiaries' interest, the developers' interest and the political significance which tend to be minimised. Is participation an end? Is it a means (stake of performance)? What political engagement is hidden behind participation? Consequently in our study of natural resources management we have chosen to consider people's participation not as a solution but as a problem to be investigated. We define participation as the sum of all the strategies created by the actors switching back and forth between cooperation and conflict in their collective action to solve the environmental problems which affect them.

We believe that thinking in terms of collective action is more relevant than using such a controversial concept. Not only it helps us to obtain a clearer understanding of this process but it enables to understand what it really means in terms of actions, sociological representations and in terms of decision making power. For Crozier and Friedberg (1977) collective action cannot be taken for granted for the reason that it integrates different individuals or social groups' behaviours who have different interests and who all pursue divergent objectives. We put forward to understand how people cooperate in the natural resources management of Kodagu: what kind of relationships they weave, what kinds of strategy they implement according to their resources and capacities as well as the constraints they have to face. What are the features of the game created by the participative forest management? Who are the participants?

Kodagu's environmental problem. Kodagu district is part of the Western Ghats a mountain range identified as one of the globe's twenty-five hotspots for its high endemism rainforest ecosystem (Myers, 1988). The discourses collected through our interviews enable us to identify a double environmental problem constituting a threat for this ecosystem. First the Kodagu's human-wild elephant conflict is a real environmental problem which leads to human deaths and injuries, destruction of crops and plantations, and building damages. In Kodagu the wild elephant appears as an indicator-specie of the changes affecting Kodagu's forest ecosystem including decreasing tree cover, soil degradation and water scarcities. The empirical data we collected demonstrate that the collective action for natural resources

⁹ The World Bank adopted the "participatory approach" in 1970s, the OCDE and the FAO in the 1980s.

management in Kodagu assumes two different shapes we described as 'imposed participation' and 'chosen participation'.

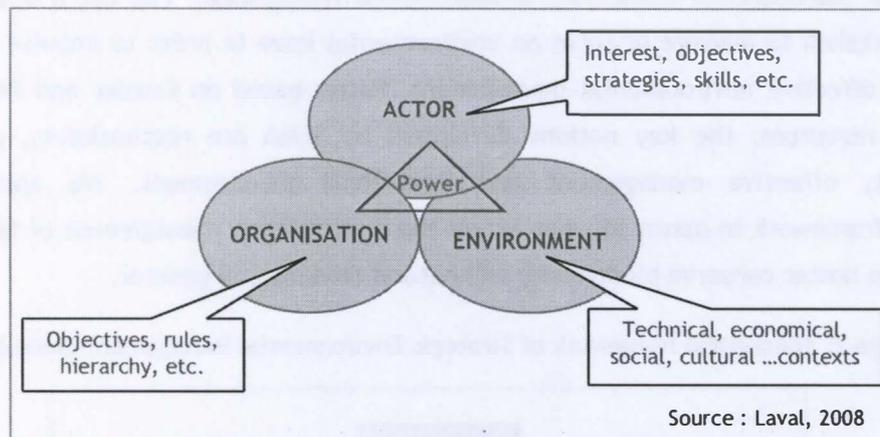
- The first category or collective action A emerges from the management committees Eco-Development Committees (EDCs) and Village Forest Committees (VFCs) set up by Karnataka Forest Department under different guidelines and projects¹⁰ to address the above pressing issues. Indian Institute of Bio-Social Research and Development NGO assists the department in the KSFMB Project.
- The collective action B appears from discourses and actions resulting of two types of alliances using the same concepts of benefit sharing and participation and proposing management alternatives to answer the same issues. We differentiate local leaders gathered voluntarily under the banner of 'conservation' NGOs i.e. Kodagu Model Forest Trust (KMFT) and Coorg Wildlife Society (CWS) and on the other hand, tribal leaders gathered into Budakattu Krishikara Sangha (BKS) or a larger cooperation between tribal people and 'empowerment' NGOs including Coorg Organisation for Rural Development (CORD).

Theoretical frameworks. Different sociological theories were available to deal with our object of study including the sociology of organised action (Crozier and Friedberg, 1977), the theory of common-pool resources and the commons (Ostrom, 1990), the theory of justification (Boltanski and Thévenot, 1991), the socio-anthropology of development (Olivier de Sardan, 1995), the Strategic environmental management analysis (Mermet et al. 1995). Boltanski and Thévenot's theory is difficultly applicable to southern countries especially the ones based on caste society. Olivier de Sardan's theory is usually relevant to analyse rural development actions but we believe that contrary to African countries such as Senegal, the stake around development in Kodagu is rather based on the control of local resources access than on the capture of income or equipment. Ostrom has developed a set of conceptual tools that can help us predict when collective action institutions will be effective according to attributes related to the resources and the users as well as design principles characterising 'robust institutions' (Ostrom, 1997). The question to know whether reserved forests are common pool resources (CPR) is difficult. The forest areas under joint management between KFD and VFC members may be a CPR. We have chosen to apply (i) Crozier and Friedberg's sociology of organisation because it is a general way to explain not only how any organisation but also any type of social action function; and (ii) SEMA which is definitely relevant to analyse the Kodagu's environmental issues and assess the ecological effectiveness of the actions conducted in the name of environment.

¹⁰ India Ecodevelopment Project (1997-98 to 2001-02) created EDCs, National Afforestation Programme (2002-03 to 2006-07) created EDCs and VFCs and Karnataka Sustainable Forest Management and Biodiversity Conservation Project (2005-06 to 2012-13) plans the creation of VFCs, EDCs and self help groups (SHGs).

- The sociology of organisations has been developed by Michel Crozier and Erhard Friedberg in the seventies. Their masterpiece is Actor and system. Politics of collective action published in France in 1977. This theory enables to understand how human beings act as individual in a collective action within a concrete action system. This theory is based on three bodies: organisation, actor and environment.

Figure 1: Concrete action system

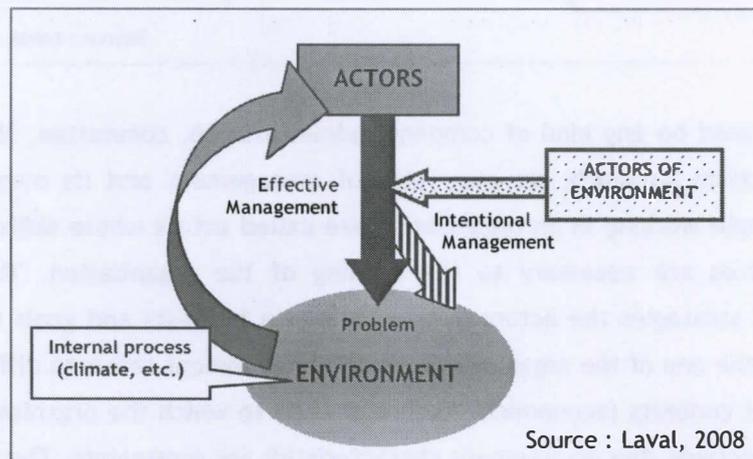


The organisation could be any kind of company, administration, committee, NGO etc. that has its own objectives to reach, its own rules of management and its own hierarchical structure. The people working in an organisation are called actors whose skills, knowledge, etc. called resources are necessary to the running of the organisation. Thanks to the implementation of strategies the actors pursue their own interests and goals which do not necessarily match the one of the organisation. Finally environment refers to different actors, as well as different contexts (economical, technical etc.) to which the organisation depends on to reach its objectives, the environment characteristics are constraints. The actors within and out of the organisation are interacting, therefore relationships of power are developing especially at the border organisation-environment but also among the different level of the hierarchical staff. Finally the real system is hardly in accordance with the organisation chart, Crozier and Friedberg call concrete action system the real system of action re-constructed by empirical demonstration. Thanks to strategic analysis and systemic analysis, we have tempted to find out the concrete action system of community-based institutions (one EDC and one VFC) by re-constructing the actors' game, and identifying the characteristics and rules of the ongoing game. Thus this approach is very different from the common vision idealising communities as homogenous groups without social and political conflicts.

- The Strategic Environmental Management Analysis (SEMA) developed from the nineties by the research team conducted by Laurent Mermet is a framework for assessing effectiveness in the pursuit of ecological goals. "Despite the public commitments made (laws, international conventions, political statements) and the varied, ambitious and complex management systems set up (institutions, planning procedures, financial tools...), examples in all

environmental areas (biodiversity, water management, air and varied pollution...) show that in many situations processes causing serious environmental degradation are out of control” (Mermet et al, 2005). Hence these researchers claim that environmental studies should more than ever analyse and assess the coherence and effectiveness of actions in the light of environmental commitments through the proposed SEMA (ibid). This framework enables to analyse any situation where an environmental issue is taken in charge by different stakeholders. The object of study is the environmental management. The aim is to assess the action undertaken to manage or solve an environmental issue in order to impulse a change for a more effective environmental management. Partly based on Crozier and Friedberg’s theoretical resources, the key notions developed by SEMA are responsibility, actors of environment, effective management and intentional management. We applied this theoretical framework to assess in what extent the participatory management of forests can contribute to better conserve biodiversity and natural resources in general.

Figure 2: Theoretical framework of Strategic Environmental Management Analysis



First, many different actors develop direct or indirect practices that have a positive or negative impact on the environment (the forest in our case). The sum of these practices is called effective management. Certain negative practices create a given environmental problem: we can read or hear that the forest is degrading, animals are lesser, etc. Therefore, certain actors suggest acting against this fate thanks to an intentional management which is mostly indirect. The aim is to change people’s practises perceived as creating the problem. If these actors (i) show they want to act, if (ii) they really act to change the practises and if (iii) it is effective, these actors are called actors of environment. Finally the environment has its own internal processes to which actors have to adapt to.

Methodology. Our six-month exploratory study in India (2 April to 28 October 2007) aimed to identify many interesting ways of research for the project Popular. We divided our work into a five-month fieldwork phase in Kodagu, then one month of data analysis at the French Institute of Pondicherry followed by two PowerPoint presentations conducted at the

Institute¹¹ and in the field¹². These events are useful to get a better understanding and better analyse the data collected. Finally, the phase of redaction and bibliography was carried out in France before defending the final thesis in January 2008. The report will be handed over to various partners.

The study focuses on one village Chennayanakote-Chennangi but some missions were carried out in the surrounding areas to obtain a different perspective (Maldare, Dodda Reshme, Thithimathi, Sampaje). We opted for an anthropological approach¹³ based on discussions with people, observation of what they do and eventually take part in their everyday activities (Olivier de Sardan, 2003). The objective is to understand different stakeholders' point of views on participatory forest management: villagers, workers, NGO members or staff and Forest department officials. Many of them are also committee members of EDCs and VFCs. Our field research is based on the following methods of data collection.

- The privileged method has been semi-structured interviews with many stakeholders to find out how they act as 'actor' in a system. The respondents gave extensive responses to a set of questions, some of which were prepared in advance and some of which arose during the course of conversation. We used a guide interview based on three basic themes of Crozier and Friedberg's organised action: the work/role in the organisation, the relationships with other actors and the environmental and/or managerial problems to face (Cf. annexe). We did not have enough time to conduct life history with the committee members. Except three interviews, all the interviews were recorded then transcribed in a text form before being analysed. Our interviews still have an exploratory value since each of them revealed new ways to explore. Totally we conducted 35 interviews including 28 in-depth with the following persons: ten Kodava, nine Scheduled Tribes (five Jenu Kurubas, three Yeravas), three Gowdas, three Christians, one Scheduled Castes, one Other Backward Classes¹⁴ and one Lingayat. With another classification, we have interviewed four persons from the Forest department, eight members of EDCs (all types included), four members of VFCs, four NGO staffs (all types included), two coffee grower landowners non-member of EDC or VFC, one tribal people non-member of VFC or EDC, Only three ladies were interviewed. To protect the anonymity of our interviewees their names are replaced by the following code 'I' for Interviews plus the first letter of the community accompanied with a chronological number, for example 'I.K1' for Interview Kodava 1; Personal communication are written PC.

¹¹ 19 October 2007.

¹² 26 October 2007 at the College of Forestry Ponnampet. List of the participants in Table 23 in Annexe.

¹³ See La Politique de terrain. Sur la production de données en anthropologie (Olivier de Sardan, 2003: pp.30-54)

¹⁴ Scheduled Castes and Tribes and Other Backward Classes are official administrative classification of social groups corresponding to the lowest Indian castes. This study is limited to the basic details.

- We had personal communications (non-recorded discussions) with persons acting as expert or key informant such as Forest officials, graduate students as well as various researchers.
- We used direct observation to observe the following events: four VFC meetings, two NGOs meetings (one organised by Coorg Wildlife Society and one organised by Kodagu Model Forest Trust), one KFD/EDC members/CWS meeting, one plantation day in Devamachi Reserved Forest and one festival (Devarapura Festival).
- During the fieldwork phase we wrote a field journal summing up our daily activities and collect of data. This method is useful to follow the progression of the research, to identify the missing data and to identify new research questions (Beaud and Weber, 2003).
- Our bibliography is based on official documents collected with the authorisation of KFD (working/management plans, project guidelines, EDC /VFC microplans, government orders, etc), various reports, scientific articles and books communicated by researchers or issued from a personal bibliographical research as well as some press articles from Indian newspapers. Finally we used many websites and the notes of our AgroParisTech lectures presented in the final bibliography.

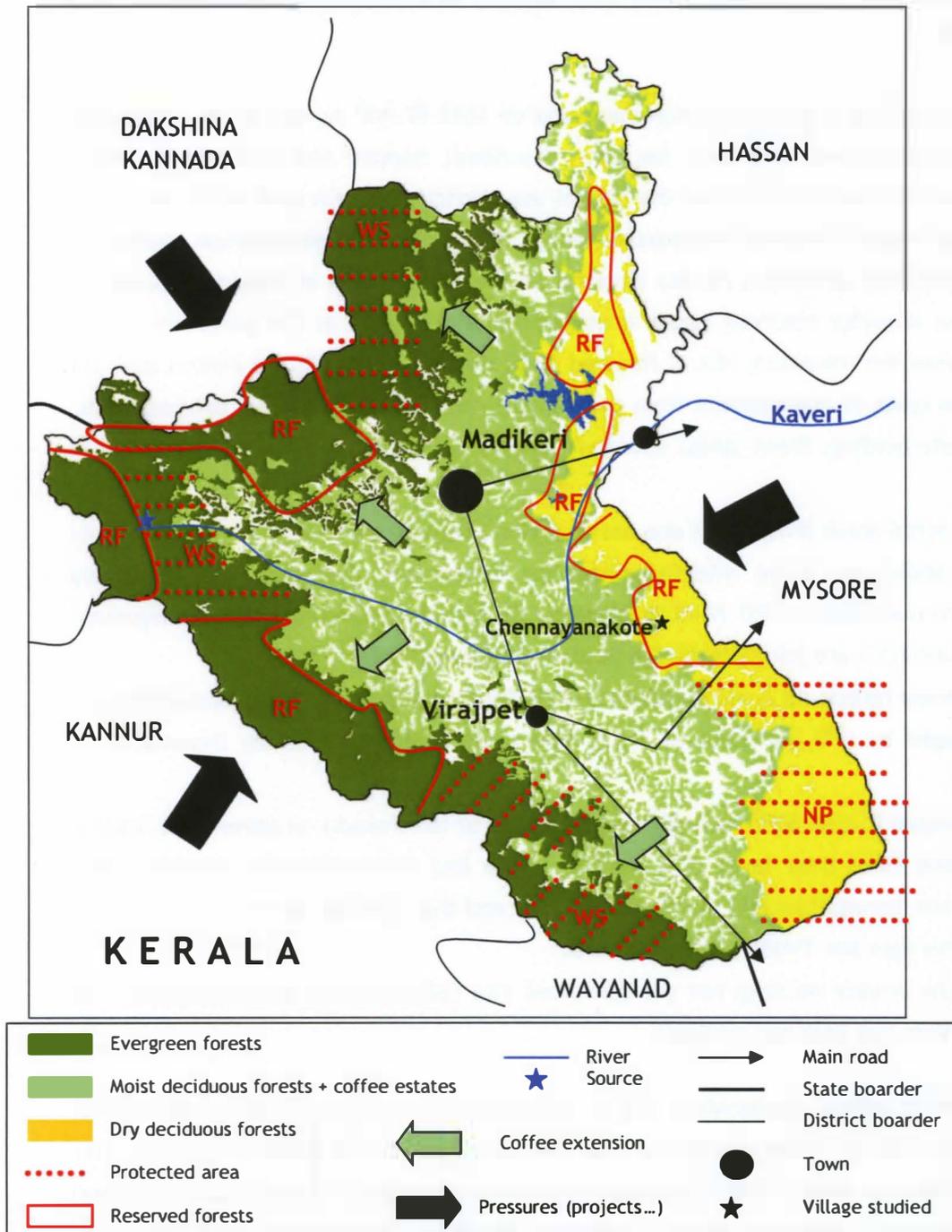
Difficulties. The field research started by the analysis of this committee during four consecutive weeks then the feeling to study an 'empty shell' push us to open new research ways outside of the committee. Our interest for this committee reaffirmed at the end of the field study when we gathered the first details on another type of EDC. Subsequently we thought it was important to go thoroughly into the first results obtained on Chennayanakote EDC. Since VFCs were too recent to assess the impacts on the forest cover as well as on people, our first objective was to compare the different types of EDCs. However during the mission of C. Garcia (23.07 to 03.08.2007), we felt it was relevant to study these committees precisely because their formation was ongoing, it was an excellent opportunity to analyse the 'participation' in its crucial phase the planning (i.e. arrival of the project, selection of members, committee formation, choice and planning of activities).

The first contacts with tribal people were quite difficult to negotiate and long to establish. Many of them asked what they could gain in return of the interview. Nevertheless a few tribal people accepted to answer our questions and kindly allow us to enter their house, besides the first meeting with CORD director helped us a lot. Scientific papers are also a great help in this task.

The richness of Kodagu's socio-ecosystem certainly deserved a more in-depth study that what we have been able to produce in a mere five-month of difficult fieldwork. All the interesting ways to further study are presented in conclusion. For example we have not reached the saturation on practises in forest or effective management.

Kodagu district. Kodagu is one of the second smallest districts in Karnataka (after Urban Bangalore) covering 4106 sq. km (Map 1).

Map 1: Synthesis map of Kodagu's natural resource management stake



The district is surrounded by three other districts of Karnataka: Dakshina Kannada (northwest), Hassan (north) and Mysore (east) and it shares a state border with three districts of Kerala (southwest). The district has a mountainous configuration declining from the west to the east for an elevation comprised between 100m to 1745m (Tadiandamol peak). The rainfall declines also from the west (about 5290 mm) to the east (1000m) as well as the temperatures: 10.3°C on the top hills (cold season) to 35°C in the eastern parts (summer). The four seasons are monsoon (June-September), post-monsoon period (October-November),

clear bright weather with cold nights called winter (December-February) and summer (March-May). The largest river of the district is Kaveri and its principal tributaries are Lakshmana thirtha, Kakkabbe or Harangi which flow in an easterly direction while Barapole river flows towards west.

The district presents a quite large forested area of 1841.47 km² or 46% of the total area (ibid.). Kodagu's natural vegetation has been described, mapped and classified by Pascal (1982) into wet evergreen forests on the hills of the district's western part; moist deciduous forests located mainly in the central-eastern part of the district with an extension toward the west and finally dry deciduous forests situated on the eastern side of Kodagu. 30% of the forested area is under reserved forest management and located at the periphery of the district whereas the remaining 16% of forested lands mainly situated in the central part are under various types of management from government control (sacred groves, revenue lands, etc.) to private holdings (bane lands) (Elouard, 2000). Five forest management types exist in Kodagu.

- The Protected areas (PAs) count one national park (Rajiv Gandhi National Park commonly called Nagarahole) and three wildlife sanctuaries (Brahmagiri, Pushpagiri and Talakavery WS); they are managed by KFD Wildlife Division. Through participatory forest management KFD and certain EDCs are jointly in charge of protected areas' buffer zones.
- The Reserved forests (RFs) are managed by KFD Territorial Division. Some parts of RFs are jointly managed by KFD and EDCs or VFCs. Our study analyses especially Devamachi RF management.
- The Protected forests (PFs) including sacred groves or devarakadu, uruduves, etc. have a confusing name since their level of protection is the less strong than the previous ones. Devarakadu are managed by KFD Territorial Division and the attached community. One type of EDC also manages this forest jointly with KFD.
- Finally, the private holdings not yet converted into coffee estates are managed by the landowners. Very few data are available.

The non-forested areas, representing 54% of Kodagu's land cover, are mainly agricultural lands including 29% of coffee plantations then fields cultivated with paddy and ginger. The main plantations are teak, rubber, eucalyptus (mainly owned by the Forest department and sometimes situated in reserved forests), cardamom (6% of the district total area) and a very small area of tea (Elouard, 2000).

As per official data on Kodagu, the total population of the district is 548,541 inhabitants with the following repartition: 86% in rural areas and 14% in the urban parts of the district. The three largest towns are Madikeri (district headquarters), Virajpet and Kushalnagar. Totally, 291 villages are inhabited. The repartition per age is 9% for 0-4 years, 20% for 5-14 years, 64% for 15-59 years and 7% for 60 years and above. The literacy rate of the district is quite high

77.99% (83.7% for males, 72.26% for females) however only 4.5% of the population is graduate and above (Census of India, 2001). The social groups of Kodagu are Kodavas and Gowdas. Kodavas would be 100,000 in Kodagu (about 18% of the total population) according to non-official source. The Scheduled Castes represent 12.29% of the total population (Adi Karnataka, Pale, Adi Dravida, etc.). The Scheduled Tribes represent 8.41% of the total population with Yeravas¹⁵, the largest group with 19,480 people, then Jenu Kuruba and Betta Kuruba speaking Kannada form the second largest group with 10,037 people (Census of India, 2001); other groups exist such as Naikda, Airies, Kudiyas, etc. Certain people belong to Other Backward Classes (OBC) and then Muslims, Brahmins, Christians, etc. The three largest religious groups are Hindus, Muslims and Christians.

Kodagu was an independent state before being part of Karnataka State in 1956. Three governmental bodies rule the District according to the Karnataka Panchayat Raj Act (1993): Zilla Panchayat (district level), Taluk Panchayat (Block level) and Gram Panchayat (village level). Kodagu district is divided into three taluks (Madikeri, Somwarpet and Virajpet) and counts 98 Gram Panchayat. In Karnataka, the Gram Panchayat follows the following rules: it gathers a group of villages (5,000 to 7,000 people), the election of the members is held once in five years and there is a representative for every 400 people; 33% of the seats are reserved for women, 33% of the seats are reserved for OBCs, seats are also reserved for SCs and STs in proportion of their population; the post of president and vice-president are also under a reservation system.

The first part deals with the interactions between public policies and local practices and explains the founding of today's game of actors related to natural resources management. The second part presents Kodagu's environmental stakes before assessing the effectiveness of the actions conducted with regard to ecological and social commitments in the third part. The fourth part discuss the notions of 'imposed' and 'chosen' participation describing the two types of collective actions for natural resources management we identified.

¹⁵ Yeravas are divided into Pani Yeravas, Panjayris Yeravas and Badaga Yerava; they speak Yerava language (Vijaya, 2000)

Part 1: Interactions between public policies and the main actors studied

This first part lays the foundation of today's game of actors developed in the community-based forest management projects studied. This game of actors was formed many years ago and has evolved with time. An historical perspective is absolutely necessary to understand today's relationships among the different actors and ideally to explicate why they act as they do and even try to foresee some characteristic behaviours for the coming years. Yet this approach is complex since we are studying social change, object difficult to handle because always moving. The social change studied has a time dimension and a space dimension. Decision making process and actions are examined according to different scales going through the nation level, the state level and the district level. This matches the concerns of the popular research project aiming to understand how global and local levels interact.

The first part is based on the analysis of Kodagu's history highlighting the conversions of natural resource management through the evolution of ancient actors (local people) and the apparition of new ones (Forest department, non-governmental organisations). Even if the data used mostly come from previous publications (Ramakrishnan et al. 2000, Moppert, 2006) we have tried to insist on the interrelations among the actors, which has not been necessarily conducted earlier, thanks to our fieldwork. The study concentrates on the following actors: Kodava and Gowda landowners, tribal people and a mixed group formed with the creation of the Forest department. Therefore we put aside many other groups who could not be studied in this first fieldwork such as the Scheduled Castes. Further study is necessary to understand their role in the system.

In this part we demonstrate simultaneously (i) the changes in the use of natural resources with important forest exploitation for timber and the conversion of certain of private lands into coffee plantations or coffee based agroforest system; (ii) how the relationships were built among the actors with the apparition of a strong Forest department and (iii) what the impacts of national policies on local people's life as well as on the forest cover are.

I. Changes linked to increasing forest resources exploitation (mid XIXe-XXe)

In this part I demonstrate the changes affecting the Kodagu's land use in governmental and private lands over the years from the time of the Rajas to the nineties eighties as well as the change of occupations for the local people.

With a mountainous configuration Kodagu was mainly covered by dense forests and inhabited by a low population of tribal communities who practised gathering forest products, hunting and shifting cultivation in the hilly parts of the area. These groups are mainly Yerava and Kuruba. The Yeravas are described as “a wandering tribe originally from Wynad, where [...] they were held in slavery by the Nairs. They speak their own language and live chiefly [...] with the Coorgs¹⁶ to whose mode of life and worship they have conformed.” (Richter, 1870: 114-115). The Jenu Kurubas originally lived “in huts in the jungles of Coorg and wander from place to place in search of honey, whence their name. They worship the goddess Kàli [and] live on vegetable and animal food, but do not touch beef. They are skilled in the use of the sling and the bow and arrow and are excellent climbers.” (ibid: 114). Then rice-cultivating communities, the Kodavas and the Gowdas¹⁷, settled in valleys. “The Coorgs [...] are the principal tribe of the country and from time immemorial the lords of the soil. [...] They are known as a compact body mountaineers who resemble more a Scotch clan than a Hindu caste¹⁸. (ibid: 117) The Kodavas are ancestor-worshippers: “[e]very family has some spot on the estate, in a retired part of the jungle-land, where a sacrifice of a fowl is offered every year to the departed by the living members of the house. [...] A stone placed on a rough mound serves as altar” (ibid: 164). Kodagu’s population comprised also a small part of migrant communities mostly Malayalam speaking. (Ramakrishnan and Moppert, 2000)

For more than two centuries the Rajas ruled Kodagu as an independent kingdom having few communications with the surroundings regions. The Rajas frequented the forests on hunting expeditions: the King Dodda Veera Rajendra Wodeyar is credited with killing 73 wild animals in a seven hour operation (Appayya, 2001). The Kodavas and tribes were great hunters with different techniques. Nevertheless only the formers as well as other jama¹⁹ landholders possess arms with hereditary right. Even with the annexation of Kodagu by the British in 1834, the district (called Coorg in English) kept some form of autonomy until the independence of India in 1947. Therefore Ramakrishnan thinks that the long isolation of Kodagu due to geographical (i.e. mountain), historical and socio-economic characteristics “prevented early heavy anthropic pressure on the forests and conversion of forest cover into agricultural area” insisting that “in 1977, 63% of the total area of the district was still under forest cover”. (Ramakrishnan, 2000: 15)

¹⁶ The Kodavas are known as ‘Coorgs’ since the British colonisation, they speak Kodava language.

¹⁷ The Gowdas come from Dakshina Kannada and Mysore. (Moppert, 2000)

¹⁸ “In the Hindu scale they are Sudras [...] but it ought to be the pride of the Coorgs to discard the caste altogether, which in fact does not apply to them [...]” (Richter, 1870: 117)

¹⁹ Definition further.

1. Creation of the Forest department

To increase its incomes, the strategy chosen by the Government under British rule was appropriation of the forest resources and rationalisation of forest exploitation in a scientific manner through (i) creation of a Forest department²⁰ in 1865, (ii) demarcation of governmental lands with attached forest rules and (iii) the introduction and development of silviculture practices.

(i) In 1865 through the Reserved Forest Act, all the Kodagu's non-privately-held forested lands were appropriated by the Government -under British rule- and managed by the Forest Department. While the settled farmers kept their rights on the different land tenures (with some changes later on), tribal people moving inside forests were deprived of their rights on the territory they used to live in. By the end of the century they were even constrained to stop one of their practices, the shifting cultivation (Moppert, 2006). This law marked the first discrimination towards tribal people in forest management. In Coorg the forest reservation system started in 1870 and from 1871 demarcation of forests was undertaken. According to the Indian Forest Act 1878, forests were divided into 'reserved forests' strictly controlled and 'protected forests' (e.g. uruduve, paisari, devarakadu) with open access to the population for firewood and minor forest products collection. Simultaneously the introduction of forest rules put an end to the system of tree exploitation permit applied since the Coorg Rajas and depots were open to stock and sold the timber (see Figure 3 in annexe).

(ii) Subsequently, the forest administration started a systematic exploitation of forest resources for economic purposes as source of income. Timber was the main valuable product extracted from forests therefore all the efforts concentrated on tree harvesting. In 1869, 15 tree species were declared as 'reserved' and absolute property of the Government. Forest divisions and ranges were created and working plans appeared to fix the techniques to be used the felling areas, etc. First, selection felling was largely practiced in evergreen forests to exploit trees with hardwood timber used as matchwood, plywood, firewood and to construct railway sleepers. Plywood companies chopped most of the big trees on the hills therefore even today very few of them remain (I.K8). Besides from 1925, clear felling (over 200 then 300 acres) was practised to raise teak plantations (*Tectona grandis*) in moist deciduous forests. Elephants were used for timber logging and forest paths created to facilitate the transport of the logs (Appayya, 2001; Misra, 2003). Consequently, Kodagu's forests were heavily exploited by people from Coorg and outside of the district. The most accessible portions of the important forests were the most exploited. During World War II, before India's independence the exploitation reached its highest level (Misra, 2003).

²⁰ At its creation the Forest Department was called 'Forest Conservancy Department'. From 1879 to 1885 the department was abolished and all the forests were vested with the Revenue Department.

2. Conversion of tribal people into workers for the Forest department

The interviews conducted and the bibliography²¹ reveals that after the creation of the forest department, tribal people especially Yeravas and Kurubas started to work a lot for this administration who could not reach its objective alone. The Forest department needed abundant workforce on the spot at the least cost. For all the forest duties, “the tribals formed the chief source of labour for all departmental works” (Appayya, 2001) from tree felling, fire clearings, planting, taming elephants, creation of paths or even to know the difference among the tree species. These two groups exchanged their resources: workers traded their knowledge of forest, their physical skills and their know-how to exploit forest produces and were paid in return. One history book highlights this point: “[t]he cutting of bamboo, is a difficult task that is rarely well done by any other than those expert jungle people, the Yerawas and Kurumbas [...]” (Richter, 1870: 24) As incentive the Forest department allowed again tribals to practise shifting cultivation -called also Kumri or taungya cultivation- of ragi in the regeneration areas of teak plantations and in the sixties bits of cultivable swamps (hadlus) were given for cultivation even in Nagarahole National Park (Appayya, 2001).

Strong interrelations weaved between those two groups went further than a simple relationship employer-employee. Surprisingly one Jenu Kuruba in his late thirties seemed to regret the older days: “before if we had any problem we never used to go to the police station to clarify things but to the Forest department. We were very close to the Forest department with the work and everything but now it is different, we have lost our relationships, now we go to the police station. We had good relationship before because of the work”. (I.J3) In Kodagu the analysis of these relationships has just started and is little documented therefore we suggest to go further on this topic and to work on the services exchanged between these two groups. Money might not be the only material; we can imagine non-material exchanges like special permission to conduct some practices. Besides the identification of strategies sometimes cooperative sometimes conflicting are worth studying. We can suppose that the type of relationships varies according to indicators such as age²², personality, community of forest officials and workers, type of forests, localisation in the district and surely others.

Cooperation does not mean that the relationships were equal between these two groups. The forest department has clearly the advantage of the legitimacy in front of tribals whose

²¹ Management plans and working plans of the Forest department.

²² With a study on social change, sociological interviews are to be conducted with different generations of tribal people and forest officials. Interesting differences and similarities are likely to come up. This is also true for the other groups not yet studied (other forest dwellers).

presence is only tolerate on government's lands. As said earlier they are totally deprived of property right which is a major source of uncertainty for them. This fact strengthens their dependency towards the Forest department and simultaneously weakens the control over their lives subdued to Forest department's goodwill. However, were the tribals totally crushed by the administration? Did they have leeway to increase their liberty and use certain strategies in their favour?

3. Conversion of farmers into coffee grower landowners

Until the mid eighteenth century, many of today's crops were not grown. Cardamom and pepper were cultivated but not coffee. From the Rajas and especially from the mid-nineteenth century under British rule, a long process of transformation of the tree cover took place in private lands and continued after the Independence in 1947. Most of the landowners became 'coffee growers' when they converted their bane lands into coffee estates. Bane is one of the 37 land tenures proper to Kodagu. Here, the point to retain is that along with the wetlands granted to families²³ i.e. jama, sagu, jaghir and umbli principally, pieces of forested or non-forested area called bane or barike²⁴ were granted. On bane, paddy was not cultivated; the land was used to meet the needs of the landowner and its servants: cattle grazing, collect of firewood, small timber, manure, etc. The role of the bane was especially to fertilise the wetlands and to provide grazing places since daily farming was importantly practised²⁵ (Vijay Uthappa, 2004, I.K1).

The hilly areas started to be cleared and planted with coffee while valleys were retained for rice cultivation (Moppert, 2006). From 1854 major forest clearing took place and coffee plantations were established in the central part of Kodagu in the moist deciduous forest areas called 'coffee belt' with a north-south extension. Thanks to the maps realised by the French Institute of Pondicherry we can clearly see that the phenomenon of private lands conversion into coffee estates has spread towards the west from 1977 to 2007 (Map 2, K.M. Nanaya, 2007). Nevertheless, the reserved forests and protected areas tend to limit this

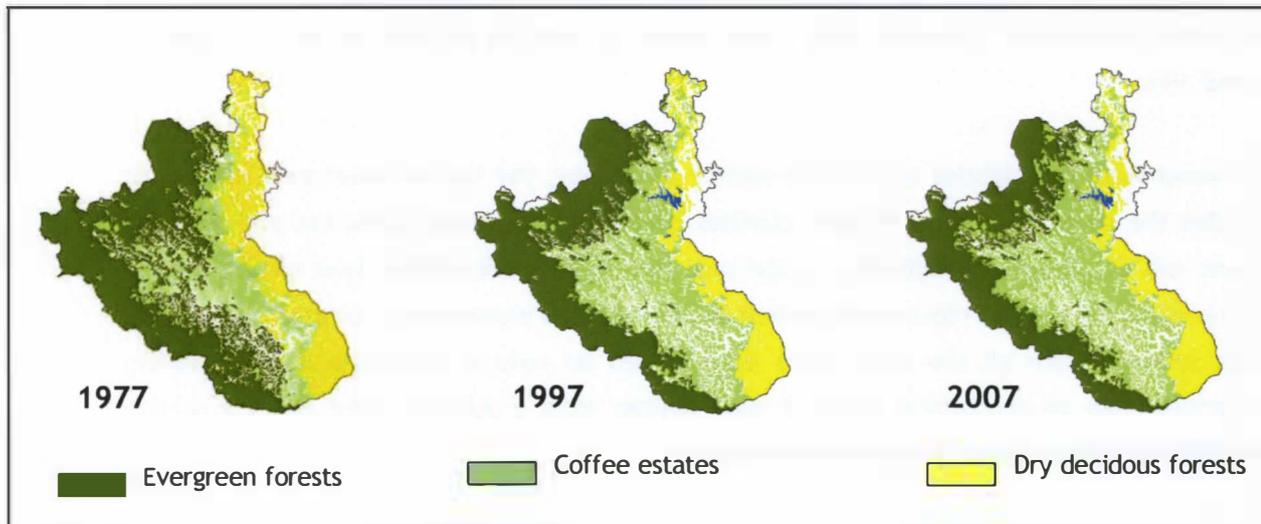
²³ Jama land was granted to or held by families prior to 1865 date when British Government prohibited the grant. Umbli and jaghir granted for service render to the Government (one-time grant) stopped from 1899. Certain land tenures had to be assessed: a "land revenue assessment" was paid to the Revenue department. For example, on the basis of Rs.10 per acre for a particular class of land: sagu is full (Rs.10), jama is half (Rs.5), jaghir there is no land revenue and umbli it is just a very small part either one tenth or one third. It is worth underlining that jama, sagu, umbli and jaghir are 'cultivable' wetlands in a sense for paddy (if wet enough) or for maize or jowar (if drier) and called hola. In Kodagu most of them are wetlands. Other categories exist like bidukulas for the house site, non-agricultural/commercial and industrial lands which are not assessed at all. (I.K1)

²⁴ Barike is a low-line bane cultivable from time to time depending on the availability of water. (I.K1)

²⁵ According to one interviewee, in Kodava language bane means 'it is a ground'. Formerly people used 'bane' to refer to cattle grazing ground (I.K1).

extension even though cases of encroachments are observed. And today tribal people in Chennangi have even started to grow coffee on forest lands as income generating activity.

Map 2: Evolution of the vegetal cover in Kodagu (1977-2007)



Source: maps from K.M. Nanaya, French Institute of Pondicherry, 2007

Consequently, the forested cover as well as the landscapes underwent spectacular changes. Forest canopy cover clearing was associated with timber exploitation in deciduous and evergreen forests. Therefore “[t]he opening of the forest for timber exploitation transformed the floristic composition and structure of the forests. Evergreen forests were rapidly degraded and in some areas, they irreversibly changed into moist deciduous forests as evergreen species were replaced by highly light tolerant deciduous species. In other areas, moist deciduous forests were changed into dry deciduous forests.” (Ramakrishnan, 2000: 15) Yet the introduction of coffee under forest canopy cover prevented from drastic deforestation observed in other mountainous parts of India (ibid.). “Hence coffee cultivation may be considered to have played a significant role in the conservation of various forest tree species and the preservation at moderate level of biodiversity”. (ibid: 16)

Recently paddy fields are less and less cultivated because of elephant intrusions, little profitability due to low prices on the market. Some of them are converted for Arecanut cultivation or ginger cultivation. The latter is spreading and lot of chemicals are used.

This conversion of private lands into coffee plantations has had an impact on Kodagu’s population²⁶. After decreasing (1901-1941), the population increased sharply until 1981 (triple from 1941 to 1981) (Guilmoto, 2000). From 1951 to 1981, the plantation economy expansion attracted numerous migrants in search of work: “the changing economic environment and the relative ecological *laissez-faire* prevailed during this period have induced these migrations” (ibid: 66). However since 1981, Kodagu faces a new demographic regime with a population growth slowing down due to a decline of birth rate and to the

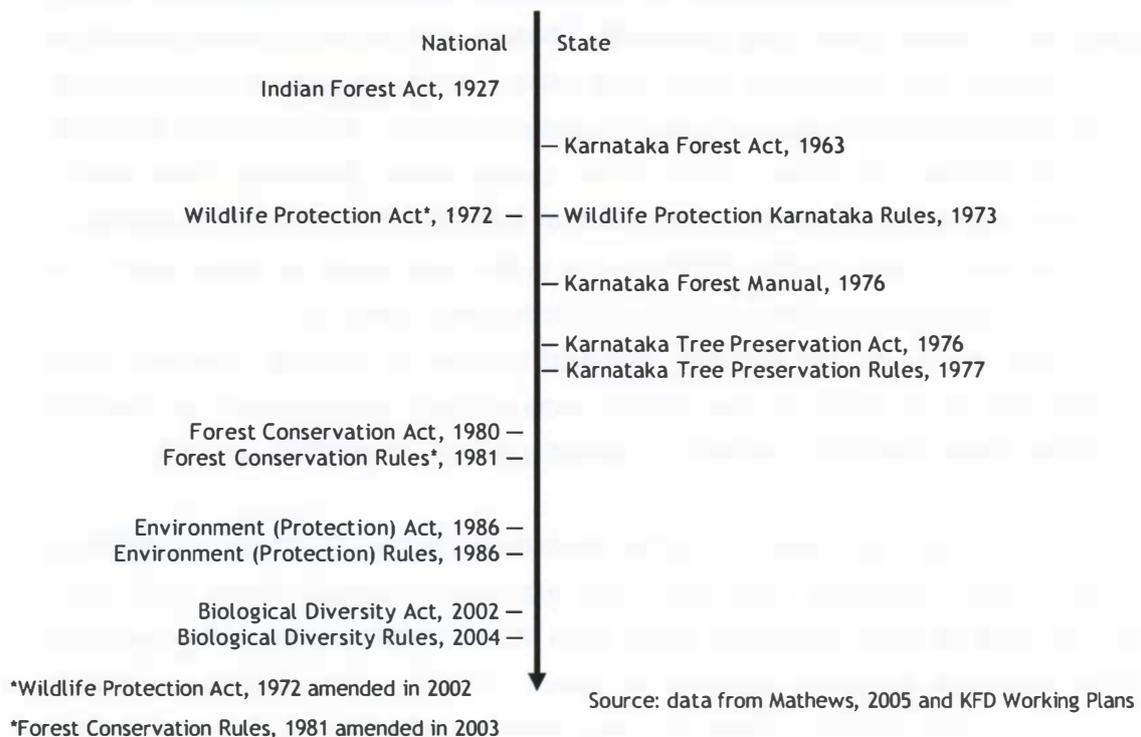
²⁶ We do not develop demographic details here as it is explained by Guilmoto et al., 2000.

migration out of the district (in other parts of Karnataka and even abroad). Finally, this model of population growth “would suggest that Kodagu’s population, which for the most part depends on an economy based on the exploitation of natural resources, has somehow attained or exceeded its upper limit” with regard to carrying capacity of the environment (ibid: 56).

However from the eighties and a little earlier punctually, the Indian government started to realise the negative impacts of the activities conducted on natural resources and initiated some will of changes through new legislations. Nonetheless this change must be due also to the pressure of popular movements as well as international movements. For the Government, this system where all the costs were externalised on natural resources is not playable anymore from an economical point of view neither from a political point of view on the international arena since it was not sustainable.

II. Impacts of conservationist laws (1970s-1980s) on the main actors

Figure 4: Forest and Environmental legislation in India and Karnataka State



In India, step by step environmental issues appeared and become visible in the seventies. Yet, these preoccupations were confirmed only in the eighties notably with the creation of a new governmental body: the Ministry of Environment and Forests (MoEF). This decade marks a turning point in natural resources management especially forests. These changes were also

promoted by the international conferences revealing environmental worries at the global level. The international donor agencies in the environmental field have contributed to the process by supporting the protected area system namely the national parks and wildlife sanctuaries by funding projects and activities and spreading their models of territory (IUCN territorial divisions for national park). While the phenomenon of degradation was ongoing, the Indian Government reversed its strategy over forested lands and stopped some practices. Yet the real motivations are not clear still. The exploitation of forests reduced considerably with the adoption of different measures.

- “Realising the scale of destruction, Government ordered banning of prepaid permits in the early seventies. This had a tremendous impact on the forest and the forest have been recovering remarkably” (Misra, 2003: 38). Conversion of forest patches into teak plantations also stopped: “a conscious decision was taken to stop clear feeling the forest areas for converting them into plantations” (ibid.).
- With regard to tree right, changes occurred with the Karnataka Tree Preservation Act, 1976 and the Forest Conservation Act, 1980. The green tree felling is banned: only dead and fallen trees can be removed.
- The Government intervened actively by editing conservationist laws aiming to change the local practices in forest areas. All forms of hunting, including the traditional ones by tribal people, were totally banned in the state from the Wildlife Protection Act 1972 and the Wildlife Protection Karnataka Rules, 1973. These laws and regulations protect wildlife; prevent certain tree exploitation in forest as well as in private holdings. Moreover they were accompanied with creation of protected areas dividing and reshaping the territory under the control of the administration at a national level as well as local level. The access to natural resources was reduced or even closed to local people.

1. The changes in Forest department’s activities

Consequently, most of the forest tasks reduced dramatically or even stopped. The Forest department did not need to supervise so much forest work anymore therefore the workforce needs collapsed. Today, the remaining forest work carried out by tribal workers is limited to small plantation work in June, cutting dry teak, checking the lines and clearing the boundaries in summer (I.Y1). Most of the tamed elephants are kept idle. The Forest department control, patrol and watch out the forest as well as trees in private lands.

The police role of the Forest department increased. Forest officers evicted and still evict tribal people living in the core area of forests. Paradoxically, this practice conducted in the name of ‘conservation’ (creation of protected areas) has been carried out in the name of ‘development’ as well e.g. the Kabini irrigation project²⁷, the Harangi dam, the tourist

²⁷ It submerged 2612 ha of forest, 3700 ha of agricultural lands and 22 villages with 14 hamlets. The people displaced have been rehabilitated in 21 new colonies ‘with all the amenities’ (Appayya, 2001).

complex in Murkal (Box 2) and the cooperation with Tibetan refugees²⁸. The creation of Rajiv Gandhi National Park is worth mentioning. Both on Kodagu and Mysore districts the park assembles seven governmental forests and is surrounded by coffee estates in Kodagu (west), Kerala forests (southwest), River Kabini (southeast) and parts of reserved forests and private cultivation (northeast).

Box 1: History of Nagarahole National Park

- 1955: Nagarahole²⁹ Wildlife Sanctuary (285 Km² area) is declared by the Coorg Government because of the “gradual depletion of wildlife”.
 - 1891 to 1971: Khedda operations in Kakankote forest led to the capture of 1902 elephants.
 - 1983: the sanctuary is upgraded to a national park and extended to 643.39 Km² (354.95 Km² in Mysore district and 288.44 Km² in Kodagu district).
 - 1986: the Nilgiri Biosphere Reserve is constituted including Bandipur NP, Wayanad WS (Kerala) and Mudumalai WS (Tamil Nadu) for a total area of 5,520 Km².
 - 1992: the park was renamed ‘Rajiv Gandhi National Park’ to mark the first death anniversary of Shri Rajiv Gandhi.
 - 2000: MoEF includes the NP in Bandipur Tiger Reserve under centrally sponsored scheme ‘Project Tiger’. (Appayya, 2001)
-

Forest officers consider the national park as “one of the best Parks in Asia” and “one of the largest conservation areas in India” due its “rich biodiversity of both flora and fauna” and its “spectacular assemblage of fauna” (Appayya, 2001: 4). It contains 32 species of larger mammals³⁰ most of them endangered specie and concentrate high density of 3 endangered carnivores (tiger, panther and wild dog). It contains over 300 species of birds, 32 of reptiles, 13 of amphibians and 10 species of fishes. The vegetation varies from semi-evergreen forest to moist deciduous forests and dry deciduous forests (ibid.). However field observations reveal that the park is far from the wilderness, the territory has been occupied and transformed for centuries by human beings. Not only leases for agriculture were given³¹ but plantations of teak, eucalyptus and of miscellaneous types were raised during the last 100 years up to 16.6% of the total area. The park has a large human population with 14 villages and 45 settlements (haadis) inhabited by Jenu/Betta Kurubas and Yeravas who represent 1703 families and 6,579 individuals (Ramanaiah, 2000). Pilgrimage centres exist including a few temples where villagers and tribals go annually to do pujas. All the people inside and

²⁸ One interviewee blames the Government for clear cutting thousands of acres of forest lands given to Tibetan refugees to grow something and eat. Now “they are constructing building after building, temple after temple. If one group constructs five-crore temple, another one constructs ten-crore temple. Is this the development? For what purpose it was given?” (I.J6)

²⁹ Area named from the river Nagarahole that winds through the park (nagara: snake, hole: river).

³⁰ 55 Tigers, 15 Leopard (census 1993-94), 1707 Elephants, 1170 Gaurs, 1164 Spotted deers, 96 Sambar, 61 Barking deers and 42 Malabar Squirrel (Census 1997-98).

³¹ 162 ha (to Odiga community from 1904) + 3.6 ha (in Arikeri Reserve forest) + Murkal complex.

around the park depend on forest for firewood, bamboo, small timber, NTFPs and fodder (Appayya, 2001).

With the notification as national park (1983) the tribals were not permitted to cultivate the swamps anymore but in some areas they continue. Some of them cultivate ginger in the park. The ban on forest exploitation led to the abandon of forest tasks which “seriously affected the tribals within the park as well as the people living on the fringe [areas]” (ibid: 71) Tribal people do not get sufficient work and those living inside are “very poor” (ibid: 69). They have to go out to work in coffee estates and fields. The zoning³² based on the IUCN principles of wildlife management (Alwa Working Plan 1978-79 to 2002-03) has promoted ‘voluntarily relocation’ of tribals in a Rehabilitation zone at the fringe areas. This mode of conservation refuses to accept the human history of the territory and creates new ones where nature should be cleared of any human influence.

The access to the resources is highly restricted for local people but open for tourists. Besides, according to personal communications with Jenu Kuruba, certain field forest officers would practice smuggling of sandalwood and teak in eastern reserved forests sometimes with the assistance of tribal persons. True or not, this data expresses one civil perception on the Forest department running. Even if KFD imposes rules, the organisation cannot control the behaviour of every employee who may use his social position and his legitimate authority to have access to the resources and make personal benefits.

2. Impacts of these policies on tribal workers

Tribal people living in forests and especially those who worked for the Forest department were and still are the most severely touched by the successive measures that deprived them of certain livelihood sources and cultural roots.

- The shifting cultivation inside teak plantation has stopped creating problem of food security: “now we do not have permission to cultivate inside the forest, we have to cultivate around the house because the rules have changed”. (I.J3)
- With the loss of their employment tribal workers have also lost their principal source of income despite increasing monetary needs due to new requirements of modernity.

“We never used to work outside before we used to work for the Forest department. We used to do all the work from the nursery to the plantation inside the forest. Now they have their own facilities and they started using machines to dig trenches. They used to have our people to catch elephants and train them. Now they catch elephants in a different manner. We know very well how to protect the forest from fire and what are the measures to be taken. Before, many of our people worked as watchers but not anymore”. (I.J3)

³² The park is comprised of: Tourist zone (2 areas), Core zone, Restoration zone, Administration zone, Habitat management zone, Rehabilitation zone plus a Buffer zone or ‘Zone of Influence’ outside the park (state forests/ coffee estates/ villages and private cultivation).

- The collect of forest products has been limited to certain areas (leases to LAMPS) and prohibited in Rajiv Gandhi National park however some tribals confessed that the collect continue in a few places.
- The Wildlife (Protection) Act, 1972 obliged tribal people to stop hunting. This rule has seriously affected their livelihood due to uncertainty with regard to food security. For example Jenu Kurubas used to collect and eat the left over of animals killed by tigers; this meat was part of their food (I.C1, I.J4). Moreover their cultural identity partly based on the consumption of wild fauna has been affected too. Up to now, they cannot satisfy certain traditional needs for example when a Jenu Kuruba woman is pregnant an animal called pura (small type of wild boar) has to be hunted and a particular part has to be cooked and eaten by the lady (I.C1). According to personal communications with tribal people, hunting could be violently punished in the park: Forest officers would have broken the fingers of the children having caught crabs and fishes because it was forbidden by the new law. The question here is not whether this is true or not; we have to consider it as a message revealing the symbolic or effective violence existing between two social groups.
- As mentioned earlier many tribals have been targeted by different measures aiming to evict them from their homelands. They have been deprived of the habitat where they used to live, where their ancestors are buried, and where sacred places are. Yet, with the development of media tribal people know what happened to their relatives in other parts of the district or the country: "In Thithimathi and Chennangi we do not have much problem nobody has told us [to leave but] newspapers told that in Begur, Nagarahole and Kahlala some people have been shifted. When we heard that we say we will not go" (I.Y1). In general the tribal groups are facing difficulties to adapt to so abrupt changes.

Coping strategies implemented by the tribals

- Certain tribals workers decided to go for work outside of the forest into coffee estates under the orders of landowners. The duties carried out in coffee estates are removing weeds, trimming coffee plants, plucking coffee, picking berry, etc. For two Yeravas³³ (Y2 and Y3) this new employment is an opportunity to earn more money since wages in coffee estate are higher. However certain Jenu Kuruba interviewees regret the forest work for diverse reasons. First the mobility: "I prefer forest work because it is easier for us, the forest is here, I can come back home in the afternoon for lunch" (I.J3). Since they live inside reserved forest, they have to go quite far to reach the coffee estates (from Chennangi to the surroundings of Virajpet). This leads to expenses for travel and food compared to when Forest officers come to pick them up (I.J5). Another reason is the leadership, in estate work they "have to listen to the owner" (I.J5). Moreover, meanwhile they work in the forest they can send their cattle for grazing and collect products (firewood, honey, Seegekai, tree mass) whereas "in coffee

³³ In the seventies forest wage was around Rs.3 or 3.5.and in coffee estate Rs.5. (I.Y2) today it is around Rs. 80 to 100 in coffee estate and Rs.60 for forest work.

estates we cannot send cattle [and] we have no permission for firewood" (I.J5). Finally landowners have already permanent workers; they only require seasonal workers for coffee picking season.

The time and the manner how tribal people started to work in coffee estates are not clear. Some Yeravas interviewed started since their childhood whereas two Jenu Kuruba started ten years back "because of the machine replacing human workforce" (I.J3). One hypothesis could be that tribal people started to work for landholders differently, according to the type of community and to the geographical localisation. Richter gave an idea of the relationships between Yeravas and their landowners: "[Yeravas] are strong diligent labourers and their frequent desertion to coffee planters causes no little vexation and loss to their often hard task-masters" (Richter, 1870: 114-115). Maybe the relationships are different between Kodava-Jenu Kuruba and Kodava-Yerava or Gowda-Jenu Kuruba and Gowda-Yerava. The cooperation with the landowners could be quite humiliating. One Jenu Kuruba told that his father who passed away two years ago used to say: "if you wear white dhoti and white shirt and go to the estate, the landowner used to tear it and rub dirt on it. They used to say "you my labourer how can you go like this? Why are you going in white? Go with mud!" Another thing is "if we left moustache they used to pull it out; they gave such punishments". Tribal people were kept at a very low level: "if [the landowner] told us to wash their boots we had to wash their boots. They kept us in such a position as if we were in sub-jail". The violence against workers in general (not only tribal people but also SC and OBC) seems a reality even though certain landholders are proud to declare that in Kodagu they are better treated than in other districts. Today, many tribal men drink alcohol regularly to escape their condition; this is a serious health and social problem affecting these communities.

- Next, it is not clear yet but we supposed tribal people started to organise themselves when economic and social pressures became too oppressing and particularly when new actors emerged in a system so far structured by three main groups: tribal workers, Kodava/ Gowda landowners and forest officers from various communities. The actors appearing in the eighties are NGOs including Coorg Organisation for Rural Development (CORD) created in 1981 in Kodagu; Development through Education (DEED) in Hunsur; Vikasa created in 1986 in Heggada Devana Kote called HD Kote and Budakattu Krishikara Sangha (BKS). Thanks to the support and assistance of these NGOs, tribal people started to resist to the power-holder groups and this marks the advent of a real collective action we will develop further. The case of Murkal tourist complex is one example. In the same way, from 1996 the High Court has started to play an important role in decision-making process on forest management.

Box 2: The case of the Murkal tourist complex

During 1985 to 1989, a hotel complex was constructed by KFD Corporation at Murkal inside Nagarahole National Park to provide facilities for ecotourism. However due to lack of expertise to run such a project, the complex was leased out to a private company³⁴ for 18 years (for Rs.124500/month). Meanwhile some of the tribal people living within the park with the help of NGOs approached the High Court which in turn quashed the lease. Government of India recognised the complex could not be leased out to private hotel group under the Forest Conservation Act. Nevertheless, the ongoing management plan recommends the development of the place into a Tourism zone for a total area of 137.61 sq. Km since the installations are already there.

(Appayya, 2001)

3. Impacts on coffee grower landowners

The conservationist laws have affected coffee grower landowners in various manners.

- Due to decreasing forest work, landowners have gained in workforce available locally, this can be considered a positive change for them. Tribal people are particularly appreciated for their skills such as tree-climbers to do pruning.
- The hunting ban is a great change for coffee grower landholders especially the Kodavas who are traditionally hunters. It seems that thanks to Coorg Wildlife Society created in the early eighties who took a leading role in the wildlife protection, the landowners have chosen to protect wildlife rather than hunt.
- Legislations such as Karnataka Tree Preservation Act, 1976 has prevented landowners to exploit their properties' timber freely, restrictions exist to cut, transport and sell the timber especially teakwood, rosewood and sandalwood the most valuable species. Only eleven tree species are exempt from these regulations, most of them being exotic ones³⁵. Rosewood and Sandalwood must be sold by auction through government depot. The timber has become less lucrative than before due to the new constraints. Besides, in private lands, the rules differentiate the trees belonging to the Government and the private trees. In redeemed land the trees belong totally to the landowner. No permission is needed to cut a tree and once it is sold 10% are retained by the Government for handling charges and the owner gets 90% of the value of the tree. In unredeemed land, the distinction has to be made whether the tree belongs to the government or to the landowner since both could coexist. If it is a government tree the landowner can use the tree for its 'bonified' purposes but in case he wants to fell it, he has to get permission from the concerned Tree Officer. Procedures are a real constraint for the landowner since many papers are requested and it requires a long time to be settled (Cheynier, 2006). In case the landowner wants to sell the tree the rights are 50%-50% for

³⁴ The company name is M/s Gateway Hotels and Gateway Resorts Ltd.

³⁵ Casuarina, Coconut tree, Erythrina, Eucalyptus, Glyricidia, Opea Wightina, Prosopis, Rubber tree, Sesbania, Silver Oak and Subabut tree.

each part. The landowner gets half because the tree “stood on [his] land for such a long time, [he] ha[s] looked after it and ha[s] provided with the nourishment and everything to it grew” (I.K1). Due to charges (5% paid to the Government), the landowner gets 45% of the timber value. Currently a battle on tree right is conducted in Kodagu. The landowners of unredeemed lands request a list of Government’s trees on their lands otherwise they would consider that all the trees belong to them and use them as they wish. A lawyer insists that the Karnataka Tree Preservation Act 1976 imposing to obtain permission to cut trees in private lands except the fast growing ones is not applicable in a few areas. An exemption exists if the land contains coffee, tea or rubber plantations with more than so many plants per acre. For example, this act is not applicable for coffee plantation with 3,000 plants per acre. In this case the landholder can cut without permission the tree belonging to him (over 300 CFT) but the problem is that the Forest department does not respect this rule. Besides after cutting the landowner is trapped because to do anything either to transport or sold the timber permission from the department is required³⁶: “that is where the hitch is” (I.K1). In general it seems that law is not well known nor well implemented by certain Forest officers.

Copying strategies chosen by coffee grower landowners

- One strategy is planting exotic species since the regulations do not applied to them. The silver oak (*Grevillea robusta*) is the most favoured specie: there is no restriction for felling and transport (easy to manage), it is a fast-growing specie, it provides support to grow pepper and plants are easily available in private nurseries. Yet in an agronomic point of view the specie has disadvantages: the bark is smoother than native trees to grow pepper, the manure is not of good quality and the leaves do not decompose well. From an ecological point of view, the replacement of native species by exotic fast growing species provides a lower density canopy cover and has impact on biodiversity; not only the diversity of plantations decreases but the plantations are likely to become less rich if the Silver oak ends up by having the upper hand on native specie. Since this specie has been introduced quite recently, it has not had the time yet to co-evolve therefore in general it does not provide a good habitat for pollinators, birds, etc. (PC: Garcia, 2007)
- Another strategy is that most of the landowners prefer to sell standing trees to timber merchants who will be the one to handle all the procedures and bribing the officers if needed (for more details read Cheynier, 2006). The landowners can chose to do timber smuggling on their own trees (which seems irrational in appearance only) without being seen or with the cooperation of certain Forest officers thanks to corruption. When levels of incomes are not equilibrated between low-paid forest staff and well-off coffee growers, getting round the rules may be a strategy for both actors to make money.

The coffee grower landowners have been trying to adapt to the laws to secure their sources of income and fought for their rights when the access to resources or even the establishment

³⁶ under the Karnataka Forest Act.

of their land tenures were menaced by the new rules. Their leeway seems wider than the one of the tribal people to adapt themselves and play in the changing system.

4. Interpretation

In her article Susan Mathews (2005) explains how conservation -in some extent- is part of the same continuum of nature 'colonisation' and exploitation as resource (forest product exploitation and animal hunting) leading to tame and manage nature. The Indian Government and many other postcolonial governments "have continued with, sometimes even strengthened colonial conservation practices" (Mathews, 2005: 8). This conception opposing a nature considered as wilderness to a nature associated to culture (homeland for humans) appears in different forest and wildlife laws and policies (Forest Policy, 1952; the Wildlife (Protection Act), 1972 and the Forest Conservation Act, 1980) and led to the creation of human-free protected areas. With the Wildlife Protection Act, 1972, "the adivasis were seen as intruders, 'encroachers' in what till then had been their homelands and were largely blamed for its destruction." (Mathews, 2005: 9) According to Mathews the creation of protected areas in India has had two effects: the prevention of biodiversity destruction by development projects and the adverse impact on indigenous communities who were displaced and whose livelihood were suppress while contradictorily the Government sometimes denotified protected areas for development actions. Has the advent of participatory forest management changed this tendency?

III. On the way to participatory forest management

The advent of participatory forest management started punctually in the seventies and was confirmed in the eighties with a new forest policy and new guidelines on forest management. Is the participatory forest management a real change in the functions attributed to forests? Does it modify the perception on forest dwellers' place in the forest? What are the impacts of this new strategy adopted by donor agencies, Gol and the state forest departments?

1. The National Forest Policy and Joint Forest Management

A turning point in the Indian forest policy history is the National Forest Policy, 1988 stating that forests should be conserved as a whole ecosystem (soil, water, animal, plants and humans) providing what we call 'environmental services' today and from where local people should meet their livelihoods thanks to sustainable use and management:

"The principal aim of Forest Policy must be to ensure environmental stability and maintenance of ecological balance including atmospheric equilibrium which are vital for sustenance of all lifeforms, human, animal and plant. The derivation of direct economic benefit must be subordinated to this principal aim" (National Forest Policy, 1988. & 2.2).

For the first time commercial exploitation of forests for industrial purposes is abandoned. From now on, wood for timber industries should be grown out of natural forests and could be imported. Besides, not only the policy favours NTFPs' utilisation but it also declares the welfare of forest dwelling communities, especially tribal ones³⁷, and the respect of their rights as major objective:

“The life of tribals and other poor living and near forests revolves around forests. The rights and concessions enjoyed by them should be fully protected. Their domestic requirements of fuelwood, fodder, minor forest produce and construction timber should be the first charge on forest produce”. (National Forest Policy, 1988. & 4.3.4.3)

Saxena (1997) explains why that radical change in forest policy was feasible. Due to rising supply of pulpwood in private lands (Eucalyptus) and liberalisation of its imports, the industry decreased its dependence over forests. Forest-based industries were also increasingly criticised in the press for their destructive practices. Next, in the seventies already certain forest officers expressed their willingness to involve local people in forest management (in West Bengal and Haryana) and the states found new authority and power in their relationships with local people by improving degraded lands. Another factor is that since 70% of the total population lived in the countryside, rural interests could not be ignored for long in a democratic country such as India.

Besides, commercial interests having lost the first place no strong political constraints prevented such a change facilitated by historical forest-based movements and more recent environmental battles (Saxena, 1997). It is not possible to develop here all these movements, for more details we recommend Gadgil and Guha (1992), Baviskar (1995), Poffenberger and McGean (1996). Here we shall underline that forest dwellers fighting for their rights organised tribal revolts (since 1778), armed struggles, political movements such as naxalism movements as well as peaceful and non-political movements. One of the best known examples of peaceful resistance is the Chipko movement started in 1973 in today's Uttarakhand State in the Himalayas. Women took a leading role by hugging trees to prevent felling. Surprisingly one of our interviewees informed us that similar movement took place in the studied area, the local leader was a man from Gathadalla village who died two years ago (I.G1). Finally with increasing popular movements, the Supreme Court of India started playing a pioneering role in forest conservation and changed the decision making process³⁸. The implementation of the 1988 Policy has been facilitated by the Government's resolution dated

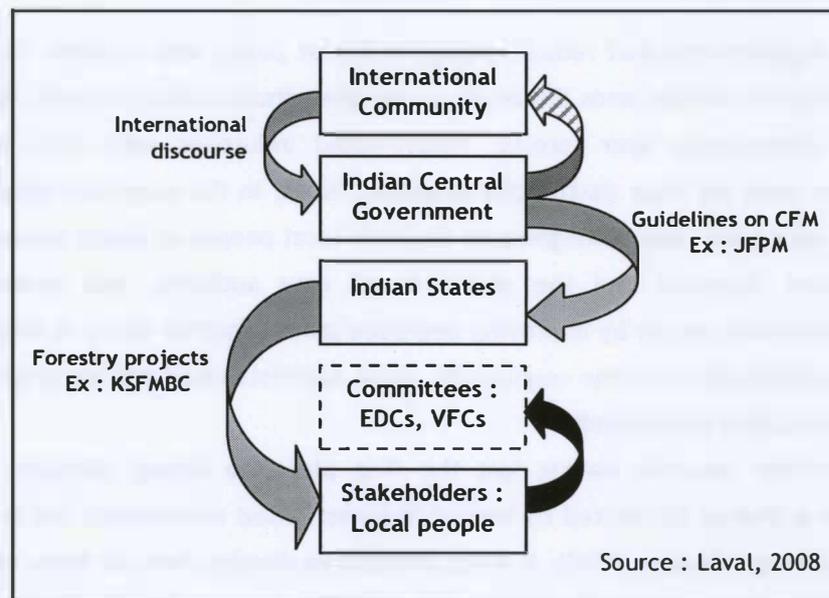
³⁷ “Having regard to the symbiotic relationship between the tribal people and forests, a primary task of all agencies responsible for forest management [...] should be to associate the tribal people closely in the protection, regeneration and development of forests as well as to provide gainful employment to people living in and around the forest. While safeguarding the customary rights and interests of such people, forestry programmes should pay special attention to the following [...]” (NFP, 1988. & 4.6)

³⁸ In Karnataka, in 1991 a lease of 30,000 ha of common lands granted to a paper company by the state Government was cancelled due to the pressure from certain NGOs. Gol through the Supreme Court opposed the decision of Government of Karnataka (Hiremath et al, 1994) quoted by Saxena (1997: 43).

1st June 1990 making it possible for the state Forest departments to involve people in forest management (Saxena, 1997). The 1988 National Forest Policy and the Joint Forest Management renew people’s link with forests and put an end to the “Forest-people interaction [...] conceptualised as a zero-sum game, in which neither party could not win” (ibid: 38).

2. Participatory forest management process

Figure 5: Formation process of Community Forest Management (CFM) in India.



As part of the international community, Government of India (GoI) approved and promoted the international discourse on communities’ participation in natural resources management to achieve sustainable development and conservation of natural resources. This engagement was confirmed and stated publicly when GoI ratified the Convention on Biological Diversity (CBD) in 1994. Article 8j³⁹ “in situ conservation” proclaims the necessity to involve local people in biodiversity conservation:

“Each Contracting Party shall, as far as possible and as appropriate:

(j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices;” (CBD, 1994)

The guidelines on community forest management issued by GoI are the Joint Forest Planning and Management (JFPM) aiming to involve village communities and voluntaries agencies in the regeneration of degraded forest lands. All the Indian states were requested to adopt

³⁹ <http://www.cbd.int/convention/articles.shtml?a=cbd-08>

those guidelines through state government orders such as the last Revised Government order on Joint Forest Planning and Management in Karnataka, 2002⁴⁰. Through this document, rural people are called to adapt or change their practices on forests thanks to forest development activities. The objectives of JFPM schemes are that village communities get a share from the forest resources and “identify themselves with the protection, development and management of forests and other Government waste lands” (Revised GO Karnataka, 2002).

The salient features of JFM listed from Saxena (1997) are presented below:

- Villagers organised into a village association obtain access to forest lands.
- They should benefit from usufructs of grasses, lops and tops of branches and NTFPs as well as a portion of the proceeds from the sale of trees on successful protection of forests.
- The village community may be permitted to plant not only trees for fuel, fodder, timber but also fruit trees, shrubs, legumes and grasses.
- No grazing is allowed in the forest area protected but the villagers can cut and carry grass free of cost to promote stall feeding;
- No ownership or lease rights over the land will be given to the beneficiaries and agencies;
- In case of failure to protect the area the usufructory benefits could be withdrawn;
- The benefits are for village communities alone and not for commercial or other interests.

All the forestry projects implemented after 1990 do not necessarily develop JFPM schemes, other types of participative forest management schemes exist. The area officially covered under JFPM in Karnataka is listed below:

“JFPM shall [...] be introduced in the following classes of lands excluding National Parks and Sanctuaries in the State:

- i. Degraded forests lands, where the canopy cover is 0.25 and less.
- ii. Reserved forests that are predominantly inhabited by tribal people or are in the vicinity of areas where forest-dependant tribal people live or which they traditionally depend upon for their livelihood or which they culturally identify themselves with, may also be subjected to JFPM involving the tribals irrespective of the density of the canopy cover of the forests.
- iii. Government waste lands, C and D class lands, gomal lands, unclassified lands and other lands under the control of the Revenue department transferred for the purpose of JFPM to the Forest department.
- iv. Roadsides, canal banks and tank foreshores and other non-forest lands under the control of the Karnataka Forest Department (KFD)”. (Revised GO on JFPM in Karnataka, 2002)

We want to make it clear that JFPM is not applicable in protected areas (national parks and wildlife sanctuaries) hence many forests that are often in better states are expelled from the programme. In Kodagu at least 40% of the forested area⁴¹ is excluded.

⁴⁰ This GO replaces the GO N° AHFF 232 FAP 86 dated 12-4-1993 (first GO on JFM in Karnataka) and the GO N° FEE 94 FAP 93 dated 16-12-1996. The state GOs are not still, they have evolved with time.

⁴¹ Rajiv Gandhi NP (Kodagu part: 354.95 km²), Brahmagiri WS (181.29 km²), Pushpagiri WS (102.92 km²) and Talakaveri WS (105.59 km²). Total area excluded: 744.75 Km².

Participatory Forestry Projects in Karnataka

The low priority granted to forests in general and wildlife in particular both by Gol and the state governments is revealed by a very low allocation of funds (Appayya, 2001). For example from 1951-56 to 1992-97, even if funds for forestry and wildlife sector increased in absolute terms, the proportion granted has remained generally inferior to 1% of India's development budget contrary to agriculture receiving from 20 to 24% (Saxena, 1997: 18). While forests development projects were initially funded with national resources, in the mid seventies donor agencies started to intervene in the Indian forestry bringing more funds. "[B]ecause of the global attention on the 'fuel wood crisis' and deforestation, forestry was one of the first among many development sectors in India to attract international funding on a large scale" (ibid: 46). Table 1 presents the projects implemented in Kodagu District to date.

Table 1: Participatory Forestry Projects in Kodagu (Karnataka)

Project name	Exec. agency	Funding agency	Project Cost	Duration	Objectives	Activities (target)
Karnataka Social Forestry Project	WB ODA		Rs. 552.30 million	4 years 1983-84 to 1987-88	Reduce people's pressure on forests to benefit industrial forestry	<u>Farm forestry</u> : 120,500 ha <u>village woodlots</u> : 26,946 ha
Karnataka Western Ghats Forestry Project	ODA KFD	ODA (UK)	Rs. 1.050 million	6 years 1993-1999		Afforestation; Research; MIS and GIS; Trainings, etc.
India Eco-development project (IEP)	WB IDA	- GEF - IDA / WB - Gol - FDs (7) - Local people	US \$ 67 million*	5 years 1997-1998 to 2001-2002	Forest ecosystem and biodiversity conservation	Creation of EDCs Relocation of tribal people Alternative livelihood
National Afforestation programme (NAP) ¹	KFD	Gol	Rs. 475.71 lakhs	5 years 2002-03 to 2006-07	Sustainable development of forests	<u>Afforestation</u> : 2050 ha <u>Creation</u> : EDCs, VFCs
Karnataka Sustainable Forest Management and Biodiversity Conservation (KSFMBBC)	KFD	JBIC KFD	Rs.745 crores	8 years 3 phases	- Ecological and biodiversity restoration - Reduce poverty	<u>JFPM target</u> : 1 200 VFCs, 73 EDCs, 6 000 SHGs <u>Afforestation</u> : 1,85,000 ha <u>Farm forestry</u> : 76 m. seedlings 2,150 ha/ 500 t seeds

*Total Cost for the whole India

¹ Data only available for Madikeri Forest Division, Virajpet Forest Division is missing.

ODA: Overseas Development Agency (UK); IDA: International Development agency; Gol: Government of India

Source: Data from Saxena (1997) and Karnataka Forest Department official reports

From the eighties KFD has been beneficiated from externally-aided forestry projects. Out of five projects, only National Afforestation Programme was funded with internal resources. With regard to people's participation, Karnataka Social Forestry Project and India Ecodevelopment Project did not contain JFM schemes but other types of measures to ensure people's participation. What are the impacts of those community based forest management (CBFM) schemes on the ecosystems, the people's livelihood and the local governance? Before the analysis of NAP and KSFMB (Part 3), let us examine first the following case.

The controversial case of India Ecodevelopment project (IEP)

Table 2: General details on India Ecodevelopment project (IEP)

Name	India Eco-development project (IEP)
Focal area/ Operational programme	Biodiversity, forest ecosystems (OP ₃)
Location	7 protected areas including 5 tiger reserves: Buxa Tiger Reserve (West Bengal), Ranthambhore Tiger Reserve (Rajasthan), Gir National Park (Gujarat), Palamau Tiger Reserve (Jharkhand), Pench Tiger Reserve (Madhya Pradesh), <u>Rajiv Gandhi National Park (Karnataka)</u> and Periyar Tiger Reserve (Kerala)
Protected area total	6,714 km ²
Population	Participation of 427,000 villagers including 39% tribal people
Implementing agency	World Bank-International Development agency (IDA)
Total cost	US \$ 67 million
Funding	Global Environmental facility (GEF): US \$20.21 million grant International Development agency (IDA) / World Bank: US \$8 million loan Government of India (GoI): US \$18.79 million 7 State Forest Departments Local beneficiaries (25% of the cost of forestry development activities)
Duration	5 years starting 1996 (from 1997-1998 to 2001-2002 in Rajiv Gandhi NP).
Phases Of implementation	Phase I: 1998-2002, Phase II: 2002-2003, Phase III: 2003-2004
Activities	Improving protected areas management Development of village Ecodevelopment committees (EDCs) with planning Environmental education and awareness campaigns Preparation for future biodiversity projects

Source: data from Devullu P. et al (non dated)

India Ecodevelopment project was a project of US \$ 67 million implemented by the World Bank and the International Development agency (IDA) from 1996 for five years. Seven Indian states were involved. In Karnataka the project was executed in Rajiv Gandhi National Park. The aim of project was biodiversity and forest ecosystem conservation. The activities intended to release forests from human pressure by different activities (e.g. supply of energy saving devices, implementation of agroforestry models, creation of farm ponds, etc.). Institutions (EDCs) were created to transfer to villagers “the responsibly of protecting the park adjoining their villages” (Appayya, 2001: 48). An important scheme was the voluntarily relocation of tribal people from core forests to the fringe areas with supply of housing facilities and lands for agriculture. For those who preferred to stay, jobs and skill improving programmes were to be provided and people received various items⁴². Microplans and self helps groups were created for them (ibid.).

We interviewed one president of this kind of EDCs; he thinks the project is a success because elephants' intrusions in the village have decreased sharply (I.K10). The Forest department in general seems also satisfied nevertheless the Management Plan of Rajiv Gandhi NP states that delays from the time EDCs were formed to the activities implementation caused difficulties; due to “lack of regular flow of funds [...] the villagers in the process loose faith in the departmental programme” besides, the project underwent “total lack of monitoring and evaluation of programmes” (ibid: 195-196). In fact according to the angle chosen the project may be seen as a success or as a serious failure. With regard to indigenous communities, several articles and reports criticise strongly the entire project (Mathews, 2005; Devullu et al.). Severe major drawbacks⁴³ were identified including forcible displacement of local tribal communities (violation of World Bank's operational directives), impoverishment of these communities creating inequities with non-tribal groups, lack of information and lack of involvement of the local communities in decision-making process, creation of superficial institutions (EDCs) and superficial development programme, ignorance of people's contestations, colossal cost of the project, cases of large corruption in the administration (Rs.6 million in Karnataka), negligible effect on biodiversity and forest conservation with the proposed alternative livelihoods (Devullu et al.).

The data we collected reveal that the first phase of rehabilitation from Nagarahole forests involved 50 tribal families and took place in 1999. Then in 2000, 155 families were shifted (Appayya, 2001). These official data hides quite dreadful field realities:

⁴² Solar lanterns, copper water container, kerosene stove, pressure cooker, utensils, blankets, medical facilities and uniforms, books and bags for children (Appayya, 2001).

⁴³ See Mathews (2005) for Rajiv Gandhi NP as well as Devullu et al. on Gir NP and Pench Tiger Reserve.

“The first batch thrown out was composed of fifty families. Among them twenty-seven were employees of the Forest department, they were regularly paid. Is it forcible eviction or voluntary relocation? You are employee of the Forest Department, I tell you: “move and sit there”. Will you listen to me? If you do not listen, what can I do? I can use force, I can throw you to some other place, I can cut your salary, I can cut your increment. This is what happened. This was the first fifty families forcibly thrown out but [Forest department] said it is ‘voluntary relocation’. If it is voluntary why people had to move in the middle of the night from the forest? They can go in the daytime, no? And after moving out, out of these fifty families, ten people died within one year; all unnatural deaths including one new born baby who was eaten away by dogs. Yes, eaten away by dogs! Do you want such a development? Is it the way to protect forest? Is that the participatory forest management? Sky and heaven were a promise for them so they went there. First they were given Rs.1000 each per month for survival [...] after ten months it ended, afterwards nothing. When they asked “please help us” the DCF Anaya told them “eat mud”! Now more than thirty people have died after going there”. (I.C2)

Although we could not verify these pieces of information, it seems difficult to think it is made-up. In addition, after having rejected the suggestions of People’s Plan⁴⁴, in 2001 the DCF M.K. Appayya still recommended the ‘voluntarily relocation’ of the tribals until 2010 (end of the management plan validity). The implementation of IEP in Rajiv Gandhi National Park is a living example of the disastrous consequences of certain type of conservation project on local communities. Nevertheless the situation seems better in Periyar Tiger Reserve (Kerala) where positives actions are notified.

3. Last improvements in forest and environmental legislations with regard to local communities

Recently the Wildlife Protection Act, 2002, the Biological Diversity Act, 2002 and the Panchayat (Extension to Scheduled Areas) Act⁴⁵, 1996 represent a positive progress toward recognition of local communities’ actions for habitat and biodiversity conservation (Mathews, 2005). However Mathews regrets that “in none of these laws are the provisions explicit and strong enough for this to automatically happen” (ibid: 11). Yet, if we consider the strategic analysis approach the implementation of laws can never be automatic and this is precisely where the hurdle is. People interpret and re-appropriate law in a way convenient for them according to their motivations, interests and own rationality.

⁴⁴ People’s plan for Preservation of Adivasi and Nagarhole forests in Karnataka (no date) was written by some Jenu Kuruba, Betta Kuruba and Yerava of Nagarhole with the help of NGOs such as CORD, DEED and Fedina Vikas. “Through this plan, the adivasis offer a viable alternative to protect forests and their own ethnicity” (Rajiv Gandhi NP Management Plan, annexure XXV, p.341).

⁴⁵ This act enables ST to develop certain control over natural resources yet it is limited to ‘Scheduled Areas’ hence many sites are excluded such as Nagarhole National Park. (Mathews, 2005)

Today's major stake is The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006⁴⁶. At the time of the field study, the act was still in the 'bill form'⁴⁷. The beneficiaries identified are not only "forest dwelling Scheduled Tribes" but also "other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded" (Tribal Bill, 2006). All these groups will get lands even if the size of the area does not appear in the last Bill⁴⁸ that provides a scope for developing infrastructures inside the forest up to one hectare of land for each activity among 13 aspects (post offices, education institutions, etc.). If the bill comes into force [...] five years are given to transfer the property rights.

This act is very controversial and there is a lot of opposition to it. So far we identified certain strategic groups however other groups exist and within a group the positions can be full of nuances. On one hand the Forest Department⁴⁹, the wildlife/forest conservation organisations as well as local non-tribal people seem quite opposed to the scheme. They fear reduction indeed destruction of the forest cover. According to one Conservator of forests even if a few acres are granted the major problem would be the fragmentation of forests called 'honey combing' which would have an impact on wildlife's movements and therefore requires corridors. One interviewee feels that contractors will be the main beneficiary not the tribals, since huge funds will be allotted to develop infrastructures inside the forest where "13 hectares of land for each village can be used for non-forestry purposes" (I.K1). On the other hand, other groups including the forest dwellers and the indigenous' rights defenders claim the opposite⁵⁰. For CORD the question is not just getting rights, the beneficiaries will also protect the environment: "if there is right, there is a duty so that is where the conservation, the regeneration comes in [as well as] the value system". Nevertheless they added "we have to ensure that [some people of the new generation] learn from [the ancients]". Adivasis and the adivasis' defenders have a great hope on this act; it is not only a matter of property but also of social recognition to put an end to the domination by other social groups: "if somebody inflicts them a personal harm they can book a case on these atrocities" (I.C1).

⁴⁶ Act N°2 of 2007 dated 2nd January, 2007. published in The Gazette of India.

⁴⁷ Passed by the Lok Sabha or People's Assembly (lower house of the Indian Parliament) it had to go to and be passed by the Rajya Sabha or Council of States (upper house) before the President's signature.

⁴⁸ CORD NGO members pretended 10 acres of land would be granted however a lawyer insisted that neither the provision of 2.5 ha in the first bill or any area size was mentioned in the Bill of Dec.2006.

⁴⁹ The Forest department claims that the country would lose nearly 16% of its forest cover (Noronha, 2005 quoted by Mathews, 2005) however the Economic Times, 2005 underlines that 60% of India's best forests are found in adivasis areas (quoted by Mathews, 2005).

⁵⁰ Asian Centre For Human Rights, CORD, DEED, BKS and many organisations not possible to list here.

Forest department may lose control over some parts of its territory since the lands granted might be removed from forest lands to become new land tenure. The rules of the game between forest officers and tribal people could be redefined and the latter could gain power. The Forest department is now facing a major source of uncertainty. This evolution is written in a phase of transition undergone within the administration due to the participatory approaches we will develop in the fourth part. Similarly the rules of the game can also change with landowners: the tribals may cultivate their own plantation and maybe stop working for the landowners to be their own chief.

To sum up, this first part highlights the impacts of changes affecting land use and natural resources management in Kodagu on the relationships developed among three main groups of actors we find in today's collective action for natural resources management. The historical perspective aimed to understand how the tribal people and the rice-cultivating communities shifted their activities respectively into workers and coffee growers and how they were affected by the Forest department's actions in charge to implement national and state rules. In this changing system we voluntarily put aside other actors.

The landowners were able to adapt themselves to the changing rules and thanks to the commercialisation of coffee their social and economical situations improved largely. Nevertheless it would be an error to think that all the landowners are well-off or to consider all the Kodavas or Gowdas as wealthy which is not true. The reality cannot be reduced only to indicators of community nor profession. On the other side, the tribal workers and non workers are the losers of this game, they are truly crushed by the rules and the repression of the Forest department and the life next to landowners is not always pleasant. These workers are the ones who suffer the most. It is always a shock for an outsider to discover what finally reveals not only the dark side of the caste system in India but also in general the low consideration of minority groups in some countries. In this phase, we consider the Forest department officers as the winner in this game, they benefit from the legitimacy of law which enable them to develop power relations with landowners and tribal people in their favour. Yet, here again all the forest officers are not equivalent we can suppose officers benefit differently from the system according to their hierarchy position, their personality, their education, etc.

The legislation has legitimated the Forest department as the only guardian of forest conservation against local populations and especially the tribals judged responsible for depletion of all the resources. Besides this conception was largely conveyed and shared in the international discourse. It is only recently that certain international conservation organisations have changed their point of view in reaction to the challenges and protest of

indigenous people worldwide⁵¹ (Mathews, 2005). The 1988 forest policy marks a turning point in forest function and management and from 1990 the Forest department has officially the power to involve villagers in forest management under different schemes (i.e. JFPM or other). Even though today the right of local communities to live from and inside forests is recognised, in practice the situation is quite different inside protected areas (e.g. case of Rajiv Gandhi NP).

With the strategic analysis, we presume that even the greatest loser keeps a leeway and is capable of mobilising its resources to find out strategies to overcome troubles and in the best case is capable to reverse the system in its favour. It seems -in some extent- that this time has come for tribal people and other forest dwellers thanks to the coming forest law. People in general were never unreceptive and passive to the loss of the changes affecting forests. This time, would the global policies be influenced by local people's needs and interests? To answer this question we should first examine the stake of biodiversity conservation Kodagu's forests inhabited and highly exploited for a long time (Parts 2 and 3). Then we should analyse in details the collective action for natural resources management organised in the framework of participatory forest management (Part 4).

⁵¹ The recognition of local communities' rights to own or manage protected areas was accepted in 1994 by IUCN, in 1996 by WWF policy, in 1996 by the World Conservation Congress and in 2003 by the 5th World Park Conference (Durban Accord). (see Mathews, 2005)

Part 2: Identification of an environmental problem in Kodagu

The previous interactions between forest and environmental policies and the main actors involved in today's participatory forest management have just been presented. Now we shall present and understand the environmental stakes in Kodagu. The Strategic environmental management analysis is a framework for assessing effectiveness in the pursuit of ecological goals. Here we consider that Kodagu's forests (our environmental object) are worth studying due to the existence of an environmental problem that different actors suggest managing. Our interviewees identified spontaneously two main processes featuring this environmental problem: human-elephant conflict and forest ecosystem changes.

We should first concentrate on the ecological data available on the area studied to document conservation stakes. These data are either scientific publication either local knowledge of the local people encountered. Then by comparing the data produced at a national or global level with the field data produced by our empirical study, we believe that the stake of conservation may varies from global to local levels. Kodagu holds major features internationally recognised since it is part of a wider natural area, the Western Ghats, recognised as biodiversity hotspot along with Sri Lanka (Myers, 1988) and it is one of the main habitats for the Asian Elephant endangered specie. But, are the conservation stakes perceived identically by the actors of the international communities and the local rural people who live daily on the spot? What is the field reality of biodiversity and forest conservation in Kodagu?

I. Stakes of conservation in Kodagu

We limit our study on biodiversity elements to a brief presentation of manifold data available from various Indian institutes (e.g. Centre for Ecological Sciences, Bangalore) as well as the French Institute of Pondicherry (Department of Ecology). Biodiversity can be investigated according to different scales, i.e. from the Western Ghats to the different types of Kodagu's forests. The bibliography available comprises various sources such as reports, articles, thesis and atlas. The interaction between biodiversity and hotspot in general is documented by Myers 1988; Myers et al, 2000; Gadgil et al, 2004. On Western Ghats' vegetation and biodiversity, the references are Pascal, 1984; Pascal et al., 1988; Pouchepadass, 1990; Pouchepadass,1993; Subash Chandran, 1993; Salaün,1995; Ramesh et al., 1997, Salavador et al., 1997; Krishnan et al., 1999, Gimaret-Carpentier, 1999; Ramakrishnan et al. 2000 and Garcia, 2003 (sacred groves). The role of coffee plantations in biodiversity conservation has

been studied by Elouard, 2000; Elouard et al., 2000 and Moppert 2006. With regard to fauna the references on tigers are Karanth and Sunquist, 1992; Karanth and Nichols, 1998; Karanth 2004, Karanth et al., 2002 and 2004; on the Asian Elephant the references are Sukumar 1989; Nath and Sukumar, 1998. Dr K. Ullas Karanth is a zoologist director of the Wildlife Conservation Society India Programme. He has carried out various studies on tiger population in Rajiv Gandhi (Nagarahole) National Park. The potential for ecological research in Kodagu is quite high notably in the national park with regard to both fauna and flora. No monitoring or location or movement of animals is carried out by the Forest department “due to lack of Reaserach officers” hence further studies are needed notably on prey community (Appayya, 2001). Up to 2001 no check list of insects was conducted. Next, up to 2001 no study was carried out on ethnobotanical value of plants specie (ibid).

1. The Western Ghats’ biodiversity Hotspot

1.1. Details on the hotspot

Kodagu District is part of the Western Ghats, a mountain range running for 1,600 kilometres through five different states: Goa, Maharashtra, Karnataka, Tamil Nadu and Kerala. The annual rainfall is comprised between 2,000 to 8,000 mm over three to four months. The range plays an important hydrological role as catchment area for several important rivers such as Godavari, Krishna and Kaveri (or Cauvery in English). The Cauvery River considered rising at Talakaveri in Brahmagiri Hills (Kodagu), flows (southeast direction) for 765 kilometres through Karnataka then Tamil Nadu before entering the Bay of Bengal. The Cauvery River basin is around 27,000 square miles. This river plays many roles: vital water resources, economical role (irrigated cultivation) and religious role. It is a sacred river personified as the Goddess Kaveri worshipped by Hindus.

Map 3 : Localisation of the Western Ghats Sri Lanka biodiversity hotspot



Source: internet

With regard to fauna and flora this area is exceptional for its specie endemism but it has faced important change for the last 150 years. Hence the Western Ghats have been identified as biodiversity hotspot along with Sri Lanka (Myers, 1988). Hotspots are defined as “areas featuring exceptional concentrations of endemic species and experiencing exceptional loss of habitat” (Myers et al., 2000: 853). While Myers has identified 25 biodiversity hotspots, the NGO Conservation International presents 34 hotspots⁵² on its website. The identification is based on two criteria: species endemism and degree of threat. Today a hotspot should contain at least 0.5% or 1,500 of the world’s 3000,000 plant species as endemic and should have lost 70% or more of its primary vegetation (i.e. habitat containing most of the species especially the endemic ones) (ibid.).

Table 3a: Area of the Western Ghats Sri Lanka hotspot

Area of the Hotspot	
Original extent of primary vegetation (Km ²)	182,500
Remaining primary vegetation (Km ²)	12,450
Remaining primary vegetation (% of original extent)	6.8

Table 3b : Species endemism of the Western Ghats Sri Lanka hotspot

Plants species		Vertebrates species	
Species (number)	4,780	Vertebrate species (number)	1,073
Endemic species (number)	2,180	Endemic species (number)	355
Endemic species (% of global plants, 300,000)	0.7	Endemic species (% of global vertebrates, 27,298)	1.3
Ratios species/area (per 100km ² of hotspot)	17.5	Ratios species/area (per 100km ² of hotspot)	2.9

Sources: data from Myers et al., 2000

The Western Ghats Sri Lanka Hotspot counts 4,780 plant species including 2,180 endemic which represent 0.7% of global plants (300,000 in total) as well as 1,073 vertebrate species including 355 endemic which represent 1.3% of the worldwide vertebrate species (27,298 in total). Only 6.8% of the original extent of primary vegetation remains today (12,450 Km² for a total of 182,500 Km² in the past) therefore a strong stake of biodiversity conservation exist.

⁵² The list of CI and Myers hotspots are presented in annexe.

Flora The Western Ghats range is mostly covered by forests. The whole Western Ghats' natural vegetation has been described and mapped by Jean-Pierre Pascal (1982a). Five types of forests have been identified: low elevation wet evergreen forest, medium elevation wet evergreen forest, high elevation wet evergreen forest, moist deciduous forest and dry deciduous forest presented in Table 4 below.

Table 4: Details on Kodagu's forest types

TYPES OF FOREST	ELEVATION (m)	ANNUAL RAINFALL (mm)	DRY SEASON LENGTH (in months)	TEMP. (°C)		SPECIES
				coldest month	hottest month	
Wet evergreen forests	High 1400-1800	2000	4-5	13.5-17	20-25	Gordonia obtusa, Meliosma arnottiana
	Medium 650-1400	2000-5000	4-5	17-22	23-25	Mesua ferrea; Palaquium ellipticum
	Low up to 800-900	2000-6000	3-6	> 20	25-31	Dipterocarpus indicus; Kingiodendron pinnatum, Humboldtia brunonis
Moist deciduous forests	x	1500-2000	4-7	> 20	25-31	Tectona grandis, Lagerstroemia microcarpa; Dillenia pentagyna
Dry deciduous forests	x	750-1500	5-8	> 20	25-31	Tectona grandis; Dalgergia latifolia; Pterocarpus marsiupium; Lagerstroemia lanceolata; Terminalia tomentosa; Bambusa bamboos; Dendrocalamus strictus

Source: data from Pascal (1982a) quoted by Elouard (2000)

In the Western Ghats the specie richness decreases from evergreen forests (90 to 174 species), moist deciduous forests (50 species) to dry deciduous forests (less than 30 species) as well as the diversity since endemic species are more abundant in evergreen forests than in dry deciduous forests (for more details read Pascal, 1982 and Elouard 2000). In wet evergreen forests 63% of the tree species are endemic (Ramesh and Pascal, 1987). Our area is situated in dry deciduous forests where specie richness and endemism are less abundant.

Fauna⁵³. The hotspot counts 140 mammal species (38 endemic) including Tigers^E (*Panthera tigris*), Leopards (*Panthera pardus*), Asian Elephant^E (*Elephas maximus*), Gaur^V or Indian bison (*Bos gaurus*), Sambar (*Cervus unicolor*), Spotted deer (*Axis axis*), Barking deer (*Muntiacus muntjak*), Wild dog^E (*Cuon alpinus*), Jackal (*Canis aureus*), Jungle cat (*Felis chaus*), Small Indian civet (*Viverricula indica*), Lion-tailed macaque^E (*Macaca Silenus*), Common mongoose (*Herpestes edwardsi*), Sloth Bear (*Melursus ursinus*), Indian giant squirrel (*Ratufa indica*); 528 bird species (40 endemic) including Black eagle (*Ictinaetus malayensis*), Malabar Great horn bill (*Tockus griseus*), Malabar trogon (*Harpactes fasciatus*), Nilgiri black bird, Wood peckers, Barn owl (*Tyto alba*); 259 reptile species (161 endemic) including important reptiles such as Spectacled cobra (*Naja naja*), Python (*Python molurus*) and Russel viper (*Vipera russeli*); and 146 amphibian species (116 endemic) (Myers et al., 2000: 854). Majority of the species listed

⁵³ E= Endangered specie, V= Vulnerable specie (IUNCN)

above appears in Scheduled I of the Wildlife (Protection) Act corresponding to the maximum protection at the national level (i.e. species treated as endangered). At the global level they appear in the IUCN Red List of Threatened Species as well as in the Appendices to the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora, 1973 (CITES) amended in 1979. What are the local conservation measures to protect biodiversity?

1.2. Ongoing conservation measures

The importance devoted to biodiversity conservation is emphasized in forests declared protected areas yet in reserved forests the ongoing management plan proclaims the same objective but with different management measures. What are the types of measures for biodiversity conservation in both protected and non-protected forest areas?

A. Protected areas

The Western Ghats hotspot (Sri Lanka excluded) counts 58 protected areas including 14 national parks and 44 wildlife sanctuaries for an area of 13,592 Km² or 9.6% of the hotspot area. Most of the area under protection is located in Karnataka State (Moppert, 2006). We do not develop these details here preferring to insist on Kodagu district which counts one national park (with Mysore District), three wildlife sanctuaries and which is part of one biosphere reserve (Table 5). Each classification develops its own rules to follow.

Table 5: List of Kodagu's protected areas

Name	Type	Protection level*	Area (ha)	Date of creation
Rajiv Gandhi (Nagarahole)	National Park	II	64339	1983
Brahmagiri	Wildlife Sanctuary	IV	18129	1974
Pushpagiri	Wildlife Sanctuary	IV	10292	1987
Talakaveri	Wildlife Sanctuary	IV	10559	1987
Nilgiri	Biosphere Reserve (MaB)	V	552000	2000

* The IUCN Protected Areas Management Category: Sources: www.iucn.org, Moppert (2006)

Category II: National Park: PA managed mainly for ecosystem protection and recreation.

Category IV: Habitat/Species Management area: PA managed mainly for conservation through management intervention.

Category V: Protected Landscape: PA managed mainly for landscape conservation and recreation.

The integrity of the interaction of people and nature should be preserved.

The Nilgiri Biosphere Reserve⁵⁴ comprises Mudumalai WS and NP, Bandipur NP, Rajiv Gandhi NP, Wayanad WS, Nugu WS, Mukurthi NP, Silent Valley NP over three states namely Tamil Nadu, Karnataka and Kerala. This biosphere reserve, the first created in India in 1986, was only approved in 2000 by the committee Man and Biosphere UNESCO. Its level of protection corresponds roughly to IUCN Category V stressing human-nature interactions (iucn.org).

B. Devarakadus and reserved forests

Apart from the protected areas, we should mention two other types of forest management less strict with regard to human practices: the devarakadus (1) and the reserved forests (2). What is the biodiversity stake for each forest type? What are the ongoing measures of management?

(1) In Kodagu devarakadus or 'God's forests' have been studied by Kalam (1996), Kalam (2000), Garcia (2003) and Garcia and Pascal (2006). Kodagu district counts 1214 devarakadus (Kalam, 1996) covering only 0.6% of the total area or 2520 ha (Garcia, 2003); in the Virajpet Forest Division devarakadu have an extent of 1125.76 ha (Misra, 2003). For its thesis fieldwork C. Garcia compared the structure and floristic composition of all the sacred forests of wet evergreen type in southwest Kodagu (larger than 1 ha) with the nearest natural forests found in Brahmagiri WS which structure and specie composition were still close to the undisturbed type (Garcia and Pascal, 2006). Contrarily to the common vision and discourses on sacred forests, this work has demonstrated that the devarakadus studied are "definitely not undisturbed patches of climax forest" they are not remaining pockets of natural forests (ibid: 212). Indeed they have been used by local villagers for firewood collection, small poles and timber harvesting, cattle grazing and collect of minor forest products. Some of them were even converted into coffee estates or ginger fields. The closest from villages and of easiest access they were, the highly important they were used by villagers. During Garcia's fieldwork on devarakadu, many gaps observed were colonised with light-demanding species with relatively low conservation value, in addition these forests had lost from one-third to one-half of the endemic species found in natural forests (ibid). Consequently it is only "considered as a network [that] sacred forests do have a high richness" in Kodagu (ibid: 212). Paradoxically despite these ecological facts which are the field reality, the discourse on conservation still instrumentalises the myth of sacred forests as wilderness sanctuary. This is due to social aspects namely concerns and strategies on identity, religion and politics: "[t]he adhesion of the Kodava community to the movement for conservation of sacred forests can be understood, at least in part, as a way of restating their dominance over the landscape, a dominance that was contested by the arrival of migrants and by the dissolution of old hierarchies. Ecology is far from being the central question" (ibid: 221).

⁵⁴ Total area divided into Core area (124,000 ha), Buffer zone (357,400 ha), Transition area (70,600 ha).

(2) The area we studied is situated out of Kodagu's protected areas, it comprises villages with fields, coffee estates and patches of reserved forests. It comes under Virajpet Forest Division⁵⁵ Thithimathi range (eastern belt) where the forests are dry deciduous and rainfall is less and soil is clayey loam and deep. The two reserved forests are Maukal (3308.70 ha) and Devamachi (3695.70 ha) for a total area of 7004.40 ha including about 33% of teak plantations (2309.04 ha). 94 families of tribal people live in Maukal RF and 84 families in Devamachi RF from where they can meet some of their needs (Misra, 2003). "They have encroached 1-2 ha of forestlands prior to 1978 in these forests" (ibid: 84). The reserved forests studied have been exploited traditionally and commercially by humans over a long period of time (Cf. Part 1). Today forest officers consider organised smuggling, forest fire, wild animal damages⁵⁶, insect attacks, weeds invasion, cattle grazing, parasites and epiphytes (Loranthus in teak plantations) as the main obstacles to tree growth in these forests. In deciduous forests open spaces are invaded with Eupatorium (suppressing natural regeneration and inflammable in summer) and Lantana (obstacle to wild animal movements).

The official management of reserved forests is planned in five-year working plans applying also to paisari, devarakadus, jammamalais, uruduves, C and D lands, etc⁵⁷. Forest conservation and restoration are the two objectives of the ongoing working plan: "The traditional objective of looking at forests only as source of revenue is no longer valid. In today's conservation oriented approach the real value of forests lies in their role in maintaining the ecological and environmental equilibrium." (Misra, 2003: 39). The ongoing working plan confirms the end of forest exploitation to call attention to forest ecosystem and biodiversity conservation. Nevertheless the specific objectives are not clearly stated, they are mixed with activities/actions to carry out. Both can be sum-up as following in Table 6. This study focuses on the measure 7. The formation and management of EDCs and VFCs presented further is one of the solutions recommended. However given the almost absence of detail to ensure people's participation (the objective is simply repeated), one wonders whether the participative forest management has really the backing of Forest department territorial division. The management recommended is divided into six working circles sometimes overlapping which objectives and measures are presented in Table 7.

⁵⁵ Kodagu district is divided into 2 Forest divisions: Madikeri and Virajpet. Virajpet FD (1410.48 km²) created in 1992 consists of 5 ranges: Virajpet, Thithimathi, Ponnampet, Makut and Mundrote. The area includes tea (4.10 km²), paddy (135 km²), cardamom (10.25 km²), coffee (354.45 km²) and 292.171 km² of forests. Finally, the total tree forest cover is about 31% of the total area (440.00 km²). (Misra, 2003)

⁵⁶ Elephants and other herbivores including Sambar, Spotted deer and Gaur damage young poles, saplings, bamboos clumps. Elephants peel off the bark of young teak.

⁵⁷ C and D lands are uncultivated lands considered as government property. In 1978 the Government transferred paisari and C and D lands managed by the Revenue department to the Forest department (Government order N°RD.54.LGP.78 dated 8/5/78) as well as devarakadu.

Table 6: Objectives and activities of Virajpet Working Plan (2001-2002 to 2010-2011)

Specific Objectives	Activities proposed
(1) Maintenance of environmental stability and ecological balance	(a) Forest protection from any practices
(2) Forest cover and soil protection	(b) Removal of dead/fallen material
(3) Sustainable forest production in natural and man-made forests	(c) Helping regeneration (fencing, etc.)
(4) Promotion of economic value for degraded forests,	(d) Silviculture in tree plantations and bamboo forests
(5) Sustainable use of forests to meet the needs of rural and tribal people,	(e) Improving sandalwood productivity
(6) Meeting the needs of forest produce in private lands and	(f) Managing MFPs harvesting
(7) Ensuring people's participation /involvement in protection and development of forests	(g) Development of vegetation cover in catchment areas
	(h) Encouraging tree planting in private lands.
	(i) Ensuring people's participation /involvement in protection and development of forests

Source: Misra, 2003

Table 7: Working circles of Virajpet Forest Division (2001-2002 to 2010-2011)

Working circle	Area concerned	Measures
Improve the moist/dry deciduous forests	moist/dry deciduous forests except teak plantations + portions of paisari	Under planting and gap planting Removal of dead/falling material Salvage logging with a 10-year cycle.
Management of teak plantations	Devamachi and Maukal RFs	Age of rotation fixed at 120 years. (None of the plantation is ready for final felling)
Management of bamboos	Reserved forests paisari lands	3-year felling cycle is planned No artificial planting of bamboo
Management of Sandalwood trees	Overlapping in reserved forests	Only dead trees /roots/ stumps of illicitly felled trees are permitted for extraction. Felling cycle of 1 year. Farmers and privates are encouraged to grow sandalwood in private lands (FD should provide seeds, technical support)
Management of Minor forest produces (MFPs)	Every land where KFD exercises control over tree growth	KFD involves certain people in management/ collect / marketing of MFPs thanks to LAMPS.
Miscellaneous regulations		JFPM

Source: data from Misra (2003)

A few minor forest produces (MFPs) are produced from plantations such as rubber (latex of *Hevea brasiliensis*) and Cashew (fruits of *Anacardium occidentale*) whereas others naturally occur. One Large Multipurpose Society (LAMPS) based in Thithimathi benefits from a biannual

lease for certain MFPs under control of the RFO and its staff. Although the Government granted permission to collect 43 items in Virajpet division, only some of can be collected⁵⁸ to avoid “any injury or damage to the trees”. The collect of animal skins, antlers/horn/tusk and bones is not allowed. The Forest department chooses the place where to collect MFPs in all forests except the ones declared as protected areas (Misra, 2003).

The element which may confirm our doubt with regard to KFD’s support to participative forest management in Kodagu is that the ongoing working plan does not favour Joint Forest Planning and Management for several reasons. First the tree cover density is superior to 0.25%. Next “the dependence of the people on forests is very limited” (Misra, 2003): the DCF Misra explained that even if tribal people in Devamachi and Murkal RFs cultivate and collect minor forest produces inside the forest they also work in coffee estates for their livelihood. Moreover firewood, timber, bamboo and leaf manure are available in private lands to meet the requirements of local people in general. Finally among the 12 VFCs⁵⁹ created in 1995-96, the DCF noticed that “these committees are no longer functional because of lack of participation by the people” (ibid). Hence JFPM may be extended to devarakadu and paisari lands “if there is cooperation from the local people” otherwise “in the absence of any participation from the local communities the areas may be afforested/rehabilitated as per the departmental programmes” (ibid: 92-94). In the whole working plan (325 pages) only 2.5 pages plus 2 annexes are devoted to JFPM. Nevertheless in the third part of this study we will demonstrate that externally aided projects interfere in forest management planned as per working plans by introducing participatory ruling principles.

2. Wild Asian elephant: indicator specie?

2.1. Conservation of the Asian Elephant

Elephas maximus called Indian or Asian Elephant is the largest land mammal. The conservation effort for this wild animal is embodied by its high-ranking level of protection on national as well as international scenes: it is listed Scheduled 1 of the Indian Wildlife (Protection) Act, 1972; it is recognised as Endangered specie⁶⁰ in the IUCN Red List of Threatened Species and also listed in Appendix I of CITES⁶¹. Our idea is to assess and understand how this concern present in global policies interacts with field realities.

⁵⁸ The main items collected for Thithimathi LAMPS are Seegekai (fruits of *Acacia concinna*), Antwala Kai, Ramapatre, Vate huli (fruits of *Artocarpus lakucha*), Honey, Bee wax, Nellikai (fruits of *Emblca officinalis*), Dhupa seeds (exudation of *Vateria indica* fruits), tree mass, etc.

⁵⁹ One VFC was created in Chennayanakote but none of my interviewees told me about it.

⁶⁰ Specie is qualified Endangered “when the best available evidence indicates that [the taxon] meets any of the criteria A to E for Endangered [...] and it is therefore considered to be facing a very high risk of extinction in the wild” (www.iucn.org).

⁶¹ “Appendix I shall include all species threatened with extinction which are or may be affected by trade. Trade in specimens of these species must be subject to particularly strict regulation in order not

Kodagu and Mysore districts constitute the main area for Asian elephant conservation in India. Elephants are found in herds of 10 to 30 with the mature tuskers normally solitary. According to Sukumar (1989) the elephant's range is 100-300 km² as minimum size. In summer many elephants from Rajiv Gandhi NP converge towards river Kabini. In general they move according to seasons following regular migratory routes. No real census is available on elephants' population but in 1998 approximately 1730 elephants were present in Kodagu's forests either as residents or migrants (Nath and Sukumar, 1998). Few of our interviewees feel the number of elephants have increased (I.Y1, I.G2) but one thinks the opposite suggesting fatal diseases (I.K7). In 2001, about 1700 wild elephants and 28 tamed elephants lived in Rajiv Gandhi National Park and the number of wild ones had increased over the last years (Appayya, 2001).

However issues have emerged and jeopardize the Asian elephant's conservation. On one hand "with working of forests having completely stopped, majority of the [tamed] elephants have no work", sometimes they are used for patrolling, tourism and cultural events such as the Dasara procession in Mysore but "in general they are kept idling" (ibid: 129, 178). On the other hand due to fragmentation of their habitat wild elephants tend to move into private coffee estates and agricultural fields causing damages (ibid). Hence Kodagu is facing what it is called a 'human-elephant conflict'.

2.2. Human-wild elephant conflict

Wednesday 11th of July 2007: Early morning a big tusker died in Banangala estate owned by BBTC near Siddapura. Late night while moving within the coffee estate the elephant was electrocuted by a wire hanging low. We reach the place in the evening. Many people were there including RFO of Thithimathi, the forester of Chennayanakote, a forest watcher, some workers, the Assistant Manager of the C^{ie}, the Timber Manager, etc. The atmosphere was sad, the cremation of the elephant lying under a hill of timber logs was imminent. The blood on the floor testimonies of the surgery practised a few hours earlier to remove the tusks kept in the RFO's jeep. Then flowers were thrown at the elephant and a coconut broken for a last puja. Because of rainy season, coffee plants and tyre were added to the burning place before pouring petrol and setting fire. Already we could smell the strong odour of the elephant that lost his life because of human negligence.

(Fieldnotes, July 2007)

Cheryl D. Nath and R. Sukumar define elephant-human conflict as following: "[t]he term 'elephant-human conflict' usually refers to negative interactions such as crop raiding by elephants, human injuries and deaths caused by elephants and killing of elephants for reasons other than ivory extraction" (Nath and Sukumar, 1998:1). To this list, destruction of houses in certain haadis such as Kodangue can be added. For these authors, "the conflict is a cause of concern because it threatens to erode local support for conservation in areas where

to endanger further their survival and must only be authorized in exceptional circumstances (CITES of Wildlife Fauna and Flora, 1973 Article II Fundamental Principles) (www.cites.org).

human life and property are at high risk of destruction by wild elephants” (ibid.). If not handled effectively the conflict may end up by an unsustainable position where one should choose between survival of this wild animal and well-being of humans and this would certainly highly weaken one of the parties. This conflict is not directly the object of our study yet wild elephant informs us on the changing affecting forest ecosystem and truly interferes in Kodagu’s forest management. The human-elephant conflict could be documented by many different sources⁶². The data we could gather come from Nath and Sukumar’s study, our proper interviews and from Payal Bal’s fieldwork during June-July 2007 when we had the opportunity to accompany her for ten visits of coffee estates and interviews with landowners. Information may have two dimensions the factual and the perceived ones. Our fieldwork in South Kodagu revealed that human beings’ feelings for elephants are ambiguous, they hatred them as much as they worship them, they could not tolerate the damages anymore but they are fascinated by their cleverness to overcome human tricks; people would like to forget them for a while but it is daily passionate subject of conversation. The conflict is also a confrontation of perceptions: poachers see elephant as money but majority of villagers see it as a God⁶³ (I.K7).

General Data. In Nath and Sukumar’s study the mostly raided crop in Kodagu between April 1992 and March 1996 were paddy (48.2%), coffee (17%), cardamom (10.5%), coconut (8.6%) and banana (6.2%), percentage varying according to localities. In Virajpet Taluk the ranking is first coffee then coconut and paddy. With regard to human deaths and injuries due to the conflict from January to August 2007, five persons were killed and more than fifteen persons seriously injured only for an eight-month period (The New Indian Express, 22.08.2007: 3). On the other side elephants are also dying: “[e]lephant deaths due to conflict are becoming a serious conservation problem in India” (Nath and Sukumar, 1998: 11). In Virajpet Taluk on average four elephants died every year from 1992-93 to 1995-96 by electrocution, capture, injuries or poison; in some cases the causes could not be determined (ibid). “On average almost half of the elephant deaths recorded every year are due to direct human actions” (ibid: 12).

Area of conflict. According to Coorg Wildlife Society the main area of conflict is situated in the north-eastern part of the district (north of Cauvery River) where forests are highly fragmented (I.K8 and Nath and Sukumar, 1998). Nevertheless since Thithimathi range is surrounded by Rajiv Gandhi National Park, many wild animals come frequently and cause

⁶² Numerous press articles; KFD’s records and reports; interviews with Forest officials, NGO members, workers, landowners; informal discussions with anyone willing to talk; observation of elephants’ traces and damages; meetings on this issue; scientific papers and reports, etc.

⁶³ “The omniscient and generous elephant-headed God, Ganesha or Vinayaka, worshipped by millions of people throughout the country, may have been significantly responsible for the popular perception of elephants as wise and gentle beings”. (Nath and Sukumar: 1998: 28)

man-animal conflict especially with elephants even though electrified fence was set up from Maldare to Devamachi villages (Misra, 2003). In the village studied the intensity of elephant problem varies from place to place: in Chennayanakote side some estates are daily visited whereas in Chennangi side they are less (Fieldnotes, 2007). In Chottepare, a settlement within Devamachi reserved forest a Jenu Kuruba declares that in general problems with elephants are very rare (I.J3). One interviewee feels that humans should live at least five kilometres from elephants to avoid problems (I.G1).

Administrative responsibility. In case of elephant damages in private lands KFD Wildlife Division is responsible however, when the private lands are situated further than five kilometres from protected areas boundaries (WS/NP), the territorial division is responsible of the prejudice (PC. KFD officer, 2007).

Management of the problem. In Kodagu, almost every two days different newspapers relate the human and wild elephant conflict. The New Indian Express of August 22, 2007 titled its article "Man-elephant conflict seems to be out of control". Contrarily to Nath and Sukumar (1998) who classified methods of prevention and mitigation of conflict as 'active' and 'passive' we prefer other terminology. We hardly see how the landowners' choice to change the types of their crops or setting up fences because of elephants can be 'passive' methods. One could retort it is a detail but if we consider the sociology of organisation this term is simply antagonistic to the theory's learning. Every solution results from a choice; non-action or non-decision (passivity) are also strategies. Hence we suggest using 'preventive' and 'curative' solutions. Up to now the preventive solutions envisaged or implemented by the Forest department are digging elephant-proof trenches, setting up electric fences and rubble walls while the curative ones are elephants' capture and scaring (ibid: 36). During the monsoon 2007, the idea circulates that the Forest department would catch and transfer twenty-eight elephants (The New Indian Express, 24.08.2007: 3). The farmers' preventive measures are setting up electrified fences, the choice to change the type of crops grown and the selective removal of trees/plants attracting elephants and finally lightening estate at night. The curative measures are chasing the intruder elephants with noise by shouting, beating drums and tins, bursting fire crackers and firing gunshots into the air (Nath and Sukumar, 1998). Monetary compensations in case of crop damage, human injuries or even death could also be considered as part of KFD's curative methods since the aim is to reduce the impact of the conflict on the inhabitants in case of damage. Currently KFD grants Rs.1.5 lakh as compensation in case of human death caused by elephant. However indicators on crop damage are still a mystery for the villagers and the overall measure do not satisfy framers. The landowners interviewed revealed that asking for compensation was not worth all the difficulties they face to request and get it: too complicated, too time-consuming and the amount allotted too minimal compare to the loss. Therefore many of them have stopped complaining (Fieldnotes, 2007 and Nath and Sukumar, 1998). One newspaper reports that the

DCF of Madikeri Division declared: “the wild elephant menace should be considered as a national disaster and [...] the affected people [should be covered] under mass insurance scheme [...]” (The New Indian Express, 24.08.2007: 3). We are going to discuss the impact and effectiveness of these measures in the fourth part.

Whose problem is it? The human-elephant conflict is definitely an issue for landowners especially the ones with small acres of lands (less than five) whose crops is the only source of income hence who can loss an immense part of their revenue. It is also a problem for estate workers “elephants attack the labourers working” (I.G1) or anyone who walk outside in the evening. Coorg Wildlife Society even states that “labourers [are] refusing to work in coffee estates due to fear of elephants” (meeting minutes CWS, 2007). As many of them are Scheduled Castes and Tribes or Other Backward Classes, it is also an issue for tribal people but some interviewees try to explain the contrary. One Jenu Kuruba assures: “[w]e have no conflict with elephant, we are living in harmony with them” (I.J6). For a NGO staff, tribal people who live inside the forest do not have any problem with wild animals in general and if wild elephant attacks or kills one tribal man, the animal will not be blamed because “if you study the culture of the tribal, they think elephant as their grand father” moreover “they do not harm elephants, they use bullets made of mud to scare them, they do not use any guns” (I.C1). One tribal interviewee added that if its relatives are killed it is only because they are drunk or too old to run (I.J4). From 1990 to 1996, 72.7% of the victims by elephant attacks were men (Nath and Sukumar, 1998). In practise, many of the elephants’ crop raiding or human injuries/deaths happen further than five kilometres hence the management of this conflict is mostly a headache for KFD territorial division who is in charge of post mortem reports and the compensations (PC. Forest officials, 2007). One forest official confirms this idea: “wild animals come from wildlife areas but the wildlife division does not pay for animals died in the territorial division’s territory” (I.K12).

The Asian elephant as indicator specie

The temptation is great to compare the human-elephant conflict in Kodagu with the Pyrenean Bear in Southern mountainous France. For Mermet who studied the conflict around the protection of this animal, the Pyrenean Bear is flagship specie, target specie, indicator specie, umbrella specie and symbolic specie (Mermet, 1998). The Asian Elephant may be target specie since its conservation is an objective for different organisation of conservation (e.g. CI, WWF, WCS), governments (e.g. GoI, IUCN). In addition the Asian Elephant may be indicator specie since the evolution of its population and its behaviour inform us on the changes affecting its territory and habitat indeed in the forest ecosystem (decreasing tree cover, food and water scarcities...). The period when elephant started to cause problems is not yet clear nevertheless one interviewee feels it has changed twenty years ago and it has become worst seven or eight years back (I.K10). Besides, “monetary compensation [...] began in Karnataka State during the mid 1980s” (Nath and Sukumar, 1998: 8). Almost all the

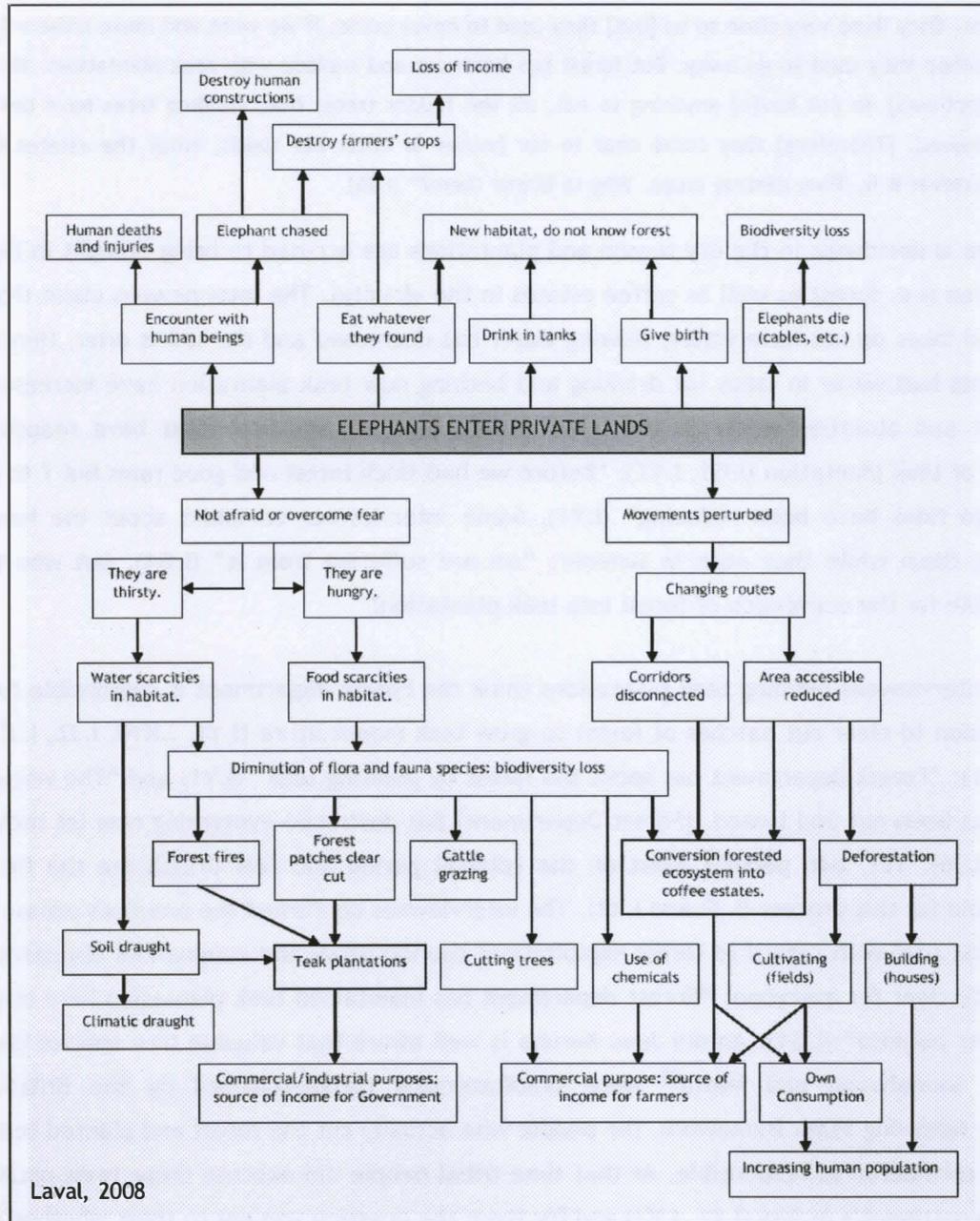
interviewees who tempted explaining the elephants' intrusion into private lands declared the mammals are coming for food and water purposes because they cannot meet the requirement of these two vital needs in their forest habitat (Interviews G1, G2, K7, K8, K9, J6, C2): "Big tuskers do not have body well built; my point of view is they definitely do not have food to eat. Only if they come to plantation they have food. Human beings when they are hungry they robe [...], I feel elephants have also become like that" (I.G2). In other words, while there is shortage of food and water in forest, plenty of food and water is available in coffee estates. In private lands elephants eat banana, coconut, paddy, jackfruit, papaya, guava, grass, even coffee plants and they drink water: "In summer many plantations have got tanks full of water. Elephants smell water" (I.K8). Other wild animals destroy crops too: wild pigs come into paddy fields; sometimes monkeys eat oranges or coffee. In Kutta (far south of Kodagu) gaurs are coming into the estates (I.G2). Why wild animals and especially elephants prefer private estates to their forest habitat? What happen to Kodagu's forests?

II. Processes affecting the forest ecosystem

Through our interviews most of the respondents gave their explanation of what we can call an environmental problem. We suggest looking at our interviewees' point of views to identify how local people perceive and explain the process of elephant entering private lands. Our intention is not to confirm whether their local knowledge it is scientifically right but to understand how they see the problem and therefore who they judge responsible. The Strategic environmental management analysis confers great importance to the notion of responsibility in the management of environmental problems not to pint finger at individuals but to understand why they act or acted in such manner to better envisage how they can improve their action in a close future.

According to different interviewees in various part of the district, water and food scarcities in elephants' habitat are due to clear cut of forest patches many years ago, forest fire, cutting of selected tree species, cattle grazing and conversion of private forest ecosystem into coffee estates. In addition, certain agricultural practices seemed to cause pollution of soil, water and air and consequently damage wildlife in general. Figure 6 sums up all the causes and consequences of elephant intrusion into private lands mentioned by our interviewees.

Figure 6: Causes and consequences of the intrusion of wild elephants into private lands



1. Clear cut of forest patches for teak plantations

The interviewees identify the clear cut of forest patches to raise monoculture of teak plantation as a major process causing food and water scarcities for elephants in their forest habitat. Jenu Kuruba, Yerava, Gowda and Kodava interviewees all denounce this practice clearly identified as a direct cause for human-elephant conflict:

“Wild elephant are coming and destroying our property because [they] do not get food. When teak plantation is raised fruit yielding trees are cut so no fruits come”. (I.G1)

“25 years back there was thick forest and animals used to have plenty of food inside the forest: fruits, fruit yielding trees, bamboos [...] so elephants used to fill up their stomach and be on their own. They lived very close to us [but] they used to never come. If we went and make noise with bamboo they used to go away. But forest has been cut and replace with teak plantations. Now [elephants] do not hav[e] anything to eat, all the fodder trees, fruit yielding trees have been removed. [Therefore] they come near to our houses or enter our fields, enter the estates or whatever it is. They destroy crops. Why to blame them?” (I.J6)

Teak tree is deciduous in the dry season and plantations are accused to bring draught in the whole area (i.e. forest as well as coffee estates in the vicinity). The interviewees claim that tanks and lakes do not have water, flowing water has decreased and the soil is drier. Hence “elephants had water in lakes for drinking and bathing now teak plantation have increased the heat and absorbed water in the lake” (I.G2). Two persons feel rains have reduced because of teak plantation (I.G1, I.Y1): “before we had thick forest and good rains but 7 to 8 years ago rains have been reducing” (I.Y1). Some interviewees complain about the heat affecting them while they walk in summer: “we are suffering from it” (I.G1). But who is responsible for the conversion of forest into teak plantation?

All the interviewees blaming teak plantations think the Forest department is responsible for the decision to clear cut patches of forest to grow teak monoculture (I.Y1, I.K10, I.J2, I.J6, I.J8, I.C1): “Forest department has spoilt the forest by planting teak” (I.Y1) and “The whole forest has been cut and looted. [Forest Department] has destroyed everything now let them think” (I.J6). Yet, two persons insist on the colonial period and feel British are the first responsible for this process (I.J2 and I.K8). The interviewees confirmed the practises exposed in the first part with regard to forest exploitation; the industrial and commercial objectives are pretty clear for everyone: “Forest department has maintained teak plantation here only for timber purpose” (I.G1). An old Jenu Kuruba is well aware that valuable tree species like Beete⁶⁴, Sandalwood and Mathi⁶⁵ were simultaneously commercialised by the British. However following SEMA framework, the people who actually cut the forest and planted teak are also considered as responsible. At that time tribal people did execute these tasks under Forest department’s orders (I.Y1, I.Y3) and for them the question was not to think whether it is right or wrong but to work and get little wage: “we needed money for our food so we have done what they have told us” (I.Y3). The Yerava interviewed know the timber qualities of teak but they are deprived from this luxurious timber: “[Teak] is of no use for us because it is a good tree. [Forest Department] say[s] ‘teak has good rate, do not cut it’. If we go and remove it forcibly we can use it for something otherwise they will not let us to remove it or maybe very rarely” (I.Y2). Another Yerava adds that “[teak] is for people who build house” indeed not for them⁶⁶ (I.Y3). Finally, tribal people and certain Kodavas interviewed feel teak

⁶⁴ Beete is a local name for *Dalgergia latifolia*.

⁶⁵ Mathi is a local name for *Terminalia tomentosa*.

⁶⁶ Tribal people who live on KFD’s lands are not allowed to build their own houses.

plantations provide benefits for the Government but not for them (I.J2, I.K10). Our interviewees oppose the economic interests of the Government with the livelihood interests of local people but we must not forget that the teak supply chain involved and maybe still involve other stakeholders such as timber companies. In general forest-based industries and timber companies have played a major role in this system hence we should consider that they have a part of responsibility in the process of forest changes.

2. Forest fire

The risk of fire is more acute in deciduous forests especially in Devamachi and Maukal reserved forests with the accumulation of dry leaves on the ground. Bamboos are highly inflammable and burst into flame quickly. Trees and fauna are directly damaged by forest fire: “lot of bird eggs get burnt, snakes, deer, everything gets spoilt.” (I.G2). One interviewee explains that in summer when the teak monoculture catches fire, it affects the coffee estates nearby because the wind spreads the heat emitted by fire up to five kilometres for fifteen or thirty days. By the time if coffee plants have flowered they are damaged and the ashes fall up to houses (I.G2). For two interviewees who detailed the problem of forest fire, in more than 90% of the cases human beings set fire intentionally (I.K6, I.G1). The reasons are diverse and most of the time the people responsible are identified under overlapping, imprecise and sometimes too general categories.

- Hunting /poaching. ‘Local people’ and ‘tribes’ would set fire to forest in order to be noiseless while walking during dry season and also to increase visibility to see animals and the Forest officers who are likely to patrol (I.K6, I. G1).
- Collect of seeds, NTFPs. This time only tribal people are judged responsible (I.K6, IG1).
- Act of revenge. Non-tribal interviewees frequently declared tribal people set fire to forest because of “animosity” or as act of revenge (I.K6, I.G1, I.K9). A retired forester says “we might have met them on our way and told them not to take things inside the forest so they use these clashes to put fire” (I.K6). A villager sates: “this is the first year that the forest has not caught fire. If we impose rules and fight against the tribes, in that grudge they put fire to the forest” (I.K9).
- Illegal extension of lands. During summer people may put fire to extent their plantation: “instead of cutting the forest which is expensive you just put fire” (I.K6). For one interviewee “SC, ST and adivasis” put fire to forest to build houses because the Government does not provide the facilities it should (I.G2).
- Fun. Other interviewees said tribal people put fire “for fun” but they did not explain why.

Consequently, for non-tribal people the people judged responsible for forest fire are mainly tribal people who are the ideal culprits because they live on the spot. Those interviewees suggest that forest dwellers set fire to forest as a sign of protestation for the problems and injustices they face. If it is the case, how could we explain that forest degradation is a rational strategy for them? Yet the Jenu Kuruba and Yerava interviewed did not mention this

practice on the contrary they underline that they are the ones who go and fight forest fire with the Forest department: “if we find fire in the forest we leave our work and go in a group to reduce it” (I.Y1). Only a thorough analysis of forest practices could elucidate what the reality is. In general, the existing fire control measures (watch towers, fire lines, fire patrol) are not effective (Misra, 2003: 38).

3. Tree exploitation

KFD recognises that “organised smuggling, especially along the inter-State border, and illicit removals by the local villagers living in and around forests are serious problems” especially in the eastern part of Kodagu where most of the teak plantations and the valuable tree species are growing (Misra, 2003: 21). Almost all the interviewees confirmed that valuable trees (i.e. rosewood, sandalwood and teak) are illegally cut inside the forest for commercial purpose; this is a secret for nobody (I.K7, I.Y1, I.J5, I.K10). The people responsible are either “business people from Hunsur especially Periyapatna” (I.K7) who come from outside of the district or they are “people from paisari [who] come and cut beete and teak to sell the timber to make furniture for money” (I.J5). The timber is cut in Kodagu forests and sent to Mysore District. If the smugglers are caught they could be sent to Court but if the timber crosses the district boarder the forest employees are powerless (I.K7). One Yerava confirms that people “from outside” occasionally cut one or two trees but neither “the Forest department [nor] us can take care of this” (I.Y1). He declares that “for important things” they inform the Forest department but for “small things” they do not. We cannot tell on what criteria this person differentiates both cases, another interview is needed. Yet, the fact is that people living in forest also need trees or parts of trees for their livelihood, the same Yerava admits: “we used to [cut trees] we did not realise but we have stopped: only if there is forest we can survive. We have informed people about it they do not do this anymore”. A villager adds that: “If we are in good terms with the tribes and if we give them permission to remove bamboo and trees to build their house they will not remove them to sell” (I.G2). Consequently the point is according to the law, from what level it becomes illegal to remove a part or a whole tree? Is this law realistic with regard to two different objectives: to conserve forest ecosystem biodiversity and to meet local people’s needs and livelihoods?

4. Conversion of private tenures into coffee estates

Initially the movement of elephants into private lands did exist but it has increased due to “degradation of habitat” and “more and more areas converted to coffee estate” (I.K8). The conversion of private tenures into coffee estates as described in the first part is an important process affecting the forest ecosystem and obliging elephants to change their routes. However the landowners interviewed mentioned it rarely. This is understandable because if they do so it is like condemning themselves for this practice. The ones who did it put it in an

indirect way: “[w]hen I was a child, there was fully forest cover and some coffee plantations now coffee estates dominate here” (I.G1). One Kodava explains how the same elephants’ movements became a problem: “like this one (showing outside) it was a forest it is my neighbour’s, but recently it [has become] an estate. [One] elephant has just gone here; earlier it was forest they would not have minded [but] now because it is an estate it is being felt, it is an intrusion” (I.K8). The Jenu Kurubas encountered hold responsible the companies such as Tata and BBTC who have converted vast areas. Nevertheless one of them declares “now I also grow coffee for my benefit” (I.J4); in fact in the tribal settlements visited many people have small coffee estates around their houses inside the reserved forest. One Jenu Kuruba started to grow coffee four to five years ago (I.J5).

The conversion of tree cover area into coffee estate is legal on private lands however sometimes this happens on government lands as well. In this case ‘encroachment’ is the term commonly used when somebody occupies illegally different types of forest lands to make fields or estates⁶⁷. For two interviewees the conflict with elephants is only or mostly due to encroachments that reduce the area available for animals (I.C2) and increase the human population inside the forest (I.G2). In fact as we said previously human population has increased in the whole district especially in the coffee belt (Guilmoto, 2000). In addition, elephant corridors have been disconnected by the construction of dams in the North of Cauvery River (I.K8).

Thanks to the comparison of satellite images, the French Institute of Pondicherry has noticed a decrease of 28% of Kodagu’s forested cover from 1977 to 1997. “The deforestation is mostly confined to private properties outside jurisdiction of the Reserved Forests” (Garcia et al, 2006: 16). Our landowner interviewees never mentioned the environmental problem in terms of reducing tree cover nor deforestation in private properties.

5. Cattle grazing

People have problem to rear cattle because the animals fall sick and above all with the use of tractors and tillers, farmers do not plough fields like before (I.K8). Besides grazing areas are very few compared to the early days when bane lands were used for the purpose of cattle grazing: now “everything is coffee and fenced” (I.K8). Since the conversion of bane into coffee estates, cattle grazing -strictly regulated in the past- has become a big pressure on forests (I.G2, I.K8 and Misra, 2003). Today most of Kodagu’s people do not rear cattle which population has reduced. The only ones who are retaining cattle are those staying near the forest: cattle are sent into the forest in the morning and come back in the evening. It is a

⁶⁷ Someone who knows well Chennangi said that when certain families joined Chennangi as workers for KFD some of them built small houses then started to extend their lands up to 3-4 acres. When the forester is transferred the new one does not know the situation hence the labourers tell him they had the place 10 years back. Another strategy is that people come as relatives in a village and put fence to cultivate. But the forest officer can remove it and file a FIR against them. (I.K6)

free grazing but “they damage the forest very badly and compact the soil” (I.K8). The eastern forests would be the most concerned: villagers both from Kodagu and Mysore side send their cows (I.K8). In general cattle grazing in forest are an obstacle to its regeneration.

6. Pollution of lands

In the village studied and in Kodagu in general, farmers and workers use chemical fertilisers and pesticides to cultivate coffee, pepper and ginger therefore “everything is destroyed: animals, insects, birds [but] nobody talks about that” (I.J6). In Chennangi Chennayanakote certain paddy fields might be converted into arecanut or ginger fields⁶⁸ but “[g]inger cultivation is definitely bad because lot of pesticides are used and plenty of manure [...] The people who take it on lease and cultivate [...] do not stick to the norms of total organic farming or non use of pesticides [...] and the amount of pesticides used is very huge with regard to ginger crop, not others” (I.K1). Certain landowners claim that coffee cultivation is not so polluting for environment: “pesticides are used on coffee but it does not have much effect on the water conservation or even human utilisation because [they are] sprayed on top of the berry⁶⁹ and normally it does not fall on the ground. And, even if it falls, it is very minimal and it does not get polluted” (I.K1). The interviewee adds that they spray after monsoon which does not affect underground water neither coffee berries harvested several months later, therefore: “it is safe for consumption; it is what we have been told” (I.K1). Nevertheless we can still be unconvinced.

Finally due the processes listed above (i.e. food and water scarcities, forest fire, removal of trees, fragmentation of forests, use of chemicals, etc.) our interviewee feel the additional effects have led to a loss of biodiversity. Two Gowda and Jenu Kuruba interviewees describe how they perceive changes affecting biodiversity especially animals who suffer from forest ecosystem changes in governmental and private lands: “The very nice birds, the squirrel bird, we used to see is reducing” (I.J6) or “ten years back, in Chennangi [...] one coffee plant had ten honey-bees. Now it’s not there. According to my experience [...] during blossom either mosquito or honey-bee has to come. Nowadays we cannot find them [and] yielding [has decreased]. In paddy fields there used to be a lot of dragonflies now we do not find them. No butterflies. They get extinct” (I.G2). For this landowner there is no doubt on the origin of the problem, these animals are disappearing because they spray coffee and paddy (e.g. end-sulphur) to protect the crop from diseases or to kill weeds. He adds that the product kills

⁶⁸ Paddy has been cultivated in all the wetlands of Kodagu but 8 to 7 years ago in Chennayanakote-Chennangi villagers started to cultivate it less and less. The crop is not lucrative enough because of low prices on the market, increasing wage of workers as well as elephant destructions. A debate is ongoing on ginger cultivation since certain people have started to cultivate the crop within the national park (Fieldnotes, 2007).

⁶⁹ They spray to eliminate the insect called beri bora which attack the coffee berries.

also fishes, crabs and frogs and it affects human beings who inhale it. He has observed that his labourers “become giddy” or “feel tired” and he says that “good doctors say if women spray end-sulphur they will not become pregnant”. (I.G2) A Jenu Kuruba from another village observes the same problem: “everything is destroyed: animals, insects and birds [...] because of the heavy usage of chemical fertilisers and pesticides [but] nobody talks about that” (I.J6). Because of the chemicals products used two interviewees complain about their fruits and vegetable that quality has decreased: the famous “very tasty” Coorg oranges produced in great quantities are little cultivated. Now oranges in the market come from other districts and the taste is not so good and the price is higher (I.J6), “there is no energy in the food and the rice has no taste” (I.G2).

The landowner feels that he cannot change the practises: “Even if we know the environment gets spoilt, we have to do it because we have no other [option]” (I.G2). However an alternative exists. In Kodagu a few landowners have chosen to do organic farming using cow dung, forest mud, leaves, coffee husk, etc. Several landowner interviewees are still reticent to organic farming because it is additional work in a context of shortage of workers, increasing labour wages as well as lack of training and information (I.K1, I.G2). Thus financial arguments are stronger and these practices go on. Besides, another obstacle preventing organic farming is the lack of areas available for cattle grazing. One person suggests that children, husband and wife in poor families (with 2 or 3 acres of land) could prepare organic manure for the whole village with the support of the government who should provide them facilities and appoint someone to guide them (I.G2).

To resume this second part our fieldwork reveals that changes in physical and social attributes did happen in Kodagu’s forests and are perceived by all the actors as a significant loss. Surprisingly on the whole, the discourse on forest changes is quite similar from one social group to another even though the social representations differ. Following Michon (2003) the term forest in Kodagu may cover five distinct entities, none of which are entirely congruent: a living and autonomous subject (i.e. ecosystem, area of biodiversity); an area of production (i.e. the sum of usable resources); a social area defined by rules and institutions (i.e. heritage, territory); a symbolic or religious space and an area of geopolitical importance (i.e. under control or to be conquered). One interview we conducted with a Kodava coffee grower landowner revealed an interesting misunderstanding about forest. For him the notions of forest and wooded lands are totally different: forests are government lands either under the authority of the Revenue or Forest department and the crucial difference is that: “lands under the Forest department were never granted to anyone whereas lands under the Revenue department were granted to landholders” (I.K1). The bane lands “most of the time had tree coverage”, were “jungle forest” or “barren lands” but “they were never lands held under the Forest department [nor] constituted as reserved forests hence bane lands are still Revenue department’s lands granted to people before 1864” (I.K1). This conception was

confirmed when we presented our work in the College of Forestry Ponnampet. For many Kodavas encountered, coffee estates under tree shade are neither 'private forest' nor 'forest' at all, but 'private holdings', 'plantations' or 'estates' because "when you sa[y] forest your mind would immediately go to the lands belonging to the Forest department" (I.K1). Consequently the landowners in Kodagu are very sensitive to any statement which could create misunderstanding on the property rights. If any researcher states that forests have been converted into coffee estates, this is an offence: it would mean that the landowners have encroached KFD's lands to grow coffee which is illegal. In reality the private lands with tree cover have been converted into coffee estates, which is legal. We believe that Kodagu's landowners would not accept the term agroforest (i.e. when trees are associated with crops) to refer to their coffee estates. It is worth underlining that the FAO definition of forest includes "plantations primarily used for forestry or protection purposes" but excludes "agroforestry systems" (FAO, 2005).

We insist on the fact that Kodagu's forests have generally speaking not been uninhabited or untouched wilderness sanctuaries even the devarakadus. If someone asks us how it is like to explore this hotspot we would say that while walking round Devamachi Reserved Forest we found temples, traces of campfire and footpaths; we noticed cattle and came across people and settlements; we went through teak plantations and by chance we got a glimpse of wild animals (Cf. Photographs). All these data are proofs of human presence and quite intense use of forest. The studied area is situated in the eastern part of Kodagu out of the protected areas. We focus on the dry deciduous forests where specie richness and diversity are the least abundant. We can consider the forest studied as a rural forest in a sense a forest worked, transformed, reconstructed by rural populations; integrated into agriculture systems with historical depth and shaping rural landscapes and territories and characterised by relations of conflict with forest officers (Popular team, 2007). In Kodagu, the stakes of biodiversity and forest ecosystem conservation apply to a territory where nature and human beings are inseparable. The following part assesses the effectiveness of the ongoing measures to meet ecological objectives and social commitments related to participatory forest management. The fourth part analyses the different forms of collective action to manage natural resources in Kodagu and question 'people's participation'.

Photographs 2 to 7: Human presence in the reserved forests studied (eastern belt)



Photograph 2:
Teak plantation in Devamachi Reserved Forest
(Laval, 2007)



Photograph 3:
Tribal house in Devamachi Reserved Forest
surrounded by small cultivated lands (Laval, 2007)



Photograph 4:
Temple in Devamachi Reserved Forest, on the
way to Basavana Halli (Laval, 2007)



Photograph 5:
Elephant proof trench in Devamachi Reserved
Forest (Laval,2007)

Photographs 6 and 7:
Devarapura Festival participants. Kodavas landlords
(above) and a Betta Kuruba (on the right). (Laval, 2007)



Part 3: How Kodagu's environmental problem is managed?

We have already identified our environmental object based on ecological terms and pursued objectives. We have also realised the diagnostic of its management (effective management). This third part tries to assess the effectiveness of the actions or solutions conducted to manage the environmental issues identified by our interviewees as well as additional issues present in official document and/or in international discourses. The question of effectiveness is central in the Strategic environmental management analysis (SEMA). Through management sciences Mermet and his research team aims to assess if the management and resolution of a given environmental problem is effective with regard to the commitments announced. They identify who are the actors able to impulse a positive change in favour of the environment (actors of environment). Yet they do not consider that environmental problems are specific and cannot be handle like other types of problems. We believe that the analysis would benefit from an additional theoretical framework. If people are aware that their problem is specific, this may help in the resolution making process. Conklin (2006) analyses problem management and resolution by an angle close to Crozier and Friedberg's sociological theory. Conklin's concept of fragmentation highlights how the people involved in a problem management "see themselves more as separate than united" and how the information and knowledge available are "chaotic and scattered". To be more precise, the fragmentation forces to solve a complex problem are due to three aspects: the 'wickedness' of the problem, its social complexity and sometimes its technical complexity. Hence fragmentation is the phenomenon that "pulls apart something which is potentially a whole" but its antidote exists; it is the shared understanding and share commitment among the actors involved in a project or a problem management (ibid.). In our study, we believe that not only Kodagu's human-elephant conflict is definitely a wicked problem but it is also a socially complex problem given the number and the diversity of the actors involved.

Keeping the differentiation between 'imposed' and 'chosen' participation we will develop in Part 4, we have chosen to compare the effectiveness of the actions conducted by the two collective actions identified previously with regard to the three main objectives of community forest management namely to better preserve the forest resources and the biodiversity, to increase the conditions of life of rural populations and eventually to combat poverty and, to improve the local governance by empowering communities and enabling them to democratically handle control over natural resources management. What are the impacts of both collective actions with regard to these objectives?

I. Management of environmental wicked problem

For demonstration purposes, we consider the committees set up under Forest department's guidelines as two actors making decisions impacting on natural resources management. Similarly we consider the conservation and empowerment NGOs as two actors making their own decision too. What are the impacts of those decisions with regard to the resolution of human-elephant conflict (a problem that has been identified by our interviewees) and with regard to the conservation of Kodagu's forest ecosystem? In addition given the first data collected we suggest identifying who the actors of environment are in Kodagu.

1. Human-elephant conflict resolution

In Part 2 we have already mentioned the issue related to wild elephants. Let us examine the solutions implemented to solve the human-elephant conflict.

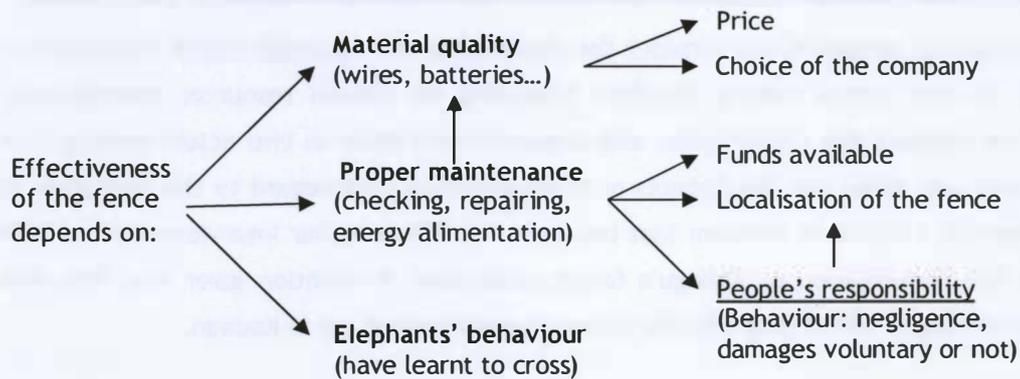
1.1. Eco-Development Committees

The technical solution favoured by KFD and by the EDC3⁷⁰ is the erection of electric fences to separate physically the forest from the human habitations on revenue lands or forest lands. Up to our knowledge, contrarily to EDC3, VFCs do not have any responsibility in electric fencing. As we already mentioned EDC3 including Chennayanakote are in charge of the solar fences set up under Forest department guidelines with regard to prevention of elephant intrusions. In our studied area, the impact of those fences is not clear. In Chennangi "there has been a remarkable effect: prior to [their] installation there were deaths, after the installation, there was no death at all" (I.K1). Yet other interviews show that many landowners are not satisfied with those fences since they still endure elephants' damages in their plantations and fields. In fact many of our interviewees declared that no fence are 100% effective (I.K9, I.K8, I.G2), the main drawback being its maintenance⁷¹ which must be faultless (I.K7, I.G1, I.G2, I.G3, I.K8, I.K9).

⁷⁰ Type of EDC that deals particularly with human-elephant conflict.

⁷¹ One fence watcher told his job: "first thing in the morning I check the battery with an instrument to know if there is fault or not. If a big branch has fallen there will be no voltage. I go and check the voltage for each section. After removing the current I clear the branch, clean and repair the fence. In this box (showing it) whatever I need is here, this is always in my pocket and knives too. If there is fault I need cutter, tightener, wheel, knife, spanner, I need to take. Sometimes in case of heavy wind if the branch fallen is very big or if elephant puts it down, I need someone's help so I inform the forester who send another watcher. Today if one wire is cut if I do not repair it, it will be expended by elephant tomorrow. I have to check 5.5 Km everyday. I work from morning till afternoon 2'Oclock. If there is no fault I can finish fast, if there is fault it will take time." The most interesting thing for him is that "I have to find out very fast where the fault is and repair it to get the maximum voltage. (I.G3)

Figure 7: Conditions for electric fence effectiveness



Laval, 2008

In general the effectiveness of the fences set up under Forest department guidelines depends on the material quality, the proper maintenance and the elephants' behaviour. Our interviewees declared that the fence maintenance is the most difficult aspect: it depends on funds availability, localisation of the fence and people's responsibility. In the EDC the amounts devoted to the maintenance are very less; hence the two watchers employed to control the fence are not paid correctly (I.G3, I.K1, I.G2): "I like the job but the salary is not enough we have only Rs.60 per day, besides I will not get salary every month, now it has been two months since I did not get salary, once I did not get for five months" (I.G3). Moreover the location of the fence may be a condition for people's responsibility: "The fence is right inside the forest and people will not bother to look after it" (I.K1). We consider people's responsibility and behaviour as an important source of uncertainty: "Forest department said "We put up the fence, you look after it" but who is going to look after it?" (I.K1). If not discussed and agreed among the two parties (KFD and villagers including tribal people) the responsibility of the maintenance may not be accepted by local people: "without being included in the thinking and decision-making process, members of the social network may seek to undermine or even sabotage the [solutions implemented] if their needs are not considered" (Conklin, 2006). Certain interviewees accused tribal people in general and other individuals to court-circuit the system by negligence (gates left open, etc.) or voluntary damages (cutting the wires, etc.). Private fences would be better maintained because their length is shorter; they belong to one person who is responsible of its maintenance and they are close to the people (I.K8, I.K1).

In fact we believe that the problem is not that the villagers refuse any responsibility but they are not given the means to carry out this duty. Karnataka Forest Department made EDC members answerable for the fence but they do not have control over the choice of the material neither the company (Ibex) nor on the funds necessary to finance proper maintenance. Finally elephants' behaviour is a major source of uncertainty we discuss further.

1.2. Conservation NGOs

The first data collected on empowerment NGOs' activities do not mention any commitment to manage the human-elephant conflict whereas the two conservation NGOs make visible their determination for conflict resolution. We should precise that these NGOs gather many landowners who are directly affected by damages due to elephants.

Table 8: KMFT actions with regard to human-elephant conflict

N°	Key issue	Actions
6	Addressing man and animal conflict	Capacity building for EDC Study on the eastern belt forests of Kodagu

Source: data from KMFT leaflet, no date

KMFT considers the human-elephant conflict has a key issue to manage (Table 8) yet we do not know what the NGO has done in this respect so far. CWS devotes a lot of time to this issue and the principal actions conducted are:

- Research. CWS has requested one study on elephant movements and damages focusing on North Cauvery⁷² “to see if corridors can be developed” and another one on wild bamboo to assess if their plantation can improve the corridors⁷³.
- Organisation of many meetings on this issue (e.g. Aranya Bhavan Bangalore in July 2007⁷⁴ and Pollibetta in August 2007). During the second meeting where forest officials were not present, CWS president declared that while the problem is increasing the ongoing solutions that are immediate and expensive are not adequate. In this context the NGO takes the responsibility “to educate the people and give the right representation [of the problem] to the Government” (Fieldnotes, 2007).
- Field actions such as creation of water points and plantation to increase the availability of fodder in forests, filling up certain trenches to improve elephant corridors⁷⁵ and creation or maintenance of barrier associating solar fences and elephant-proof trenches in a few strategic places⁷⁶. The NGO provides assistance to EDC3 in the maintenance of electric fencing through an alliance with the EDC presidents (CWS meetings fieldnotes, I.K8).

⁷² As said earlier the area contains highly fragmented forests, the Harangi dam and backwaters.

⁷³ Studies carried out respectively by Mr Bhuminathan, WWF and the College of Forestry Ponnampet.

⁷⁴ We did not attend this meeting gathering the PCCF Wildlife and the DCF Wildlife of Hunsur for the KFD side and the President of CWS and the President of Nokya EDC for the civil part.

⁷⁵ Notably to suppress the Anechowkur-Alalur elephant proof trench preventing elephants from moving between Rajiv Gandhi National Park and Periyapatna Reserved Forest.

⁷⁶ Rajiv Gandhi NP, gap in Begur, Thithimathi-Kardigod, Cauvery River bank, Kushalnagar/ Somwarpet area and the hill sector of the district. (Agenda of Coorg Wildlife Society meeting, 2007)

1.3. Analysis of the problem according to Conklin's six criteria

Conklin presents the six criteria of a wicked problem as defined per Horst Rittel in the seventies and gives an example with the design of a new car in a car company. A problem does not necessarily have to possess all the criteria in order to be wicked (Conklin, 2006).

1. "You do not understand the problem until you have develop a solution"

Every solution exposes new aspects of the problem. If we analyse the main ongoing solutions related to Kodagu's issue, the results reveals several aspects to the problem.

(1) The compensations paid by KFD in case of crop damage, human injuries/death have the following aspects:

Administrative aspect: Wildlife and territorial divisions are both in charge of the issue (files, financial costs). KFD decides of the amount of compensations granted (Based on which criteria?)

Territorial aspect: beyond 5 km from PAs boundaries the territorial division is in charge of the issue.

Time aspect: The compensation procedure is very time consuming. Can KFD pay indefinitely?

Financial aspect: increasing costs for KFD (from Rs.25000 to 1 and 1.5 lakh today for human death)

Landownership aspect: only the people with land records can ask for compensations, therefore many people are excluded of this system. Is there social injustice?

Political aspects: KFD's credibility and legitimacy is questioned by the public.

(2) Solar fencing and elephant proof trenches (EPTs)

Administrative aspect: What division has initiated the fence and why?

Financial aspect: How much does it cost for KFD to set them up and maintain them?

Technical aspect: What quality has to be chosen? Based on what criteria?

Human aspect: The serious of companies setting up fences is doubtful sometimes (I.K8, fieldnotes). Private fences would be better maintained that departmental one.

Territorial aspect: fences are a physical obstacle not only for animals but for people too.

Animal behaviour aspect: the reaction of elephants is difficult to foresee. Elephants have learnt how to overcome the barriers installed by human beings. The cleverness of the animal is a parameter important.

(3) Transfer of elephants to other areas by KFD

Technical aspect: how the transfer of 28 elephants from Kodagu to other areas can be organised technically without putting them in danger?

Financial aspect: What is the cost of such operation?

Animal behaviour: the effectiveness is uncertain because elephants may come back⁷⁷ except if they are sent very far away. Other unwanted reactions on the elephants remaining in situ may exist.

Political aspect: is it popular or acceptable to remove specie when we have a problem with it? Especially an endangered specie in the Red list IUCN?

⁷⁷ "Elephants tranquilised and translocated by me in 1986-87 from Daddabetta in Hassan and Chikmagalur districts and released in Nagarahole, as they were causing heavy crop depredation, were found back in their original habitat within a period of six to eight months. The elephants have walked back a distance of 100-150 km respectively" (Appayya, 2001: 32)

In fact the solutions depend on who we ask to (Conklin, 2006). One solution can be acceptable for some people and unacceptable for others. The solutions suggested by our interviewees have also several aspects for example the most frequently mentioned is:

(1) Remove teak to plant natural species (I.K10, I.K8, I.K1, I.J6)

Administrative aspect: This is impossible in national park where “not even a grass can be removed (2001 Policy): the teak in protected areas will never be removed” (PC Working Plan Officer, 2007). In RFs it could be done but none of the teak plantation has reached maturity fixed at 120 years by Virajpet Working Plan (2003).

Technical aspect (silviculture): if many places are opened, Lantana is likely to invade the dry deciduous forests and consequently prevent animals from moving and prevent natural regeneration.

Time aspect: if people wait for tree to grow or wait for teak to reach the maturity age many years will pass before a real improvement except for bamboos which grow very fast.

2. “Wicked problems have no stopping rule”

What are the limits of the problem studied? How can we know where and when the human-elephants conflict ends? When compensations are big enough? When elephants do not enter private lands anymore? When crops are not damaged anymore? When there is no a human injury nor death anymore? When people can walk outside after 6 pm without any fear?

In fact, a decision maker does not look for the best solution in principle or the ‘optimum’ (which is not possible), but he looks for a rational decision which respond to its criteria of rationality (Conklin, 2006 and Crozier & Friedberg, 1977). Herbert Simon said human beings are not “optimizing animals” but “satisficing animals” who choose solutions that are “good enough” (Simon 1969, quoted by Crozier & Friedberg, 1977 and Conklin 2006). These criteria of satisfaction are influenced by the characteristics of the action system.

3. “Solutions to wicked problems are not right or wrong”

Is the compensation price allotted for human death right or wrong? For human beings defenders, the idea itself could be unacceptable since a price is given to human life: 1.5 lakh. However the families accept this idea and even wish the amount was higher. And when certain amount is given according to the injuries, so much for a leg, so much for an arm, a little less for a foot, one could object to this marketable rationality on human body. However someone injured might be happy to get compensation if he or she cannot go for work. Is the transfer of the Asian elephant, endangered specie, right or wrong? For animal defenders the transfer of endangered specie such as elephant could be perceived against the conservation effort therefore unacceptable: “If you have a problem with specie, you do not remove the specie; you should try to improve the habitat because they are part of the ecosystem. So that does not make sense actually.” (I.K8) Are all the people who think and openly say “I am going to kill an elephant” right or wrong? When you are so tired to attend -powerless- the loss of your crops and fruit trees everyday this reaction can be understood. However one could object that this is an unacceptable crime. Finally all these questions put us not at ease.

Indeed Conklin explains that with wicked problems the determination of the solution quality is not objective. The solution to a problem depends on the way the problem has been defined besides each person has its own rationality⁷⁸. For Crozier and Friedberg one's decision is based on a limited rationality: choices are the most rational and not rational for themselves. Human beings and decision-makers never know very well what they want, they find out their objectives sometimes new ones through experience that is to say through their decisions.

4. "Every wicked problem is essentially unique and novel"

Even if some problems have common points, every wicked problem is essentially unique and novel. The problem of conservation of the Pyrenean bears in the Pyrenees has common points with the human-Asian elephant conflict in Kodagu however both problems are not similar: people are different, countries' rules and laws are different, the species are different and the problems created are different (elephants do not attack herds but crops). Indeed, each wicked problem requires a new learning process on its specificities. It is difficult rather impossible to find any "expert on human-elephant conflict" who could solve on its own the problem in Kodagu. To learn one has to act without knowing yet (Crozier and Friedberg, 1977).

5. "Every solution to a wicked problem is a « one-shot operation »"

Conklin explains that "you cannot learn about the problem without trying solutions, but every solution you try is expensive and has lasting unintended consequences which are likely to spawn new wicked problems". The development of electric fences has had one unforeseen effect since elephants have learnt to cross them but how could we have foreseen that elephants will use branches or their nails to cross the fence without experimenting it? Besides, there is one unwanted effect due to the development of private fences⁷⁹ around coffee estates called 'island fencing' by CWS members. Sometimes elephants are trapped inside private lands (coffee estates) by a network of solar fences constituting random obstacles in their effort to find a route to the forest (I.K8).

6. "Wicked problems have no given alternative solutions"

For Conklin only collective creativity and judgment can help to design a set of solutions among which actors can choose the ones good enough. Compensations, solar fencing/EPTs, transfer of elephants are certainly not the only solutions to try. One worrying uncertainty source is that even if the forest habitat is finally improved, elephants might not be decided

⁷⁸ Rational: based on or in accordance with reason or logic (Oxford dictionary of English). Crozier and Friedberg criticise the rationality a priori because (i) it is impossible to gather all the pieces of information a priori; (ii) the objectives are ambiguous because our world is complex, (iii) the problems have many uncertain parameters and many partners have contradictory interests.

⁷⁹ Privates who could afford the costs and maintenance have tempted to protect their estates by setting up fences along their boundaries e.g. TATA Coffee Ltd. and BBTC companies (Fieldnotes).

to go back to forest. Many of them have never seen the forest; they were born within coffee estates hence “those elephants think this is their habitat” (I.K8,I.K9).

As soon as we venture into an unknown field or as soon as we tackle a set too complex, the problem of relationships and the system effect become crucial. The objectives can stay ambiguous before clarifying and detailing them in the implementation process. Progress appears in the implementation and experience. Finally the human-elephant conflict that is indicator on changes affecting the forested ecosystem is a wicked problem due to the following sources of complexity : administrative rules (two types of management between KFD territorial/wildlife divisions); territorial division (landownership divided into private/governmental lands); diversity of the actors involved (governmental bodies, individuals and companies); the elephant status (endangered specie, religious figure), its behaviour⁸⁰ and the characteristic of its habitat (any lands with tree cover) and finally human practices in this habitat (poaching, smuggling, etc).

2. Collective actions for forest ecosystem conservation

What is the effectiveness of the collective action we describe as ‘imposed participation’ with regard to the three main objectives of sustainable development? What is the effectiveness of the collective action we describe as ‘chosen participation’ with regard to the same main objectives? Our fieldwork study enables us to present a preliminary assessment.

2.1. Forest management issues and collective actions

In principle participatory forest management tends to better preserve the forest resources and biodiversity. What are the real actions conducted by the actors to improve the ecological state of forests? We limit our analysis to the ongoing actions related tree cover and biodiversity conservation as well as water and soil conservation.

A. Tree cover and biodiversity

- EDCs and VFCs

EDC and VFC actions aim to restore forest ecosystem and degraded lands. The biodiversity conservation is taken care by improving the forest habitat. The KSFMBBC Project’s target is the afforestation of 1, 85,000 hectares and the development of farm forestry with 76 million seedlings, the plantation of 2,150 hectares with 500 tonne of seeds. These quantitative indicators do not necessarily inform us on how effective these activities are to match the objectives of biodiversity conservation.

Through their microplans, Chennayanakote EDC and Chennangi VFC have tried to restore forest ecosystem and degraded lands by plantation of tree species and other plants such as

⁸⁰ cleverness, reproduction behaviour (births in estates) and attacks of human beings (life threat)

Bamboos in devarakadu (for EDC) and parts of Devamachi Reserved Forest (EDC and VFC). The use of solar energy (solar lamps, solar fencing) aims also to protect the ecosystem by renewable and no polluting sources of energy. Let us insist on plantation work which is worth studying. Many EDC and VFC members as well as several local forest officers declared that the plantation work is not effective (I.K1, I.K3, I.G2, I.J3, I.J4, I.K11 and I.K12). For the forest officers encountered the EDC microplan which gives priority to plantation is not suitable for Thithimathi range not only because it is a wildlife area where animals move freely and destroy the plants but it is also an area where forests are inhabited by many people who have domesticated animals (cows mainly) (I. K11). We observed a plantation day in Devamachi RF carried out by VFC members: the plantations were not protected by any fence, the only protection is provided by a forest watcher who has to control the site and scare the animals from the morning till evening during the first month. This measure may not be effective in the long run. No data were available on the percentage of plants which survive but we can suppose it is very little. Consequently "For Kodagu, we should forget this microplan" (I.K11) and try other solutions. The forester suggests fencing small areas of 10-50 acres starting from the forest edges and irrigating the natural or artificial regeneration 15 to 20 days from January to April (summer) through sprinklers and small generators like the one utilized for sprinkling coffee plantations (I.K11).

- Conservation and empowerment NGOs

Empowerment NGOs seem to promote afforestation and are very active for lobbying against development projects that are likely to cause deforestation. Conservation NGOs (KMFT and CWS) have overlapping objectives and areas of action. They intervene in reserved forests, in protected areas plus sacred groves under the custody and managed by KFD; in coffee and cardamom plantations under the custody and managed by privates "without any sustainable plans for tree cover" and in wetland⁸¹ under the custody of private landholders "without any crop planning and undergoing a sea change in land use patterns" (KMFT leaflet). Both NGOs conduct similar activities and the ones of KMFT are organized into a Strategic Plan for five years presenting eight key issues and correlated actions (yet some of them do not really reveal what the concrete actions are).

- Scientific Research: KMFT and CWS's privileged method is to get a better understanding of problems and solutions thanks to scientific research notably on tree, coffee and private lands for KMFT (key issue 2 in the table) and on evergreen forests, eastern belt forests⁸² plus on wild animals of Kodagu e.g. on snakes, birds and Jackal or *Canis aureus* for CWS.

⁸¹ Forming about 12% of Kodagu's total geographical area (Kodagu Model Forest Trust)

⁸² From Anechowkur gate to the north boundary of Kodagu with assistance of the College of Forestry.

- **Lobbying:** The CWS members devote the major part of their time in lobbying⁸³ to oppose a dam, a hydroelectric project or a power line. First they go to the field assess the situation, make a report, write to people including Forest department if involved and finally meet the actors implicated in the issue: “you go to the minister then you go to Delhi so that keeps us quite busy” (I.K8). The president admits “sometimes it works sometimes it does not but somebody has to keep the pressure” (ibid). CWS also tries to mobilise politicians which is quite difficult: “some politicians understand environment at least to an extent and they support us [but] some are totally against and say what we are saying is against development, it is not people friendly. [People] want [facilities] there is no power they need power” (I.K8). KMFT may not use so much these methods.

- **Media:** CWS uses media (i.e. press conference) to communicate its messages.
- **Meetings:** Another strategy frequently used by CWS is the organisation of meetings with different stakeholders e.g. departmental officials (Forest...), EDC presidents and general members of civil society. KMFT may organise fewer meetings with so many stakeholders.
- **Plantations:** CWS takes part in the plantation activity realised by EDC members; the NGO organises plantations with school children and EDC members (native specie seeds in RFs). We do not believe this is a favoured and frequently-used strategy for both CWS and KMFT.

The activities related to tree cover conservation are presented in Table 9.

Table 9: KMFT actions with regard to tree cover in private and government lands

N°	Key issues	Actions
1	Degradation of natural forests	Fire protection in natural forests Afforestation and enrichment of degraded forests Formation of eco-battalions for forest conservation Eco-restoration of grassy banks Quantitative assessment of plant resources
2	Loss of tree cover and diversity in private plantations	Studies on: - land tenure and tree diversity - integrated landscape management - shade tree management - conservation management of pollinators
8	Degradation of community lands.	Capacity building for EDCs to manage sacred groves Biodiversity conservation

Source: data from KMFT leaflet, no date

⁸³ CWS ongoing files includes ‘Illegal sand mining’ along the Cauvery River bank, in Dubare forest area and the Barapole Hydel Project. (Fieldnotes, CWS office, 2007)

B. Water and soil conservation

- EDCs and VFCs

EDCs and VFCs deal with water only in the areas under the committee’s management (parts of RFs). Both have created or will create tanks to provide water to wildlife within the forest and the EDC has constructed two guli checks and checks dams to combat soil erosion. Contrary to plantations which are likely to die, in general our interviewees were satisfied with these activities they perceive as permanent therefore effective: “I feel wild animals will not come into the village because they get sufficient water in forest. I am very happy with that” (I.G1).

- Conservation and empowerment NGOs

We have no details with this respect on empowerment NGOs. CORD may have activities to conserve water stocks in tribal haadi. On the other side, KMFT and CWS deals with and intervenes in rivers and streams which form “riverine ecosystems coming under the management of government agencies but without any proper planning and control” (KMFT leaflet).

Table 10: KMFT actions with regard to biodiversity and water conservation

N°	Key issue	Actions
3	Loss of aquatic ecosystem and depletion of ground water resources	Fish conservation Protection of riverine eco-system Valuation of watershed services Establishment of rain centre

Source: data from KMFT leaflet, no date

Table 10 presents KMFT’s water conservation activities. CWS creates water points and tanks in forests and protect a part of Cauvery River from the use of dynamite, of chemicals, of illegal small nets for fishing or polluting exponents thanks to Brigade Cariappa (CWS founder) who obtained 28 km of the river on lease (I.K8).

We must precise a transversal project supported by CWS and KMFT: the Greater Talakavery Wildlife Sanctuary Project. At the beginning the project was a Coorg Wildlife Society proposition subsequently supported by KMFT. It aims to protect the evergreen forests on the hills against future development projects⁸⁴ “which can damage the environment to make money only or to develop things too rapidly” (I.K2). KMFT trustees ask for the conversion of the western reserved forests into wildlife sanctuary. Since three wildlife sanctuaries already exist the whole western belt would be declared as protected area. For one of the trustee the

⁸⁴ Politics concerns exist: “the lobby of Kerala Ministers of Parliament in Delhi is very good, they went abroad and organised themselves very quickly whereas here we are very mild” (I.K2). Hence these powerful politicians can threaten Kodagu’s self-government.

procedure is simple, the Forest department “has just to pass the reserved forests areas into wildlife sanctuaries” (I.K2). The project is easier to realise in the southwest part of Kodagu because there are few encroachments and the agriculture is not very productive but in the northwest the situation is quite different, the forests are more inhabited and some politicians are opposed to the project (I.K2, fieldnotes 2007). Another difficulty comes from the Forest department who is the only authority to decide and execute the project. It seems that forest officers from the territorial division fear to loose control over certain areas; the Conservator of Forests of Madikeri Division is opposed to the project and opposed to NGOs in general. In fact tensions between territorial and wildlife divisions within KFD may interfere and make vulnerable the project (fieldnotes KMFT meeting). In reaction the trustees planned strategies to reach their target. One trustee intends to convince the local people concerned by these change with ecological services arguments to underline the necessity to protect the forest cover (e.g. water conservation, fight against erosion, but not climate change too far from local people) (I.K2). This interviewee feels the conversion of reserved forests into wildlife sanctuary will not change people’s life so much since the level of protection is not as strong as in a national park. In return the affected people could be provided with employment in ecotourism⁸⁵ as “local protectors of the forest” especially since the Forest department has too many officers but is lacking of such field staff (I.K2). Another strategy is to ask CWS members of the western belt to spread the idea and negotiate with the stakeholders for example create an alliance with the Jama Malai landowners⁸⁶ who are small holding planters cultivating cardamom for their livelihood. Since CWS and KMFT counts many landowners, they are involved in property rights issues. CWS helps the Kodagu Jama Malai Association and KMFT has seen here an opportunity to go ahead in the wildlife sanctuary project: “The association said that they will support us; in exchange they want to settle their rights” (fieldnotes KMFT meeting, 2007).

We cannot take free position in this debate but if this huge wildlife sanctuary is created, the area devoted to Joint Forest Management would reduce once again and the entire Kodagu’s evergreen forests (half of the district’s forests) would be excluded from the applicable area.

2.2. Who are the actors of environment?

Thanks to the data collected during our fieldwork we elaborated Table 11 to summarize the activities carried out by the EDC and VFC studied as well as the ones conducted by CWS and KMFT (conservation NGOs) and by CORD (empowerment NGO). The data collected on BKS are

⁸⁵ The NGO intend to develop ecotourism, suggestions were made in a draft concept with regard to home stays: “The fastest route to destruct Kodagu is tourism” (fieldnotes, KMFT meeting, 2007).

⁸⁶ The jama malais is one of Kodagu’s land tenures which represent enclosures within the evergreen type reserved forests. “The Jama Malai rights owners [...] are desirous of surrounding their heredity rights in favour of the Government only for purposes of protection of trees and biodiversity [...]. They expect to receive adequate and timely compensation” indeed Rs.55000/ha for a total area of 3172.62 ha and 55 families. (Coorg Wildlife Society files, 2007)

not sufficient to include this association in our discussion on forest ecosystem and biodiversity. Following SEMA framework, for each type of collective action we have tempted to assess the effectiveness of ecological commitments by summarizing the presence or absence of actions identified in our interviews or in reports and we have tried to indicate the importance given to each action by the corresponding institution or organisation.

Table 11: Actions conducted with regard to ecological issues by the different collective actions

Specific objectives	Actions conducted	Collective Action A		Collective Action B	
		EDC	VFC	Conservation NGOs	Empow. NGO
	Regeneration in forest lands (artificial)	+	+	+	+
Tree cover and Forest ecosystem conservation (plant & animal species)	Plantation in private lands	-	+	+++	?
	Promotion renewable energies (solar)	+	+	+	+
	Research on forests and wildlife	-	-	+++	?
	Lobbying against development projects	-	-	+++	+++
Water and soil conservation	Water availability in forest (tanks...)	+	+	+	?
	Prevention soil erosion (guli cheks...)	+	+	?	-
	Awareness creation	-	?	+++	++
	Meetings: negotiations with parties (KFD...)	+	+	+++	?
Combat Pollution	Lobbying against chemicals (agriculture)	-	-	+	+
River conservation	Research on biodiversity and ecosystem	-	-	+++	-
	Protection of rivers and streams	-	-	+++	-
	Awareness creation	-	-	++	-
Dealing with human-elephant conflict	Plantations for Fodder and food	+	+	++	-
	Maintenance solar fence	-	-	++	-
	Priv. lands Gov. lands	+	-	++	-
	Research on elephants, fodder, corridors	-	-	+++	-
	Meetings: negotiations with parties (KFD...)	+	+	+++	-

- absent action ++ important action ? No data
 + present action +++ main importance action

Source: Laval, 2008

The committee characterised by an ‘Imposed participation’ focus on forest regeneration, water and soil conservation and human-elephant conflict. Conservation NGOs and Empowerment NGO whose collective action is described as “chosen participation” focus on the same actions plus pollution issues and give importance to lobbying and awareness whereas the committees set up under KFD guidelines do not. The president of Chennayanakote EDC who is also one KMFT trustee regrets that in all his schemes, KFD implement activities first and do not create awareness. For him a most effective strategy would be the opposite “even if it takes one year time”. His interpretation of this fact is that “the policy makers or the department heads must stop thinking that all schemes must come to an end during their tenure” (I.K1). KMFT key issue N°5 aims to create awareness by the following actions (Table 12):

Table 12: KMFT actions with regard to environmental awareness

N°	Key issue	Actions
5	Creating environmental awareness	Publishing relevant books and guides Establishment of Kodagu heritage interpretation centre Environmental education programmes

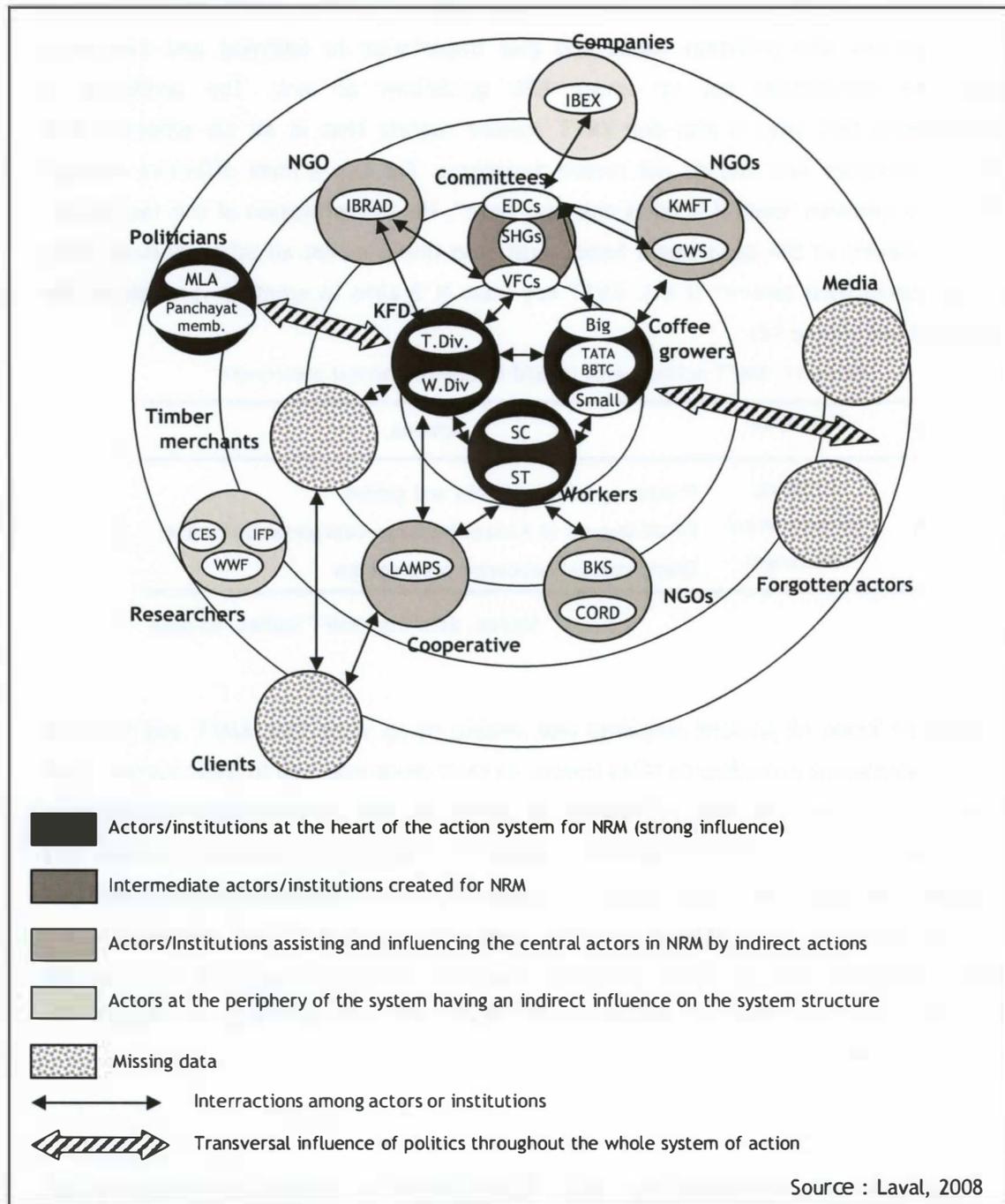
Source: data from KMFT leaflet, no date

The details in Table 12 present elements that enable us to state that KMFT and CWS are actors of environment according to SEMA theory. In their discourses and in their actions, they effectively play a role of agent of change in favour of the environmental commitment exposed (Mermet et al., 2005) especially thanks to lobbying, awareness creation and negotiations with the Forest department. VFCs and EDCs do not fulfil totally the criteria of actor of environment since despite the objectives announced in official documents, the measures conducted are not really effective especially plantations yet the most funded action. The data collected on Empowerment NGOs are not sufficient to assess the effectiveness of their actions.

II. Social complexity of Kodagu’s environmental problems

Not only Kodagu’s environmental problem is a wicked problem but it is also socially complex. The social complexity comes from the individual diversity of the actors, their diversity in disciplines, the diversity of the organisations they are representing and the structure of the relationships they have (Figure 8 above).

Figure 8: Social complexity of the action system for natural resource management in Kodagu



1. Diversity of the actors involved

The actors involved in the problem belong to diverse professions; they are farmers (small and big), managers of coffee estates, KFD civil servants either project makers, decision-makers or executive officers; seasonal or permanent daily-wage workers for coffee growers and sometimes for the Forest department; contractors and companies staff who set up the fences; lawyer, professors, retired army officers, retired forest officers, directors of NGOs, NGO staff, journalists, politicians, Panchayat members, government members and

researchers. Moreover the actors represent different organisations such as the Central Government (MoEF), the State Government (KFD wildlife and territorial divisions), NGOs (CORD, IBRAD, BKS, CWS, KMFT, WWF), LAMPS, corporate companies (TATA, BBTC), media, politicians, research institutes (IFP, UAS College of forestry Ponnampet, etc).

2. System of interrelations

2.1. Karnataka Forest Department and its directions

KFD is an important organisation who deals with participatory forest management. The important thing to remember is that any organisation pursues its objectives invents its own rules and develops its own hierarchy. The hierarchical system of the Forest department is divided in decreasing order into: Principal Chief Conservator of Forest (PCCF), Chief Conservator of Forest (CCF), Conservator of Forest (CF), Divisional Forest Officer (DFO), Range Officer (RO), Deputy Forest Guard or Forester and Forest Guard or Beat Guard and temporary employee called Watcher (Figure 15 in annexe). This organisation is also divided into directions having different responsibility, territories and issues to manage. Our study is limited to a brief analysis of Territorial Division and Wildlife Division. One Wildlife RFO prefers to work for the wildlife division because “in territorial you have to deal with people mainly” (PC. RFO wildlife, 2007).

Through participatory forest management, KFD cooperates with certain NGOs such as IBRAD to implement certain projects such as KSFMBBC.

2.2. Relationships between CWS and KFD

Since KFD is the legal guardian of forests, CWS cooperates with all the hierarchical levels: “we constantly go and meet them right from the guard, forester, RFO, ACF, DFO and PCCF wildlife or territorial, then sometimes up to Delhi” (I.K8). This collaboration is not an easy task; our questions on this topic always made the interviewees smiling and a little bit embarrassed: “To be frank relatively speaking they have been quite okay, quite cooperative within their constraint, they also have constraints” (I.K8). The NGO president tries immediately to explain the managerial problems of the department: the lack of funds and the very small field staff limit KFD’s actions. Besides, the pressures from other departments put the Forest department in delicate position. The president’s anecdote⁸⁷ illustrate this point and he thinks that through the years KFD has become demoralised which “is not a good thing” (I.K8). As we already mentioned forests and wildlife are little funded by the Government of India who funds “anything that gets votes but forests do not give votes” (I.K8).

⁸⁷ “I attended a meeting in Bangalore the other day with the Chief Minister, I was just listening to our political representatives. They were all shouting at the Forest Department [who] annoys them because they come in a way of everything: they want to build a road because villagers are demanding roads, the Forest Department says no so everybody is against the fellow who has to shut up. (I.K8)

In addition, the President explained that the relationships and hence effectiveness of the cooperation between the NGO and the department depends on less on hierarchy than on the personality of the officials: "It is very much personally oriented, I might get on very well with [one] DFO but not so well with [another] DFO because each personality looks at things a little differently". Hence on the personalities of forest officers may depends the effectiveness of any activities carried out by the NGO: "If you have a good chief on top a respected DFO or RFO, if they are positive you can get the work done. Because it is a voluntary work also [...] I cannot devote all my time, so I go once, twice, thrice I cannot go everyday to Madikeri. That's why it is personally oriented when it is a good guy, we go and get" (I.K8). The personality of forest officers may be an uncertainty zone for the NGO who can neither predict nor control this parameter: "(laughing) we always keep fingers cross and hope good will come" (I.K8). Besides there is also a dimension of power: "some foresters look at us like this is my territory, why are you interfering in my work!" (I.K8)

On the other side the Forest department high officers seems to often seek for the NGO assistance on certain issue like construction of dam flooding many hectares, construction of big hydroelectric line or construction of roads: "one CCF in Bangalore said "they are demanding for this road, so you guys also put some pressure from the other side, that road should not come, it is difficult for us to take all the pressure" (I.K8). However certain things cannot be done to respect the temporary fragile alliance between these partners "one thing I am very clear in my mind is as part of Coorg Wildlife Society, I will never ever go public as far as Forest department is concerned" (I.K8).

2.3. Relationships between CORD and KFD

In general CORD staff members we encountered were quite critical towards the Forest department: "We are trying to regenerate the forest which has been destroyed by the Forest department in the name of teak plantations" (I.C1). The director thinks that the Forest department perceives forest as a commodity "which can be sold and marketed like everything is sold in our country right from sand to stone". Consequently the department's objective is to make money without realising that is going to contribute for the destruction of environment" (I.C1). In general Mr C1's opinion on the Forest department officers is negative even though they recognised the quality of some of them⁸⁸: "unfortunately those who think positively and progressively are just comedown and thrown as if they were useless people" (I.C2). Within the KFD officers, the most disparaged is a retired RFO of the national park who led the relocation of thousands of tribal people a few years ago. The NGO do not seem to have any alliance with the Forest department and the members are also critical towards

⁸⁸ Anecdote counted by the director: once Mr Ramaka DFO of Nagarahole NP declared the department did not require so much money, with its own resources and by involving the local community forest could be protected and managed but, within ten days he was thrown out of the department (I.C2).

government officials and many politicians. Nevertheless this strong criticism is not wanton, several NGOs' leaders have tangible example of suspect files and exactions committed by the Forest department (Cf. Part 1).

The system of action for NRM in Kodagu is structured by interpersonal relationships among the actors, politic and systemic phenomenon constituted by these interrelationships and the problem of decision influenced by the decision-maker preferences. The influence of one actor depends on his personal qualities, his resources in the system and the manner how he uses them. All these elements compose fragmentation forces. The intentional management to improve Kodagu's ecological situation may be subject to these forces.

Yet sustainable forest management (SFM) and sustainable development developed commitments to improve the well-being of local populations and to involve them in the decision-making process on forest management (governance aspects). Do conservation NGOs conduct effective actions in these fields too?

III. Collective actions and social commitments

EDCs, VFCs, conservations and empowerment NGOs present commitments to increase the conditions of life of rural populations including to combat poverty and, commitments to improve the local governance by empowering communities and enabling them to democratically handle control over natural resources management. Thanks to the data collected we tempt a first analysis of the impacts observed.

1. Collective actions and poverty reduction

In principle, participatory forest management is supposed to increase the conditions of life of rural populations and combats poverty for the underprivileged ones. In Kodagu in general the Scheduled Castes and Tribes as well as the Other Backward Classes are the least wealthy social groups, yet certain Kodava and Gowda families are also below the Indian poverty line. Are the activities conducted by both collective actions effective? Table 13 presents the actions conducted by both collective actions to reduce poverty of underprivileged people in Kodagu. We consider short term and long term and activities.

Table 13: Actions conducted with regard to poverty reduction by the different collective actions

Actions conducted	Collective Action A		Collective Action B	
	EDC	VFC	Conservation NGOs	Empow. NGOs
Microfinance	-	+	-	?
Benefice sharing of forest produces	-	+	-	?
Employment	+	+	+	+
Support for activity creation	-	+	+	++
Distribution of inputs (agriculture, garden, agroforestry...)	+	+	-	++

- absent action + present action ++ important action ? No data Laval, 2008

1.1. Organisations little working for poverty reduction: EDC3 and CWS

Up to our knowledge CWS does not have guidelines to combat poverty. In the EDC3 framework there is no benefice sharing of the forest produces. Even if the EDC receives Rs.4000 for one hectare planted to develop 'entry point activities' this do not necessarily directly reduce poverty (this EDC used the money for solar lamps and construction of checks in the forest). In the EDC studied the financial aspect is source of discontentment by all the members interviewed. One of them feels that: "in fact the EDCs have been used as shield [...] to serve the interest of certain forest officers who will not be directly answerable to any of the finances [which] are transferred to EDCs and the EDCs are answerable to that. So someone is trying to wash out the responsibilities in favour of someone else".

1.2. Organisations working for poverty reduction: VFC, KMFT and empowerment NGOs

VFCs present an important commitment for poverty reduction. The main strategies are microfinance and benefice sharing of the forest produce (through JFPM guidelines). The benefice sharing in Karnataka is presented in Table 14 below. Provisions are made for people below the poverty line (BPL) to have access to loan with little rate of interest to develop income generating activities through the formation of self help groups. The KSFMB Project's target is the creation of 1200 VFCs and 6000 SHGs (KFD, 2005) but these quantitative indicators do not necessarily inform us on how effective these activities are to match the objectives of biodiversity conservation and poverty reduction.

Table 14: Sharing of the total proceeds derived from the sale of forest produce in Karnataka

Products	Government share (in %)	VFC share (in %)	Remarks
NTFPs	10	90	x
	25	75	Case 1: From the assets created with the help of VFC.
Other Forest Produces	50	50	Case 2: From the assets created <u>prior</u> to the VFC formation including other fuelwood, fodder and small timber plantations but <u>excluding teak plantations</u> .
	50	50	Case 3: From the natural growth <u>prior</u> to the formation of VFC <u>excluding valuable species</u> (Sandalwood, Teak, Honne, Matti and Nandi subject to the Working Plan prescriptions).

For all the produces in all the cases, a minimum of 50% of the VFC share will go to the Village Forest Development Funds. The balance will be shared by the VFC members as dividends or will go to the VDF as decided by the VFC. Source: data from Revised GO on JFPM in Karnataka, 2002

In reality there may be too many VFCs and SHG members compared to the fund allotted. The president of Chennangi VFC is well aware of this problem, during a meeting he suggested to realise actions in common to get higher fund and effective results. In Chennangi, Rs.30000 were given to 5 SHGs with 1% interest: “this money is very less, it is Rs.700 per person; it is not enough for big investments⁸⁹” (I.J3). Similarly one Bhadragola VFC member declared: “My idea is that Rs.30000 should be given to only one person or at least people should be given Rs.10000 each for their agriculture” (I.Y2). Consequently people use the amount as consumption loan not as income generating revenue. This does not help them to improve their livelihood in a sustainable way. In addition people loose interest due to delays in the payment: “they say we will put money in your account but they are not coming” (I.Y1).

To share the benefit on trees, the plantations have to be successful. But in Kodagu it seems that most of the plants die within a year. If trees do not come up there is nothing to harvest and nothing to share. Moreover the plantation sites seem to be to far away: “since we have to go 5 to 6 kilometres inside the forest, it does not benefit to us, it is far” (I.Y2)

Laws are perceived as changing. The changing policies and laws on forest and tree rights make people doubt on the real sharing at the time of harvesting in more than 20 years. They cannot control this uncertainty zone: “One advantage is if we plant a fruiting tree we can remove the fruits when it starts fruiting that will be in 25 years. But we cannot tell how the law will be at that time; every five years the law will keep changing. Can we remove the

⁸⁹ In addition there are problem of market for the products In Chennangi, one SHG created a nursery to sell plants and also for own purposes: coffee, pepper, silver oak, oranges, surgi and some forest tree species. “If we plant more forest species we have to sell it to the Forest Department for plantation work. But they already have their own nursery so what is the use of growing forest species?” (I.J3)

fruits after 25 years? If they tell “it is Government’s you cannot remove it” so we cannot touch it. How can we trust that?” (I.J4)

- The Kodagu Model Forest trustees have planned four actions with regard to poverty reduction (Table 15). Yet, we do not know what has been done and what the impacts are.

Table 15: KMFT actions with regard to poverty reduction

N°	Key issue	Actions
4	Economic instability and impacts on livelihood	Planned promotion of ecotourism
		Livestock studies
		Development of bamboos and its industry
		Sustainable utilisation of non-timber forest produces

Source: data from KMFT leaflet, no date

Currently CORD conducts three projects. One of them is a six-year project (2004-2009) on food security and livelihoods carried out into forty villages and funded by Terre des Hommes thanks to European Union and Government of Germany funding. Among eighteen activities, the ones directly related to poverty reduction are livestock (cows, chicken), horticulture, agroforestry, agriculture input materials, smokeless cooking and herbal gardens. The impacts of this project were not investigated.

Finally the committee where a strong commitment for biodiversity conservation and poverty reduction is announced seems to have difficulties to conduct coherent and effective actions. In the VFC meetings we attended, money was the main subject of conversation. The members wanted details with the loans, the interests, the deadline to pay back, etc. we hardly heard about ecological issues. It seems that Forest department’s guidelines on poverty reduction are an incentive strategy to involved underprivileged people in joint forest management but environmental objectives appear to vanish for the economic ones. In this situation, what is the real appropriation and responsibility of the forest management by local people? Are they really involved in the decision making process?

2. Collective actions and governance

In principle, participatory forest management tends to improve the local governance by empowering local communities and enabling them to democratically handle control over natural resources management. We suggest assessing the effectiveness of the actions conducted thanks to our fieldwork observations thanks to Table 16 elaborated from Arnstein’s notion of participation defined as citizen power (Part 4).

Table 16: Different types of governance system in the collective actions A and B

Specific objectives	Participation components	Participants [†]	Collective Action A		Collective Action B	
			EDC	VFC	Conservation NGOs	Empowerment NGOs
Public involvement	Physical participation	Powerless	+	++	-	+++
		Powerholders	++	+	++	-
Public empowerment	Trainings, Information access	Powerless	-	+	-	+++
		Powerholders	-	-	++	-
Citizen Power	Negotiation with KFD... Part of decision making process	Powerless	-	-	-	++
		Powerholders	-	-	+++	-

[†] In general powerless are ST, SC, OBC 'landless' workers and Powerholders are Kodava, Gowda coffee grower landowners

- weak
 + present
 ++ good (desired)
 +++ proficient (targeted)

Source: Laval, 2008

2.1. EDCs and VFCs

• If we compare the duties and responsibilities of EDC members with what actually happen we obtain the following analysis. EDC should be established in a democratic manner but since we have not attended the election meeting we have no tangible information yet the clues available tend to demonstrate that people are reticent to be presidents and that some members might be chosen or designated by the forest officers or villagers. EDC members should attend all general meetings without fail but they do not. Responsibilities should be equally shared between villagers and Forest department but in reality the system and the forest officers do not want to share all the types of responsibility, in practice members are neither responsible of the funds flow and management nor for the assessment of the work. As planned the members cooperate with KFD in preparation of afforestation plan and actively take part in enrichment of forests however they are not the ones who actually plant the tree species but workers employed for this duty. The members are supposed to inform the forest department about illegal activities or other forest risk such as poaching, illegal feeling and grazing, fire, etc. and help the department in preventing them. The interviews we conducted do not inform this aspect. The members do not have power to manage the committee independently and they do not really take part in the decision making process. EDC should be an institution to create awareness about society and environment but it is not really the case since training programmes or activities planned⁹⁰ have not been conducted (I.K1, I.K3). The

⁹⁰ Activities such as "training programme, workshop, educational tour and vocational training programmes organised to provide more information about NAP" (EDC Microplan, 2003)

president even declares that the local people are not aware of the activities impacts and that they themselves destroy what they have done (I.K1).

- In VFCs in general marginalised people, especially women, are encouraged to be executive committee members. They are pushed to form self help groups and create income generating activities with the funds allotted. In two VFC meetings⁹¹ we attended, we observed that women were quite active compared to men. In the first meeting they were in great majority and in the second they were as numerous as men. In both cases they spoke to the forester or forest guard, the IBRAD facilitator and the president (in the first case the president is a lady). In the second meeting they were seated at the first row in front of these three people. Despite the drawbacks mentioned we should acknowledge this advent of women empowerment is a good progress in empowering marginalised social groups, the village committee offer a platform for members to express themselves and talk directly to some Forest department's officials even though the force rapports between these groups are not equal. However since intermediary-level forest officers still do not play the game the process is partly court-circuited and we wonder how and to which extent the executive committee members could be actors of change.

2.2. Conservation and empowerment NGOs

- As we already discussed in Part 3, KMFT trustees aims to relocate tribal people from the core of forests to the fringe areas, a controversial strategy already used by KFD (Cf. Part 1). Up to our knowledge no rehabilitation has been conducted under KMFT guidelines but the intention exist and the negotiation with tribal leaders ongoing. We do not have details with regard to the second actions suggested.

Table 17: KMFT actions with regard to governance

N°	Key issue	Actions
7	Marginalisation of indigenous communities	Rehabilitation of tribals Capacity building for local communities and tribals

Source: data from KMFT leaflet, no date

- Through the EU-Government of Germany funded Terre des Hommes Project, the activities related to capacity building conducted by CORD in villages are pre-primary centre (PPC), student education support and cultural identity, Gram Sabha meetings (traditional village assembly), BKS meetings, SHGs development, legal awareness on rights, leadership training, child rights campaign and self rule committee (fieldnotes, I.C1). We call BKS and CORD 'empowerment NGOs' as a result of their influence on tribal people's behaviour towards other groups of individuals indeed the power holders such as the Forest department officials

⁹¹ In Sampaje (Sampaje VFC) and Dodda Reshme (Bhadragola VFC).

and also the landowners. The director of CORD intends to remove “the fear that [adivasis] have towards officials, landlords or whoever it is, in a way they resist and oppose any exploitation and injustice” (I.C1). Communication with tribal through empowerment discourses may be the main way used: “This samasthe is here to bring our people together they told us “you are the same caste”, they made us one to live in harmony”. (I.J6) Mr C1 tells them they should send the children to school, tells them how to fight and takes care of the expenditures for lobbying actions example he paid for plane tickets for them to go to Delhi (I.J2). The CORD members also break the social system hierarchy based on caste compartments, the samasthe members came for several months in the haadi, they used to eat in Mr J2 house: “there was no differentiation among us but before I used to not sit in his house and he used to not eat in my house” (I.J2).

Yet a KMFT trustee perceives things differently. For him for a long time Mr C1 has been working in Kushalnagar area with tribal people who have welcomed him easily because he gives them promises of facilities to come. Besides, “he is lucky” because with the actual context of the tribal Bill he could spread his action in the whole district and got more funds from the international scene (I.K2). Supporting tribal people and livelihood is a well-funded theme by donor agencies. Thus our interviewee concludes that it is easy for Mr C1 to become a leader with tribal people whereas it is more difficult for KMFT trustees to work with educated planters who are going to question (on the responsibilities, etc.): “Tribals do not question” (I.K2).

The empowerment strategy not clear yet has already given some results. Certain Jenu Kurubas have partly lost their shyness and fear of strangers. An old Jenu Kuruba declared: “We did not have anyone to speak to, we did not have education. When [forest officers] told us to run we used to run” (I.J2). One of his young sons detailed: “Like how the deer runs when it sees humans we were like that. If someone from outside like you came, we used to run inside the forest and hide. That is why it was easy for them”. Now they are confident enough to make them heard “Now we have started talking back and they have started getting scared.” (I.J2) or “Since CORD organisation of Kushalnagar came they cannot touch our moustache, they cannot hold our land, if they question us we have the responsibility to answer any kind of questions” (PC. Jenu Kuruba, 2007). Sometimes the gratitude for the director made us perplex due, the relationships appeared to be based on this person charism. Since the director went to haadis, educated people showing “how men and women should live in a society” and published about tribal people to make them heard even abroad, they declare: “he is a god to us. He is our father” (idem.).

We have noticed that the individuals in contact for several years with CORD are all local leaders, at the scale of their haadi and even further, who hold the same discourse in front of us. They told the same stories and the same critics towards the Forest department. Besides, CORD director arranged our visit in two haadis. Two coordinators accompanied us and introduced us. In the second one, after they had left, a special evening was organised. It

gathered ten self help group members (men only) Jenu Kuruba and Yeravas. The two Jenu Kuruba leaders who organised the event suggested that each community representative presents his traditions. When it was the turn for a Panyia Yerava to talk they truly humiliated him in front of us and prevented him to go further in its explanation and we had to put an end to the evening. This incident shows how these leaders try to change the discourse of their relatives now they have been in contact with the NGO. They feel they have more knowledge or more resources to impose a relation of power in their favour. Everything they told us was calculated whereas the discourse of this old Yerava was “innocent” in a sense that he was telling his life thanks to the description of his daily duties. In the first village we visited where the NGO has just started to work we did not observe such kind of leadership. What are the impacts of this NGO on the tribal populations? What kind of discourses they try to enforce on these communities? What vision they have of these communities?

Each institution or organisation do not have the same impacts neither with regard to human-elephant conflict resolution nor with respect to the three main objectives of CBFM i.e. forest ecosystem conservation, poverty reduction and governance. The imposed participation is rather directed towards collective action. In Kodagu the actors are switching back and forth between a strategy of conflict or cooperation. Four EDC⁹² around the national park have decided to cooperate with the Forest department. The objective is to close a gap in a place called Begur from which the animals entered Kodagu’s private lands from the Kerala forests. We attended a meeting where this issue was discussed with the CCF wildlife. The main point discussed was that the EDC money has been blocked in the bank for several years in a Village Development Fund and could only be drawn on the department’s permission. The villagers who had paid 25% of the amount at the beginning of the project (IEP) requested that this money (about 40 lakhs) was used to close this gap by setting up electric fence. One EDC president challenged in front of the CCF wildlife: “either you give us the whole responsibility for the money or I give back everything to you”. The CCF accepted to consider their claim and requested that the concerned EDCs submit a “community-oriented and ecological-oriented” proposal (Meeting in Nagarahole 10th August 2007).

It seems that the time is more at the willingness to choose cooperation rather than conflict to solve problems which appear as common. Why is it so? How this cooperation will be turned into acts? What will be the impacts on the state of the forests, on the wild elephants’ situation and on the natural resources management in general? What could be the changes in the relationships among the actors knowing that some of them had rather a conflicting past? Does this new will to cooperate reveals a strengthening of the social relationships in adversity or is it the expression of a new form of “exploitation” of the others to serve one’s interests or the interests of his own social group? Will new capacities be developed for each part? Will there be a social change?

⁹² Badaga, Kanur, Naanachi and Lakunda.

Part 4: Discussion on collective action for natural resources management

We have already presented how public policies on forest and environment in general have affected in the past the Kodava and Gowda landowners, the tribal workers and the mixed-community group forming KFD (Part 1). These elements are important to set up the foundation of today's game of actors developed in the community-based forest management. The second part presented what type of biodiversity and forest ecosystem can be found in Kodagu and identify a main environmental problem: the human-elephant conflict informing us on the forest ecosystem changes happening in the district (Part 2). The third part introduced the difficulty to manage a wicked and socially complex environmental problem. This final part analyses social change but at this point we try to draw a picture at the time of fieldwork; consequently as we immobilise something moving for demonstration purposes, the elements observed could have already changed. This part analyses the actors involved in today's participatory forest management in Kodagu and tries to present the realities leading to different collective actions and discuss the other side of the concept of participation.

We identified the following social groups sometimes overlapping who deal with natural resources management.

- Landowner coffee growers mostly Kodava and Gowda living in Chennangi village.
- Tribal workers mainly Jenu Kuruba and Yerava who live inside the forest or at the fringe.
- SC and OBC workers who live in Chennayanakote village (Holamala neighbourhood).
- KFD as an institution whose members belong to a variety of communities and live in quarters in small town and cities.
- NGO permanent staff of IBRAD and CORD mostly Christians living in small town or cities.
- NGO committee members of CWS and KMFT mostly Kodava who live in villages.

The legal guardian of forests is KFD who has a word to say on tree management in private lands and also deals with human-elephant conflict. Nevertheless, other stakeholders are acting to manage the same pressing issues both in cooperation with the KFD or in an autonomous way. They are either organised into management committees (EDCs and VFCs), either gathered into NGOs (Coorg Wildlife Society, Kodagu Model Forest Trust, Budakattu Krishikara Sangha) or cooperating with NGOs (IBRAD, CORD). According to the data collected, the collective action for natural resources management in Kodagu assumes two different shapes described as 'imposed participation' and 'chosen participation'.

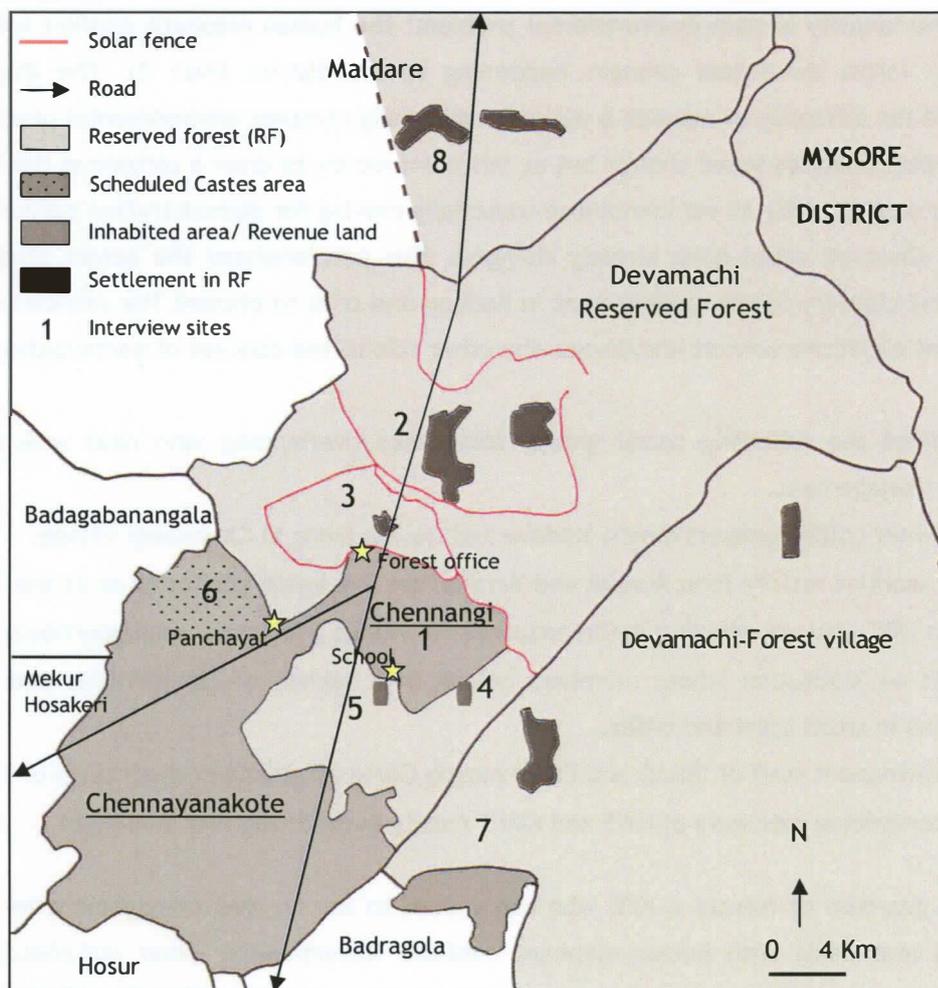
- The first category called collective action A emerges from the management committees (EDCs and VFCs) set up by KFD under different guidelines.

- The collective action B appears from discourses and actions resulting of two types of alliances. On one hand we differentiate local leaders gathered voluntarily under the banner of 'conservation' NGOs (i.e. KMFT and CWS) and on the other hand, we identified tribal leaders gathered into BKS or a larger cooperation between tribal people and 'empowerment' NGOs (i.e. CORD, DEED, etc.).

Chennayanakote and Chennangi villages

We shall first present our studied area, in and around the village of Chennayanakote.

Map 4: different types of areas in Chennayanakote-Chennangi villages



In fact two villages Chennangi (N° 1) and Chennayanakote are gathered under one Gram Panchayat (Chennayanakote Gram Panchayat). Both villages are surrounded by reserved forest and contains habitat with cultivated lands (4,965 acres in Chennayanakote) and coffee estates. Most of the livelihood is agriculture (paddy, ginger) and plantations (coffee, arecanut, fruit trees, cardamom, pepper, banana, etc).

The total population of the village is 6,946 people divided equally into 3,479 male and 3,467 female (Census of India, 2001). About 47% of the inhabitants are illiterates with equal repartition between men and women. Scheduled Castes (SC) and Scheduled Tribe (ST) represent about 39% of the inhabitants (EDC microplan, 2003). With regard to the population

repartition we just highlight some points: SC and ST tend to occupy different territories and are mutually exclusive (Guilmoto, 2000). This is not only true at the district level but also at the village level. In the area studied, ST are mostly settled in hamlets within or at the fringe areas of reserved forests Yeravas in Chikka Reshme (N° 4) and in Dayadhadlu (N° 5), Jenu Kurubas in Chottepare (N° 3) and Basavana Halli (N° 2). Some settlements are mixed such as Dodda Reshme (N° 7) belonging to Thithimathi Gram Panchayat (Yerava, Kuruba mainly). SC people have their own neighbourhood in Chennayanakote village nicknamed 'Holamala' (N° 6). According to one villager, the original inhabitants of Chennangi are Kodavas, Gowdas, Okaligas, Scheduled Tribes such as Jenu Kuruba, Yeravas, Soligas and Scheduled Castes groups. The village composition results from phases of migration before and during the nineteen eighties when a major migration took place from Kerala, Tamil Nadu and Andhra Pradesh. People came in search of work as plantation workers and they settled down in Chennayanakote and Chennangi. From 1978 many Kodavas and Gowdas were shifted from the core of Thithimathi forest to places called Gudlur and Mudabail in Chennangi. They had been given two acres of lands per family. "It was a policy of the Forest department to move these people out from that area for the betterment of these people and for the betterment of wildlife and for the forest sake. They are doing well now".

Some tribal people who live inside the forest today originally belong to the place but a majority of them were brought in by the Forest department for the purpose of plantation work before nineteen eighties (I.K1). In our studied area, just to remind the situation of the tribal people facing social change, we present briefly a non-exhaustive chronology from Chennangi VFC microplan.

1950: Tribals were engaged to catch elephants in 'khedda' operation for the Forest department.

1950: Tribals were appointed as forest watchers

1962: Teak plantations were established

1965: Coffee plantations were established

1975: Tribals from Kanchugar hadlu were shifted to Dodda Reshme.

1976: Tribals were made members of the LAMPS located at Kalhalla. (Chennangi VFC microplan)

I. 'Imposed' participation

The 'imposed' participation studied emerges from the management committees set up by Karnataka Forest Department (EDCs and VFCs) under the guidelines of National Afforestation Programme (NAP) and Karnataka Sustainable Forest Management and Biodiversity Conservation (KSMFBC) Project. They offer an example of both Joint Forest Management schemes and other type of communities' participation. They present quite similar objectives: biodiversity conservation, forest ecosystem conservation and poverty reduction (especially in the latter). The activities implemented are also comparable (e.g. plantation, construction of tanks, check dams etc.) but the EDC studied especially deals with human-elephant conflict. While NAP applies to almost all the Indian States, KSMFBC Project applies only to Karnataka.

Locally the area of implementation is also different: EDCs intervene in buffer zones of protected areas, devarakadu and reserved forests whereas VFCs intervene in reserved forests only. The funding is different too since NAP is funded by the Indian Central Government whereas KSFMB is an externally aided project (Cf. Table 1). Another main difference is the benefice sharing. In EDC under NAP the benefice sharing is not applicable to the tree planted in reserved forests whereas it exists for KSFMB Project. The people belonging to these two committees are quite different. In the EDC studied, majority of the executive committee positions is handled by the well-off villagers mostly Kodava and Gowda landholders. However in the VFC studied, the members of the executive committee are mainly underprivileged people i.e. Scheduled Castes and Tribes and Other Backward Classes.

We propose an investigation of the 'imposed participation' in terms of stakeholders and processes involved. What type of projects? Have the projects created new action system? What are the main features? What type of collective action? Decision making process is examined according to different scales going through the nation state and district levels. We will demonstrate that this process of participation is mainly top-down rather than bottom-up and we will discuss the type of participation created.

1. Chennayanakote EDC: Strategic analysis

Even though the number is not fixed, the district may count 43 EDCs (PC. C.G. Kushalappa, 2007). The identification of EDC categories is based on administrative classification. So far three types of EDCs have been created under different project guidelines, we suggest to call them EDC1, EDC2 and EDC3.

EDC1: created under India Ecodevelopment Project, this type of EDC and the activities are located in the buffer zone of the protected areas especially Rajiv Gandhi National Park. The tribals living inside the park are excluded of the committee (I.K10).

EDC2: created under NAP, the activities are located in degraded forest and lands especially devarakadu and parts of reserved forests (K.12, I.K3 and PC. Garcia, 2007).

EDC3: created under the same programme (NAP) but which objective was to manage human-elephant conflict by closing the access between reserved forests and human habitations with solar fencing set up by the Forest department (I.K1, I.K2, I.G1).

We focused on the third type of EDC in Chennayanakote-Chennangi village (called Nisagara Abhivrudhi Samithi). This village is one of the main areas of conflict with the elephant (Nath and Sukumar, 1998).

1.1. Ruling principles

Guidelines of reference The EDC3 studied was created in March 2003 for five years. "Under the National Afforestation Programme (NAP) participatory approach to sustainable development of Forests a scheme is prepared to promote afforestation of degraded forests and adjoining lands to meet the requirements of local people who live in a close vicinity and

adjacent forest land [...] like fodder, fuelwood, small timber, bamboo and NTFP [...] through EDC/VFC [...]” (Creation of FDA, 2002: 3). In 2002, the formation of VFC under JFPM programme could not be conducted in Kodagu because the tree density was above 0.25% hence the Devarakadu Committees existing were modified into EDCs (EDC microplan, 2003) which type of ‘participation’ is different from JFPM guidelines⁹³ (we are going to discuss participation at the end of this chapter). According to EDC rules there is no sharing benefit of harvest produce between Karnataka Forest Department and the villagers (fieldnotes, 2007). EDCs intervene in buffer zones of protected areas (national park, wildlife sanctuaries), in devarakadu and reserved forests.

Objectives The general objective stated in official documents is to meet the requirements of local people’s needs (Creation of FDA, 2002). The specific objectives listed in the EDC microplan are presented below (we suppressed the activities mixed with the objectives although it is two different aspects).

1. Development of degraded forests
2. Maintenance of environmental balance
3. Increase of fuelwood and fodder production
4. Protection of natural resources for future generation.

If we compare the objectives stated in official documents with the discourse of different interviewees belonging or not to the executive committee, from the Karnataka Forest Department side, the first point highlighted by the forester in charge of the programme implementation is the following: “the idea is to make degraded forests revert back to the old status” (I.K11). For the interviewed villagers, the main objective is to deal with human-elephant conflict, an element totally absent of the microplan (planning document at local level) and present in state-level guidelines among other specific objectives:

“One [objective] is to improve the forestry and provide food, water and shelter to wildlife animals and also to prevent wildlife animal menace”. (I.K3)

“The Forest Department officers and villagers called for a meeting saying: “we are forming a committee, we will do a system to prevent animals from entering your estates”. Lots of people gathered. (I.G2)

“EDC is a new concept involved in sacred forests and elephant issues”. (I.K1)

Besides, it seems that the objectives are not always understood and shared by the villagers whose normal thinking is “why should I do this work which is the work of the forester or the Forest Department?” (I.K1)

⁹³ “According to the Government order N°FEE 50 FAP 2000 dated 19.06.2002, for the formation of village forest committee forest area with less than 0.25% tree density should be available. Due to non-availability of such forests under the jurisdiction of Kodagu circle, the existing Devarakadu Committee were modified and village Eco-Development Committee were formed” (EDC Microplan, 2003)

Steps of formation First, a meeting⁹⁴ gathering all the villagers was organised by Thithimathi RFO, other forest departmental staff and Cauvery Association. In this meeting “awareness was created among the villagers” about NAP and EDC (EDC microplan, 2003). A few “actives people” formed a ‘committee of promoters’ whose responsibility was to encourage villagers to participate in the EDC (ibid.). One members heard about EDC from K1: “[K1] has given good opinion about our Kaveri Nisarga Samithi, he told it will be helpful for our children in future” (I.G1). Then the promoters collected a membership fee of Rs.1 for the SC and ST and Rs.2 for the remaining villagers. The EDC was subsequently registered by the Deputy Conservator of Forest Virajpet Forest Division. Those who had paid the fee attended a general body meeting to elect the president and the other members of the executive committee (replacing the temporary committee of promoters).

Funds The secretary (forester) he is responsible for proper management of EDC funds and Village Ecodevelopment Fund (EDC microplan, 2003) along with the EDC President: “it is a joint account between the secretary and the president; we issued the cheque when the work gets completed” (I.K11). The secretary keeps the account in a cash book. EDCs have obtained the financial assistance of the Central Government receiving funds from an intermediary body called Forest Development Agency (FDA). We only obtain the NAP guidelines for Madikeri Forest Division therefore we have no official indicators of the amount spent in the framework of NAP in our study area (Virajpet Forest Division). Nevertheless the EDC President gave us data: until the 31st of March 2007, Chennayanakote EDC received and spent Rs.9,58,269 to set up a solar fence of 10.8 Km. With regard to national afforestation activity the EDC received Rs.4,27,807.00 but spent only 69.5% of the amount divided as following: 24% on ‘entry point programme’ (2 solar lamps, 2 gully checks), 28% on water and soil conservation activities (check dam), 48% on advance work and plantation work for afforestation and finally nil amount for protection of the fence⁹⁵. In general, plantation activities are the highest funded under NAP guidelines.

1.2. Planning of the activities and microplan

A. Microplan

The microplan is a project document to plan the activities and set up the rules to follow for five years. It has to be approved by the RFO and DCF. The method used to prepare the microplan is the participatory rural appraisal (PRA) carried out by the forester plus a resource person (e.g. NGO staff) involving the villagers (EDC microplan, 2003). We met the former forester who was the previous EDC secretary. He is satisfied with the microplan

⁹⁴ All the meeting at the local level are conducted and written in Kannada language.

⁹⁵ Data from a chart given by the President of the Eco-Development Committee during our fieldwork.

because the participatory process enables to better plan the tasks⁹⁶ by collecting all the details on the inhabitants⁹⁷ and villagers' opinions (I.K6). The forester tells the procedure of elaboration:

“During two to three months we collect data, we go to animal husbandry we ask them how many cows/calf are in this village, we go to Mandal Panchayat ask what is the population, in revenue office we collect details about tank, etc. We discuss with people we show them the documents. How many SC, ST, landless, how many are dependant on firewood, how many are dependant on forest. Before writing the document, we call a meeting, all the local people attend, even the DCF comes he is the chairperson he tells about the programme which has come from the Government. In the meeting we ask people to give us their views, opinions, problems and also demands. They were given 15 days to express their opinions to include them in the microplan. We also make a map of the area where the forest is, school, where ST people live, where the temple is. First we write by handwriting then in book format and send it to different offices”. (I.K6)

The three activity components are reforestation and plantation, water and soil conservation and 'entry point activities' to develop the village. Since Chennayanakote EDC gets Rs.4'000 for one hectare planted, any development activity is based on plantation work (we discuss this point in the fourth part). However one of the main stakes is the prevention of human-elephant conflict in the area. The Forest department set up a solar fence through five villages and five EDCs are in charge of its maintenance. In Chennayanakote the demand would have come from the villagers and the Forest department agreed to build this protection in 2003 (I.K1). In reality the microplan contains no defence schemes, and no elements on biodiversity; it is “the same for all over the state” (I. K11).

B. Rules of the EDC according to the microplan (2003)

The executive committee has to prevent misuse of funds and violation of the rules. It should prevent the “offences” to forests; in case a member is involved in such activities he should be excluded (microplan Chennayanakote EDC, 2003). The committee has to supervise the work conducted and the members should meet at least once in three months in a meeting where the decisions should be documented in a proceeding book by the secretary. An annual general body meeting should be conducted once a year and special general body meeting could be conducted in case a debate on emergency issues is needed (ibid.). The president should call for and chair meetings and decide the agenda. The secretary has to organise the executive committee meetings and send the proceedings to higher officers to obtain their suggestions and directions. He has to provide all types of documents related to the planning to the committee (government records, notifications, etc.) (ibid.).

⁹⁶ “In the microplan it is already discussed where [work] has to be done. Before in case of plantation work we used to carry out where we had good access to everything” (I.K6).

⁹⁷ Including their needs from forest like mud, firewood, leaves, cattle grazing, etc.

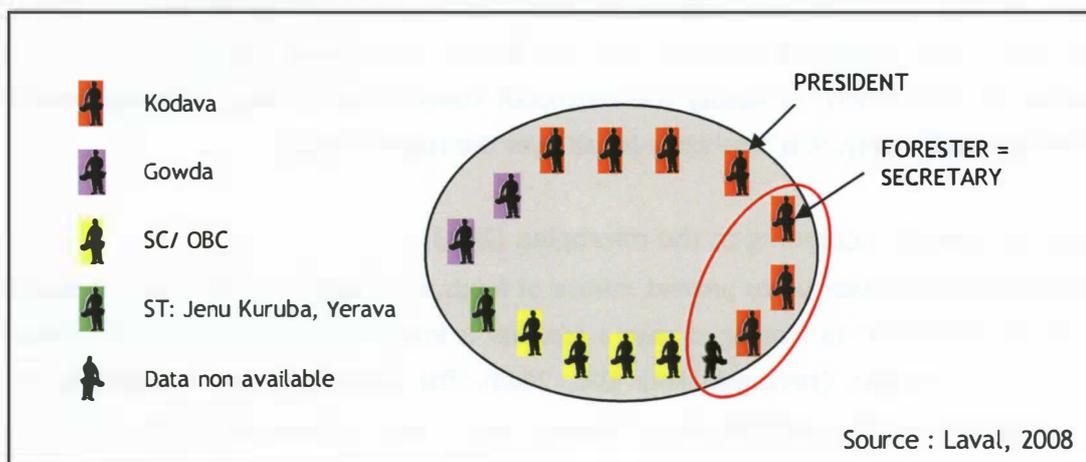
KFD has to approve the work conducted through the EDC based on estimations made by departmental engineers (changing according to the type of task e.g. construction, forestry) who give specific parameters to follow (I.K1). Once the work is completed, the forester submits the completion report to the Ranger. The committee i.e. the “president, secretary and any member who has time” supervises the activities; the members have to approve the work before and after its completion; “any member who sees a mistake has to feel free to inform the Committee” (I.K1). Finally the RFO checks the work then the Assistant Conservator of Forests (ACF), then the Deputy Conservator of Forests (I.K1, I.K12).

1.3. The EDC members

A. Composition of EDC governing body

The composition of the EDC governing body called executive committee is “already written in the microplan” (I.K6); it counts fifteen members including villagers and department officials presented in figure 9 below. To be an EDC member, the excluding criteria are age (the person should be at least 18), place of habitation (the person should live in the village concerned) and the occupation may be a criterion since a watcher employed by the Forest department cannot be member if as long as he is in function⁹⁸ (I.K7).

Figure 9: Composition of Chennayanakote EDC executive committee



Four ‘ex-officio members’ (circled) are nominated: the forester of the area who is secretary of the EDC, the accountant of the Revenue department, the local village Panchayat secretary and a representative of an NGO. The nomination of the first three members would be done by the Forest department according to official posts (I.K1) but other criteria may exist. Even though the Revenue department should be present in the EDC it seems that the Forest department is the only department involved in the long run. The NGO is selected by the committee members with approval of the DCF i.e. Coorg Wildlife Society in Chennayanakote EDC (I.K1). Due to a reservation system, the eleven other members are two women, two

⁹⁸ A former forest watcher declared: “because I was in the department they said no” (I.K7).

Scheduled Castes and Tribes, one artisan, one landless labourer, four persons belonging to any group and, one President from any group. The election of the eleven non-nominated members is conducted during the first general body meeting. We did not attend this event (3 years ago) but since an EDC normally includes two or three villages, equal number of members should come from all the villages (I. K6, I.K7). Several interviewees often used the passive form “they have made members” in which ‘they’ refers to the forest department. Therefore we suppose that the members are not really elected but maybe nominated by the forester or an influential villager. The interviewees did not express a real will or a special pride to hold their position as members.

Table 18: Characteristics of Chennayanakote EDC executive committee members

Position	Nb	Type of Member	Function	Sex	Community or code	Language			Land ownership	Occupation
						Kod.	Kan.	Eng.		
Forester	1	N	Secretary	m	K11*	•	•		x	forester
Village panchayat secretary	1	N	-	f	K5*	•	•		yes	Accountant Revenue department
Village accountant	1	N	-	m	unknown	x	x	x	x	Village panchayat secretary
NGO member	1	N/E	NGO Represent.	m	K4*	•	•	•	yes	Coffee grower
President any group	1	E	President	m	K1*	•	•	•	yes	Lawyer
General category	4	E	General member	m	K3*	•	•	•	yes	Veterinary
					K9*	•	•		yes	Coffee grower
					G2*		•		yes	Coffee grower
					G1*		•		yes	Ex forester watcher
Women	2	E	General member	f	SC OBC		•		x	x
ST or SC	2	E	General member	m	Y1*		•		no	Worker
					SC1*		•		yes	Worker
Artisan	1	E	General member	m	SC		•		x	Artisan
Landless labourer	1	E	General member	f	O1*		•		no	Worker

* Person interviewed

- No title given by the microplan

x no data

Source: data from Chennayanakote EDC microplan and fieldwork interviews

The first thing we can see with this Table 18 is that the positions planned in the microplan classify and mix under a same title different types of social categories: sometimes per

profession, sometimes per community, per sex, per land ownership or other criteria ('general category'). This led to confusion. Being more precise we can declare that among fifteen members four members are women. With regard to community this EDC is composed of six Kodava, two Gowda, one ST and four SC/OBC. No data is available on the Revenue department accountant.

- The six Kodava occupy the important positions (secretary, president, NGO member and Panchayat secretary). Three of them speak English fluently. Apart from the two civil servants (forester and Panchayat secretary) who are not from the village and live respectively in Thithimathi and Virajpet, the other Kodava live in their native village Chennangi in beautiful houses. Their profession is mixed: the president is a lawyer, one member is a veterinary, two members are civil servants and two have no other profession apart managing their coffee estates. Apart from the forester all the Kodavas are landowner coffee growers with different level income of income.
- The two Gowdas are also coffee growers but one is much less wealthy. They were born and still live in Chennangi. Both occupy a 'general' function in the committee.
- The four SC/OBC occupy a general position through special provisions made by the Government. They do not speak English but Kannada and their own language (e.g. Malayalam). Most of them live in community homogeneous neighbourhood. Their access to lands is limited (a few acres) or they are totally landless. Since they cannot live from agriculture only, they are artisan or daily-wage workers in coffee estates.
- Only one Scheduled Tribe, a Yerava, is a general member of this committee. He cultivates a few acres around his house but has no land record therefore he appears as landless in our table. He is also a daily-wage worker who does not speak English.

B. Social identification of the members

The nominated members

(1) Not only the forester of the village is secretary of Chennayanakote EDC but he is also the secretary of three VFCs. Mr K11 is a Kodava around 50 years old who comes from a village called Cherambane around 20 to 30 km from the village studied. He started his career in 1973 and was appointed in Chennayanakote in 1992 as a forester then transferred to another place before coming back in 2005. He lives in quarters in Thithimathi (range headquarters) about 8 km from there. He has a bike to move around and a mobile phone to communicate. He does not speak English but understand most of it. After a first interview at the very beginning it was impossible for us to get another one.

(2). The NGO member represents Coorg Wildlife Society. Mr K4 is a Kodava in his sixties. He lives in Chennangi in a big house and runs his coffee estate. Sometimes he moves around with his car. He is a former Panchayat member. The interview shows that he is neither very involved nor interested in the committee; and he was not talkative on the EDC neither on the NGO.

(3). Mrs K5, the Panchayat secretary, is a Kodava lady who lives in a big house in Virajpet. Her husband is a lawyer who speaks English but she does not.

(4). Since we did not meet the accountant of the Revenue department no data is available.

The “elected” members

(5) Mr. K1 is president of the EDC⁹⁹. He is a Kodava around 48-50 years old married with children. He is Mr K2 brother-in-law. He lives in Chennangi near Dr K3. He is a landholder who owns a coffee estate divided in two parts: one in Chennangi and another one in the revenue land of Basavana Halli which he has never mentioned. He is a lawyer and his office is in Pollibetta, 7 Km from his village. He attaches great importance to the formal procedures and the law especially any official documents (behaviour that might be due its profession). He is respected by the villagers and some of them described him as someone “honest, educated and knowledgeable, deeply and sincerely involved in environmental issues”, who has the capacity to negotiate with high Forest officials because he is patient: “If a tempered person does it, it will turn to conflict” (I.G2). Moreover he is mobile: he travels with his car and “he does not mind spending Rs.5000 from his own pocket”. Mr K1 is “not like any other person he is good, he does not have intention to spoil government’s money so no one fights against him to become the President” (I.G2). Due to its involvement in environmental NGOs as a member of Coorg Wildlife Society and one of the seven trustees of Kodagu Model Forest Trust he is known as “an environmentalist [who] works for development and strives to protect and save forest” (I.G2). With the support of KMFT, he has published a book Land tenure, land holding, tree rights of Kodagu which was controversial at the time of publication in 2004.

(6) Dr K3 is a Kodava around 60 years old; he lives in a big house in Chennangi with his wife. He owns a coffee estate divided in several parts two in Chennangi village and the last one in revenue land adjoining Devamachi Reserved Forest. He is veterinary and works in his clinic in Pollibetta where he goes by car. Many people know him because of his job. He is not a member of Coorg Wildlife Society because to his opinion “it is just to put a sticker on your car” (I.K3).

(7) Mr K9 is native from Chennayanakote (Chennangi) where he leaves with his wife and children. His father was born in Virajpet. Then his family purchased lands and settled here. Mr K9 runs his coffee estate in the village and today as Panchayat vice-president he seems always busy and keeps moving around in his pick up. He does not speak English very well but understands; he has a mobile phone and landline to communicate.

⁹⁹ If we compare with an EDC1 president (Mr K10), some similarities and differences appear. Mr K10 is a Kodava around 47. He studied law but never become a lawyer. He manages his coffee estate in his village Dhanugala and lives in a big house. Not only he is the President of an EDC but he is also involved in many other social and cultural organisations. Contrarily to Mr K1 he does not seem so strict on the rules: he told us how he managed to repaired his fence utilising its relationships (informal procedure).

(8) Mr G1 is a 45 year old Gowda; he is married and has two children. He lives in Chennangi his native village. His parents had seven children. In 1962, his father settled in this village to cultivate. Mr G1 worked for twelve years in Forest department as a forest watcher along with three other watchers (two Jenu Kuruba and another Gowda). Even though he liked his job, he had to resign in 1999 because of his father's health problem. When his father expired five years ago he had to look after the farm alone. His two elder brothers are in Bangalore. He has no car and only a landline to communicate.

(9) Mr G2 is a Gowda in his forties. He lives in Chennangi his native village. He declared that for 800 years his family has been living here. From first to eighth standard he studied in Pollibetta. He speaks very little English. His father and mother expired. He has a son who has just get married. He runs his coffee estate and grows paddy, arecanut, banana, pepper and coconut. He is a member of a rifle association in Madikeri where he does shooting competition. In the village he is involved in many social activities including spreading information on government's programme for "poor people". His interview shows a strong capacity of observation of the changes affecting Kodagu's animals, forest and coffee estates. He has a jeep to move around and a mobile phone to communicate.

(10) Mr Y1 is a Yerava of 57 years old. He is married and has two sons and one daughter who just gets married and left the house. His sons have failed at school in 9th and 10th standard so they work (one is in Bangalore). He lives inside the reserved forest in a hamlet called Chikka Reshme. He knows all the tree species around as well as the NTFPs he could get. He is an ex-local representative of Thithimathi LAMPS now his son holds the position. He was suspicious about our study and he vividly expresses his fight to obtain property rights (uncertainty zone) through Budakattu Krishikara Sangha a tribal organisation for agricultural purpose started in 1984 he is member from. He asked us to support him in case they conduct a strike. He has no modern means of communication, no car or bike and no phone at all.

(11) Mrs O1 is a Malayalee¹⁰⁰. She is married and had three children, two sons (one passed away) and one daughter married with two children. Her husband is from Chennayanakote but her parents and she are from Siddapura village where she was born and where she studied Malayalam and Kannada until 5th standard. Today she lives in the SC neighbourhood of Chennayanakote in a small house with her husband and an old orphan lady to whom she provides shelter. During the interview the old lady started to cry. "An ashram should be open for poor people; there is no one to look after them" Mrs O1 explains. She does not have any field to cultivate; they are landless labourers as per the classification of the microplan. She does not go to the forest even for firewood since she gets it from the coffee estates. She started working for different coffee grower landowners (as well as her husband) just after her wedding when she was 20. She learnt from the elders and after 20 year experience it is

¹⁰⁰ Officially classified as Other Backward Classes.

her turn to manage 10 to 15 people. She works everyday on a contract work basis except on Sundays which is a day-off. She confesses “people are ready to work also on Sunday but I cannot I have work at home also” (I.O1). Through the interview she made clear that life is difficult for them “we are poor people [...] if we do not go for work we have no money. In the morning we wake up early to go for work, when we come back we have to fresh up, cook, clean the house, we are tired” (I.O1). She is president of a landless lady SHG. As they do not have access to banks, the advantage is that the ladies have access to loans with lowest interest than if they borrow money to “outsiders”. The SHG provides assistance for hospital expenses and children’s admission to school hence the main uncertainty for this lady is to earn enough money to live, take care of health problems and children’s education. “There are facilities provided by the Government but we do not have time to go and request them”. She was a Panchayat member for 2.5 years and then President of Chennayanakote Panchayat for 2.5 years but she does not have a good opinion of this institution running: “whenever we go the secretary is not here”; “The Panchayat members are of no use: If we ask for something they say go to Taluk and when we go to Taluk they said go to the local Panchayat. So we have to go higher up to District Commissioner”. She is the only person who talks spontaneously of ‘community’, jatti. She pointed out the social rules of the upper-class people who did not allow the lower class to enter their house. She also mentioned briefly the struggle of Mohandas K. Gandhi and Dr Bhimrao Ambedkar to bring up the lower-class people. Now through the Panchayat, programmes exist to bring up underprivileged persons.

(12) Mr SC1, 60 years old, is an Adi Karnataka-Yedagai¹⁰¹. He is married, has two daughters and one son who is in Bangalore. The daughters live here. He cultivates a little bit of coffee and paddy and works daily in coffee estate for a landholder. He leaves the house at 7.30 am and comes back around 6-6.30 pm: “It is difficult because I am old” (I.SC1). Since the estate is divided into two parts (at 3 and 5 km from its house) to reach the further part he walks inside the forest (rather than on the road “it is too long”) where he has already encountered wild elephants. Before like many other people he used to go to forest for firewood only “now we do not go to the forest because of the solar fence”. He prefers to get firewood from estates because in forest he gets firewood “only if a branch has fallen whereas in the estate we are sure to get [it] and for free” (I.SC1). He does not go for plantation work in the forest but go and gets bamboo shoots where there is no fence. He is member of the EDC and member of a SHG in Pollibetta (access to loans for agriculture). The interview was very confusing between the two organisations. The main uncertainty for this person is to obtain employment to support his family: “The government have to look at our problems and gives us facilities. My son has studied but has no job”. It should also “give money for the solar fence” (I.SC1).

No data are available on (13) artisan, (14) and (15) the persons of ‘women’ category.

¹⁰¹ Officially classified as Scheduled Castes.

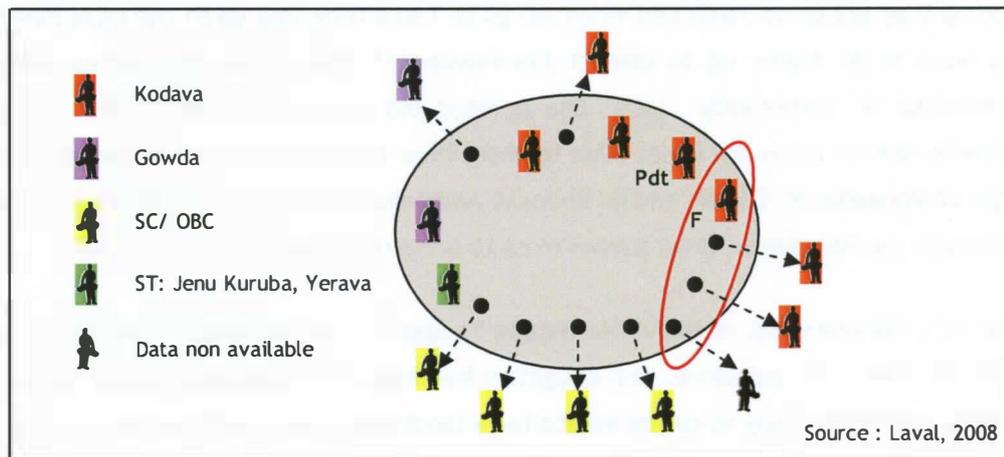
1.4. Concrete action system of the studied EDC

Following Crozier and Friedberg's example of the French Ministry of Industry (1970), the strategic analysis of Chennayanakote executive committee tends to demonstrate that this committee is a non-organisation: as observers during the fieldwork research we lost the notion of organisation and it appeared necessary to broaden our investigation scope and to identify and explain its real running out of the organisation.

A. Actors' strategies

The situation occurring during EDC executive committee meetings reveals the actor's strategies and the system of action. Given the pieces of information collected through our interviews we know that most of the members have chosen to walk out of the executive committee meetings. The process is presented below with Figure 10.

Figure 10: Composition of the EDC executive committee with time



The forester confesses that six to seven members attend the executive committee meetings (I.K11). Another member confirms that “around nine members do not attend meetings” (I.Y1). He declared that he attends as well as the president and the forester but: “certain people do not attend at all; I myself do not know how many members are there” (I.Y1). It seems that the two women requested by the microplan are not involved: “In our EDC we want two women but we do not have” (I.Y1). Why the members do not attend the meetings? In general people “have lost interest” (I.Y1), certain cannot afford the cost to be ‘active’ members and other feel powerless:

- In general the underprivileged villagers i.e. the tribal, SC and OBC workers cannot afford the cost in time and finance to attend meeting (I.SC1, I.O1, I.Y1). Two of them do not see any benefit to be part of the executive committee (SC1 and O1). When we contacted Mr SC1 for the first time he declared “no, no, I am not a member” finally he accepted an interview and explained that it is a loss for him to attend a meeting: “if I go for work I earn Rs.100 if I go to the meeting I lose them why should I lose Rs.100 just for one tea and one biscuit?”

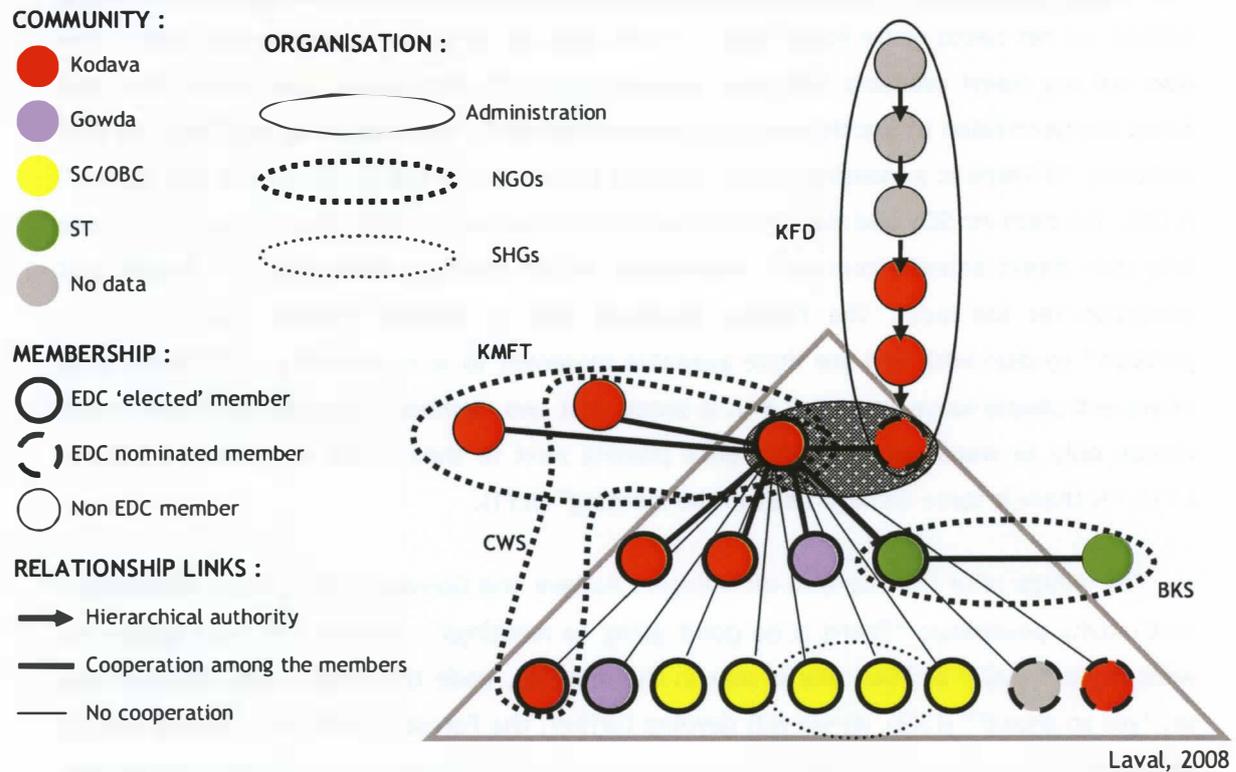
(I.SC1). Mrs O1 explained how she became member: “they put my name on the list three years back” (I.O1). She makes “no benefit” out of the EDC; she does not go into the forest neither for her needs or for forest work because she has “a lot to do with estate work”. She does not use forest products (she buys firewood from the landowner). She added “We once asked the permission to use the forest but we did not get”. With regard to meetings she also declares: “If there is a meeting I have to leave my work and pay to go, it is a loss for me” (I.O1). Yet both Mr SC1 and Mrs O1 were quite talkative on the SHG they belong to because they gain direct benefit from such organisation which matches their priorities (health and education for the lady). The Yerava explained that as workers “people have their own problem” to deal with and are little available moreover as it is voluntary work there is no salary and people loose interest (I.Y1). It seems that two members including the Yerava were chosen only to watch whether the fence passing next to their house is maintained (I.G1, I.Y1): “If there is some damage I tell in the meeting” (I.Y1).

- The village elite i.e. the well-off villagers Kodava and Gowda coffee grower landowners feel mostly powerless: “There is no point going to meetings”; “We do not have power we want power” (I.G2) or “Our role is seat in the meeting, node the head, node the head and say ‘yes go ahead’” (I.K3). As we will develop further, the Forest department controls almost everything from the activity planning, execution and checking as well as funds management (I.K2, I.K3, I.G2): “They made us members for name’s sake” (I.G2). Consequently some have chosen to walk out of the meetings; they feel their action cannot change the problems they have identified: “Mr K.1 is fed up being president, he is not able to solve problem we have seen it in our own eyes. What will happen if I take up [the post]? It will be more difficult. In general body meeting they tell you to become the President but no one agrees” (I.G2). The interviewee feels that “People are ready to face anything. Everyone has capacity but we do not have power” (I.G2). Thus in this system, the domination seems anonymous and the authority impersonal, both apply to all the members. This collective action results from a system which imposes its general rules and norms to the individuals, even to the most powerful of the village.

B. System of action

We suggest the following social network (Figure 9) to represent the interrelations between the different members concerned more or less directly with the committee. The figure is certainly much more complex.

Figure 11: system of actors in Chennayanakote EDC



Degree of fragmentation and compartmentalisation

The degree of fragmentation and compartmentalisation between the parties of an action system are an important indicator to identify the type of system of action. It seems that the system counts several centres of decision compartmentalized and pursuing their own objectives. There may be a 'weak direction' with a theoretical horizontal shape formed by the EDC executive committee with its so called democratic and participatory approach and, a 'strong direction' with a real vertical shape formed by KFD and its hierarchical system. The forester and the president are respectively at the knot between KFD and public especially the first one. The functions of integration and coordination are fulfilled by these two actors who may act as a couple. The success of the project is partly in their hands and socially they can benefit from a good image.

Another clue confirming the fragmentation between the vertical and horizontal bodies is that while the civil members and the forester are in charge to run the committee and implement activities under the given guidelines, they do not necessarily share the objectives of the Forest department. With regard to the quantitative targets of plantation work, the higher officers are "not bothered about what happens there, they are only bothered about their statistics and their charts", this "does not help any place to go forward except their own promotion" (I.K1).

Dominant mode(s) of communication

The mode of communication is also an important indicator to define a system of action (Crozier and Friedberg, 1977). In our case, information is not transparent neither circulates freely within the committee and between the inside and outside with the individuals belonging to the organisation's environment. KFD keeps voluntarily an uncertainty with regard to the future of the organisation, the EDC president himself declared "I do not know what will happen to the EDC" (I.K1).

Structure of the game, modes of articulation or hierarchy modes

Due to the executive committee dependency towards KFD, it is impossible for the members including the forester to take decisions unilaterally; the important ones have to be approved by the KFD higher officials who themselves have to conform to the MoEF's directives. It is quasi impossible for any member to suggest activities already planned either in the microplan or in the NAP guidelines which limit the extent of the committee's powers. There is no provision to revise the plan. In case they try to suggest all the same, the ideas have to be approved by the DCF who is a key person in the system of action. KFD controls all the steps from planning, implementation and checking of activities which is perceived as an offence by several villagers who are not satisfied with the participatory process of the microplan creation (I.K3, I.G2). Although he is a former forest watcher, one member does not know about the existence of the microplan. One interviewee detailed:

"The execution of the work is done by officials in whatever manner they like. Then the work has to be assessed to know whether it has been done in proper way or not, [...]. Even that is done by the higher officers not the villagers because they say: 'you're not technically confident to scrutiny the work'. So they do all that and ultimately come back to us for approval" (I.K3).

This discourse expresses a lack of responsibility given to the committee members, an absence of trust in their competence and a relationship of power favouring the department. The president declared that "the area [of action] is not clearly defined"¹⁰² and that:

"The concept was that when you prepare a microplan you involve all the people around the village and prepare [it]. Unfortunately, it was the first experiment by the Government in this area. People were called and told about so many aspects, they were asked: "do we go for all this?" So there was no time to think for the people... to come to a conclusion on what is good and what is bad: Where are we going to work? What kind of authorities behind? So many things have not been told to the people. Of course even the authorities were not that aware of all those aspects." (I.K1)

Financially the committee is not an autonomous body but depends on the good will of the KFD. The DCF is the only one who can give authorisation to withdraw the money from the bank. Hence the members do not control the fund flow to implement the activities: "money

¹⁰² While in Chennayanakote they planted in sacred forest, parts of the reserved forest and other type of lands, the EDCs responsible for sacred groves only have an area well demarked (I.K1)

is in their hands [so] we loose our interest” (I.G2). This interviewee feels that EDC activity effectiveness would increase if powers were given to the committee (I.G2). His argument opposes the temporary responsibility of forest officers compared to the permanent one of villagers: “What guarantee is there whether we will get the money? Today there might be a Ranger or a forester or an ACF then he gets transferred, the new fellow will say I do not know about it.”(I.G2). Besides, due to lack of training and information, some EDCs do not have submitted their account properly: “When the money was given to us a proper procedure [had] be followed but many of the EDC committees were not aware of these formalities and no training was given to any person with regard to the utilisation of the funds [...]” (I.K1). The president who is a lawyer extremely respectful of law does not appreciate this situation at all¹⁰³. When we asked questions on the EDC funds and accounts he was very embarrassed. Later on when he came to know we had borrowed the EDC cash books he took it back “to correct the mistakes”. Finally we decided to not examine the accounts of the EDC. The president would have preferred that while giving such responsibly to both forester and president, the forest officers told “this is Government money so there is a certain procedure to be followed, so these are the procedures, you had better learn them first and then, you utilise the money accordingly to any beneficial manner” (I.K1). He mentioned that the account problems are “not [due to] the intention to cheat” but another member mentioned cases of misuse: certain forest officials would augment measure records to increase the costs (I.G2).

Problem of the system limits

With Crozier and Friedberg’s approach of organised action, each actor belongs to more than one structure, has more than one role to play and more than one identity to manage (Crozier and Friedberg: 1977). The EDC President belongs to different groups according to various parameters: he belongs to the Kodava community, he is a landowner coffee grower, he is a lawyer -profession which made him to behave in a formal way respectful of rules- and he is also an active member of two environmental NGOs (CWS and KMFT). Therefore for each group, certain behaviour, knowledge, discourse, actions are expected by the individuals with whom he is in interaction. The EDC secretary is a forester who has to obey higher officials’ orders and whose behaviour has to conform to the rules of the Forest department. As a Kodava, he shares common points with the other members of this community, at least the language. The Yerava is a member of BKS, an organisation with whom he fights for property rights that are one of the main stakes for him. Since he is the only tribal person of the committee may act as spokesperson for his relatives but also as representative of tribal workers, as inhabitants of forest, etc. In reality several systems of actions always interweave

¹⁰³ The interviewee denounces that at the beginning of the project when forest officers handed over the first amounts they said: “you do whatever you want it is your money [...] only thing is make sure it helps your nature, your environment, your village. And finally, the same officers c[a]me back and sa[id]: you should have known that there are procedures to be followed”(I.K1).

and every system of action is open according to different degree (Crozier and Friedberg, 1977). To our point of view, Figure 11 shows that in reality the relationships structuring the most the actors' action are weaved out of the EDC executive committee, either with NGOs (Kodavas with CWS and KMFT, Yerava with BKS), self help groups (Scheduled Castes and Other Backward Classes) or the forest administration (forester). The studied actors organise their actions rather through these organisations than through the EDC.

Finally from the EDC members to the ACF in the Forest department, for manifold reasons, almost everyone thinks the microplan is not suitable at all, yet all of them keep the game going with different strategies: while some have chosen to walk out (ACF, RFO, more than half of the members), other struggle trying to solve problems and carry on with the objectives (president, forester and a few members). Dependency and passivity are characteristic features of the system of action created by the EDC management. We believe the pyramidal shape divided into one vertical body and one horizontal body is proper to represent this top-down process yet more interviews are needed. To our point of view the major drawback of system of action is that rules are rigid and there is no provision to change or adjust them. We believe that the possibility of adaptation is a key indicator of a real participatory process giving decision making power to villagers. The EDC executive committee presents the characteristics of a non organisation or a body which is not able to operate a real autonomous mediation between ends and means because everything is dictated by KFD. We think that the rigidity of the EDC system could have been tackled by informal adaptations such as in EDC1 but the president of Chennayanakote EDC may be too quibbling to dare or take the liberty of choosing such types of strategies. We do not know if the forester uses informal means. In general we believe that the EDC members were no able to adapt the rules of the game in their favour, KFD stays the only real governing body in the system. However, we have explained that multiple systems of action exist; they embrace and overhaul the organisation. We will analyse these systems further and try to foresee some change in the preponderant role of KFD.

2. Chennangi VFC: strategic analysis

Not only the village of Chennayanakote counted one VFC created in April 2007 but the formation of a second VFC was ongoing. This was a premiere in Kodagu (I.C2). It seems that different types of VFCs exist, some are under a Special Component Programme (SCP) where more than 50% of the members should be Scheduled Caste or Scheduled Tribe hence there are general VFC, Scheduled Caste Programme VFC, and Scheduled Tribe Programme VFC¹⁰⁴ (I.K12). We studied Chennangi VFC, a 'Scheduled Tribe VFC', extended over six hamlets or

¹⁰⁴ Bhadragola VFC was a general VFC (the president is a lady Kodava) but as most of the members are tribals it has become STP VFC (I.K12)

haadis within Devamachi Reserved Forest: Chottepare, Didalli, Kotemachi, Chikka Reshme, Kesuvina Kere and Deyadhadlu. The 'village' considered counts 602 persons equally divided into men and women and 142 families classified into the following castes: Scheduled Tribes (92), Gowda (15), Kodava (10), Scheduled Caste (9), Muslim (5), Malayalee (4), Billava (3) and Madivala (2). Only 33 families are landowners, 109 do not have any land record (Chennangi VFC microplan).

2. 1. Ruling principles of Chennangi VFC

A. Framework and objectives

The Karnataka Sustainable Forest Management and Biodiversity Conservation (KSFMBC) Project is a project for an eight-year period (from 2005-06 to 2012-13). It is funded partly by the Japanese Bank for International Cooperation (JBIC) and partly by the Karnataka State. The project objective is to reduce poverty and conserve biodiversity¹⁰⁵. The project is launched under Joint Forest Planning and Management guidelines which target is the creation of 1,200 VFCs, 73 EDCs and 6,000 SHGs in 27 districts of Karnataka starting by the north. At the time of fieldwork, the second phase was ongoing in the southern districts. Official documents planned the creation of 32 VFCs in Kodagu (Madikeri plus Virajpet forest divisions) but one NGO facilitator involved in the process mentioned a target of 37 VFCs including 27 already formed (KFD, 2005 and I.C2). The main difference between EDC and VFC is that in the previous one there is no benefice sharing at all of the forest produce between KFD and the villager members. Almost all the tribal families live on forest lands¹⁰⁶, they do not have property nor tree rights: "the tribal village is actually a reserved forest, 100% of the trees belong to the Government" (I.K1). Since the trees cannot be cut and sell by the tribal people, they have been facing many difficulties in their daily life: "Inside the forest, we cannot take anything. If we want to build a house we can take bamboo but we cannot remove trees (I.Y2). In this context the sharing benefit offered by the project could be a source of interest for the tribal people.

¹⁰⁵ Or "to restore forests to bring about ecological restoration and also facilitate livelihood improvements of the inhabitants of the project villages by afforestation through JFPM in the state of Karnataka, this further contributes to reducing poverty and preserving biodiversity conservation" (Project Implementation Manual, 2005)

¹⁰⁶ Only in Basavana Halli certain tribal people have property rights due to an enclosure of Revenue lands within Devamachi RF. These people might have been granted revenue lands a long time ago before people settled down in Chottepare (I.K1). The data collected give no details with regard to the year.

B. Steps of formation and respective rules

The data come from interviews with one IBRAD facilitator in charge to assist the KFD in the project (I.C2) plus a local ACF (I.K12) and the JFPM Coordinator Bangalore (I.L1).

1. Contact meeting First a 'contact meeting' is called in the village by the Forest department officials and the facilitator. Both introduce themselves to the local people e.g. who they are and what they are doing, what the project is. The objective of this first meeting is to provide basic information on JFPM (the purpose, what has to be done, etc) thus local people "will think about that, and see what the possibilities of forming VFC are" (I.C2)

2. Sensitization Then the facilitator and a forest officer go to the village to "sensitise the people about forest conservation, man and nature relationships and [their] livelihoods. Why they should conserve [and] protect the natural resources including forest and why they have to cooperate with the Forest department" (I.C2). They explain the role of the Forest department and why forest officers "have to come to the people" (I.C2). After the discourse, the local people go for a walk around the settlement; the aim is to "motivate them to protect the forest" and convince them to be involved in the project: "voluntarily they will come forward" (I.C2).

"Motivate means they do not realise... they are not aware of what the consequences of degrading the forest are. [...] we take them in the older days when there was plenty of forest cover, plenty of wild animals, clean environment, regular rainfall, good fertile lands and good climate [...]. But nowadays, gradually it has been degraded. We inform people this is all happening because of decreasing forest cover [...]. And scientifically, it is proven that where there is forest cover it will be good rainfall. We inform the people and they realise that without the forest... So they think: 'yes, we have to save the forest'. If there is any vacant land there, they have to grow some trees and like that there will be motivation." (I.C2)

3. Identification of promoters About seven people are selected as 'promoters' who cooperate with the Forest department and the NGO facilitator to form a VFC in the village. The promoters help in "collecting the membership" and "making the members" (I.C2). The vocabulary is confusing we do not really discern the sense behind "making the members", on what criteria the choice of the promoters is based on, etc.

4. Based-land survey The next step consists in realising a household survey called "based-land survey" by the facilitator. We attended this event in another settlement inhabited by a tribal community called Maratha near Kushalnagar. It consists in completing a form (annexe x) with demographic and socio-economic details (e.g. name of the village, people's caste, joint or nuclear family, education, occupation, type of house, etc.) in Kannada language. Recently an order from KFD Bangalore requested in addition ecological details, mostly hydrological data (I.C2, letter KFD addressed to all facilitators). This survey has to be conducted for each family; it is very time-consuming for the facilitator who is alone to complete all the forms (he spent 3 days to complete the forms in this village). Sometimes he asks someone literate from the public or the forester to help him. The general purpose is to understand people's

“level of livelihood and education” as well as to compare people’s situation before and after the project to assess “if there is any improvement in the lifestyle of the people” (I.C2).

5. Membership fee collect Anybody who wants to become a VFC member should be more than 18 years old and should be interesting in conservation of the forest. He has to pay Rs.2 as a membership fee. The facilitator makes a list of those who have subscribed to the committee and who become ‘general body members’.

6. Rules and regulations Then the facilitator, the forester and the members set up the “Baila rules and regulations” on VFC management i.e. how it should function, who has to call the meeting and when, within how many days that meeting has to happen, who can benefit and on what basis the products have to be shared among villagers. These rules and regulations are sent to the DCF who scrutinizes them and registers the VFC (I.C2).

7. Election of the management committee Among the ‘general body members’ eleven people are elected to become ‘management committee members’. Once in three months they have to conduct a management committee meeting to reveal the progress of both VFC activities (I.C2). The minutes have to be sent by the secretary to the concerned RFO. If there is any enquiry or if there is any demand of the committee the Ranger should address them (I.C2).

8. Training When VFC is under formation, training programmes (three days) have to be conducted in the village itself for all the villagers before conception of the management plan (step 9). Yet in reality the training is conducted after the management plan because people’s availability does not always match the requirements of the procedure: “if we go [during monsoon people] are totally engaged in their activities they cannot spare time; in February or March people will be free” (I.C2). Forest officials received also training at the beginning of KSFMBBC project (I.L1, I.C2, I.K12). RFOs attended training on JFPM in Darware (‘5-day capture’ 3 times: 15 days). Forest guards and foresters received training programmes in Kushalnagar. At the time of fieldwork all the trainings for KFD officers in the framework of this project were completed.

9. Management plan Normally the management plan is prepared for eight years (length of the project) based on the participatory rural appraisal (PRA) method which takes three days to complete. It should be done jointly by the Forest department and the people. The microplan is made at the micro-level and should cover all the aspects of the village within 2 km diameter: habitat requirements, number of people, cattle, associations and self help groups, area available for afforestation, school facilities, electricity, etc. “People have to say what is needed not the Forest department” (I.C2). Four groups are constituted but we do not know who makes the groups and based on what criteria. One group go to the east, one to the west, south and north. Several actors facilitate the process including the facilitator plus “some resource person from outside the village: someone who can handle this type of project” like another “specialist NGO” as well as the Forest department (I.C2). The groups are not accompanied by a resource person but guided their instructions. Then they go and collect it. Based on the details analysis they perform social mapping, resources mapping (water, the items “exported” out of the village are and the items ‘imported’ into the village, etc.) and

climatic conditions comparing the situation in the past and at present and trying to suggest specific targets for the future. The VFC microplan contains biodiversity elements: list of the village tree species, animals and birds. 100 to 200 hectares of degraded forest area are selected “through the participation of the people” (I.C2). At least 100 hectares have to be taken for treatment according to eight afforestation models¹⁰⁷: “Depending on the nature of the forest area, people select the model [and] seat with the Forest department to discuss what species of trees can be planted. The people select the species” (I.C2, I.L1). For plantation activities all the details have to be calculated e.g. number of labourers, number of pits a labourer can excavate, etc. “You have to foresee everything” said the ACF (I.K12). With regard to soil and moisture conservation activities, people identify and discuss where there is a possibility of preserving water (e.g. presence of an old lake or possibility to create a new one or a check dam) by going into the forest to inspect the spots. Afterwards, one man and animals plan is prepared and all these activities are listed out. One bilan is prepared on how this committee can be functional (meetings, membership, members’ role, etc.) According to data proper to the village the activities are planned per year with regard to afforestation, water conservation and income generation. For each VFC a manuscript version is realised before the official version typed with computer. Foresters, guards, RFOs and ACFs have been trained on microplan and MoU preparation (I.K12).

10. MoU

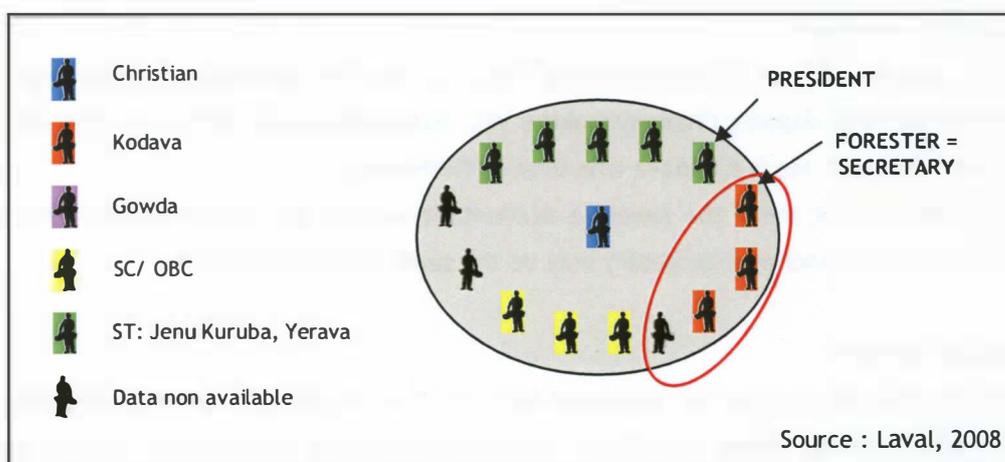
Finally a Memorandum of Understanding (MoU) is signed between Karnataka Forest Department and the villagers involved in the Village Forest Committee.

2.2. The actors involved in KSFMBC Project

A. Composition of the VFC governing body members

The committee counts fifteen members including villagers and department officials presented in Figure 12 below.

Figure 12: Composition of Chennangi VFC governing body



¹⁰⁷ Presented in annexe.

Similarly to EDC four 'ex-officio members' (circled) are nominated: the forester of the area who is secretary of the VFC, the accountant of the Revenue department, the local village Panchayat secretary and a representative of an NGO. Contrary to EDCs, the forester in charge of the section (under which comes the VFC) is not the only person who can be secretary, a forest guard with a minimum level of education (S.S.L.C.) or an agriculture assistant can hold the position (Chennangi VFC microplan). In Bhadrakola VFC, a Muslim forest guard is the secretary (I. C2 and fieldnotes).

Among the persons who have paid the membership fee eleven people are elected to become 'management committee members' or 'executive committee members'. The excluding criteria are the same than for EDC i.e. age (limit of 18 to 60 years), place of habitation (permanent resident of the area concerned by the committee); besides, the person should have "a special interest in protection and development of forest" (Chennangi VFC microplan). If a member has been declared guilty in any "forest offence" he remains ineligible for the membership for 6 years; if a member of the executive committee is absent for three consecutive meetings its membership is terminated (ibid.). The Government made provisions for ladies (the committee should have 50% of ladies and 50% of gents), SC/ST, landless labourers and also NTFPs collectors (ibid.). Our fieldwork reveals that the executive committee is composed of five women and six men and counts at least 50% of Scheduled Tribes members including the president elected for five years who is a Jenu Kuruba. If we compare with the EDC executive committee the main difference is that in the VFC the beneficiaries targeted are underprivileged people (SC and ST). They are daily wage workers or meet their livelihood with the collect of NTFPs sold to the LAMP society as well as small agriculture for their own consumption or for selling. One lady is school teacher. Most of them live in hamlets within Devamachi reserved forest on Forest department's lands, therefore one of their main stakes is the access to property rights. Since we did not meet all the members, the analysis is incomplete.

B. Social identification of the actors

VFC 'ex-officio members'

(1) Mr K11, the forester of Chennayanakote village is also the secretary of Chennangi VFC, Maldare VFC and the ongoing Chennayanakote VFC (Scheduled Caste VFC). The details have already been exposed. He is a Kodava who lives in Thithimathi.

(2) (3) (4) We did not meet the Revenue accountant neither the NGO representative who might no exist. The Panchayat secretary may be the same than for the EDC.

VFC elected members

(1) Mr J4 is a general member of Chennangi VFC. He is a 39 year old Jenu Kuruba who lives with his wife and his three daughters inside the reserved forest in a hamlet called Chottepare. He has a government house with commodities and cultivates small garden and small lands around his house (Forest department lands). He grows coffee as source of

income. He does not seem to work for a landowner and we do not really know what his sources of income are. He has a car, a landline and mobile phone which in Kodagu are precious means of communication: he is able to move for any training or meetings and can be reachable quickly for any information. Always busy, he was hardly at home when we went to his hamlet. He tries all the opportunities to find any kind of assistance for his hamlet and the school children (financial mainly). He is involved in many different organisations. First he was a local President of the LAMPS for seven years, he left one year back. Next he is the “Taluk leader” of BKS. Since 1994-95 he is a member of Chennayanakote Gram Panchayat (he won thrice the elections). Recently he became a member of Chennangi VFC. He has also strong links with CORD NGO based in Kushalnagar. His father is a respected “great man” who is the author of many poems and songs telling the culture (I.C1). He does not speak English but understands sometimes.

(2) Mr J3 is the president of Chennangi VFC. He is a 37 year old Jenu Kuruba and one of the younger brothers of Mr J4. Physically he looks like his brother but their personalities are quite different. He lives with his wife and his children in the same hamlet. He cultivates small lands (forest lands) where he grows coffee and other crops. He does not seem to work for a landowner too. We are still unsure about his sources of income. We do not know if he is a member of a SHG. He has a bike and a mobile phone but does not give the impression to be as busy as his elder brother. He does not speak English.

(3) Mr J5 is the NTFP representative of Chennangi VFC. He is also a Jenu Kuruba from Chottepare, married with three children. He is from this place “from ancestors”. His father expired but his mother is still alive. He has 2.5 acres of lands (Forest department’s lands) where he cultivates paddy (own consumption) as well as coffee and pepper (for selling) he started to grow four or five years back. The FD has already removed the fence he had set up around ‘his’ lands. He has four cows. If he does not have forest work with KFD he works for a landowner in coffee estate. He is a member of a men SHG and member of the Thithimathi LAMPS. He has no modern means of communication: no vehicle, no mobile. He does not speak English.

(4) Mr Y2 is a general member of the Bhadrugola VFC created two years ago. He is a Yerava in his thirties married with two daughters and one son. When his father expired: “If mother fell sick and stayed in her bed, we did not have food for a week” (I.Y2) hence he had to work to bring up his two sisters. He lives in a Government house in a hamlet called Dodda Reshme inside the reserved forest belonging to Thithimathi Gram Panchayat. His house is located in-between cultivated lands and teak plantation. While his wife and children work for the coffee grower landowners nearby, he works at home and cultivates his small lands (Forest department’s lands). He is also a Gram Panchayat member. He has no vehicle but owns a mobile phone as well as his son. He does not speak English. He is the only tribal person who attended our presentation in Ponnampet.

Members of the VFC's environment

As defined by Crozier and Friedberg (1977), the environment is external to the organisation but it contains resources that the organisation needs to function and reach its objectives. To carry out the KSFMB Project, the Conservator of Forests Project Director and the Deputy Conservator of Forests (Social forestry) take the support of one JFPM coordinator, five Lead-NGOs namely IBRAD¹⁰⁸ Bangalore, IDS¹⁰⁹ Dharwad, RDS¹¹⁰ Belgaum, Outreach Bangalore and Samudaya- RDS Tumkur and sixty JFPM facilitators on a contract basis for the first five years (KFD, 2005). For example, IBRAD's role is to assist KFD and facilitate the implementation of the project through formation and capacity building of VFCs, preparation and realisation of the management plans (website). The criteria for NGO selection are the presented below. The NGO should have:

1. Experience in forestry related, rural development, social work, human resource development, microcrédit and IGA.
2. 5 years existence including registration under Foreign Contribution Regulatory Act.
3. Facilitated community-based organisation (CBO) mainly and their federation.
4. Capacity for training of CBOs in aspects of NRM, community organization, microfinance and livelihood related issues.
5. Been associated with Govt. funded project for a minimum period of three years.
6. Experience in promotion of microfinance among the CBO and building the capacity for the same.
7. Experience working with local NGOs in the network and building their capacities.
8. Should already be working at least in three districts in the State of Karnataka.
9. Staff strength of minimum of 50 with subject matter specialisation such as NRM, microfinance, promotion of livelihood and others.
10. The Governing body of the lead NGO should be broad based with people from various disciplines.
11. Good communications and drafting, facilitation and appraisal skills both in Kannada and English.

(Karnataka Forest Department 2005)

Only IBRAD intervenes in Kodagu. We shall present this NGO who plays an important role in the actor system. IBRAD is a non-profit organisation created in 1985. The founder member and chairman is Professor S.B. Roy, a Christian around 60. The governing body counts thirteen members, seven of them are Doctor of Philosophy in Anthropology mostly, the other have different degrees on social services, accountancy or worked as civil servant. All of them live in Kolkata and none of them are western persons. The national headquarters are based in Kolkata (ex Calcutta) West Bengal. Among several regional centres¹¹¹ the one for South India opened three years ago in Bangalore. It is an ISO 9001, 2000 Certified Organization. Among

¹⁰⁸ Indian Institute of Bio-Social Research and Development

¹⁰⁹ India Development Service

¹¹⁰ Rural Development Society

¹¹¹ In North and West Bengal, Rajasthan, Chattisgarh and Himachal Pradesh.

other sources of income, IBRAD has received US \$ 800,000 as an Endowment Fund from the Ford Foundation and receives a remuneration of Rs.20000 per month for KSMFBC Project (KFD, 2005). During the interviews with the implementation level, the NGO objectives were often rapidly eclipsed by activities, nevertheless the website provides information. The IBRAD vision is "Creating a world of human understanding for sustainable human development"¹¹². The NGO is known for its involvement in participatory forest management in India (Poffenberger and McGean, 1996), one Bengali staff declared: "we are the pioneer of Joint Forest Management" (Fieldnotes, 2007). IBRAD is involved in different forestry projects (KSMFBC project in nine forest divisions¹¹³ and consultant as Training Advisor for Andhra Pradesh Community Forest Management Project in 2006). IBRAD provides training and education programme (e.g. training for senior Indian Forest Service officers (IFS) notably on Joint Forest Management since 1991; distance learning course on natural resource management (NRM)¹¹⁴; academic programmes¹¹⁵ and public health education and practices. Finally, the NGO is involved in action research by publishing many books, research papers and consultancy reports related to the previous themes (Cf. Pr S.B. Roy).

Social identification of these members

We interviewed three actors who are part of the organisation's environment: the JFPM coordinator (L1) jointly in charge of the KSMFBC Project at the state level with other KFD officials, the IBRAD Regional coordinator in Bangalore (C3) and the two facilitators employed by IBRAD to assist KFD in the formation of the VFCs in Kodagu. One of these facilitator (C2) interests us particularly since he is in charge to assist the formation and management of the VFCs studied.

Dr L1 is around 48 to 50 years old and belongs to the Lingayat community, one of the most dominant communities of the Karnataka State. He is PhD in Agriculture and a Professor of agriculture extension. He wrote twenty-five research papers in peer reviewed national and international journals, guided M.Sc. and PhD students in Agricultural Extension. He handled different international projects including some related to forestry. He attended almost all the previous international forestry congress. He was associated with the centrally funded-

¹¹² IBRAD was established "in response to growing need for: understanding the concepts of biological, social and other natural sciences, through systemic approach and unifying these concepts for developing a coherent body of knowledge; thus applying the body of knowledge and skills through integrated training and educational programmes to address the problem of severe degradation of natural resources and social environment, upon which our survival depend" (website).

¹¹³ Bangalore (Urban), Chamarajnagar, Hunsur, Kollegal, Madikeri, Mangalore, Mysore, Udupi (Kandapur), and Virajpet (Karnataka Forest Department, 2007)

¹¹⁴ The idea is to form a NGO network committed for the cause of NRM, water management and public health education from 2003. (Website)

¹¹⁵ Programmes are conducted on NRM, sustainable development and human development. (website)

NAP and since December 2006 he joined KFD as a JFPM Coordinator of the KSFMBBC Project in Aranya Bhavan Malleshwaram Bangalore. He receives between Rs.40000 to 50000 per month (about €1000) according to its qualification and experience (KFD, 2005).

Mrs C3 is the Coordinator of IBRAD regional office Bangalore since April 2007. She is a Christian from Bangalore her native place. She studied engineering, worked in a company and joined Outreach Bangalore NGO for 3.5 years as a Project Coordinator. She confesses that she is not very interested by forests and actually the project close to her heart is to help the eunuch community. She has planned a project to help them and wait for an opportunity and funds to start its implementation. She has a strong character and refuses that somebody at her level or below controls her work.

Mr C1 is one of the two IBRAD facilitators in Kodagu. He is a Christian around 40 years old. He is married and has two children in 4th and 7th standard. He is native from another district of Karnataka but he wants to stay in his small house in Kushalnagar and not be transferred. For many years he has been involved in social work: before his position with IBRAD he was working for CORD NGO he joined in 1993. He speaks Kannada and English. He does not have any facilities to travel but owns a landline, mobile phone as well as a computer.

Now that we have identified the actors we shall analyse the concrete action system of the VFC executive committee.

2.3. Concrete action system of the studied VFC

We have tried to unveil who do what in the system, who are the actors allied and the ones in opposition or conflict and how the whole system functions knowing that further study is needed to complete the analysis.

VFC meetings are an event worth analysing to understand the facilitator's role as well as the real type of participation of the members. The few VFC meetings we attended were postponed. This reveals the difficulty to organise or conduct this type of meeting since several conditions have to be fulfilled and for each condition difficulties emerge. First the choice of the meeting date is an issue. The people targeted are SC and ST who mostly works in coffee estates who are free only on Sunday or Monday. During their day-off they prefer going to the market or handle other tasks than attending a VFC meeting. After work people are tired and at 7.00 when the night falls people are afraid of elephants. Another condition is the presence of the facilitator which is a source of uncertainty since his mobility is a problem: he has no control over the journeys very time-consuming neither over timetables especially during monsoon or under exceptional circumstances¹¹⁶. Occasionally he is obliged

¹¹⁶ Friday 17th August 2007, we rent a car to go to Makutta (road to Kerala). When we arrived after 2 h of very bad road the VFC meeting was cancelled: the facilitator could not reach the place due to a

to stay overnight in some acquaintance's house. When it is not the facilitator, it is the forester who is not free due to other duties that have priority such as plantation work or chasing wild elephant¹¹⁷. Sometimes meetings are cancelled due to lack of information. In general the secretary has to organise the meetings, at least to spread the message. At times one forest guard is sent to inform one by one all the households concerned a few days before the date of the meeting (fieldnotes, 2007). The meeting we attended in Chennayanakote village (27.08.2007) shows how it is difficult to conduct a VFC meeting in general and especially a meeting to elect the management committee members:

When we arrived at 9.00 the building was closed and nobody could find the keys. Very few people knew there was a meeting therefore the forester visited many houses one by one to inform the people. Then Mr K9, the Panchayat vice-president, arrived and opened the building but there was no chair so he fetched some with three or four men in his pick up. One hour and a half later when everything was installed, the place was not convenient so we moved to the adjoining room more lightened but very small. The persons entered with difficulty, there were around 16 men plus 2 women as well as the IBRAD facilitator (C2), the Panchayat vice-president (K9), the forester-secretary (K11) and the Zilla Panchayat representative. The meeting was about to start but Mr K11 declared there were not enough members to conduct an election¹¹⁸. Consequently a long discussion followed: the forester asked one lady where were the other ladies, then individuals asked him why meetings are held on Sunday (day of the market) despite they prefer Monday. Then everybody discuss whether to choose Sunday or Monday. Finally K11 declared: "without electing the members you cannot have access to the bamboos in the forest" and the Zilla Panchayat representative added: "you will not have access to the bamboo only but also to other things in the forest". Then they discussed again the date and small groups were formed outside. Finally K9 decided (outside) the date of the meeting for the next Sunday. (Fieldnotes, 2007)

The facilitator (Mr C2) is not annoyed when a meeting is cancelled at the last minute it is part of his job. Sometimes he foresees that it will not be held because it was not well prepared but he lets the secretary-forester and the members manage this issue because: "they have to experience the thing themselves" and realise how they should organise a meeting (I.C2). If he intervenes, "they will not be involved and they will wait for [him] to do everything" (PC. C2, 2007). That is why that day he did not take part in the negotiation that was going on. Few days later during a Chennangi VFC meeting a new rule was adopted: when

strike in Kerala preventing buses to travel. We went back home. The next day we learnt that buses finally moved, the facilitator reached the place and the meeting was conducted in the evening. (Fieldnotes)

¹¹⁷ Sunday 26 August 2007, two VFCs meetings in Maldare and in Chennangi were cancelled because the forester had to take in charge people attacked by one wild elephant early morning. (Fieldnotes)

¹¹⁸ The persons needed are one Inspector from Revenue department (absent), one Zilla Panchayat member (present), one forester (present), one NGO member (absent), one photographer (absent) and at least 50% of the members should be assembled for the meeting (not entirely present). (Fieldnotes)

the secretary inform the members that a meeting will be held, they have to sign a paper saying that they had the information and that they will come (Fieldnotes, 2007).

A. Actors' strategies

Following Crozier and Friedberg (1977) we shall present some features of cooperation and conflict. In order to cooperate, any actor must have resources to exchange sometimes of various natures (knowledge, skills, experience, funds, etc.). These resources must be relevant indeed useful for the actors of the other party who should recognise their necessity in pursuing their objectives. If the resources are not useful to them no exchange is going to happen. Next, when the actors respect the rules of the game in which they are involved (e.g. hierarchy principles, rules and norms) this reveals a willingness to cooperate whereas if certain actors express their disagreement or do not respect the rules, these are indicators of a dimension of conflict. The components of a conflict dimension are the actors' capacity to identify the actors and stakes of the social rapport, the capacity to perceive the rules of the game and put them into question; the use of their leeway and their capacity to use their resources to assert their point of view. In fact both cooperation and conflict dimension can be present in the same interview which makes confusing the analysis at this stage.

On the implementing agencies' side we tried to identify strategies of cooperation or conflict among the actors through their discourse and action.

- Among others role, the IBRAD coordinator manage “a triangular activity” since she coordinates “three agencies” i.e. IBRAD, KFD and the facilitators (I.C3). She declared that the coordinator is not “the partner of KFD, KFD’s partner is IBRAD”. KFD gives instructions to IBRAD office then through this office she receives the instructions in an official manner: “they give the headings of the activities [but] they will not tell how to implement it”. Her duty is to simplify the activities “to bring it to the knowledge of [the] facilitators”. Afterwards she monitors the work conducted¹¹⁹. She confessed: “It is not difficult, it is the easiest thing one can do. [...] I feel I have a tremendous capacity to do many more things” (I.C3). Even if she does not share the ideology of the NGO: “IBRAD it is only forest, forest and forest” it seems that she is doing a good job. She went on by explaining that “We have got constraints, we have got capacities but opportunities should be there and means should be there. I have got an idea to help all the eunuch, do you know the eunuch?” (I.C3). We wonder if pursuing personal objectives which do not match the ones of the NGO can affect the organisation and the project to be implemented.

¹¹⁹ She monitors whether the facilitators “are doing their jobs according to [her] requirements”: she scrutinizes the quality of information i.e. whether the information collected is sufficient or insufficient, whether its quality is genuine (in a sense non made-up), if it is measurable information or vague information (I.C3). She monitors the timing of the work. She sends the information in a report to KFD.

- In general the JFPM coordinator regrets that at the first opportunity facilitators leave their job: “they will get around Rs.10’000¹²⁰ per cash, it is not a permanent job, it is on a contract basis. They always look for a good job, it is a human tendency. Stability cannot be ensured that is the main problem. We are unable to keep them, people come and go so every time we have to select them, give training and after two months they just quit” (I.L1). It seems the IBRAD facilitators are the ones who act in such a manner since the NGO is quite new in Karnataka.

- The facilitator of IBRAD we followed is bonded with social work and he is convinced that the public participation is a positive thing: “the government has realised that unless there is Joint Forest Planning and Management, the forests cannot be protected” (I.C2). For him, the relationships between an NGO and the public are necessarily cooperation: “as a local NGO we have good rapport with the people and they will put some level of confidence in [us]” (I.C2). We observed that during the based-land survey the facilitator tried an alliance with the villagers against the Forest department, he declared: “the forest people work for salary only, you are living near the forest if you protect it; it would be useful for you that is why we are forming this committee” (Fieldnotes).

- Facilitators are facing non-cooperation from certain Forest departmental officers. KFD direction manages alone the funds allotted to VFCs: “money is in their hands” (I.J4) therefore the facilitators do not necessarily have access to the information, even if they ask to the concerned person they do not know whether the funds have reached a given VFC. Locally the RFO is in charge of the funds flow but it is not transparent for different reasons (I.C3). Sometimes forest officers are not knowledgeable because the project is not a priority: “for Range Forest Officers these are the least activities they give importance” and in case any misuse happens they are reluctant to give the information: “I have seen Range Forest Officers misused the funds” so if the facilitators ask for information even very politely they would not have it (I.C3). Similarly one VFC member wonders: “What will the people know? Were the expenses really so much? Was it utilised properly? They might buy a plant for Rs.2 and in the account book they might write Rs.5. That is why the in charge has to be given to the committee” (I.J4). In case of non cooperation, the IBRAD coordinator writes a letter to higher Forest officer namely DCFs to ask them to notify their subordinate to cooperate with the facilitators by giving the necessary information (she has already wrote such letters in Mysore and another district and it has worked (I.C3).

In general, higher officers cooperate non-cooperation is at the local level (I.C3). In our case study the forest officers above the Forester tend to escape their responsibilities with regard to the project management. They do not attend the PRA exercises neither the governing

¹²⁰ The KFD gives Rs.12000/month per facilitator but when it goes to the lead NGO, the organisation keeps something. That is called institutional development funds. (I.L1)

body member election meetings. In the few VFC meetings we try to attend in Chennayanakote, Chennangi, Bhadragola and Maldare no forest officer above the forester came. The ACF declared “before I attended these meetings now I send the RFO; I only go if there is problem (I.K12). This disinterest in the committee’s action might be due to lack of time or simply that he does not believe in the project objectives ends or means. Indeed within Karnataka Forest Department itself the cooperation is not easy too.

To the JFPM Coordinator: How do you see the involvement of forest officers in the project?

“Euh... it is a little bit early to comment it but I could use the word transition [...] only top people were managing you know, top down, now we are reversing that bottom up so that takes a lot of time but still I am seeing positive changes they are diverting their roles, talking to the common people, these things were never known by the Forest department people before, they were like a Police people. Now they are talking to them, helping them, their attitudes are changing. It is happening and some people are very good. Maybe around 30 to 40% officers DCFs ACFs, RFOs, Foresters, now they are... they are all a bit confused that is why we are in a transition phase”.

(I.L1)

On the members’ side we identified confusing discourse between strategies of cooperation and conflict with the Forest department.

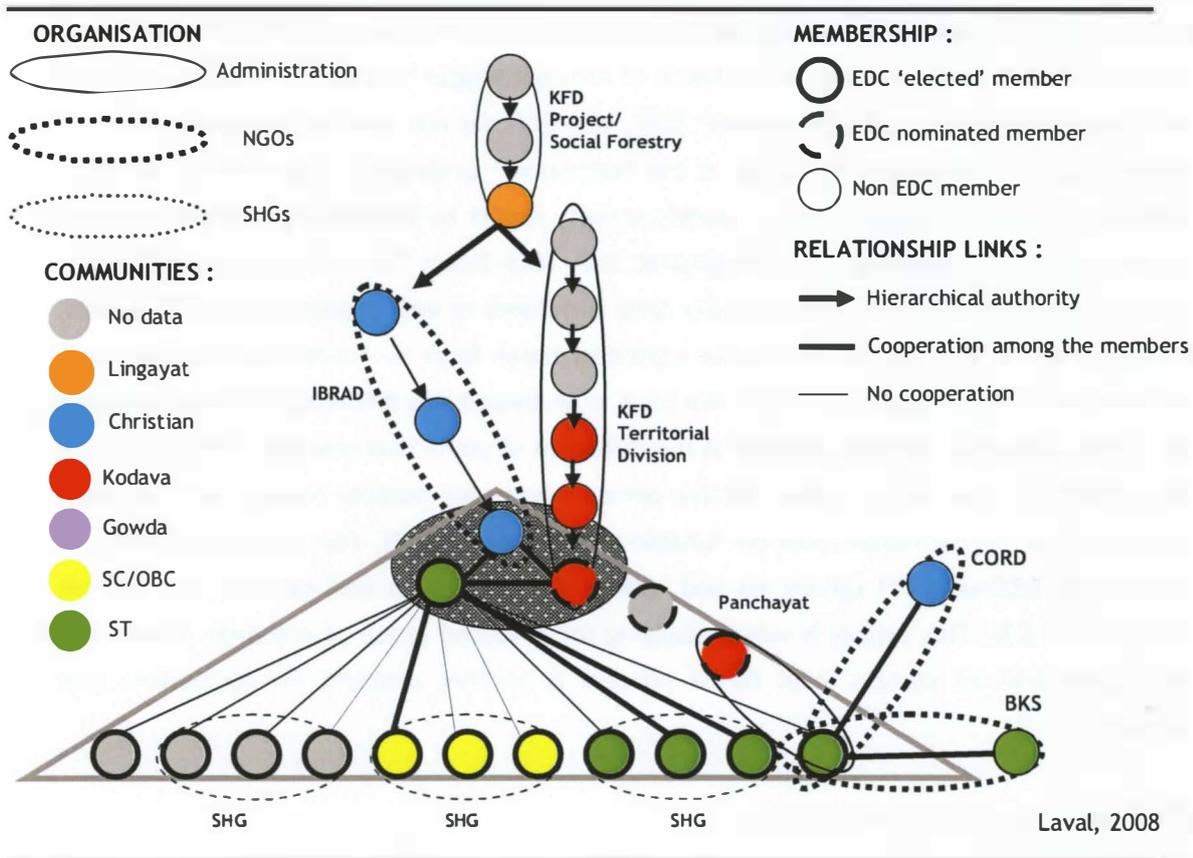
- Mr J4 was quite critical towards the VFC but yet keeps the game going. He is a very active person who uses its resources to develop its hamlet and earn its life better: “even though there are facilities people do not utilise it, they do not have guts to speak. How much I speak, some people cannot. So many people have become president but they are of no use, they never speak nor demand anything. Some people make benefit out of this” (I.J4). He declared that the Forest department call for a meeting once in two or three months to discuss how many holes have been dug up, how many plants will be planted: “We just say plant it, we do not have any relation with them. We can question them but we do not. By questioning we will spoil our relation” (I.J4). The strategy of this person to have good relationship with the Forest department is to keep quiet even though he does not agree, a conflict dimension is hidden behind an alliance of surface serving its own interests we could not identified so far. According to CORD NGO staff, Mr J4 is “a tribal but he has some close contacts with the Forest department. He has got some economic interest... If you speak to his father he will not speak like that”. Mr J4 is described as a person of the “new generation” who “has seen the power and the modern things”. In general the new generation of tribal people is more exposed to “the market economy and market commodities” (I.C1).

- The president of the VFC is one of the younger brothers of Mr J4. Apparently he also plays the cooperation strategy with the Forest department. He is less critical toward the forest administration and expresses regrets of the older days when the Forest department and the tribal workers were linked thanks to forest work (Cf. Part 1). Maybe he hopes to obtain forest work again or any other assistance through the Village Forest Committee.

B. System of action

The System of action in and around Chennangi VFC is presented below in Figure 13.

Figure 13: System of actors within and around Chennangi VFC



Degree of fragmentation and compartmentalisation

It seems that the system of action of the KSFMBC project counts also several centres of decision compartmentalized and pursuing their own objectives. We still find a direction with more or less horizontal shape formed by the VFC executive committee and a direction with a vertical shape formed by KFD and its hierarchical system. Given the time allotted it was not possible to analyse in details IBRAD who is a supplementary organisation in the project system. For IBRAD facilitator the forester and VFC president are “the main two people” (I.C2), but for the ACF “the first person involved is the forester who knows everybody personally” (I.K12). Yet we believe its role is also very important due to his position difficult to manage since he is at the knot of several action systems (grey zone in the middle). He creates a contact between KFD and local rural people as well as IBRAD and the same people and finally IBRAD NGO and KFD local officers (KFD is divided into two bodies not necessarily very cooperative with each other). In her interview the IBRAD coordinator listed the different types of problems faced by the facilitators.

The first problem is the facilitators’ difficulties to move. “JFPM schemes call for free accessibility and mobility but here our facilitators are not given any vehicle assistance”; they depend only on the local buses available to reach remote places and the interior forest areas (I.C3). This practical problem to carry out their mission is confirmed by our fieldwork

observations, the interviews with the facilitator himself (I.C2) and the JFPM coordinator (I.L1). We followed Mr C2 up to Sampaje to attend a VFC General Assembly Body Member Meeting (18.08.2007), that day we travelled almost 8 hours by bus on very bad roads for less than 2 hours of meeting. In compensation they receive an allowance but it is not sufficient (I.C3, I.L1). This problem is not in the hands of the coordinator “because it is associated with the programme itself” until September 2007, the CCF did not take any decision with this respect (I.C3). The second difficulty is the facilitators’ problem to give reports on time. Normally facilitators have to send a weekly activity report to Bangalore office and go there once a month for a meeting (I.C2). In general, they face delays “to reach the target in time” due to natural phenomenon such as heavy rains and floods as well as social aspects (festivals, elections, etc.). The IBRAD coordinator considers these facts as “understandable reasons” while monitoring the activities (I.C3). We have experienced this difficulty with our fieldwork during the monsoon. Another problem is the influence of politicians who may interfere in the VFC members’ vote hence “some inactive person who is not capable become VFC member, VFC president” so facilitators may be “unable to speak out” (I.C3). The coordinator declared she cannot intervene: “I cannot go and talk to the politicians and say “no, no, do not interfere” (I.C3). This aspect is worth studying for a second phase of research. Finally the non-cooperation of certain local forest officers is another problem for facilitators (see further).

Dominant mode(s) of communication

We could make the hypothesis that in the VFC the presence of the NGO may improve some drawbacks identified in the EDC system such as improving communication transparency and information circulation between different the directions and among the members thanks to one mediator. Yet IBRAD has faced language problems with regard to its regional office staff who do not always speak Kannada (if they come from West Bengal) and field staff who do not always speak English fluently. For example a Bengali staff is described as following: “he is not from this place, he cannot speak regional language so he cannot do anything he has to depend only on the facilitators but I am local, I know language I can go to the field” (I.C3).

Structure of the game

The JFPM Coordinator is not satisfied with all the five Lead-NGOs: “two NGOs are good, extremely good ones” i.e. IDS Dharwa and Outreach Bangalore, “one is moderate” i.e. IBRAD and “I am not satisfied with the other two” (I.L1). Not only IBRAD has faced problems with regard to employment of facilitators in the field but also with regional office staff due to leadership problems¹²¹ (fieldnotes, I.L1). The IBRAD coordinator added: “I have been here

¹²¹ I was witness of a direct conflict between the coordinator (native from Karnataka) and one staff member from West Bengal. “Because of interference I gave a threat I am going to resigned. When things are going in the right direction if somebody comes and tells you what you are doing is wrong, I do not tolerate.” (I.C3) With regard to the hierarchical system, this person from IBRAD headquarters is

since April. Before that the situation was so bad KFD was about to sack these people” (I.C3). Yet the JFPM coordinator is confident in this NGO. Since it is led by “a very good Professor”, (i.e. Pr. S.B. Roy) he “can understand” (I.L1). Today he seems satisfied: “after I join this project, I could identify very good individuals, good human capital” (I.L1). Even though IBRAD is a reference on JFM and sustainable development all over India, this does not prevent the organisation to face implementation difficulties which menace its effectiveness and credibility. This proves that organisations have to face unwanted or unexpected results due to actor’s strategies. We wonder if the employment problem within IBRAD affects the implementation and effectiveness of the project.

Problem of the action system limits

This time again each actor belongs to more than one structure, has more than one role to play and more than one identity to manage (Crozier and Friedberg: 1977). The system of action of the VFC executive committee is open to IBRAD NGO (through facilitator), KFD (through the forest officers especially the forester-secretary), the Panchayat (one member is a Panchayat representative), BKS (the same member is the Taluk representative), CORD NGO (same member again) and many SHGs created before the VFC or under its guidelines. We might forget other systems of actions weaved through other organisations.

It seems that Village Forest Committee is still an institution directed by a top-down process influenced by external actors (IBRAD, KFD) yet more interviews are needed to study formal and informal processes and see if the VFC members are able to adapt the rules of the game in their favour. Is this institution a means for marginalised populations (SC, ST and OBC) to insert them in the local and regional governance and politics?

II. ‘Chosen’ participation

Contrarily to the first collective action studied, this collective action B do not result from committees set up by KFD. The ‘chosen’ participation appears two types of alliances. On one hand we differentiate local leaders gathered voluntarily under the banner of ‘conservation’ NGOs i.e. Kodagu Model Forest Trust and Coorg Wildlife Society and on the other hand, we identified tribal leaders gathered into BKS and a larger cooperation between tribal people and ‘empowerment’ NGOs (i.e. CORD, DEED, Vikasa, etc.). We propose an investigation of the ‘chosen participation’ in terms of stakeholders and processes involved. What are the main features of these NGOs? What type of collective action they generate? What is the type of decision making process? The impacts will be discussed in the fourth part.

below the coordinator: “If you come here as my senior okay I am bond to answer but if you are redundant why should I answer any question?” (I.C3)

1. Local leaders gathered into 'conservation NGOs'

Coorg Wildlife Society and Kodagu Model Forest Trust are two environmental NGOs we perceive as 'conservation NGOs' due to their desire to develop stricter protection against human activities and the tendency to perceive forest as habitat for wildlife mainly. These NGOs are led by Kodava and non-Kodava landowner leaders who have joined forces voluntarily. They are mostly big coffee growers, managers, executive officers (lawyer, doctor, etc.) and retired Army officers or Forest officers. These NGOs' objectives are quite similar they intend to maintain "ecological, environmental and socio-economical equilibrium and conservation of catchments areas of the rivers" (KMFT leaflet). The action suggested are various: implementation of sustainable forest management, promotion of ecotourism, scientific researches, lobbying against huge development projects. These NGOs have a link with the committees created by the Forest department since some EDC members are representative of CWS.

1.1. Coorg Wildlife Society: An NGO evolving with its time

Creation and objectives Following the increasing concerns for environmental issues in the seventies, Coorg Wildlife Society was formed in the eighties by one retired officer brigade Cariappa mainly to assist the effort of wildlife conservation leading to hunting ban. Today's president tells us its interpretation of the creation:

"At that time there was lot of forest and a lot of wildlife. [...] There was lot of hunting going on because it was a way of life. [When] in the seventies the Forest Act came, it became an offence to hunt and all over hunting was prohibited but in Kodagu, [it] continued because it was part of our tradition. In the eighties brigade Cariappa felt it was putting too much stress on wildlife so he founded the Coorg Wildlife Society with the primary aim of creating awareness among the people that they should conserve rather than hunt. The message of conservation was very new for people of Coorg and he is the one who introduced it. He did a very good job, a fantastic job". (I.K8)

We have already seen in the first part the impacts of public policies at the local level. In Kodagu the hunting ban has not been respected straightaway and CWS has played an important role in the diminution of this practise¹²² (I.K8). Nevertheless the president feels that "since the nineties the main challenge is something different". Today the NGO is fighting against "degradation of the habitat" focusing on "forests plus rivers" (I.K8). According to the president, Kodagu's environment is threatened by the neighbouring districts' development. In the west and in the south of Kodagu, the hill sector with evergreen forests is bordered by highly populated Kerala districts demanding for more electricity and communication. In the north, Kodagu is bordered by Dakshina Kannada which is also a developing district requesting the same needs. Therefore the evergreen forests on the hills are perceived as a barrier which may fall by the neighbours' covetousness:

¹²² Hunting as a common practise has stopped but poaching still goes on for selling and consuming meat but not so much for commercial purpose (e.g. tigers for their skin or elephant's ivory) (I.K8)

“Hydroelectric projects [will] damage the fast flowing river [to] create electricity [and] for communication they want railway lines. All these will pass through to the forest. They say “no, it is development” but development when will it end? It goes on and on and on and finally you will have degraded forests... and it is affecting the watershed [because] Cauvery River and various other important rivers like Lakshmana-thirtha have catchments in Kodagu. So our larger message is while progress and development is required, degradation of forest in Kodagu is against the national interest because Cauvery River is life to millions of people in South India.” (I.K8)

Activities Today Coorg Wildlife Society conducts very few actions against poaching preferring dealing with man and elephant conflict, “degradation of the habitat”, loss of biodiversity as well as protection of “what is left” against development projects (I.K8, fieldnotes 2007). We develop these activities and discuss their impacts in the fourth part.

Members and management The analysis of CWS members inform us on the type of actors involved as well as decision making process. In theory, anybody who wants can become a member yet in practice CWS has about 900 members¹²³ most of them living in Kodagu and a few outside of the District (Bangalore), out of Karnataka or abroad (UK). The president admits that almost all the members are “planters like [him] because they are all from Coorg” (I.K8). They have to pay a lifetime membership fee changing with time from Rs.500 to Rs.2000 today (I.K8). We can suppose this amount is a criterion of selection, since it is quite expensive for workers who earns around Rs.60 to 100 per day. The organisation is managed by an executive committee of twelve members plus the previous president. It is worth noticing that the EDC President of Nokya village is one of them as well as one retired RFO “who helps [with] the Forest department that is very useful” recognises the president (I.K8). This committee includes a president, a vice-president, a secretary and a treasure who meets every two months to take decisions and to agree on funds management.

Box 3: Portrait of the President of Coorg Wildlife Society

Colonel K8 is a Kodava married around 55 who lives in Athur near Gonikopal. He is a retired Colonel of the Indian Army and also a landowner coffee grower. He runs his coffee estate and has a quite big house. He has been President of Coorg Wildlife Society for three years now and he is Kodagu Model Forest Trust Secretary. In order to manage the activities of both NGOs he travels a lot from Kodagu to Bangalore and even further to obtain appointments with higher forest officials, tourism department officials, some researchers and the media. (I.K8; fieldnotes, 2007)

Every year an annual general body meeting is held to renew year performance and take major decisions for the coming years (I.K8). The NGO employs “very small” clerical staff and

¹²³ The NGO counts 7 Benefactors, 43 Patrons, Life members>850 (army officers, coffee landholders, managers, retired forest officers...) 1 Yearly or Ordinary Member and 1 Student Member (Fieldnotes).

a few watchers whom are paid “small salary” (ibid). The office in Madikeri counts a meeting room and a shop. Two ladies take care of the place.

Funding Fishing hunt and license fees are one of the major sources of incomes enabling the NGO to earn around Rs.40000 to 50000 a year (I.K8). The NGO sells many items to the public including caps, umbrellas, tee-shirts, books and stickers. The latter are so popular that fake ones circulate everywhere in the district, the president quite amused declared they had to go to Court all the same. He feels this craze for these stickers is rather due to a fashion taste (“it looks nice”) than an environmental philosophy: “they are not so much about the message” (I.K8). Yet, another informant thinks these stickers are a sign of identity: people from Coorg can be recognised up to Delhi¹²⁴. Next membership fee and funds allotted for projects by privates¹²⁵ or Government (1 lakh in 2005) are other sources of income (I.K8). Contrarily to KMFT, CWS does not have a FCNR account¹²⁶ so it is not possible to receive foreign funds. The president hopes to benefit from its alliance with KMFT.

Coorg Wildlife Society is a local NGO well-known in Kodagu and beyond which has evolved with time. Today the NGO is looking at larger environmental issues though it was initially formed as a conservation group (I.K8). The members in general are quite homogeneous with regard to social and economical status. The decision-makers are strongly interconnected, they are coffee grower landowners, mostly Kodava, who hold social and economic resources and constitute the district elite. The social position of these members enables the NGO to negotiate with privates, departmental officers (Forest officers, etc.), politicians and the media.

1.2. Kodagu Model Forest Trust: a recent NGO with a wider scope

Kodagu Model Forest Trust (KMFT) is part of the International Model Forest Network (IMFN) announced by Canada at the 1992 Rio Conference. The secretariat is based in the headquarters of International Development Centre (IDRC) at Ottawa. Today’s Model forests are present in twenty countries and forty-four sites for a total area of 62,789,100 ha¹²⁷ (www.imfn.net). KMFT first Model forest in India joined IMFN in October 2005. Originally Model forest is a Canadian concept (Canadian Forest Network created in 1991).

Sustainable forest management and sustainable development

¹²⁴ The experience I had in Kerala confirmed this idea: while I was walking with my family within a tea estate, the local manager native from Madikeri noticed my cap CWS. He was so joyful to meet someone who knows Kodagu that he allowed us to continue our stroll even though it is forbidden to the public.

¹²⁵ Coorg Foundation granted Rs.25000 for a visit in forest with schoolchildren (I.K8).

¹²⁶ Foreign Currency Non-Resident Account. Its acquisition procedure seems long and strict (I.K8).

¹²⁷ Argentina (4), Brazil (2), Bolivia (1), Cameroon (2), Canada (11), Chile (3), China (1), Costa Rica (1), Dominican Republic (1), France (1), Guatemala (1), Honduras (2), India (1), Indonesia (2), Japan (1), Philippines (1), Russia (5), Sweden (2), Thailand (1). Data including model forests under development.

Today “a Model forest is both a geographic area and a specific partnership-based approach to sustainable forest management. [...] At the heart of the model forest concept are people. Model forests, as a process, are as much about the people who sustain themselves from the forest, their impact on its resources, and their human development as they are about trees and forests products” (IMFNS, 2003). The concept of sustainable forest management and participation are present in the concept of model forests. Model forests are directly related to the most important national and international policies¹²⁸ related to SFM and sustainable development. KMFT's objective is “sustainable management of forests and other ecosystems in Kodagu as a model for other areas of Western Ghats with the aim of maintaining ecological, environmental and socio-economical equilibrium and conservation of catchment areas of the rivers of the region” (leaflet KMFT). The specific objectives are the protection of forests, trees and their sensitive ecosystems; growing native trees and encouraging agroforestry models, creating awareness about forests and environmental sciences; research and training connected to forest values; consultancy services in allied and relevant matters and finally addressing the problems of demographic changes that affect environment. Livelihood and poverty reduction are quasi absent of the objectives even though it appears discretely in the activities, sometimes in cooperation with Coorg Wildlife Society, presented in the fourth part.

All Model forests share six attributes: a stakeholder partnership, a commitment to SFM, a landscape approach, a government structure, a programme of activities and a commitment to knowledge-sharing and networking (IMFNS, 2005).

Partnership and network members

Model forest is a “voluntary partnership whose members fully represent the environmental, social and economic forces at play within the land-base” (IMFNS, 2005). Worldwide, partners may be government departments and agencies (including Army), protected area directions, industry companies, academic institutions and scientific researchers, local communities, indigenous groups, environmental NGOs and religious institutions. In Kodagu one Model forest trustee is proud to announce that KMFT is the first public and private partnership looking at model sites for India (I.K2): “KMFT is the only model to be not only governmental but with privates and companies. In the other Model forests all over the world, the Forest department is very powerful and handles the organisation” (I.K2) In Kodagu, the twelve trustees are:

¹²⁸ National Forest Programme, Millennium Development Goals, Convention on Biological Diversity, Convention to Combat Desertification, UN Framework Convention on Climate Change, UN Forum on Forests and XII World Forestry Congress final statement (www.imfn.net).

- President of the Agricultural Scientists Forum of Kodagu
- Director of the Centre for Environment Education (CEE)
- Deputy Director of Coffee Board Bangalore
- Director of Instruction of the College of Forestry Ponnampet
- President of Coorg Wildlife Society
- Secretary of Kodagu Zilla Devakad T. Mahamandali
- Regional Manager of Skanda Coffee Company Bangalore
- Manager of Tata Coffee Limited Pollibetta
- Director of Coorg Foundation Pollibetta
- One retired Indian Forest Service officer (individual)
- One advocate* (individual)

We must precise that the advocate (Mr K1) is the president of Chennayanakote EDC and the brother-in-law of the Secretary of Kodagu Zilla Devakad T. Mahamandali whose portrait is presented below.

Box 4: Portrait of one Kodagu Model Forest trustee

Dr K2 is 46 years old Kodava married with two sons. He lives in a village called Dhanugala near Thithimathi. He is a landowner coffee grower whose estate is partly under organic farming. He is PhD in Forest Ecology and he teaches in the College of Forestry in Ponnampet. He manages many research projects and consequently employs a large team of young graduates. He is the Indian regional coordinator for the European Union-funded CAFNET project. He travels abroad frequently to attend congresses and various conferences. Among other activities he is mainly involved in KMFT. During Kodagu Model Forest meetings he is an important spokesman; his friends and colleagues care for his advice and point of view. He is not involved in any of the committees set up by the Forest department because “there is only a part of my estate in the village” hence he is not a resident of the village considered (I.K2). Thanks to his position in the College of Forestry he has developed many contacts with the Forest department and knows the running system proficiently. His social position as a landholder Kodava Doctor in Ecology in his forties confers him great power in Kodagu, he is a well-known person throughout the District and above. However as he is employed by the Government this prevents him from making public declarations: “I let the other trustees doing it”. (I.K2; fieldnotes, 2007)

The first ten persons are trustees due to their function not individually. The composition reveals an alliance between private and public sector with environmental NGOs, local associations, coffee companies and an academic institution (College of Forestry). Indigenous groups and Forest department officials in function are not trustees but the latter are involved in the partnership all the same. KMFT is recognised by the Government of India, one officer in the MoEF he is the national focal point who coordinates the model forest activity in India from Delhi (I.K8). KFD (Conservator of Forests) helped the NGO at the beginning before lessened its role¹²⁹. One trustee is proud to declare: “We did not rush to one model non suitable just to have money; each of us has paid for membership” (I.K2).

¹²⁹ Initially KFD helped KMFT in its creation but the department set back when one trustee published his book on land tenure and tree rights. “People call for burning the book, newspapers criticized the NGO, timber merchants lobby was against the books hence the government wanted to hold an enquiry into KMFT” so far nothing has happened (I.K2)

Discussion: what perception of forest conservation?

Since Kodagu Model Forest Trust deals with forest-related landscape, the entire Kodagu district is included in this Model forest. Hence its area of intervention is wider than the restricted one managed by the committees created under Karnataka Forest Department guidelines. With regard to landownership, KMFT looks at all issues on sustainable development both inside and outside forest, in coffee plantations and agriculture lands (I.K2). KMFT consider “not only at tribal people but all the villagers in the whole village” through a wide scale action (I.K2). The trustees do not believe that human beings should live in the core of forests, they want to separate the living habitat from forest: “Instead of many hamlets in the forest, [the tribal people] could be brought in one place only. With 50 to 100 families on the periphery of reserved forests we can develop a community centre. But we should have a clear view for the rehabilitation package” (KMFT meeting fieldnotes, 2007). Thus their position on the coming Tribal Bill is: “the lands could be given [to forest dwellers] but on the forest periphery” (I.K2). Nevertheless it is obvious that the tribal people do not share the same vision, they want to obtain property rights where they are. Consequently the trustees who are well aware of this opposition have decided to create an alliance with tribal leaders. During our fieldwork, for the first time the trustees (all Kodava landowners) decided to communicate with the tribal people. Even if the strategy to be adopted was not still decided, the favour one was the negotiation with a few tribal leaders including the district president (Jenu Kuruba) of Budakattu Krishikara Sangha presented further.

The motivation of the Kodava landowners to cooperate with tribal people may be due to the wild elephant issue. Up to now the failure of the solutions implemented would be partly due to tribal people’s practises: they are blamed to not close the gates, they would destroy the fence on purpose, etc. Yet we believe that the coming Forest Act giving them property rights inside the forest is rather the stimulus for cooperation since this could threaten the stability of the system presented in Part 1 (tribal are workforce for coffee growers) and their position as powerful actors. Hence we wonder how the negotiation will be conducted, who the participants will be and how the tribal people will react. Is the new Forest Act definitely a means to introduce social change in a sense a process where the relationships of power progress in favour of the powerless or is it a new means to instrumentalise a population who has always been disfavoured in the system?

The partnership and acquaintance network enable the trustees to use many etiquettes in the negotiation according to the public targeted and the place concerned. Sometimes they use CWS, KMFT, the EDCs, other associations or individuals of the civil society. This flexibility is clearly an advantage for the NGO which enables it to have access to information of the other parties (i.e. their point of view position on certain issue) in a discrete manner: “let’s see what is in their minds”. This helps Kodagu Model Forest trustees in the future negotiation. CWS and KMFT have strong links and overlapping objectives and activities, certain members

belong to both NGOs. The decision-makers (trustees) form a quite homogeneous group of elite individuals with social and economic resources locally sources of power.

2. Alliance between tribals and 'empowerment' NGOs

Any study on tribal people in India is a very delicate task. For the few hints we could pick up on people's life, culture, economy, politics and stakes in Kodagu, countless questions appeared with shade zones. For example one hurdle is the vocabulary used to refer to tribal people which terms are not necessarily congruent e.g. adivasis or the 'original inhabitants' (I.C1, I.J6), girijana and budakattu or 'forest people' (I.J4, I.Y1). Many tribal groups live in Kodagu yet in the studied area the ones involved in participatory forest management we encountered are Jenu Kuruba and Yerawa. This part tries to draw attention to some important points and issues related to the tribal people in Kodagu knowing that most of the system has yet to be unveiled. A 'chosen' collective action has emerged from tribal leaders voluntarily gathered into BKS or a larger cooperation between tribal people and 'empowerment' NGOs i.e. CORD in Kodagu, DEED in Hunsur and Vikasa in HD Kote.

2.1. Budakattu Krishikara Sangha

BKS is a tribal association for cultivators created in 1984 which today seems to have a quite large extent: "it is not only in Kodagu it is spread all over the country including all part of the world" (I.J6). The creation is not clear but it seems that due to the forcible displacement of tribal people within the forest we described in Part 1, Kodagu's tribal people began a struggle in the eighties against the Forest department. When NGOs such as CORD appeared, they assisted the action in progress by increasing awareness regarding the basic rights of tribal people: "[CORD] agency came and said we are free people we have rights, they told how to protect ourselves and so on" (I.J6). The struggle would have ended to make place to an organised collective action: "so we started organising our community into Budakattu Krishikara Sangha" (I.J6). We encountered the District president of BKS in CORD office in July 2007. His portrait is presented below:

Box 5: Portrait of the District president of Budakattu Krishikara Sangha

Mr J6 is a Jenu Kuruba of 51 years old. He lives with his wife in Mavinahalla Hadi where he cultivates a small land holding. He has three children and his elder daughter is doing second year of Law (LLB) in Mangalore. He doesn't belong to any political party as such but he is involved in the promotion of the livelihood and rights of his community. He has risen himself to important positions since he is the District president of Budakattu Krishikara Sangha and also the National president of National Adivasi Andolan which is National Tribal Network. In order to defend his view he went abroad many times and "he has gone and challenged the World Bank in Washington" (I.C1). (I.J6, I.C1 and fieldnotes)

From the time the Forest department tried to relocate the tribal people out of Kodagu to the neighbouring districts, they decided they wanted to stay in Kodagu only, they were very sure

and that is why they organised themselves (I.J6). Mr J6 declared: “Many people are asking us why we want to stay inside the forest, why do not we want our children to become [...] lawyers, officers or whatever; in fact we want everything, but we want it where we are” (I.J6). For them the struggle still goes on in a different form. Today the association gives training: “through that we learnt to speak and became aware of laws” (I.J4) and enables tribal people to do lobbying for property rights: “we have a sangha, through this we fight for our rights” (I.Y1). The strategy used is mainly communication: “Our fight is writing letters, giving application, doing strike. We have gone to Madikeri, Bangalore, Delhi and we fought” (I.Y1). Their argument is wherever adivasis live this place should be considered as their habitat including forest. Not only adivasis’ lifestyle and habitat should be conserved but they should be given rights to assert their livelihood and be themselves in a sense: “If I have to go in car I should decide; if I want my house to be like this it should be my decision not somebody else’s” (I.J6). The Jenu Kuruba interviewed want to be master of his own destiny, he refuses to depend on the power holders’ decision anymore.

2.2. Coorg Organisation for Rural Development

CORD was founded in 1981 by V.S. Roy David whose portrait is described below.

Box 6: Portrait of the President of CORD

Mr C2 is a married Christian of 52 years old. He lives in Kushalnagar but his birth place is Horrur Estate of Kedakal village, Suntikoppa. He grew up in Pollibetta where he studied from his first to eighth standard. Then he studied in Mysore before coming back and started working with rural people in Mangalore area and then as environmental trainer in Bombay where he worked with the slum adivasis. He attended training programme in community-based organisation and learnt to be “effective community organiser”. Since 1976 he has been working in social work and in 1981 he founded Coorg Organisation for Rural Development based in Kushalnagar. For an unknown reason many inhabitants of Kodagu think he is not from the district so one of the first things he insists on is “I am not an outsider, I am not alien to this place!” (I.C1, fieldnotes).

The NGO aims to create a rural development of equality and justice for the local people in general nevertheless since 1984 the NGO has been focusing on adivasis’ livelihood rights and cultural identity (I.C1). CORD and its director are “giving voice to the voiceless people to make them heard not only in the local society but at the state level, national level and even at the global level” (PC. Journalist, 2007). CORD organises the adivasi communities around their “own common interest” helping them to build “their own organisation and to build up the self confidence by direct non-violent actions”.

The specific objectives are to protect the adivasis’ livelihood rights and to ensure food security for human beings and animals too. CORD conducts several projects dealing with these issues. The details are discussed in the fourth part. The NGO uses a lot of lobbying action and different communication items such as posters.

The journalist depicted the philosophy of the NGO. Not only adivasis are part of the forest ecosystem but they have a symbiotic relationship with the forest through their cultural roots. Consequently “unless adivasis’ culture sustains forests cannot survive and unless forest is sustains adivasis’ cultural identity cannot be saved”. They strongly feel adivasis are the “ultimate conservators of forests” thanks to their lifestyle and their value system which the entire world has to learn from. They strongly criticise “the Forest department or the so-called environmentalists who are sitting in the cities, shouting and making big noise” (I.C1). Their point of view on the ongoing policies and actions based on wildlife protection only is that they are unfair and not effective since “it is the people and the communities who can save [forests]” (I.C1 and PC. Journalist, 2007).

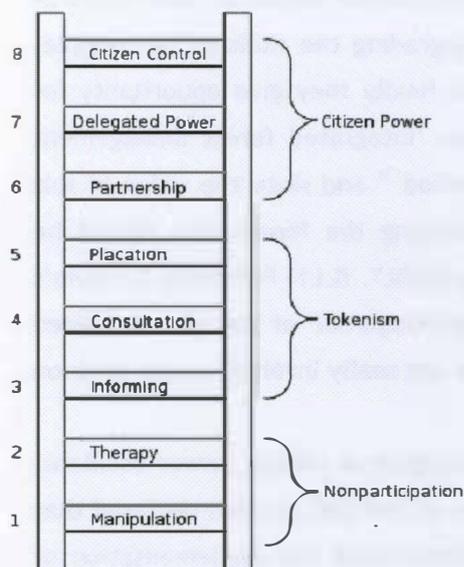
CORD plays a supportive role in the developmental process of local people towards sustainable development. Even if the NGO members acknowledge that without their support people are going to survive, they dread that adivasis’ quality of life, lifestyle, knowledge and identity would be destroyed in a pernicious process to which adivasis may not be totally aware of. The data collected tend to describe the participation of the tribal people in BKS and CORD’s actions as citizen power. Hence we call these two organisations ‘empowerment NGOs’ as a result of their influence on tribal people’s behaviour towards power holders groups of individuals such as the Forest department officials and also the landowners. The director of CORD intends to remove “the fear that [adivasis] have towards officials, landlords or whoever it is, in a way they resist and oppose any exploitation and injustice” (I.C1). The fourth part discusses certain impacts already observed.

III. Discussion on ‘participation’

We believe any discussion on participation is definitely political and, politics contains a dimension of power. We must be very clear that power is not one actor’s attribute but an unequal relationship among several actors (Crozier and Friedberg, 1977). Before the advent of participatory forest management in India, KFD was the main power holder actor in the game. Have the participatory forest management projects studied enable to change this unequal equilibrium in favour of the other actors?

In her article “A ladder of Citizen Participation” published in 1969, Sherry R. Arnstein’s define citizen participation as citizen power. She explains that without redistribution of power, participation is an empty and frustrating process for the powerless which “allows the powerholders to claim that all sides were considered, but makes it possible for only some of those sides to benefit [and] it maintains the status quo” (Arnstein, 1969: 2). For Arnstein participation is a strategy which enables the powerless citizen to be deliberately included in political and economic processes introducing social change where benefits are shared. The

author has made a typology of eight levels of participation knowing that the classification is a simplification of the reality for demonstration purposes. The ladder pattern presents the different extent of citizen power “in determining the final products”.



- Partnership, Delegate Power and Citizen Control are described as Citizen Power: the powerless are involved in the decision-making process from the possibility to negotiate with powerholders up to the full managerial power.
- Informing, Consultation and Placation are described as Tokenism: the powerholders hear the powerless but they may not heed their voice in the decision own by them, there is no certainty to bring change.
- Manipulation and Therapy are described as non-participation processes: “their real objective is not to enable people to participate in planning or conducting programme but to enable powerholders to “educate” or “cure” the participants.

(Arnstein, 1969)

Figure 14: Eight rungs on the ladder of citizen participation

EDC and VFC members are involved in forest management but what is extent of their power? The forester interviewed declared that EDC is a Public Participation Programme (PPP) and this means “if the department works alone it will not work well but if public participates it will be a success, this is my idea” (I.K11). For him, one villager has to be “made president” and others have to be “made the members”. With regard to VFCs, the IBRAD facilitator interviewed is proud to declare that “from the planning to the implementation process people are involved” (I.C2). These statements would go in favour to the citizen power in forest management thanks to the two institutions studied.

Nevertheless other interviewees’ discourses tend to reveal that the level of participation related to EDC and VFC executive committees may be described as “Tokenism”. One ACF declared that the Forest officers are the ones who draw the microplans “in consultation with the villagers” thanks to “discussions with [them]” (I.K12). This does not assure that the villagers’ voices are heeded in the final decision. In addition we wonder if forest officers (powerholders) do not manipulate the members to make them work at low costs: “the idea through EDCs and VFCs programmes is to provide [people] with job and livelihoods by using the manpower” (I.K12). This perception is shared by the JFPM coordinator whose targets are based on the World Bank’s documents focusing on human development (i.e. aspects of health, education and income). Similarly to the ACF one of his targets is employment:

“People should participate and should be employed at least 200 days a year” (I.L1). What could be wrong with the willingness to provide people with employment? We believe that this is a good idea in appearance only because this type of job like many other governmental measures for rural employment¹³⁰ (e.g. coolie work, 100-day employment programme) do not create a real change of people’s conditions: they provide manual labour at low levels of productivity, no lasting employment, no investment in upgrading the skills of the people, they enable no real development of the rural sector and finally they give opportunity for corruption practices (Luce, 2006). We wonder if the new ‘Integrated forest management plan’ will make a change since it is still based on PRA method¹³¹ and since the vision of this project-maker is: “It is ultimately people who are destroying the forest they should be educated and involved in forest management with sharing profit”. (I.L1) Following Arnstein’s ladder of participation, this approach would reveal non participation of the citizen indeed their manipulation or therapy (we educate them); they are not really involved in the decision making process.

The members’ discourse tends to confirm this idea. The extent of citizen power oscillates rather between bottom levels than top ones. One member of the EDC studied declared that when the local people realised that they were not satisfied with the implementation of programmes, legislation was made to involve them, “that is the concept of EDC” (I.K3). Following the same idea the president stated that people want to take responsibly in sacred forests and elephant issues and “highlight the problem to the Forest department to get a relief” (I.K1). Yet they draw attention to the fact that they have “no word to say in planning” (I.K3, I.G2), they do not have decision making power. Similarly the VFC tribals members interviewed feel mostly powerless, their discourse reveals that they do not take part in the decision making-process too: “they have just made us the members” (I.J4), the Forest department officers “do not listen to us about the activities” for example the president is not satisfied with the plantation work (I.J3). The president of Chennangi VFC denounced: “VFC was created to form relationship between the Forest department and the people. They told about the whole programme to have relationships. But nobody attends the meeting, there is no relationship” (J3). This all the most serious that the president perceives the VFC meeting as the only arena where a negotiation could take place: “they have their

¹³⁰ See the commentaries of Edward Luce, 2006: 182-221

¹³¹ During our fieldwork, the Forest officers in charge of the KSFMB Project in Bangalore were preparing the blue print of an ‘Integrated forest management plan’ to replace former microplans. This new document for ten years advocates different forestry and agroforestry models and is applicable to the whole village area not only the lands owned by the Forest department: “We were looking in an isolated manner”, this strategy worked “probably until the project is on, [but] the moment you withdraw the project it would collapse” so now they want to treat the entire revenue area of a given village as a unit “like a watershed” (I.L1). The coordinator declared that people are involved in the planning of the activities through “many PRA exercises (resources mapping, training)”. KFD officers “impose nothing” (I.L1). The microplan is revised “to build flexibility in permanence” (I.L1).

views and we have different ones so only in meetings both points could be discussed and decision will be taken.” (I.J3)

In reality both EDC and VFC microplans present the same contents listed in annexe. Some paragraphs have just been copied and pasted as the term EDC changed for VFC. The microplan does not structure people’s action. We wonder who utilises who? The forester declared “for Kodagu, we should forget this microplan” the reasons is not because villagers do not have enough power but the plantation work poses problem (see Part 4). His discourse reveals the limit of the forester’s capacities:

“Is it possible to change the activity of the microplan for the ones you are talking about?

We cannot do it... We don’t have powers...

Who can do it?

PCCF

Is the PCCF aware of the problem that it is not suitable...

He knows about the program... the funds comes from there....

Does he know about the problems?

He may not know... These small issues will not be a success, but no one will be ready to talk to him about it.

Do you have direct contact with the PCCF?

No I cannot.

You only have a direct contact with the Ranger?

Yes, but talking to the ranger will not be of much use too. Before the creation of EDCs in the entire state a commission was made and decision taken to define the best way to make EDCs successful. After that, if we say it is not effective and if we try to correct them, our ideas will not be accepted”. (I.K11)

The forester is an implementing officer at the local level who does not take part in the decision making process, it is not his role. His capacity of action is clearly limited by the management of KFD based on hierarchy principles even though we feel that in all forestry projects this person always holds a key position which confers him a potential role as agent of development and eventually actor of environment¹³². The JFPM Coordinator who is not civil servant but employed for the project made clear that “if they want Forests to remain in the society as an important sector there is no way except accepting the participatory management. [...] wherever I go I say to the officers there is no escape”. (I.L1)

One interviewee resumes perfectly the type of participation and type of decision making process of villagers in the framework of the EDC3 studied: “I plant and I get out” (I.K1).

¹³² We will discuss the notion of actors of environment in the fourth part. In the case study carried out last year in Morocco in the framework of AgroParisTech-ENGREF courses, we already identify the forester as a key person that the Forest administration and donor agencies should give more attention and consider its strategic role in the participatory system. It has been already demonstrated that in many places local foresters are on the way to become agent of development.

Thus the interests perceived through the EDC are quite different: opportunity to get workforce for the local forest officers (powerholders) and opportunity to get responsibilities (EDC, VFC) and benefice sharing (VFC) in forest work management. Sometimes the power of certain groups is revealed not by what they are able to accomplish but especially by what they are able to block. In our study the capacity to create or obtain non decision on certain issues (funds, future of the committee, etc.) is a characteristic of KFD.

We have demonstrated that in general the collective action controlled by Karnataka Forest Department is a top down process even if VFC contains improvements with regard to benefice sharing and decision making process especially by involving women. Surprisingly three actors belonging to empowerment and conservation NGOs (collective action B) apparently opposed on several issues share the same understanding on KFD's driving force for participatory forest management. They suspect the Forest department to utilize participatory forest management as a strategy to control rural people and we can add to obtain workforce at low cost. Certain empowerment NGO members suspect that Forest officers, who were acting "like the landowners of these forests", have realised they were loosing control on local communities therefore by forming Village forest committees and giving money in reality the department directly control people living in the forest who are not independent (PC. NGOs members, 2007). One conservation NGO member believes that Forest department officers feared that EDCs presidents who are prominent villagers handled their responsibilities; therefore with VFCs since the people targeted are mainly tribal people living in reserved forests they though it would be easier to control them (PC. one NGO member, 2007). One empowerment NGO member feel that the department has interest to maintain interrelations of dependency with the villagers and the haadi inhabitants otherwise if these civil persons take over control and substitute to the department responsibilities and mission ultimately forest officers "will be jobless".

Nevertheless once again, the rules of the game and the actors' strategies may change with the coming new forest act. Similarly, the type of participatory forest management promoted by CWS and KMFT on one side and CORD on the other side has to be investigated: does it correspond to citizen power? We already suppose that the conservation NGOs may promote (Kodava) coffee grower landowner power and that the empowerment NGOs may promote tribal (leaders) power. Yet it is worth mentioning that in empowerment NGOs such as CORD and even IBRAD, decision-makers are non-tribal people.

CONCLUSION

We have described how the introduction of successive public policies on forests and environment has acted as constraints that the actors had to adapt to with more and less difficulties. The coffee grower landowners and the tribal workers especially had to modify their practices on land and forest use and tried to elaborate new strategies in pursuing their interests i.e. their access to forest and tree resources. The Karnataka Forest Department has been a strong institution who could partly normalise practices on forest and develop relations of power with rural people. Yet the increasing influence of civil society in India and worldwide (especially through NGOs' influence) and greater environmental concerns lead to the introduction of participatory forest management in the late eighties. In many tropical countries, supported by international donor agencies people's participation became target rather than means to achieve sustainable forest management and sustainable development. Yet our case study of two village committees under participatory forest management approaches has demonstrated that the 'imposed participation' do not necessarily lead to ecological effectiveness with regard to the commitments announced in forestry project reports. Discourses do not always match field realities. The actions conducted through 'chosen participation' seem to be more effective (conservation NGOs and ecological concerns; empowerment NGOs and livelihoods) than the ones conducted through 'imposed participation' trying to integrate all the aspects with lesser success. In Kodagu, specialisation in given field of activities seem to be a more efficient strategy in Kodagu than their integration. Moreover the originality of Kodagu's environmental situation is characterised by the existence of a wicked problem that is also socially complex. Now that we have identified human-elephant conflict and forest ecosystem changes as a wicked problem (first step of the process) we shall go forth in bibliography references to investigate resolution recommendations from the management sciences.

We feel that the collective action formed by 'chosen participation' is very political and strongly structured by communities' identity and interests. In our Indian field, the community system is strong and has a real sense. In each organisations of the chosen participation we have observed quite homogeneous community composition (contrary to imposed participation guidelines). Usually we are prudent with the notion of communities because it does not reflect the real heterogeneity of the social groups and people's struggle for power. We have observed that individual trajectories remain; we have encountered strong personalities both in Jenu Kuruba and Kodava groups. We have noticed that the decision-makers of this collective action are either the Kodava elite for conservation NGOs, either non-tribal people for empowerment NGOs such as IBRAD and CORD. Besides, many social workers belonging to empowerment NGOs were Christian.

We have identified several ways to explore or verify for a second phase of fieldwork.

Tree right and property right in private and governmental lands

In Kodagu, tree right and property right are closely linked. Yet, tree would not be a sign of territory appropriation as it is often the case in some African countries (e.g. Senegal). The battle over tree rather expresses rather the demand to access this resource -which is made quite impossible due to the heavy constraints imposed by legislation (PC. Garcia 2007).

Rural practices and local knowledge

We suggest participant observation to conduct a complete analysis of rural practices on forested ecosystems (effective management) including the exchanges of forest products (timber and NTFPs) that shall be investigated. Several markets for forests products co-exist simultaneously: (i) the official market of timber and some products under auction (as the cane) controlled by the Forest department; (ii) the informal timber market with organised timber smuggling, (iii) the market of NTFPs controlled by the LAMPS reserved for some tribal people, (iv) the informal exchanges of forest products between a worker and its landowner employer. Most of the time the products needed that are not available in estates come from the forest. Finally (vi) the individuals who go into the forest to collect products for their own consumption.

In addition people's definitions of forest wooded lands in Kodagu should be documented. The analysis of the forms of representation and value system associated with forests in Kodagu would enable us to assess if strategic groups would differ from the social groups based on community criterion. Sociological interviews are needed to document the terminology and categories of language used by the actors to name and classify wooded vegetation.

Wicked problem

We recommend the identification of people's criteria of satisfaction with regard to the issues discussed: forest ecosystem changes, human-elephant conflict, etc. This would request a sociological analysis since these criteria come from the learning process of the decision-maker; respond to its cultural values, to the conditions of the game in the action system (rules) and respond to personal strategic choices in a particular context (Crozier & Friedberg, 1977). For example the perception of the fence by the tribal people living in haadis within reserved forests is a point to document.

In fact to understand the actor's game better a complete strategic analysis of the Karnataka Forest Department in Kodagu District (from watchers to the Principal Chief Conservator of Forests in Bangalore) is worth it. This should include an analysis of the formal and especially informal activities conducted by the Forest department to reveal the real regulation with regard to timber supply market and the implementation of projects. However this is a delicate mission to carry out.

The question of deforestation in Kodagu.

First an ecological effectiveness of the different types of forest management (ecological study) could be conducted. Are we facing 'deforestation' or a loss of tree cover? Then a sociological approach to understand how the phenomenon is perceived by the actors encountered. According to Michon (2003), "[h]ow a given social group sees deforestation depends on the nature of its links with forests, and especially on the meaning and values the group attributes to each identity. Different groups will see the loss of forest cover as damage of biological nature (conservation NGOs), an attack on a territory or identity (indigenous groups), a loss of income or a weakening of authority (States)" (Michon, 2003: 24). What is the situation in Kodagu? Can we identify strategic groups on this matter?

Another important question is: does resettlement of tribal people help or hinder conservation?

Collective action's capacity to influence public policies in rural people's favour.

The cooperation between tribal people and local/ national and international NGOs has led to the emerging indigenous question worldwide. A new term adivasis or 'original inhabitants' appeared to designate tribal people and other people living in and from forests. The first time I heard this term was when I met the CORD NGO's members. This terminology is definitely political. What are the impacts of this alliance on tribal people's practices in forests? The coming forest Act is crucial to follow to see if forest dwellers are really capable of acting to influence the design public policies in their favour.

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ANNEXES

Table 19: Interview guide

INTERVIEW GUIDE

Where do you come from?
What is your occupation?

1. Role in the committee/NGOs/KFD

What can you tell me about the EDC/VFC
How did you become a member, why?
Could you describe your action in the committee?
What are you trying to do by being a member?
What do you think of the composition of the committee?
Are you involved in other associations, organisations? Which ones?

2. Relationships with other actors

Do you work alone? With whom do you work, why?
Do you have contacts with KFD, other members, etc?
With whom do you have good relations? Difficult ones?

3. Problems (environmental problem, managerial problem)

What are the activities of the EDC/VFC?
Which ones are the most interesting? The most difficult?
What are the impacts of these activities? On forest? Livelihood?
Do you go into the forest? Why?
How do you see the future of the committee?

Table 20: Interviewee details to fulfil after the interview

INTERVIEWEE'S DETAILS			INTERVIEW DETAILS	
Full name	Sex	Occupations	Interviewer	Language used
Community	Age		Assistant	Village/place
Hamlet/ village	Date		Nb of Interview with this person	Use of a guide
Children			Interview number on the list	Recorded

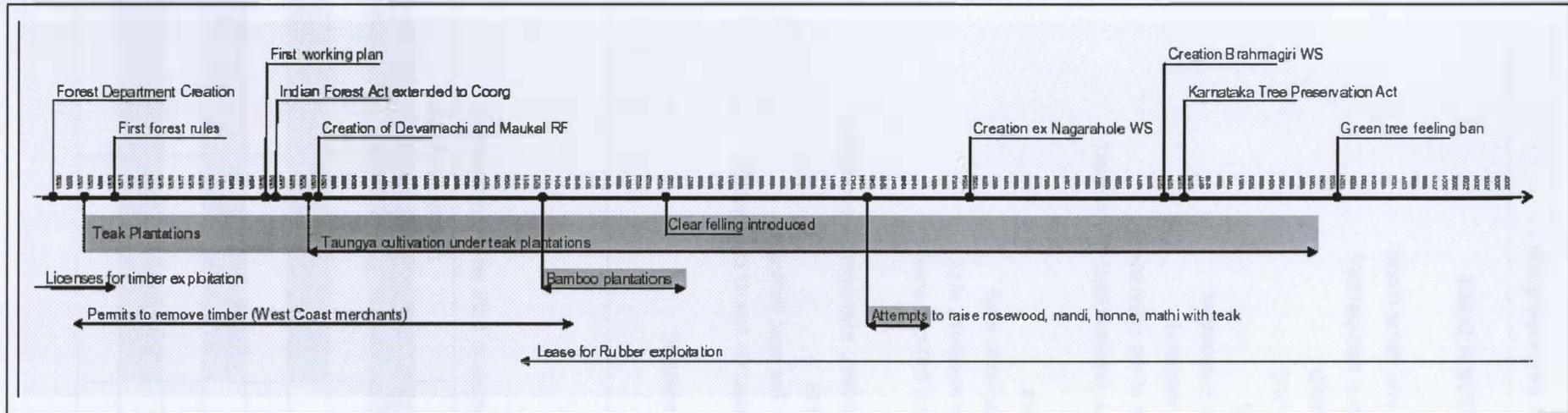
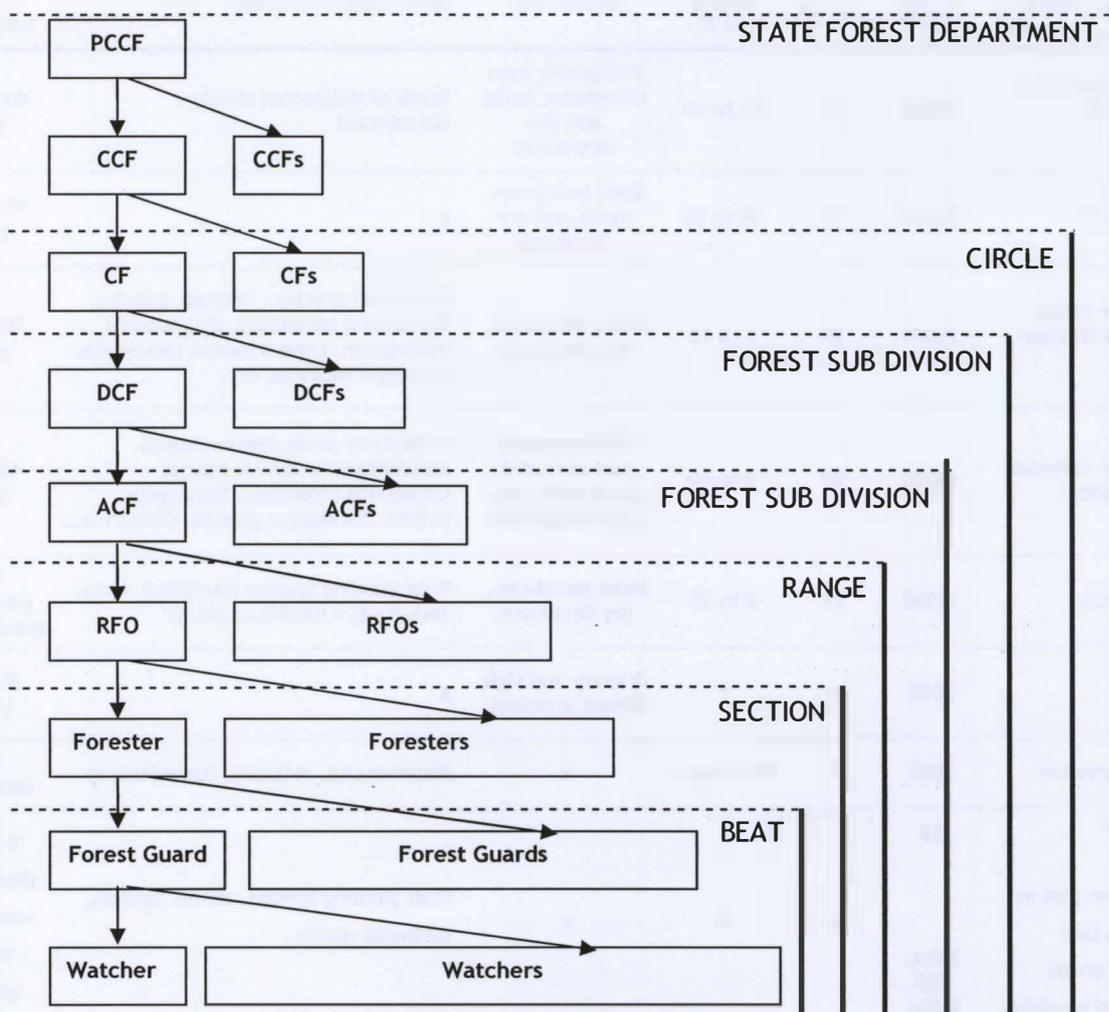


Figure 3: Chronogram of forest exploitation from the creation of the Forest Department to date (source: data from Misra (2003) and Appayya (2001))

Figure 15: Karnataka Forest Department hierarchy



Source: Laval, 2008

Table 21: Eight Afforestation models (Source: KSFMB Project Implementation Manual)

Nb	Name of the Model	Extent* (in ha)	Area* (in ha)	Canopy density (in %)	Forest type	Species recommended	Duration of final harvesting
1	Ecological restoration through natural regeneration	22000	50	25 to 40	Evergreen, semi evergreen, moist and dry deciduous	Seeds of indigenous specie + sandalwood	60 to 100 years
2	Assisted natural regeneration	35000	50	10 to 40	Semi evergreen, moist and dry deciduous	x	60 to 100 years
3	Plantation for timber production in Western Ghats area	25000	25	0 to 10	Moist deciduous, dry deciduous	Hardwood species : Tectona grandis, Terminalia tomentosa, Pterocarpus marsupium, Lagerstroemia lanceolata, Dalbergia latifolia, etc.	About 60 years
4	Plantation for fuelwood and small timber	30000	25	0 to 10	Highly eroded and degraded scrub with very little vegetation	In Western Ghats region: Acacia auriculiformis, Hybrid acacia, Eucalyptus torelliana, Eucalyptus pellita, Eucalyptus grandis, Casuarina...	About 8 years
5	NTFP plantation	12000	25	0 to 25	Moist deciduous, dry deciduous	Fruit yielding species (tamarind, Amla, Jack fruit) + medicinal plants	No extraction except fruits
6	School forest	2000	x	x	Primary and high school premises	x	About 8 years
7	Mangrove plantation	3000	x	No canopy	x	Rizophora sp. Avicenia, Sonneratia sp.	No extraction
8	Farm forestry	38					8 years
	8a Raising demonstration plot in the farmer's land		x	x	x	Fruit yielding species, timber species, fuelwood specie	(fuelwood) longer for other species
	8b Supply of seeds	250 t. 380 lakhs					
	8c/d Supply of seedlings						

Table 22: Comparison of the Chennangi VFC and EDC contents

Chennayanakote/Chennangi EDC	Chennangi VFC
<ul style="list-style-type: none"> • Background of National afforestation and management programme • Salient features, concept and benefits and of afforestation policy and management prog. • Public welfare programme in the village • Details of the village • Formation of village forest committee • Duties and responsibilities of EDC members • PRA: resources, agriculture lands • Problem Management • Evaluation 	<ul style="list-style-type: none"> • Background of JBIC JFPM • Salient features, concept and benefits of JFPM programme • Soil water conservation/ income generating activities prog. • Details of the village • Formation of VFC • Duties/ responsibilities for members/ committee • Village Development Fund • PRA: resources, agriculture lands, etc. • Objectives of VFC and problems management • Evaluation • Forest development models (8) • Data from PRA • By Law rules and Regulations of the VFC
Source: Microplans EDC (2003) and VFC (2007)	

Table 23: List of the participants to our presentation in Ponnampet (October 2007)

Organised by Dr Claude Garcia and Dr C.G. Kushalappa; speaker: Marie Laval

N°	Name	Occupation
1	Gajanana Bhat	RFO Ponnampet Range
2	Dr S.D. Pathak	DCF Virajpet Forest Division
3	Dr P. Venkatesha Murthy	Associate Professor of silviculture College of Forestry Ponnampet
4	Kanavi MSP	Assistant Professor of Genetics and Plant breeding, CF Ponnampet
5	R.B. Basavapat	Assistant Professor of Agriculture extension
6	AS Devakumar	Associate Professor College of Forestry Ponnampet
7	HS Vasdev	Associate Professor
8	Dr NA Prakash	Director of Studies College of Forestry Ponnampet
9	Dr Devagiri	Associate Professor College of Forestry Ponnampet
10	D. Boominathan	Program Officer, WWF India NEG Landscape
11	Col. C.P. Muthanna	Coorg Wildlife Society, Kodagu Model Forest trustee
12	KG. Uthappa	Advocate, Kodagu Model Forest trustee
13	KN Changappa	Kodagu Model Forest trustee, Coorg Foundation
14	Sherry Subbaiah	Kodagu Model Forest trustee
15	P.P. Sidda	Gram Panchayat member
16	Sunand Kumar	JFPM Facilitator, IBRAD
17	V.S. Roy David	Community organiser, CORD
18	Shammi David	Social Worker
19	V.T. Padmanabhan	Environmental scholar
20	T.S. Kavana	Graduate Student (MSc Animal behaviour)
21	A.N. Chethana	Student College of Forestry Ponnampet
22	K.P. Ganapathy	Kodagu Planters Association
23	C.A. Subbaiah	Coffee grower
24	Dr S.V. Nanaiah	Physician

Abstract

People Elephants and Forests. Collective action to manage an environmental wicked problem in Kodagu, Western Ghats.

For the last twenty years the international discourse on natural resources management has promoted communities' participation in order to achieve sustainable development and conservation of natural resources. The Indian Central Government approved and promoted this concepts and principles and subsequently introduced corresponding rules and measures through its 1988 National Forest Policy and its guidelines on Joint Forest Management enabling village communities to take part actively in forest management and to get a share from forest resources. To understand the interactions between those public policies and the rural practices and initiatives we have focus on Chennayanakote village in Kodagu district (Karnataka State). Kodagu's collective action for natural resources management assumes two shapes that we described as 'imposed' and 'chosen' participation. The impacts of those types of collective actions on the ecosystems, the people's livelihood and governance are different. It appeared that the actions conducted by the chosen participation are more effective with regard to ecological concerns (conservation NGOs) or livelihood concerns (empowerments NGOs) than the actions conducted in the framework of 'imposed participation' (Eco-Development Committees and Village Forest Committees) trying to do both with lesser success.

Key words: collective action, biodiversity, public policies, participation, forest management

Résumé

Des homes, des éléphants, des forêts. Action collective pour la gestion d'un problème environnemental pernicieux dans le Kodagu, Ghâts occidentaux.

Ces vingt dernières années, le discours international sur la gestion des ressources naturelles a encouragé la participation des communautés locales dans la poursuite du développement durable et de la conservation des ressources. Après avoir approuvé et encouragé ces concepts et principes, le Gouvernement central indien les a traduit dans la Politique Forestière Nationale de 1988 et les principes directeurs sur le Joint Forest Management permettant aux communautés villageoises de participer activement à la gestion forestière et à en retirer un bénéfice de l'exploitation de certaines ressources. Afin de comprendre les interactions entre ces politiques publiques et les pratiques ou initiatives rurales, nous avons étudié le village de Chennayanakote dans le district du Kodagu (État du Karnataka). L'action collective pour la gestion des ressources naturelles dans le Kodagu prend deux formes différentes que nous avons décrites comme « participation subie » et « participation choisie ». Les impacts de ces actions collectives sur l'écosystème, les conditions de vie des populations et la gouvernance sont variables. Alors que les actions conduites dans le cadre de la « participation choisie » semblent plus efficaces pour répondre aux problèmes environnementaux ou de niveau de vie des populations, celles conduites dans le cadre de la « participation subie » qui essaient de gérer tous les aspects à la fois mais avec moins de succès.

Mots clés : action collective, biodiversité, politiques publiques, participation, gestion des forêts

Abstract

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Résumé

Des homes, des éléphants, des forêts. Action collective pour la gestion d'un problème environnemental pernicieux dans le Kodagu, Ghâts occidentaux.

Ces vingt dernières années, le discours international sur la gestion des ressources naturelles a encouragé la participation des communautés locales dans la poursuite du développement durable et de la conservation des ressources. Après avoir approuvé et encouragé ces concepts et principes, le Gouvernement central indien les a traduit dans la Politique Forestière Nationale de 1988 et les principes directeurs sur le Joint Forest Management permettant aux communautés villageoises de participer activement à la gestion forestière et à en retirer un bénéfice de l'exploitation de certaines ressources. Afin de comprendre les interactions entre ces politiques publiques et les pratiques ou initiatives rurales, nous avons étudié le village de Chennayanakote dans le district du Kodagu (Etat du Karnataka). L'action collective pour la gestion des ressources naturelles dans le Kodagu prend deux formes différentes que nous avons décrites comme « participation subie » et « participation choisie ». Les impacts de ces actions collectives sur l'écosystème, les conditions de vie des populations et la gouvernance sont variables. Alors que les actions conduites dans le cadre de la « participation choisie » semblent plus efficaces pour répondre aux problèmes environnementaux ou de niveau de vie des populations, celles conduites dans le cadre de la « participation subie » qui essaient de gérer tous les aspects à la fois mais avec moins de succès.

Mots clés : action collective, biodiversité, politiques publiques, participation, gestion des forêts