Institutional Governance System (IGS) for forest management planning

A Theoretical Proposal

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Forewords

This working paper is the third of a serie of three papers constituting a part of the author's PhD thesis titled "Design of a planning system for sustainable forest management in the Congo Basin". Beyond a concern of this paper on institutional governance systems (IGS), the other two working papers examine means of "Linking normative and strategic forest planning in a unique forest management planning framework: A theoretical proposal" (Working Paper 52-2008) and "Property rights and decentralisation as a forest management planning framework: A theoretical overview" (Working Paper 53-2008). All three of these working papers have been discussed in colloquia and revised by the author.

The works of Oesten & Roeder (2002) as well as other relevant literature[1] form the basis of this paper in relation to common pool resources (CPR) and their management. This is supplemented by the author's experiences on forest management in the Congo Basin. A proposal for managing the interaction and co-existence of actors or participants[2] in forest management planning is developed. This is by providing a practical reference, an IGS to be used by the various forest management planning participants. In other words, a means for creating effective agreements or a "social contract",[3] as well as the idea of establishing fair partnerships in forest management planning are presented. These measures improve the participants' confidence; ensure transparency and the legitimacy of the planning outcome. This intended outcome of planning procedures is made known to all participants, is accepted and respected, and may consequently be one of the means to reduce bureaucracy and transaction costs through enhancing local commitment to management planning. In this respect, this paper deals with the need for an analysis of the patterns of interaction between participants, their incentives for forest management planning, as well as their active participation and conflict management. Problems of legitimacy of current forest management planning in Cameroon and many other tropical countries is emphasised, as are the issues of conflict management and the insufficient tools available to help address the complex social issues involved in forest planning. However, it should be noted that this paper will not present a "one size fits all" or blueprint process for management through IGS. Rather, it contains a

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[1] Biesbrouck/ Van den Berg (2000); Biesbrouck (2002); Pomeroy/ Rivera-Guieb (2005); Beket & et al. (2005); Tyler (2006); Berkes et al. (2004); Cartier/ Ruitenbeek (2001); Henderson (2005); Colfer et al. (2005); Ostrom (1998a,b; 1999; 2005, 2007); Priscoli (1997, 1998); Association Technique Internationale des Bois Tropicaux (ATIBT) (2005a,b, 2007); Kovac (2002); Williamson (2000); Abdullah et al. (1998); Forest Monitor (FM) (2001).
[2] All constituent groups include: government, forest companies, local communities, conservationists, forest donors and forest planners.
[3] Here social contract as the forest management planning process outcome.

theoretical model that is "generic" for the Congo Basin in that it will provide the user with a place to start, an understanding of how a model works and the variety of activities and methods that can be used to implement the IGS, which is a multi-participants model for managing the Congo Basin's tropical rainforests.

The conceptual framework of the IGS is essentially based on a combination of two sociological epistemological frameworks for public decision rationale; rationalist (top down) and community based management (bottom up) on the one hand, and the concept and theories of the 'commons', co-management, participation and conflict management on the other. The IGS provides a foundation for the design and implementation of an integrated collaborative, tactical (medium term) forest management planning process. The IGS relates to two basic concepts, institutional analysis and development (IAD) and the democratic approach to dealing with problems. It provides ideas, methods and techniques for managing the co-existence of planning stakeholders, particularly in the building of trust, which is essential but may take time and patience. It focuses on forest concessions and forest management units, and is also relevant to forest councils in the tropical rainforests of the Congo Basin, and specifically in Cameroon. It also focuses on the management of other CPR in other tropical countries. This paper will be of considerable interest to managers, practitioners and academics active in the area of tropical forest management planning in the Congo Basin.

I wish you a pleasant and inspiring read.

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Acknowledgements

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List of acronyms and abbreviations

API	Amenagement Pilote Integre der Dimako
CBP	Community-Based Planning
CPRs	Common Pool Resources
CPSWG	Combined Planning System Working Group
FAO	Food and Agriculture Organization
FMSP	Fisheries Management Science Programme
FMU	Forest Management Unit
IAD	Institutional Analysis and Development
IFMPI	Integrated Forest Management planning Information
IGS	Institutional Governance System
ILO	International Labour Organization
ITTO	International Tropical Timber Organization
IWR	Institute for Water Resources
MARPP	Active Method of Participatory Research and Planning
NGO	Non Governmental Organisation
NIE	New Institutional Economics
NOAA	National Oceanic and Atmospheric Administration (NOAA)
NRM	Natural Resource Management
NTFPs	Non Timber Forests Products
OTPIC	Online Training Program on Intractable Conflict
PFE	Permanent Forest Estate
SC	Synapse Consulting
SCOPE	Sustainability indicators a scientific assessment
SFM	Sustainable Forest Management
SIPP	System intelligent participation process
UNECE	Economic Commission for Europe
USA	United States of America
VDC	Village Development Committees
VLUP	Village Land Used Plan
WB	World Bank
WO	Women Organizations
WR	Working Report

1 Introduction

There is increasing concern over environmental quality, public health, common welfare and social justice. Actors or participants[5] actively participating in forest management planning (FMP), specifically local communities are rightly considered to be an essential feature of the FMP and conservation of tropical forests worldwide. It has been known for decades that the success of FMP in terms of sustained forest production depends on an equitable distribution between the principal actors of the incentives, costs and benefits, associated with forestry.[6] In other words, it depends to a considerable degree on its compatibility with the interests of local populations who dependent upon the forest,[7] and others involved in the planning process. It depends on an equitable distribution between the principal actors of the incentives, costs and benefits, associated with forestry. In this respect, to ensure sustainable forest management (SFM), it is important that forest resources, especially the permanent forest estate (PFE),[8] are secured and protected, and that they are managed in accordance with best management practices that involve all actors. Marjuni (1992) and the International Tropical Timber Organisation (ITTO)[9] both stated that timber permits granted for areas inhabited by indigenous peoples should take into consideration the recommendations made by the World Bank and the International Labour Organisation (ILO) in relation to work in such areas.[10]

Unfortunately, this has proven to be a very elusive objective, despite significant efforts made on every continent. Only few programmes or projects can claim enduring success in terms of increased community income, sustainable forest management (SFM) and/or conservation.[11] The Food and Agriculture Organisation (FAO) (1998)[12] revealed that progress in establishing stable and enduring FMP arrangements is so slow that it is currently having little impact on

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[5] All constituent actors or participants groups include: the forest owners, concessionaires, local communities, conservationists, forest donors (agencies or institution that supported or assited the FMP: capacity building) and forest planners (see section 3.1.2). Actors and participants are here used as synonyms.

[6] Cf. Marjuni 1992; International Tropical Timber Organization (ITTO) (2005).

[7] ITTO (2005).

[8] Also known as 'classified forest' (forêts classés in french), which can only be used for forestry or as wildlife habitats Cameroon has an estimated 12.8 million hectares of natural-forest PFE, comprising 8.84 million hectares of production forest (including council forests, the objectives of which may vary between councils) and 3.90 million hectares of protection forest. The law 94 (Article 22) specifies that at least 30% of the national territory should be classed as the PFE Présidence de la République du Cameroun ((PRC 1994).

[9] ITTO (2005); Marjuni (1992).

[10] See for review ILO (2007); Dogmo 2008a, Working paper 52, in the annex1, the ILO texts.

[11] Dourojeanni/ Sève (2007).

[12] See also Almendares et al. (2003); Hideyuki (2008).

the general decline and quality of tropical forests. In fact, in tropical regions, most forestland is under the statutory ownership of the respective sovereign state.[13] Clement (1997) argued that this framework of state ownership has been inherited from the colonial times. He highöighted that in the times post-war, the independent nations relied on the colonial legal systems pertaining to forest management when seeking to avail of forest resources to satisfy national interests.[14] According to Biesbrouck/ Van den Berg (2000), these nations did not acknowledge the rights of tenure of forest-dependent peoples who over the course of decades, or even centuries, used the forest resources "sustainably".

Conflicts between state forest bureaucracies, concessionaires, rural people, conservationists etc. have been caused by this legal usurpation described by Clement (1997). These conflicts relate particularly to access to resources and the sharing of benefits, and have drawn in all actors involved in forestry. The concept of commons was not integrated into the institutional arrangements (FMP outcomes), but excluded.[15] The conventional literature in the area of resource economics provides some insights into how common property resources such as forestry can be managed in a sustainable manner.[16] This has meant broadening the alternatives considered, from traditional planning tools like control by area, volume, increment, yield tables, etc. to the incorporation of non-structural and behavioural measures (static vs. dynamic system). Initially, the forest industries and agencies greeted actor's involvement with scepticism, and the environmental interest groups with naïve euphoria.[17] Adapted from Biesbrouck/ Van den Berg (2000), this is particularly important in the Congo Basin tropical forest region, where the forest companies and the local people see each other as enemies. They showed that communication becomes distorted. People perceive each other according to the prevailing stereotypes, and not as individual human beings. Each new escalation in aggressive behaviour is justified as a response to the other person's perceived aggression. According to Priscoli (1998), "When this kind of polarisation occurs, most of us assume that we are now in a struggle to "win", which means that the other person will lose. So, we have a 'win–lose' battle, or as it is sometimes called, a 'zero-sum game.''[18] The difference is in how the conflict is managed. This is a key concept. Therefore, one of the key jobs of a planner is to manage conflict so that it does not become dysfunctional.[19] Just turning it over to the

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[13] Cf. FAO (2005); Poffenberger (2000) & White & Martin (2002) cited by Hideyuki & Xin (2008).
[14] See also quoted by Biesbrouck/ Van den Berg (2000); Lynch / Talbott (1995) cited by Hideyuki & Xin (2008).
[15] Cf. Contreras-Hermosilla/ Fay (2005)/ Peluso (1992 cited by Hideyuki & Xin 2008); see also Dogmo (2008a,b).
[16] Ostrom (1998, 2005, 2007); Berkes (2002, 2006); Agrawal (2002).
[17] Priscoli (1998). See also Ayres et al. (1998).
[18] Meaning every gain – money, status, power, and authority – must be at someone else's expense (Priscoli (1998)).
[19] Adapted from Priscoli (1996).

attorneys or authorities, as was often the case under the classical forest management approach, is not a solution.

Emphasises on Cameroon, Cameroon's forestry council and FMU are confronted by the problem of scarce natural resources such as land, water and trees. These resources are owned and/or exploited by the better off, and are frequently the cause of disputes and conflicts. Organisational structures and decision-making mechanisms are generally dominated by the local elite, forest industries and forest department.[20] Cameroon's permanent forest resources are a source of conflict in which economic, ecological, social and cultural values are at stake.[21] The forest resources are owned mainly by the state, which grants licenses to forest companies and municipalities for their use. However, traditionally the indigenous people of Cameroon had exclusive rights over the use of the land, and enjoyed a share of the forest revenues. To date the importance of the social and ecological sustainability of common pool resources have not been fully recognised, specifically in relation to forest concessions, forest management units and forest councils. This fact means that the management of the forest resource, which has the character of a common pool resource, is difficult as it is necessary to find sustainable solutions allowing for the co-existence of all of the interest groups. Studd (2002) argued that support for more inclusive active participatory and conflict management approaches to planning has evolved in response to a range of social and political factors.

a) the "crisis of legitimacy" faced by institutions, and the need to gain recognition for either issues or parties: the current system of representative democracy and expert-dominated decision-making, where decisions are taken on behalf of the public by representatives, has been criticised as being too remote and failing to adequately take into account the concerns and needs of citizens, especially those of marginalised groups;[22]

b) the complexity of and uncertainty associated with environmental problems: organisations are increasingly faced with complex and contested environmental issues, frequently crossing institutional and administrative boundaries. Examples of these problems include what are referred to as 'wicked' problems or ill-defined problems, tightly coupled with

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[20] Oyono (2002a,b, 2004a,b); Steimann (2004).

[21] Oyono (2004a,b); Bigombé (2003).

[22] It is argued that participatory processes can help forest planners to understand public values, making them more responsive to public needs; the decisions made are directly attributable to the participants who helped develop them, and they allow for exchange and the scrutiny of different perspectives and knowledge (Studd (2002)).

other sectors and resolved only through imperfect and transitory political agreement. Often there may be no simple scientific or technological solution;[23]

c) local communities and other actors are increasingly demanding more say in planning decisions that affect them, as is illustrated by the rise in grassroots protest movements. Local participation forms a core theme of sustainable development, and is linked with democratic arguments of fairness and equity in governance, allowing local people and the wider public to exercise their basic human right to participate in decisions that affect their quality of life. In general, human rights are linked to environmental decision-making through the environmental justice movement.[24]

Aim and organisation of the working paper

The quest for sustainable, efficient and equitable ways to manage the tropical common pool resources (CPRs) of Central Africa, such as the rainforests, has been a long and difficult one. Moves towards decentralisation and property rights reforms have created a new forest management planning framework that requires a new governance principle or structure (for more detail refers to Working Paper 53 – 2008). For example, through the active participation of actors, there should be incentives to support long term SFM that is suited to the requirements of all parties (actors) involved. This statement means, according to Marjuni (1992) and ITTO (2005)[25] that concessionaires should provide for the long term viability and visibility of their concession. In reality, the aims of the forest company are mostly benefit oriented (neo-liberal economics). The forest company strategy targets merely 'social peace,' which consists of contributing to infrastructure by building medical facilities, schools, etc. in the villages and expecting that they be allowed to log in peace in return.[26] Contrary to this neoclassical view of business, is the need for the local population to be represented at each step in the FMP process and jointly, in an equitable manner, actively participate in the management of the forest resources, and thus to benefit from it. The government, and local government, should also receive appropriate revenues from the outcomes of the planning process. The planning process should leave both the conservationists and the forest donors

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[23] The resolution of such issues requires flexible solutions, which are supported and 'owned' by the various parties involved. Involving those who have an influence over the implementation of a decision in the development of that decision increases support for, ownership over, and the effectiveness of that decision. Participatory processes encourage transparency and the incorporation of public concerns in decision-making (Studd (2002)).

[24] These arguments are driven by a vision of a new active stakeholder participation in planning processes, shaping society, rather than the 'using and choosing' basis of the modern consumer culture (Cornwall/ Gaventa (2001)).

[25] ITTO (2005); Moore/ Santosa (1995).

[26] Association Technique Internationale des Bois Tropicaux (ATIBT) (2001,2005a, b, 2007).

satisfied. This gave rise to the following questions: Can the conflicting interests within the forest management planning framework be reconciled? What happens after we have listened to the different, competing views? Can participation and conflict management – by raising and articulating the various interests – lead to the consensus necessary for the implementation of forest management plans? Is it possible to design a model that integrates the actors in each step of the forest management planning process? These questions constitute the issues addressed in this working paper.

Cameroon's Forest Law 94 provides the framework by which the questions at the heart of the study presented in this working paper are addressed. The purpose of Forest Law 94 is in part to achieve sustainable forest management and greater democracy through the introduction of participation in the planning process, in an attempt to solve the problem of legitimacy that undermines traditional forest planning. However, the seven ITTO projects reviewed by Dourojeanni & Sève (2007),[27] as well as an analysis of the FAO forest management planning project documentation from 2002 and of projects implemented in Cameroon since 1992, financed and/or promoted mainly by the ITTO,[28] have proven, once again, that the main problems are not related to the participating communities themselves, but are essentially the consequence of serious failures in terms of project design, important technical deficiencies and, to a lesser extent, flawed project implementation. Furthermore, a review of the participative and conflict management initiatives undertaken in Central Africa in the area of forest ecosystems showed that recourse to the participative model has only recently been considered in a political context dominated by the democratisation, globalisation etc.[29] An attempt to reconstruct the history of the prevailing ideas in relation to active participation and conflict management indicated a tendency towards the 'collaborative model,' referred to here as the institutional governance system (IGS), as a means to solve the problem posed by the absence security in relation to forest land and property rights, the failure of decentralisation and the conflicting interests of the actors. This evolution of ideas, and forest management

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[27] In Bolivia, Ghana, Panama, Peru, the Philippines and Togo (Dourojeanni & Sève 2007).

[28] Including: a) The Dimako pilot integrated management project for rational forest harvesting was launched in Cameroon's Eastern Province. The project recommended harvesting intensities greater than 1 tree/ha, a rotation of 30 years and a planting prescription for areas with poor regeneration. b) Supervised by ONADEF, the So'o Lala project carried out on a forest management unit (FMU) straddling central and southern Cameroon was based on a forest management plan designed to produce timber on a steady but sustainable basis, whilst respecting the other functions of the forest. c) The Cameroon Tropenbos project (Kribi) was to develop strategies and methods for sustainable forest management. d) The Ottotomo forest management project and the SIKOP project in the coastal province. e) The Lokoundje-Nyong forest management project on the south-west coast of Cameroon. There are also a number of sub-regional initiatives for cooperation and coordination in natural resource management (ECOFAC, REIMP, CEFDHAC, CARPE, etc.) (Durrieu de Madron & Forni (1997)); Fines et al. (2001); Yene (2002); FAO (2002 a-d); Amsallem et al. (2002)).

[29] Nguinguiri (1998).

practices, marks a move from a centralist or top down approach, as well as a privatisation approach, towards a participative and conflict management or collaborative approach.[30] In fact, the state cannot control the forest resources. The solution, therefore, according to the neo-classical economics of the World Bank (WB) and the International Monetary Fund (IMF), was to promote privatisation, which seeks to guarantee viable and SFM. It was subsequently revealed that this model of privatisation far from guaranteed the security of forest resources in tropical forests regions, see Ostrom (1998a,b, 2007), Berkes (1989,2002, 2006), Agrawal (2002), Biesbrouck & Van den Berg (2000), FM (2001), Nasi et al. (2006).

This working paper presents a model institutional framework for FMP components critical to the successful implementation of a forest management plan (fmp) seeking to implement SFM. The author believes that the findings represent a significant contribution to the study of institutional change and conflict management in the FMP process, and that they will help improve the conception and implementation of fmps. These plans must take into consideration the range of actors involved in FMP, all with similar overall goals. The number of actors is large, with diverse and sometimes conflicting objectives and vested interests. This institutional governance model for forest planning is a moral, social, economic, ecological and political tool for sustainable forest management. It demonstrates how to improve the collaboration between actors and participants in FMP. Using the idea of the IGS for planning, there is a variety of institutional factors that could be selected according to the particular context. This approach requires site specificity and a high degree of social contextual understanding on the part of the implementing or facilitating organisation. This working paper examines the needs and premises for effective institutional forest planning, and the establishment of an institutional framework to ensure the implementation of the FMP outcomes. The main objective of this section was to develop a proposal for managing the co-existence of actors in the FMP framework. It aimed also to outline how to achieve a reconciled agreement amongst actors incorporating diverse objectives, different perceptions of the forests and thus improves their confidence in the planning outcome. The approach used here for active participation and conflict resolution is an institutional one in the sense of collaborative planning procedure. The difference between this and the classical approach is how conflict is managed within a forest management planning process. In this respect, the new planning approach aims to address the situation in Cameroon, and so is an important example of its application in a real situation.

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[30] Participative or contractual management (Nguinguiri (1998)).

The structure of this working paper is as follows. In the first part after the introduction, the theory underlying the IGS is discussed (Chapter 2); specifically the conceptual framework for which the IGS of a forest management planning design can be developed. Five concepts are discussed here, namely the rationalist view of forest planning versus the community based view of planning on the one hand, and the "common", the "co-management" and the participatory and conflict management concept on the other. Then, based on the problem resulting from these five theories, the next section addresses the need for a new approach in forest planning. The second part of this working report emphasises the design of the institutional governance system (IGS), built primarily on the basis of the 'institutional analysis and development (IAD) framework' developed by Ostrom and colleagues.[31] This approach facilitates the analysis of the actors' interactions and incentives in a given forest planning process (chapter 3). The IGS also incorporates interactive and active participatory forest planning and conflict management (democratic resolution of a problem) based on the establishment of a working group called the Combined Planning System Working Group (CPSWG), and also communication/consultation, negotiation and consensus building (Chapter 4). The third part of this report highlights the conclusions of the study (Chapter 5).

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[31] Ostrom (2005).

2 Conceptual framework of the institutional governance model for forest planning

The present section presents the conceptual framework of the IGS for forest planning. This framework consists on some well known theories and incorporates empirical evidence. It is essentially based on four approaches (see Figure 2-3, p. 33). The first is rationalist or expert-based planning (top-down approach), as can be seen in Figure 2-1 (below). In this case, the expert plans for the user, who is informed at the end of the planning process or as the plan is being implemented. The planning process is mostly conducted by experts who are trained in planning methods, and who usually possess a professional title or designation. In this conception of planning, the finished planning output (the plan) is usually transferred to users and/or practitioners. In this conventional or classical type of planning, users and/or practitioners may be the recipients but they are not involved in actually conducting the planning (except sometimes as data collectors). The second approach is the community-based planning (CBP) or bottom-up approach, as can be seen in Figure 2-2 (below), which is permanent social construction of the content of the plan by the actors. Here the planning process begins with the users planning for the users, and ends with the users implementing the plan. It is local knowledge-based planning. Then the third approach is the institutional aspect of planning (property rights and decentralisation). It is discussed with the understanding that forests are a common pool resource.[32] Finally, the fourth approach presented relates to co-management, mostly developed in Asia which involves government and/or forest companies and the population.

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[32] For more information concerning the commons refer to Dogmo (2008b, Working Report 53).

START: Experts or researchers   Users

Problem Formation

Goal Establishment

Plan formulation

Alternative selection

Plan implementation

Plan Controlling /monitoring

Users or practitioners

STOP

Plan Controlling /monitoring

Plan implementation

Alternative selection

Plan formulation

Goal Establishment

Problem Formation

Permanent social construction of the content of the plan by the users

Users or practitioners

Figure 2-1   the rationalist planning agenda
(top-down approach) adapted from
Buttoud 1999a
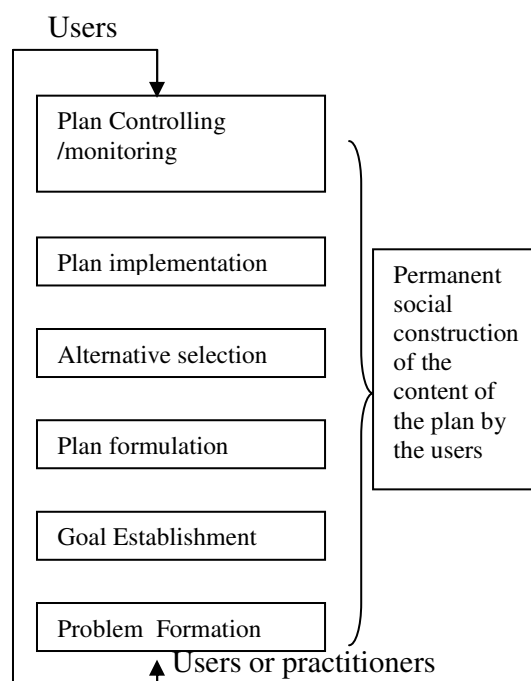
Figure 2-2 Community based planning process
(bottom-up approach) adapted from
Buttoud 1999a

2.1   Rationalist's methods view of planning

The first is the rationalist or top-down approach, or general model of rational-comprehensive planning. It is based on a deductive chain of decisions taken by a public authority or forest agency and/or enterprise and/or forest planning experts in charge of making forest planning decisions. The information flow is from planning experts to users, as can be seen in Figure 2-1 above and Figure 2-3, p.33. The expert is at the top, and makes all of the decisions. The users have to implement these decisions, without any say in the process. There is no negotiation. McCay & Hanna (1998) highlighted some characteristics of rationalist, or classical or 'traditional' natural resource management. These include utilitarian values, production orientation (MSY), single species, scientific monopoly on data and analyses, deterministic scientific models, advisory, consultative roles for users and communities; scientific expertise and top-down management (government and expert-based). This government and expert-based approach dominates traditional approaches to resource management planning and protection, where scientific investigations lead the process of

identifying and designating specific areas.[33] Top-down development derives from the traditional colonial (logging) exploitation, when European powers laid claim to land in South America, Africa and Asia, and 'civilised' the native populations. Modern colonialism relies more on the exchange of material goods than the use of force to convince less developed countries countries to trade away their natural resources, and third world politicians are often accomplices in this exploitation.[34]

Decisions are often made by planning experts or government authorities. This is the case in central European FMP, as well as in most of the tropical countries, where FMP derives from the European system. Some examples of these expert-based planning techniques are: area and volume control, combined method, the control method, serial planning unit, the control sampling method, operations research, etc.[35] None of these makes provision for social aspects, and address only superficially the ecological or environmental aspects of the planning process. Indeed, the outcomes produced by these planning techniques can lead to controversy or opposition because the actors are not formally included in the process and, as a result, have little understanding of, or support for the results.[36] This is the case in relation to the results of FMP at the FMU level in Cameroon, where conflicts between the actors involved is commonplace, particularly the local communities.[37] At the same time there is a continual degradation of the resources because there is little compliance with the rules and regulations, and enforcement measures are ineffective. Under the top-down approach (also called the authoritarian approach), the political or economic authorities decide on a project based on recommendations by outside consultants.[38] The argumentation in favour of this approach has often been that the local residents have neither the knowledge nor the vision to propel themselves into the modern economy, and that they must therefore be guided by the experts.[39]

For a review of recent research findings in the area of common and common pool resources, and decentralisation, made over the past two to three decades, revealing insights into the community-based resource management and the theories derived.[40] Artur (2005)[41] stated that this top-down or expert-based is approach is the more traditional approach, and claimed that

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[33] Kesley et al. (1995).
[34] Jordan & Montagnini (2005).
[35] Speidel (1972); Biolley (1922); Dogmo (2008 b, WR 52); Mantel (1959); Wagner (1923); Kurth (1994).
[36] Brody (1998).
[37] For review see Dogmo (2008b, WR 53).
[38] Gildman (1997 cited by Brody 1998).
[39] Jordan/ Montagnini (2005).
[40] See Dogmo 2008b, WR 53.
[41] Arthur (2005).

centralised management arrangements that provide advice in a top-down manner are widely considered to have failed to deliver either sustainable forestry, or to meet the needs of those who depend upon the resources (see also Fisheries Management Science Programme (FMSP) (2008), Ostrom/ Schlüter (2007) and the Forest Communities Project in Cameroon).[42] Although some empirical evidence supports the hypothesis that the expert-based approach reduces resources overexploitation (tragedy of the commons) and improves good governance, there are many theoretical and empirical examples that also show how they systematically fail to encourage good governance and lead to overexploitation in many developing countries.[43] Taking just two examples, the first one from the fisheries sector, according to Artur (2005), there are a large number of cases in inland fisheries where the resource has been "captured" by the better-off, resulting in fisheries that are heavily overexploited, and exclude the poor. The reasons for such failures include the fact that centralised management arrangements can lead to decisions and/or the provision of information for decision-making that, being detached from the fishermen (and other actors) and their needs, fails to account for local complexities and the uncertainties that these can create. At the same time, centralised management agencies often lack the resources to either enforce management decisions made centrally or to support local arrangements. In order to develop supportive policies we need to consider what sort of arrangements we are looking to support.

The second example of this approach is the operational research model approach from the United States (US) of America. The US Forest Service simply tried to blend forest planning into its existing planning routine by broadening the geographic scope of its unit plans and by integrating its functional, resource specific plans into a huge process. A complex computer model designed to consider potential resource management options given different demands and constraints was developed. As a highly structured and rational process, it seemed for a while that forest planning had been successfully formalised. In this conceptual framework, the common interest is defined by rationalist or agency norms in an extra-societal way, without any consideration for the needs and interests expressed by users. In forestry, it is sometimes emphasised that the common interest not only differs from but is often the very opposite of the needs expressed by individuals. The authority's task is to decide what most benefits the community. If centralised management is not the answer for small-scale resources, however,

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[42] The FMSP indicates that there has been increasing interest in the potential of co-management to deliver sustainably managed fisheries, creating fisheries that are better able to meet the needs and obligations of the nation state, while at the same time providing benefits to those that depend on the resource for some or all of their livelihood needs (www.fmsp.org.uk). See Ostrom/ Schlüter (2007) and, for Cameroon, see Castadot et al. (2007); Ango et al. (2007), FM (2001).
[43] See Nupia (2006); Dogmo (2008b).

is community-based management the solution? This working paper develops upon the latter approach (see Figure 2-2, p. 9). The pretension has been for the rationalist view of planning that the local residents have neither the knowledge nor vision to propel themselves into the modern economy and that guidance must be left to the experts.[44] However, the author highlights also here that there are always misunderstanding and confusion about the FMP terminology. In this frame, it has been known on one hand as yield regulation, e.g. control by area, sometimes has been defined as harvesting system, e.g. Reduced Impact Logging (RIL) well as the some FMP concepts. On other hand, it is known also as silvicultural system, e.g. Tropical Shelterwood System (TSS).

2.1.1 *Forest management planning understanding as yield regulation*

Tropical forest management and planning literature shows that early yield regulation methods used in tropical forest tended to follow the classic techniques developed and employed in Europe during the 13th, 14th and nineteenth century for both even-aged and uneven-aged forests. Recknagle (1917)[45] for example, described eighteen distinct methods (see some of them in Figure 1-8 in the Appendix H). Methods of calculating the yield depends on a number of factors, variables or criterion. They include: control by area,[46] control by volume,[47] control by volume & increment[48] and Control by the number of trees,[49] regulation by size class[50] and Common growth model types, like the gap models with their three contents, the cohort models and the Carbon balance models and the FORMIX3 for relation to other model.[51] In tropical central African exists since the 1990s an approach for FMP based on yield regulation techniques developed by the CIRAD in 1992[52] in the east region of Cameroon, the "Dimako

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[44] Jordan & Montagnini 2005.

[45] Recknagle 1917 quoted by Vanclay 1996.

[46] Specifically for Congo Basin, the number of trees felled each year is controlled by felling rules that may be based on minimum size limits for utilisation, favoured species, silvicultural considerations and an assessment of potential logging damage (Alder 1992; Dupuy 1998; FAO 1998; Atyi & MBolo 2006; ATIBT 2007).

[47] Concerning the control by volume, it comes from the Austrian government decree of 1788. The timber industry generally prefers a guarantee of yearly volume to one of yearly area (FAO 1998).

[48] As Dwight (1965) points out the science of forest regulation is based here on a very simple principle: if there is excess of old timber, the allowable cut should exceed the mean annual increment (MAI) of the forest; if, on the other hand, young age classes preponderate, the cut should be less than the increment (Dwight 1965 quoted by FAO 1998).

[49] The control by the number requires information on three attributes of the forest: the numbers of trees in each diameter class, the time of passage that is the time taken by trees to grow through the various diameter classes to exploitable size, and the mortality percent of each diameter class (FAO 1998; Adler & Wright 1999).

[50] This method was devised for uneven aged and semi-uniform forests, and it based on the substitution of sized classes for age-classes for the purpose of yield regulation.

[51] The FORMIX3 model can be classified under the carbon balance modelling approach since the calculation of the individual tree growth is based on carbon balance (FAO 1998).

[52] Durrieu de Madron & Forni 1997.

project". Also in this framework, the FAO proposed through their projects findings on FMP some tools for FMP which may be found in the FAO (2002a-e).

2.1.2 Forest management planning understanding as silvicultural systems

FMP has been understood by some author[53] as silvicultural prescription. From history, silvicultural in tropical Africa dates from the early 1900s.[54] Some of these systems are still practiced, while other systems have been discontinued or modified. In the following, some systems already developed in the tropics are reviewed: first of all, the Natural regeneration system which depends on the number of individuals of desirable species left after harvest.[55] Then, the modified version of the Malayan uniform system (MUS) is as one of the older and most widely known management system in Southeast Asia. Its rotation period is about 50-60 years and the determination of regeneration status is through diagnostic sampling (3-5 years after harvest). Afterwards, the polycyclic methods contain many management systems include: the selective management system (SMS)[56] and the cellos silvicultural system (CSS).[57] Most management systems for natural tropical forest today are modifications of the SMS or the CSS geared to suit the local ecological characteristics of the forest as well as the economic conditions of the region. Another method her is the Tebang Pilig Indonesia and the Tebang Pilig Tanam Indonesia. In tropical Africa, the work was done in Ghana since the 1950's and modified more recently[58] and the "Société de Développement des Plantations Forestiéres" (SODEFOR) trials in Côte d'Ivoire[59] about the improvement of natural stands system or "l'amélioration des peuplements naturels" (APN). Furthermore, the other system was the TSS as partial clearing system,[60] introduced in Nigeria in 1944 as a monocyclic system based on the European uniform or shelterwood System. The other silvicultural system with natural regeneration attempted for a brief period in Ghana was the Post Exploitation-

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[53] Silva 1989; Jordan & Montagnini 2005.

[54] Basically two schools have evolved: The use of natural regeneration which was advocated by foresters of English origin, and artificial regeneration, defended by French foresters, although amongst the Belgian foresters in particular, there were supporters of both schools (Catinot 1965 cited by Silva 1989).

[55] With the following characteristics: Abundant, Wide diameter distribution, and good quality timber.

[56] SMS was applied in rich forests. It counts only on the commercial species of average diameter (30 to 50 cm), left on feet by a practised cut all the 25 or 30 years. It is an inexpensive system (Dawkins & Philip 1998; Hon Tat Tang 1987 quoted by Silva 1989; FAO 2005).

[57] The CSS has been proposed as a technically feasible balance of economic and ecological aspects of timber production in the seasonal evergreen forest of Surinam (De Graaf & Poels 1990; Dekker & de Graaf 2003; Catinot (1965) cited by Silva 1989; De Graaf et al. 1995; FAO 2005; Jordan & Montagnini 2005).

[58] Asabere 1987 quoted by Atyi 2000; Jordan & Montagnini 2005.

[59] De Graaf et al. 1995; Maître1986 cited by Atyi 2000; FAO 2005; Jordan & Montagnini 2005.

[60] In opposition to MUS, the forest under management did not have high regeneration capacity (Dawkins & Philip 1998). This system was gradually abandoned in Ghana and Nigeria in the late 1970 and polycyclic methods were adopted.

System. However, a number of approaches and solutions to the problems of silviculture in natural forest have been abandoned.

2.1.3 Harvest system in Tropical region also referred as "forest management planning"

Harvesting and extraction operations are the activities that generally cause the most significant impacts on the forest. Felling and removing trees are the activities that are included in this system. Some research efforts have also been devoted to the improvement of logging techniques following the damaging and destructive conventional logging[61] as ecological response. One of the most known techniques is the RIL.[62] It is identified as one of the key elements of SFM. In this framework, there is a significant difference between RIL and FMP. RIL refers to the process of timber harvesting including pre-harvest planning, technical supervision and post-harvest assessments that reflect concern about non-timber resource values and about the future state of the forest,[63] whereas FMP deals with the basic questions: what management objectives and activities have to be undertaken, where, when and by whom. According to Speidel (1972) and Bachmann (1992) definitions on FMP, RIL may be an important element of the FMP and not a FMP it self. Therefore, forest planners, who are called on to develop a forest management plan can use the RIL as a tools, which assist them in managing forestlands in such a manner and rate, that they are capable of providing long-term contributions and functions to society and future generations.

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[61] Conventionally practiced is characterised by depletes timber stocks and causes severe ecological damage to residual forests.

[62] RIL systems use an array of best harvesting techniques that reduce damage to residual forests, create fewer roads and skid trails, reduce soil disturbance and erosion, protect water quality, mitigate fire risk and potentially help maintain regeneration and protect biological diversity. These techniques are now widely recognized and numerous studies in the three major tropical forest biomes (Latin America, Central Africa, and South East Asia) have demonstrated that, under moderate logging intensity, these techniques can reduce by 50% the damage on residual stand and soil. However, RIL operations are still based, as all other selective logging systems operated in the tropics, on a very simple rule: the minimum diameter limit applied to all commercial species (Durrieu de Madron et al. 1998; Boltz et al 2003; Barreto et al. 1998; Jordan & Montagnini 2005).

[63] Durrieu de Madron et al. 1998; Applegate et al. 2002; Jordan & Montagnini 2005.

2.2   Community based planning or the bottom-up approach to forest planning

In contrast to the top-down approach, which may involve some degree of local participation but where decision-making is heavily biased towards centralised forest management planning (agencies and staff);[64] effective community-based planning (CBP) places a strong emphasis on community-level institutions for managing the forests. In CBP, or bottom-up approach to planning, the focus is on traditional knowledge of the users, and on understanding and accommodation of how they rely on the resources is very important (Figure 2-3, p.9 and Figure 2-3, p.33).[65] Here, decisions in planning are a set of actions taken by a network of users and the representative structures.[66] In a CBP approach, researchers work with the local men and women most directly involved with forest management. Such an approach recognises that these men and women may have intimate knowledge of the local resource base, that they may have (contrasting) views on resource use and management, and that they are motivated to improve productivity if they can be assured that they will receive benefits.[67] In other words, it is where decision-making is decentralised to the extent that management decisions are made 'locally' (Figure 2-3, 33). McCay & Hanna (1998) highlighted some additional important characteristics of the CBP view of planning. These are a 'land ethic,' multiple species, discontinuity, ecological interactions, habitat, more humble science, acceptance of uncertainty, learning while doing, active and engaged human communities, incorporation of the knowledge and expertise of users; bottom-up. In this respect, CBP is a permanent, social development of the content of the plan through negotiations with users.[68] This view of planning has been advocated by some on the basis that those dependent on forestry have the greatest interest in ensuring the sustainability of the resource system, and have extensive local knowledge, including knowledge of the needs of local users. For these reasons they are potentially the best placed to make management and planning decisions.[69] Bellah (1983)[70] stated that the common interest is defined as all needs and interests expressed

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[64] Beket et al. (2005) demonstrated that 'traditional' planning often discounted the role of local people in designing and implementing measures, projects and programmes.

[65] Graham et al. 1992; Henderson 2005; Beket et al. 2005.

[66] Henderson 2005; Beket et al. 2005.

[67] Beket et al. 2005.

[68] See Buttoud 1999a. In the same view, there are principles which have been drawn by a specialist team of FAO (1998b) about stakeholder participation in forestry: The planning process: is inclusive rather than exclusive; is voluntary with respect to participation and except where a legal requirement specifies otherwise- to the initiation of the process and to the implementation of its results; may be a complement to legal requirements, but cannot conflict with legal provisions in force, in particular with ownership and user rights; is fair and transparent to all participants and follows agreed basic rules; is based on participants acting in good faith; does not guarantee or predetermine what the outcome will be.

[69] E.g. Folke et al. 1998 cited by Artur 2005.

[70] Bellah 1983 cited by Shannon 1991.

by users, and not by experts. The fmp is a local or community-based plan, and not a plan imposed upon the locals by a central administration or expert.[71] CBP is increasingly recognised as the way forward in situations where local people have a strong interest in maintaining natural resources. In forestry, it has been mostly apply in forest communities. However, achieving a shift from conventional planning in production forest, PFE to CBP requires new knowledge, significant institutional changes, and most especially, the assumption of new roles and the development of new capacities by many different users.[72]

According to Brody (1998) and Kessler (2004), the challenges for CBP remain the need to acknowledge that while actor involvement can help establish a partnership that will accommodate the interests of those with a stake in the resources, it will not always lead to protection or successful resource management. Potential problems associated with actor involvement may include delays in decision-making, a high level of financial resources and staffing often unavailable on site, increased tension between actor groups, and a lack of consensus. The process tends to be extremely time consuming and may result in delays to much needed actions that should be taken to protect threatened resources (refer to Ango et al. (2007) and Castadot et al. (2007) for a review of the most recent research findings in relation to community forestry in Cameroon and the difficulties implementing it). CBP processes are complicated by a number of context- and capacity-based factors, which may lead to delays in decision-making. By its very nature, it requires that diverse interests be involved. This may mean that conflict management is necessary to overcome tensions between the actor groups. The complexity of these processes is also influenced by the level of involvement and the role of actors in decision-making. It may prove a challenge to hear from all of the actors and to cope with all of the input received, as well as the divergent opinions expressed. Community-based forest management planning offers the best opportunity to develop plans with actor support, particularly the local communities themselves.[73] However, adapted from National Oceanic and Atmospheric Administration NOAA (2000), the CBP correspond to the level four of participation.[74]

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[71] Brody 1998; Kessler (2004).
[72] Henderson (2005) argued that community relationships, institutions and authorities are an essential part of natural ressource management (NRM), and that any NRM strategy that fails to positively engage communities will be ineffective. Strengthening community-level capacities for NRM is a key strategy for improving NRM.
[73] Brody (1998); Kessler (2004).
[74] See NOAA (2000) level of participation in Table 1-4 in Appendix I.

2.3 Institutional aspect in Forest management planning

Various authors agree that the main reasons for FMP problems lie in inadequate institutional frameworks[75] and the fact that institutional frameworks have been ignored in FMP processes. The references principally include here the theories of New Institutional Economics (NIE) and institutional governance.[76]

2.3.1 New Institutional Economics

Concerning the NIE, it has been described by North (1992) as an attempt to integrate institutionalism or to incorporate a theory of institutions into mainstream neoclassical economics. In contrast to the many earlier attempts to overturn or replace neo-classical theory, the NIE theory builds on, modifies, and extends neoclassical theory to permit it to come to grips and deal with an entire range of issues previously excluded.[77] Thus, NIE expands neo-classical economic theories in order to explain economic behaviour by incorporating a property rights analysis, an economic analysis of law, public choice theory, constitutional economics, the theory of collective action, transaction costs of economic performance, hierarchy and organisation, the principal-agent approach, the theory of relational contracts, and comparative economic systems. Here, emphasises solely deals in part with property rights regimes, because of their importance in relation to tropical Cameroonian forests. Property rights are an institutional form (these can also be called rules) which regulate the access to and use of resources by humans. Those rights should be enforced by the state as a "unit of coercion".[78] Property rights provide agents with the incentives to use land efficiently and to invest in land conservation and improvement and therefore this process is characterised as market-based innovations.[79] Unclear or insecure rights are thought to inhibit exchange, erode incentives to invest in activities that increase long term productivity of resources, and affect the amount of output produced in the economy.[80] Many conflicts over forests arise because of difficulties in clarifying the property regimes and many empirical studies link the absence of clear property rights to rapid loss of vegetation cover, overgrazing, and soil erosion.[81] In this

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[75] Understanding the institutional situation is an essential prerequisite for improving forest management planning performance.
[76] For full discussion on NIE and institutional governance see Dogmo 2008b.
[77] North 1992.
[78] Arlinghaus et al. 2007.
[79] Antinori 2000.
[80] Kundhlande & Luckert 1998.
[81] Kundhlande & Luckert 1998.

respect, Bhagirath/ Engel (2006) argue that an important reason for the massive degradation of natural resources in developing countries is a lack of well-defined and secure property rights,[82] for example, 18.000 people live inside and/or near a forest concession areas called "Concession Forestiére Camerounaise" (CFC)[83] in East Cameroon, and these people believe to be the true owners of the forest. At the same time, the state claims to be the owner of the forests and converts these into forest concessions without taking into account local forest peoples living in extreme poverty. This situation presents the permanent conflicts. The same situation prevails in reserves, parks and/or protected areas. Consequently, due to the lack of an adequate institutional framework and unclear property rights the forest management plans elaborated by the forest holders are still not being implemented in Cameroon resulting in road blockings by rural communities during log transports, for instance.[84] The reform of the property rights system in Cameroon does not solve the problems by means of introducing forest communities. The implementation of these is also critically questioned[85] and not all villages have the opportunity to become a forest community because they are located inside the forest concession. In this respect, the NIE approach stresses the need to explore how the definition and enforcement of property rights influence the manner in which economic agents behave but especially to seek solutions to how to overcome these property right problems. Now, emphasise on the Common property regimes, such as collective rainforests management, are developed when a group of individuals are highly dependent upon a resource, and when the availability of the resource is uncertain or limited.[86] Thus, common properties, i.e., common pool resources share two characteristics. Firstly the exclusion or control of access to the resources by potential users is difficult and secondly each user is capable of subtracting from the welfare of all other users.[87] These two universal characteristics of commons are referred to as the 'exclusion problem' and the 'subtractability problem,' respectively. Common pool resources bas been defined by Ostrom (1998b) as those in which the exclusion of beneficiaries through physical and institutional means is especially costly, and the exploitation by one user reduces resource availability for others. In theory, and often in practice, a group using a commons can solve both the exclusion and the subtractability problem. The key is their ability to limit the access of outsiders and to self-regulate their own use of the resource. Common property works through incentives. If the

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[82] Ribot 2002a,b; Larson & Ribot 2004; see also Dogmo 2008b.
[83] CFC a company which belongs to the French "Groupe Rougier".
[84] Djomo et al. 2000.
[85] Ango et al. 2007; Castadot et al. 2007.
[86] Runge 1981.
[87] Feeny et al. 1990.

members of a group are assured that future harvests will be theirs by right, and will not end up being harvested by others, then they have the economic incentive to self-regulate. Exclusion means the ability to exclude people other than the members of a defined group. Evidence suggests that successful exclusion under communal property is the rule rather than the exception. However, stresses brought about by population growth, changing technology and economic transformation may contribute to the breakdown of the communal property mechanisms that facilitate exclusion.[88] Subtractability refers to the ability of social groups to design a variety of mechanisms to regulate resource use among its members. In many cases, resource users have been able to avoid Hardin (1968)'s "tragedy"[89] by devising rules for self-governance, monitoring mechanisms, and sanctions that rely neither on government control nor on private property rights.[90] Much of the common property literature addresses this issue, and the conditions for effective self-governance.

Ostrom (1990) listed eight design principles important for the success of community-based institutions. Agrawal (2002) expanded this list and suggested that there may be as many as forty critical enabling conditions important for the success of commons institutions.[91] In many cases, community-based management systems are deemed to be successful not because conservation or sustainability can be demonstrated, but because they have survived for long periods, and through various crises. Such successful commons institutions have received special attention for the purposes of theory building, precisely because they are enduring.[92] As one may expect crises and cycles of change rather than equilibrium, there is a shift in the analytical emphasis from stability to resilience, and to increasing the capacity of management systems to learn from experience and to adapt to change.[93]

This occurs mainly because of the relative ease of observing processes of self-governance. (collective choice theories) in the simple cases, but it gives rise to questions in relation to scale and the question of multiple actors; for example, the case of the forest concession or forest council. Sustainable forest management within a 'not well defined property rights' is one of the fundamental problems for Congo Basin tropical forest management.[94] These studies are, in addition, based on factors that influence cooperation in commons situations.

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[88] Berkes 1989; Berkes 2006.
[89] For further details on the tragedy of the commons refer to Dogmo 2008b.
[90] Burger/ Mayer 2003; Berkes 2006.
[91] Dogmo (2008 b, Working Paper 53).
[92] Ostrom (1990); Biesbrouck/ Van den Berg (2000).
[93] Folke et al. (2002).
[94] Berkes (2006).

Commons dilemmas are social dilemmas in which non-cooperation between individual people leads to the deterioration and possible collapse of a resource.[95] Hardin's (1968) parable about the herdsmen, who share a common pasture, where each has an incentive to raise the number of sheep grazing, but in doing so they risk ruining the pasture, illustrates the prototypical commons dilemma. From an economic perspective, commons dilemmas are one class of social interaction in which equilibrium outcomes are inefficient. This inefficient equilibrium is not confined to resource and environmental situations, but arises in other domains as diverse as industrial organisation, public finance and macroeconomic policy [96]

The theory of the commons has undergone major transformations over the years, moving from the simplistic "tragedy of the commons" model to dealing with small-scale, community-based systems as laboratories for the investigation of self-organisation and self-governance.[97] Proceeding from this base, commons literature has dealt with the governance of multiple resources and user groups, and regional and global commons.[98] There are ongoing debates in many areas of commons research. Some of the experimental work on commons, using prisoner's dilemma models, has treated nation states as unitary actors in the analysis of global commons,[99] with the implication that the same commons principles may apply across levels. In this analysis, a number of factors are considered important, including the size and complexity of the system, and the speed at which resources regenerate. In addition to the scaling-up problem, there are several other challenges facing global commons as quoted by Burger et al. (1999), who indicated that concerning such factors as cultural diversity and inter-linkages of commons. Other researchers have argued that the transferability of the small-scale commons experience is fraught with complications. The issue on self-regulation may be approached by suggesting that it may be more useful to pose the issue as one of complexity management, rather than of scaling-up. Commons management can in many cases be understood as the management of complex systems, with an emphasis on scale, self-organisation, uncertainty, and emergent properties such as resilience. Several authors have touched upon aspects of this.[100]

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[95] Hardin (1968); Van Lange et al. (1992a cited by Kopelman et al. 2002).
[96] Kopelman et al. (2002).
[97] Ostrom (2000).
[98] Dietz et al. (2002); Dietz et al. (2003); Dolsak/ Ostrom (2003).
[99] E.g. Gardner et al. (1994).
[100] Gunderson/ Holling (2002); Adger et al. (2003,2005); Levin (1999 cited by Berkes et al. 2003); Wilson (2005); Beket et al. (2005); Berkes et al. (1991); Berkes (2006).

2.3.2 Institutional governance

Institutional governance looks at governance[101] regimes at the institutional level. The governance regimes cover important aspects of decentralisation which represent new extensive forestry reforms of the last two decades. These reforms have fundamentally transformed the institutional conditions for natural resource governance in most developing countries, specifically the Congo Basin countries. In fact, the total disregard of land and resource rights of many forest peoples is often a major source of conflict between a national government, corporate logging interests and forest peoples. This shows that the forest governance regime depends on the behaviour of several actors. However, the customary law of forest peoples, based on their traditional practices and cultural values, has often been undermined or even replaced by statute law imposed by a colonising power or otherwise adopted and imposed across the land within the national boundaries, without consultation or consent of forest peoples.[102] In Cameroon, under Law 94, the local people's rights to land are recognised and protected, yet in practice these rights are ignored or not enforced, which benefits the forestry sector industries and the government. This issue illustrates how "the game is played" or the "governance of contractual relations". In this context two approaches will be of interest in reviewing the institutional framework of forest planning: the decentralisation or devolution mechanism[103] as well as participatory and conflict resolution mechanisms (distribution of power). These two approaches of the "Institutional governance mechanism" have been described by Overdevest & Rickenbach (2006) in the sense of a market based mechanism, signalise mechanism and learning mechanism.

The last half century has witnessed many efforts to reform the economic and political performance of developing countries.[104] Throughout much of the last 20 years, have

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[101] The concept of "governance" was used in the 1990s by the "new public administration", the National Performance Review, and the reinventing government movement in the United States to reflect the idea of implementing public policies not just through governmental bureaucracies but also through a variety of public-private partnerships, outsourcing, and privatisation. A parallel influence in the 1990s was the growing importance of networking (including electronic networking) in policy development and coordination: governance was associated with networking, whereas government was associated with traditional bureaucratic hierarchies in public administration (Hajer & Wagenaar 2003).

[102] In fact, since the early 1980s proportionately less attention has been devoted to local issues of the decreasing access to forest resources and its implications for local people dependent on forests for securing their livelihoods. An important component of most major international funding agencies support for forestry has been to promote institutional change within forestry bureaucracies in order to encourage them to be more responsive to the needs of forest-dependent villagers (Ahmed & Mbwambo 2004).

[103] Institutional change towards a new institutional order in forestry which has been promoted as a new approach to benefit sharing.

[104] Ostrom 1998a,b.

witnessed a paradigm shift in conservation and natural resources management away from costly state-centred control towards approaches in which local people play a much more active role.[105] Larson (2004) highlighted also in the same view like Hobley (1996) that one of the most important arguments for reforms in forestry governance relates to the historical exclusion of many local people from access to forest resources.[106] As Edmunds & Wollenberg (2003) also argued that People living in forest areas have been expected to cope with sometimes drastic limitations on their choices and to yield rights of self-determination commonly enjoyed by others living outside of forests. These wrongs constitute the primary reason that central governments adopted policy reforms rhetoric.[107] Larson (2004) also showed other important arguments for policies reform in forestry in practice is to reduce costs, often while increasing forest department revenues,[108] reaffirming private property rights[109] and/or addressing central government problems of legitimacy or economic and political crises[110] at the same time. Consequently, democratisation may be a stated goal but in reality is sometimes no more than official rhetoric. Another argument for policy reforms has been found according to Ribot (2002a,b) who argued that as called for in the Rio Declaration and Agenda 21, governments, donors, and international NGOs have experimented widely with participatory natural resource management strategies as a means for increasing efficiency and equity in natural resource management and use. The final important argument for policies reform is based on donor pressure often plays an important role in initiating decentralisation, though specific pressure in the forestry sector is less common than with regard to the service sector. However, some studies found that decentralisation policies actually served as a way to increase state control over forest management.[111] In this respect, Agrawal & Ostrom (2003) found also that decentralisation most often occurs when there is significant elite support within government, pressure from international donors (with financial incentives) and demands from local actors. Local actor demands may not be needed to initiate decentralisation, he argues, but are needed to actually bring about real political changes. Although, Donor pressure, however, may result in "imported" laws that are not appropriate for the national reality.[112] And decentralisation[113] rhetoric may simply be employed

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[105] Ahmed & Mbwambo 2004.
[106] The goal was only the promotion of commercial logging or forest concession resulted from the Structural Adjustment proram of the World Bank (Gray 1991).
[107] Larson 2004; Ribot 2004.
[108] See also Pacheco 2002, 2004.
[109] Cf. Pacheco 2002, 2004; Beneria-Surkin 2003.
[110] Anderson et al. 2004; Kassibo 2002; Oyono 2004a,b; Ahmed & Mbwambo 2004.
[111] Contreras 2003; Agrawal & Ostrom 2003.
[112] Kassibo 2002.

principally to appease donors and garner funds without actually implementing any meaningful changes.[114] However, Ahmed & Mbwambo (2004) sustained that there are two opposing views of decentralization in natural resources management. The first one which critics decentralisation, see for example Ahmed and Mbwambo (2004), Pacheco (2004) and Ostrom (2007) who argued that things are not going to change when municipalities' receive authorities for conservation and management of natural resources found in their areas. In some cases it could even worsen the current situation. Despite these claims, most decentralization efforts end up without increasing much the powers of local authorities or peoples.[115] Agrawal et al. (1999) and Agrawal (2000) presented a discussion examining the justifications advanced for recent attempts at decentralization around the world. The second one which constitutes the advocates of decentralization like Larson (2004), Ribot (2002a,b, 2004), Oyono (2002a,b, 2004a,b), Agrawal & Ribot (2000) who justified it on grounds of increased efficiency, more thoroughgoing equity, sustainable use and/or greater participation and responsiveness of government to citizens. These views have been based on the theories that presumed that decentralisation can lead to a better match of public services to local needs, more efficient delivery of public services, facilitating self-governance, more equitable outcomes, and greater citizen participation in public affairs. Pacheco (2004) who worked actively on the effects of decentralisation in Latin America fined out that "In our research, we found there are some good reasons to support decentralization in Latin America…" Though some few positive results can appear here and there, examples of other countries and that of Cameroon have in common: non-effectiveness transfer of power to the lower level and the persistent hold of the states control over the process (even subtle). The controversial findings from decentralisation studies show that if local forest users are to exercise genuine control over forest management, they must be better represented in the processes of forming, implementing and evaluating devolution policies.[116] In this respect, according to the property rights theories and the institutional one which have been learned and developed during this section, it could be concluded that the rainforests as a CPRs has to be managed and planned as a common property in order to avoid the cost of exclusion or the "tragedy of the anticommon" and the negative effects of the decentralisation like corruption, injustice etc.

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[113]According to a recent World Bank study, "out of 75 developing and transitional countries with populations greater than 5 million, all but 12 claim to be embarked on some form of transfer of political power to local units of government see also UN 2004; Agrawal & Ostrom 2003; Ahmed & Mbwambo 2004; Agrawal & Ribot 2000.

[114] Anderson et al. 2004.

[115] Agrawal/ Ribot 1999; Agrawal 2000.

[116] This argument is built around careful and illuminating case studies of the effects of devolution policies on the management of forests in several Asian countries performed by Edmunds & Wollenberg (2003).

2.4 Co-management or joint management or collaborative management concept for planning

An acceptance has developed amongst governments, development agencies, forest managers and planners, civic society and resource users that commons are often impacted upon by forces or drivers at various levels of organisation.[117] There is also consensus on the need to consider multiple levels of management.[118] Some of the commons literature explicitly deals with such multi-level management. During the last decade, this model concept is spreading around the world, as illustrated by Craig (1999) and has been by far the one that flourished most of several alternatives to the previous top-down,[119] centralised approach to the management and conservation of state forestland. It represents the desire for local community involvement in the management of resources.[120] This model is also an institutional means of dealing with commons management at two or more levels, but there is a diversity of institutional forms for dealing with multi-level commons.[121] This concept of co-management is also known by a variety of other terms, the more common being adaptative, collaborative, cooperative, joint, community-based or participatory management.[122]

Co-management was defined by Carter/ Gronow (2005)[123] as, "(…) working partnerships between the key actors in the management of a given forest." Brown (1999) added that, "(…) as the term is conventionally used, emphasis is placed on the crucial (though partial) contribution of communities in those partnerships." Borrini-Feyerabend (2004) found that the term "co-management" generally denotes a process that involves shared decision-making

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[117] MA (2003 cited by in Berkes 2006).

[118] Burger et al. (1999); Adger et al. (2003).

[119] Here the top-down approach represents conventional forestry in which professional foresters control the entire management process. Biesbrouck & Van den Berg (2000) revealed that in some southern countries, such professionals are endowed with the means to actually fulfil these duties and implement official forestry policy. They argued that in many other cases, however, they are not. As local populations, due to their physical proximity, are usually the actual managers of these areas, collaboration between professionals and local people would seem to be a given. There are other reasons – in addition to the merely practical – to opt for co-management (see also Brown (1999); Biesbrouck/ Van den Berg (2000); Biesbrouck K. (2002)).

[120] Abega et al. (1999); Nguinguiri (1998).

[121] Pinkerton (1989 cited by Pinkerton 2003); Jentoft & Trond (1989); Berkes (2002); Hideyuki (2008).

[122] Pomeroy/ Rivera-Guieb (2005) described the fundamental differences between community based management (CBM) and co-management. These differences centre on the level and timing of government participation in the process. CBM is people-centred and community-focused, whereas co-management focuses on these same issues and a partnership arrangement between government and the local community of resource users. The process of resource management is also organised differently. Co-management has a broader scope and scale than CBM, with a focus on both internal and external community issues. The government may play a minor role in CBM; co-management, on the other hand, by definition includes a major and active government role.

[123] Similarly, Catterson et al. (2001) showed that in the collaborative management or co-management of forest reserves the development of management plans in collaboration with local people is now an important means of conservation. They also stated, however, that the managers of formally protected areas often need more specific information about the local people with whom they want to co-manage resources.

between social actors. It is also about joint definition of problems, negotiation and coming to agreements.[124] Under co-management, the multiple interests of different actors are accommodated and trade-offs can be negotiated and possibly arranged in a more equitable manner through formal and informal practices such as deliberation, learning and negotiation.[125] The goal of the co-management approach is to achieve joint responsibility and authority for resource management through cooperation between authorities and resource users.[126] All of the participants need to find a favourable balance between the use of the forest as the foundation for the subsistence of the majority of the local population, the source of much needed timber and an important local cultural artefact and ensuring that the forest remains intact and that its resources are not depleted. The amount of responsibility and authority held at the local level will ultimately depend on site-specific conditions. Depending on the particular situation, the authority can either be shared between government entities and resource users, or between two government entities. Co-management can be used as a mechanism for both resource management and community and economic development by promoting participation in actively solving problems and addressing needs.[127] It is also an instrument for bringing together the conservation authorities and indigenous peoples in the management of protected areas, and represents an attempt to recognise the interests of two cultures within the constraints imposed by a goal of ecosystem preservation. This model of co-management institutionalises cooperation in both long-term management and in the day-to-day business of the forest resources management, including the mediation of disputes. Co- or joint management recognises the importance of cultural and biological diversity, and is a method of utilising the traditional knowledge of indigenous cultures to the benefit of all humanity. Craig (1999) showed that co-management helps in averting the double tragedy that is the loss of unique ecosystems and unique cultures. An additional advantage of joint management is that it attempts to harness the energies and enthusiasm of both parties at a grass roots level, by providing a participatory framework and encouraging access to decision-making. However, he argued that this kind of joint management philosophy may conflict with the institutionalised and hierarchical nature of government and the national parks systems. Berkes (2002) shows that the balance of the evidence from the commons literature of the past few decades indicates that neither purely bottom-up nor purely top-down management planning works effectively (see Figure 2-3, p.33).[128] He argued that rather, there is a need to

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[124] Biesbrouck (2002).
[125] Carlsson & Berkes (2005 cited by Hideyuki 2008).
[126] Folke at al. (2002).
[127] Pomeroy (1995).
[128] Berkes (2002).

design management planning institutions combining the bottom-up principles with the principles of top-down planning, with attention paid to the interactions between the two. A concept of co-management applying both horizontal, i.e. across the actor platform, and vertical, i.e. at the various political levels including forest legislation, interactions has been proposed by him. He assumed that a linkage between the top-down and the bottom-up approaches is more effective than either of the two approaches applied in isolation. Research by Berkes (2002, 2006), Arthur (2005) and the FMSP (2008) have shown that the custodians of local resources do not necessarily have extensive knowledge of the limiting conditions of their resources.[129] The public authority has a passive role in the translation of expressing social needs. As some of the positions expressed are conflicting, the solution cannot be a consensus, but must usually be a compromise.[130] Moving away from the two extremes (bottom-up and top-down) we arrive at the types of co-management or collaborative arrangements suggested by Berkes (2001).[131]

As illustrated by Craig (1999) the co-management[132] of national parks in Australia represents an evolving cross-cultural approach to land use and management in protected areas. The Australian Aborigines have rarely been given equal or determinative power in decisions in relation to land use and resource allocation matters affecting them.[133] The same author also examined the existing co-management arrangements implemented under Canadian regional agreements, the joint management committee for fisheries, and the recent Makuleke co-management agreement in South Africa.[134] The model of co-management is also being implemented in Tanzania. For example, the preliminary results of the community-based co-management of the resources from the North-eastern Usambara high canopy forests developed by Rugumamu (1998-2001) revealed that the co-management of forestlands by

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[129] For example, the capacity of the resource to support multiple users or the processes underlying natural replacement or resource maintenance.

[130] McCay & Hanna (1998); Buttoud (1999a,b); Kreikebaum (1981); Shannon 1981a,b; 1991, 2003); see Figure 2-1, p.9 and Figure 2-2, p. 9).

[131] Berkes (2001 cited by Arthur 2005).

[132] Examples of joint management include Kakadu National Park and the Gurig National Park, where the management occurs in a partnership between the Northern Territory government, represented by the Parks and Wildlife Service, and traditional Aboriginal owners (referred to in Australia as the indigenous joint management of national parks).

[133] He highlighted that even the best studies and inquiries often make promises to the Aborigines which then fail to materialise, leaving few beneficial legacies in terms of laws, institutions and processes. A notable exception to this pattern is the operation of the Aboriginal Land Rights Act (Northern Territory) 1976 (Cth) (Craig (1999)).

[134] The following parks in the Northern Territory are subject to joint management: Rainbow Valley Conservation Reserve; Devils Marbles Conservation Reserve; Flora River Nature Park; West MacDonnell National Park; Gregory National Park; Fogg Dam Conservation Reserve; Black Jungle & Lambell's Lagoon Conservation Reserve; Harrison Dam Conservation Area; Melacca Swamp Conservation Area (Craig 1999).

actors and government is an amicable solution to the existing conflicts over land tenure.[135] Another example comes from Ecuador, where through a co-management agreement, the organisation People Allied for Nature financed the demarcation and protection of a reserve.[136] There have also been case studies conducted at two co-management pilot sites in Gunung Halimun-Salak National Park, West Java, Indonesia.[137] These case studies demonstrated that co-management processes promote shared decision-making arrangements between state forest bureaucracies and rural people through the application of equity approaches, such as deliberation, negotiation, and experimentation.[138] Another example is the Programmatic Environmental Assessment of Co-Management of Reserved Forests in Guinea.[139] In the Blue Forest, in Honduras, Almendares et al. (2003)[140] found that plans for areas must be made in a participatory way. If this is not the case, they will not be rooted in civil society and government institutions, and are therefore unlikely to be effective. Certain authors have focused on understanding local people's use of time; a pre-condition for good co-management in protected areas, e.g. Colfer, Wadley/ Venkateswarlu (1999). In the area of fisheries, Pomeroy/ Rivera-Guieb (2005) revealed that during the last decade, there has been a shift in the governance and management of fisheries to a broader approach that recognises the participation of fishermen, local stewardship, and shared decision-making.[141] This approach is also called co-management. They found that fisheries management should focus on people not fish, and that local communities will need to take more responsibility for solving local problems. Based on experiences made in eastern Senegal, Ribot (1999b)[142] argued that devolving community control over access to resources is not sufficient, especially not in cases where representation is problematic. He stressed that control over access does not necessarily result in control over the associated benefits, as in order to derive benefits local people must have access to markets and labour opportunities.[143] The Centre for International Forestry

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[135] By empowering local communities to make rational decisions through the provision of education and other resources, it is hoped that they will develop a greater interest in protecting forestlands and increasing their productivity (Rugumamu (1998-2001)).

[136] Becker (2003).

[137] Hideyuki (2008).

[138] However, the results of this study also indicated that the co-management of state forestlands is a double-edged process for local people, who risk becoming a proxy of state bureaucracy in the implementation of state policy. Proponents of co-management should, therefore, examine critically whether new institutional arrangements developed through co-management truly reflect the values and needs of local people (Hideyuki 2008).

[139] Catterson et al. (2001).

[140] Almendares et al. (2003), in a project sponsored by the Tropical Agriculture Research and Higher Education Centre, engaged in a multi-stakeholder strategy for managing conflict, using development activities, facilitation, mediation and collaborative planning.

[141] Through this process, fishermen become active members of the management team, balancing rights and responsibilities, and working in partnership with government.

[142] Ribot (1999b cited by Biesbrouck 2002).

[143] Furthermore, the question as to who to co-operate with arises. Communities appear to be much more heterogeneous than one might expect, due to differences in power positions. This raises issues of accountability and representation.

Research (CIFOR) used the term adaptive collaborative management (ACM) as a co-management approach to address the speed with which environmental degradation and human impoverishment are progressing in tropical forestry in the Philippines, and argued that people living in or near the forests are often denied access to their products. Also, they have little say in the decision-making processes that affect their future.[144] In the Peam Krasaop Wildlife Sanctuary of coastal Cambodia, ACM is based on a combination of the iterative learning dimension of adaptive management[145] with the linkage dimension of collaborative management in which rights and responsibilities are jointly shared. Complementarities between concepts of collaboration and adaptive management encourage an approach to governance that encompasses complexity and cross-scale linkages, and the process of dynamic learning. In the realm of nature conservation, this concept of co-management includes tools that enable local people entering into formal agreements with the agency or administration, or becoming involved in projects, to outline their involvement in the planning and management of national parks and other reserves.[146]

In Cameroon, the concept of co-management was given as legal basis in the Forest Law of 1994.[147] However, the economic and political entitlements provided for in the law were inferior.[148] This recognition of the need to involve local people has grown out of the awareness that the conservation of natural resources cannot take place in isolation from economic development, especially where people depend upon these resources for their livelihoods. Natural resource management decisions are made through complex interactions

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[144] Colfer et al. (2005).

[145] Key features of adaptive co-management include: a) a focus on learning-by-doing; b) a synthesis of different knowledge systems; c) collaboration and power-sharing between community, regional and national bodies; d) management flexibility (Berkes et al. (2004); Cartier/ Ruitenbeek (2001).

[146] These agreements include the improvement of land management; using indigenous traditional knowledge together with scientific approaches; aboriginal community access for cultural activities; community participation in park management, including the setting up of an aboriginal advisory group for the park and its employees; education and training opportunities for aboriginal people; richer visitor experiences from increased opportunities for the interpretation of indigenous culture; social development and economic opportunities for traditional owners, their families and communities; recognition of traditional owners' rights and interests; and respect for aboriginal people's aspirations and their desire to express their connections to their country. See also http://www.environment.nsw.gov.au/comanagement and Smyth (2001).

[147] Forest law 1994 renders co-management a legal obligation.

[148] The Cameroonian anthropologist Nkwi (Biesbrouck/ Van den Berg(2000); Biesbrouck (2002) suggested that the government's stance on forest property is not just. This injustice has largely been inherited from earlier legal texts which continue to rely on the legal, colonial usurpation of property rights held by the local populations. These local rights derive from customary tenure regimes, rather than from the state laws. He stated that local property rights should be deemed to be legitimate, and argued that such property units should be the basis for the granting of timber concessions, with the state benefiting by levying taxes. Nkwi rightly concluded that the continuation of the current legal provisions not only maintains social injustice, but is also a constant source of economic and political insecurity, which is detrimental to attempts to improve the economic and ecological conditions for resource management. Biesbrouck/ Van den Berg (2000) and Biesbrouck (2002) argued that the 1994 Forest Law is based on the assumption that the sustainable use and management of forest resources should be entrusted to the state administration, instead of to the local populations using this resource base, and who are the actual managers.

between actors and the natural resources base at various levels, from the farm and household level to national institutions and beyond. These actors are conscious of the fact that they are operating within a complex system and that they can learn, adapt, and modify the rules of their participation. Collaborative-based strategies and mechanisms are needed to accommodate these multiple interests. This concept is also sustained by the existing economic demand and interests, as well as by the 'joint–tenant' rural societies.[149]

However, certain authors argue that local communities' rights to forest resources are not protected in Cameroon. Their views and aspirations are often sacrificed during the planning process, in which they are merely kept informed or consulted for the purposes of "social peace."[150] Consequently, they still live in extreme poverty and hunger.[151] Biesbrouck/ Van den Berg (2000)[152] showed that some policy makers only pay lip-service to the concept of co-management by instituting forms of local power (Comité Paysan-Forêt or taxation decentralisation) that "involve" local people in the planning process, but without letting them take part in decision-making processes and without transferring control to them. Biesbrouck & van den Berg (2000) concluded that there are four major issues that are of particular importance when attempting to solidify the co-management of tropical forests in Cameroon:

a) the importance of forest resources to the local populations; for example, future arrangements for sustainable forest management will not only imply new regulations for logging, but will also further restrict forest exploitation by local people;

b) law and rights, inequality in the distribution of legal power; Bagyeli people and Bantu farmers represent politically marginalised groups in forest management, whereas those responsible for industrial logging dominate decision-making within the forestry sector;[153]

c) the definition of 'community;'

d) representation, leadership and negotiating power in external relations; the existence of local forms of organisation and leadership that can assume the tasks of developing forest management agreements and enforcing the local resource regulations agreed upon is central to the process of co-management.[154]

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[149] Abega et al. (1999).
[150] ATBIT (2007).
[151] For more information refer to Dogmo (2008b).
[152] See also Biesbrouck (2002).
[153] See also Ekoko (1997) and Essama-Nssah/ Gockowski (2000 cited by Biesbrouck/ Van den Berg 2000); Biesbrouck (2002).
[154] (Biesbrouck/ Van den Berg (2000); Biesbrouck (2002)).

In general, it should be noted that this concept is mostly applied in the conservation of protected areas and in relation to other natural resource management systems like fisheries.[155] However, certain weaknesses can arise in this co-management approach, such as a lack of the required experts and mediators to organise the process, inappropriate consensus building techniques for groups with no interest in compromise, and a lack of time.[156] The co-management is rarely applied in forest production as can be seen in many cases of forest concessions in the Congo Basin rainforest region.[157] In this same context, as has been argued by Pomeroy/ Rivera-Guieb (2005),[158] the actual process of co-management is often problematic as the definition of co-management is quite broad, and means different things to different people. Furthermore, the complexity of issues and relationships and the time involved in planning and implementing co-management arrangements has also led to problems with implementation. This has frequently led to misunderstandings between the co-management partners and a vague adoption of the concept as a NRM strategy. In this respect, this paper suggests a new approach which is the IGS with its planning "institution" called the Combined Planning System Working Group (CPSWG), involving local populations, conservationists, forest services, loggers, planning experts, and forest donors between whom there is a great deal of mistrust and whose forest management objectives conflict, representing a learning process for all involved.. This approach to FMP has clear advantages in terms of the potential to provide benefits to all actors in exchange for the costs of the various forest functions. The CPSWG offers a solution to the conflicting nature of forest management planning, with recognition of conflicting interests fundamental to the process of negotiating agreements on the rights, regulations and duties of all actor groups.[159] This new approach includes elements of both the top-down and bottom-up approaches as well as of co-management, of decentralisation and of property rights theories or discourses as can be seen in Figure 2-1, 2-2 p.9 and 2-3 p.33. In fact, there is a balance between the top-down and

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[155] With the surrounding local communities (Catterson et al. (2001)).

[156] Hislop (2008).

[157] Pomeroy/ Rivera-Guieb (2005) described the fundamental differences between community based management (CBM) and co-management. These differences centre on the level and timing of government participation in the process. CBM is people-centred and community-focused, whereas co-management focuses on these same issues plus on a partnership arrangement between government and the local community of resource users. The process of resource management is also organised differently. Co-management has a broader scope and scale than CBM, with a focus both inside and outside the community. The government may play a minor role in CBM; co-management, on the other hand, by definition includes a major and active government role.

[158] Pomeroy/ Rivera-Guieb (2005). They also defined co-management as cooperative management and stated that co-management can be defined as a partnership arrangement in which the community of local resource users (fishermen), government, other stakeholders (boat owners, fish traders, boat builders, business people, etc.) and external agents (NGOs, academic and research institutions) share responsibility and authority for the management of fisheries. Through consultation and negotiation, the partners develop a formal agreement on their respective roles, responsibilities and rights in management, referred to as 'negotiated power.'

[159] Abega et al. (1999); Biesbrouck (2002).

bottom-up approach. This equilibrium of the CPSWG allows for the involvement of all of the actors at all levels of the planning and not only at the end of the process like the traditional or classical model of planning. The utilisation of a term like 'combined' in the CPSWG reinforces the active participation of the actors in planning decision-making and thereby enhances their commitment to the planning process and outcomes.[160] In this approach also neutral and independent third party facilitators and/or mediators are usually needed to manage and structure the planning process. In addition, this approach requires broad actor participation and measures such as training and financial assistance to avoid or reduce inequalities between the actor groups.[161] This approach will be the most appropriate method to resolve the forest management planning problems in the tropics and particularly in Cameroon. The CPSWG corresponds to the level 4 participation according to the model developed by National Oceanic and Atmospheric Administration (NOAA) Coastal services Center (2000) from the Bens (2000) version (see Table 2-1 below).

Management Agency Controlled		actor Controlled	
Level 1	Level 2	Level 3	Level 4
Management Agency has authority, makes the decision, and then informs actors: Telling, directing, management Agency is accountable and responsible,management Agency is in control, actors are told about, but not involved in decision making	Management agency gathers input from the actors before deciding: Selling, coaching, actor input is gathered as part of the process, actors are consulted and may have input into the decision	actors decide and recommend actions for the agency to implement: participating, facilitating, accountability is shared, actors provides decision to management agency, who then develops an action plan and implements the decision	actors decide and act to implement: Delegating, liaisoning, actors are accountable and responsible, actors can set direction and take action without approval, actors implement decision

Table 2-1 Participatory decision making continuum designed by NOAA Coastal Service Center, 2000, modified from Bens, 2000.

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[160] Frame et al. (2003); Biesbrouck/ Van den Berg (2000).
[161] Frame et al. (2003).

In conclusion, the balance of evidence from the commons literature is that neither purely bottom up management planning nor purely top down management planning works well by itself.[162] Rather, there is a need to design FMP institutions at combining the bottom-up principles with the top down principles of planning, with attention to interactions across the top down and bottom top management planning. Here we proposed a concept of collaborative planning which horizontal and vertical interactions. These refers to linking institutions of forest management planning both horizontally (across actors platform) and vertically (across the political levels like forest legislation) Here it is assumes that the linkage between top down and bottom up approach of planning is most important than isolated from one another. In the same view like Berkes (2002), Arthur (2005) also, as research, including that by FMSP, has shown, local resource custodians do not necessarily have extensive knowledge of the limiting conditions of their resources[163]. The public authority has a passive role of translation of social expressions. As some of the expressed positions are opposite ones, the solution cannot be a consensus, and it is usually a compromise.[164] Moving away from the two extremes (bottom-up and top down) we come to the sorts of co-management or collaborative arrangements suggested by Berkes (2001).[165]

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┌─────────────────────────────────────┐
│ Top-down formal forest management    │
│ regimes ('command and control')      │
└─────────────────────────────────────┘
        │
        │   ┌────────────────────────────────────────────────────┐
        ├──►│ Decentralisation and devolution forest management   │
        │◄──│ regimes (Institutional change)                      │
        │   └────────────────────────────────────────────────────┘
        │
        │   ┌────────────────────────────────────────────────────┐
        ├──►│ Combined planning system: planning with agreement   │
        │◄──│                                                      │
        │   └────────────────────────────────────────────────────┘
        │
        │   ┌────────────────────────────────────────────────────┐
        ├──►│ Co-, joint, adaptativ collaborative,                │
        │◄──│ collaborative-management                            │
        │   └────────────────────────────────────────────────────┘
        │
┌─────────────────────────────────────┐
│ Bottom up forest management regimes  │
│ (community based forest management)  │
└─────────────────────────────────────┘
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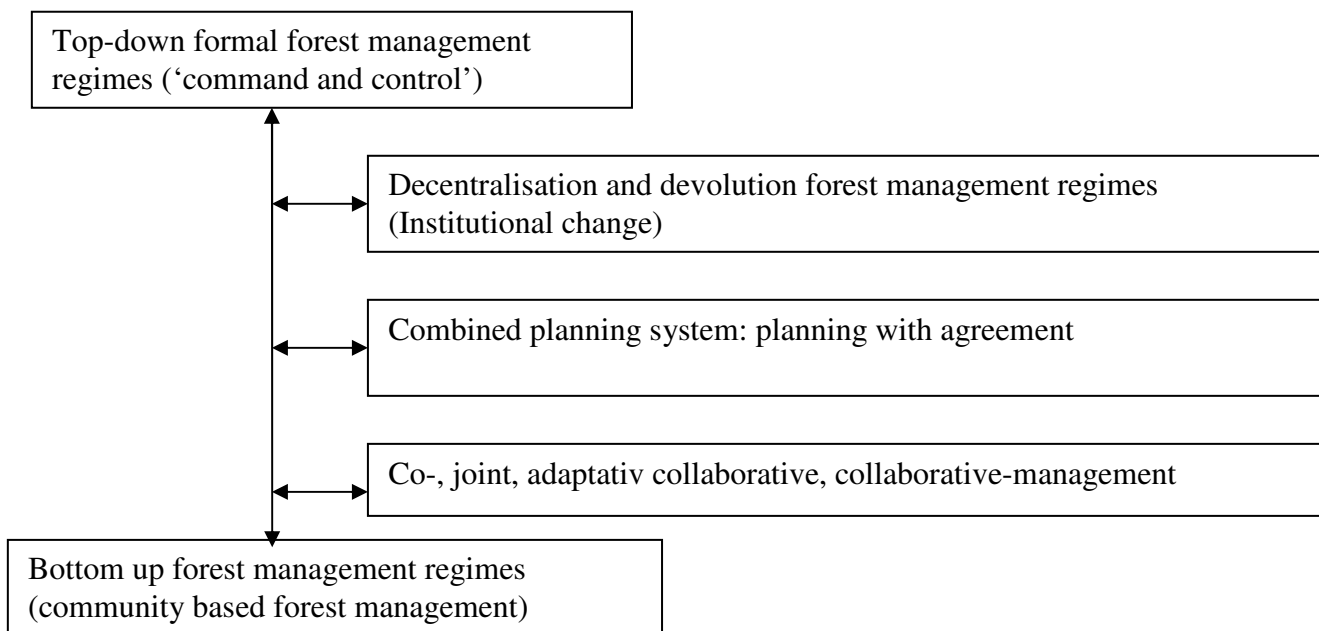*Figure 2-3   Concept of collaborative forest management planning.*

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[162] Berkes 2002.

[163] for example the capacity of the resource to support multiple users or the processes underlying natural replacement or resource maintenance.

[164] McCay/ Hanna 1998; Buttoud 1999a,b, Kreikebaum 1981; Shannon 1981a,b; 1991, 2003; see Figure 2-1 and 2-2 p.9.

[165] Berkes (2001 quoted by Arthur 2005.

2.5 Need for a new approach in planning design: the institutional governance system (IGS) as the sum of the institutional analysis and development (IAD) and the democratic dealing with a problematic framework

Forest, a renewable natural resource, can be deemed to be a so-called CPRs, and is characterised by great rivalry over the ability to utilise the resource and problems in the exclusion of other (unauthorised) users (tragedy of the commons). The difficulties faced by CPR managers trying to cope with the problem of unauthorised users represent a particular dilemma as many of the approaches tried to date have failed, and have at the same time also failed to eradicate economic inefficiencies, social conflicts, or the destruction of natural resources.[166] New, innovative management planning approaches such as the institutional governance system need to be developed, tested and integrated. There must be a process of learning and adaptation. Actors will need to work together to decide upon the best combination of approaches applicable in their situation. The key to achieving this goal lies with the institutional governance structure, as the entity that decides how a certain resource management plan is carried out.[167] Although there is no blueprint for the management of common pool resources like forests, the novel approach proposed here is built upon the combination of the two views of planning expanded upon earlier, the rationalist and the instrumentalist, and also upon the theoretical references described in section 2-1 to 2-4 of this paper (CBP, theories of the commons, co-management, collaborative management, adaptive learning, etc.). The term co-management as used in this paper refers to Kant/ Zhang's (2002) understanding, namely a sharing of power and responsibility between two or more parties. The parties in question may be the community of local resource users, a forest company, government, external agents (NGOs, academic and research institutions, industry). Inputs

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[166] Biesbrouck/ Van den Berg (2000) also outlined some reasons why a reform of conventional forest planning and management is necessary. They showed that in conventional forest planning, professional foresters and/or planners control the entire management process. Brown (1999 cited by Biesbrouck/ Van den Berg 2000) highlighted the fact that such professionals are endowed with the means to actually fulfil these duties and to implement official forestry policy in some southern countries. In many other cases, however, they are not. As local populations, due to their physical proximity, are usually the actual managers of forest areas, the idea of collaboration between forest planners and local people imposes itself. Biesbrouck/ Van den Berg (2000) argued that the exploitation of forest resources is crucial for the economic and cultural survival of local populations, and will continue to be so for the foreseeable future. This exploitation influences the availability of forest resources. Some authors describe the effect of exploitation on biodiversity in negative terms; others, however, have shown that the current high levels of biodiversity in tropical moist forests are largely a result of human activity (Ichikawa (1999/ Bailey et al. (1992)/ Fairhead / Leach (1996 cited by Biesbrouck/ Van den Berg 2000)). Local involvement in the formulation of forest management arrangements will help to make these known, to become accepted, and respected. Among development experts, participation is even considered to be an aim in itself for it provides people with a better grip on their own futures. Especially in West Africa, a region with a longer history of social forestry, international donors agencies consider it to be part of the process of the decentralisation of power, one of the means to reduce the (costs of) state bureaucracy (Biesbrouck / Van den Berg 2000).

[167] Adapted from Arlinghaus et al. (2007).

(factors) and/or outputs are shared, as is decision-making, and this is usually founded in some political and legal basis. Shannon (1981a,b) argued that an important value in any democratic society is allowing its citizens to participate in the decisions that affect them.

Co-management is relatively extensively practiced, but it still lacks a clear theoretical basis,[168] specifically in terms of economic theory. In fact, neo-liberal economists will argue against such a system. Neo-liberal economics is based on the Walrasian model, in which market adjustments are frictionless, so that the prices are set without consideration of the cost suffice for all allocation problems, and institutions are superfluous. One of the main problems associated with neo-classical economics, at least with respect to sustainability, is the common aphorism that 'economists' know the price of everything and the value of nothing. However, sustainable forest management and sustainable development involve not only priced goods and services, but also values far exceeding the grasp of market mechanisms. In such circumstances, the neo-classical price-based weighting must be replaced by a hierarchical approach based on values such as the co-management system.[169] Co-management is generally understood as either a conflict resolution system or a system of empowerment of local people (decentralised system) from political and legal perspectives. An economic rationale has not been fully realised for such a management system. Any findings, therefore, are of great importance and thus property rights and transaction costs are used in this study to demonstrate the co-management option and illustrate that the non-pricing of many forest attributes, the high transaction costs associated with the delineation of attribute-specific property boundaries according to different actors, the specialisation of different actors, and the user-specific values of different forest attributes contribute to making co-management an economically optimal option. Shannon (1981a,b) showed that partnership arrangements, degrees of power sharing, and the integration of local (informal, traditional, and customary) centralised government systems, logging firms and other actors vary between co-management situations.

Co-management is closely allied with collaborative management, participatory management, community management, joint management and actor management. Consequently, forest planning should not be perceived as merely a technical issue, but also as a political issue, or a political mechanism. In other words, formal demands for 'public participation' are little more than a formalised version of the ancient art of good governance and administration. Planning

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[168] Abdullah, Kuperan & Pomeroy (1998)/ Beckley (1998 cited by Kant/ Zhang 2002); Campbell (1996). The focus remains largely on protected areas, parks and reserves, and less so on the forest management unit.
[169] Kant & Zhang 2002 see Chapter 1 of this paper for more detail.

is an inherently political exercise, and because of its political nature there will always be undefined expectations, multiple and conflicting goals, institutional constraints, and limits to the accomplishment of goals. However, there will also be opportunities for organisational and public learning.[170] NRM, and specifically forest management planning, is embedded in society. Natural resources are the physical manifestation of the link between people[171] in any society, and at any point in time, the set of defined natural resources, the technology, organisation and belief system, economy, and its relationship to its physical setting.[172] The actors, and specifically forest communities and forest logging companies, use the same land within a specific forest management unit and negatively affect each other's productivity levels. Additionally the common pool resource (multiple use situations) character of this situation has made finding a lasting solution for co-existence difficult. As a result, these situations are almost always characterised by conflict. The introduction of the new forest law in Cameroon, in combination with the reforms to the system of property rights, the introduction of the decentralisation process (see previous section 2.3 of this paper) and the involvement of the local people in FMP have proved an ineffective means to address this situation. This is clearly indicated by the fact that conflicts between the actors still occur. Many authors have argued that conflict is unavoidable because actors have differing and competing interests, perceptions and ideas about how NRM should be carried out. Nevertheless, scholars worldwide insist that the way to create better governance is, in theory, through greater participation of civic society.[173]

According to Gordon (1954) and Marusic (1996)[174] several types of conflict situations generally occur in expansive areas. These are:

a) demands upon non-forest land, neighbouring forests;

b) demands upon forests, which are legally protected (such as recreation in forest reserves);

c) demands upon managed forest with one or more uses;

d) conflict between forest uses;

e) demand upon any other type of forest land;

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[170] Cortner & Shannon (1993); Shannon (1981a,b, 2003); SC (2000).
[171] Shannon (1992, 20039.
[172] Shannon (1992).
[173] For example, Campbell (1996); Shannon (1981a,b, 1991, 2003); Buttoud (1999a,b); Kovac (2002); Cornet & Muslim (2004); FAO (1999); Stilles (1995); Manga et al. (1999); Assolo et al. (1999); Chorfi (2004); FAO (2000); Kant & Zhang (2002); Jonsson (2005); Johnson et al. (2001a,b); Becker et al. (1995, 2003); Yunusova (2005); Sandström & Widmark (2006); Arthur (2005).
[174] Marusic (1996 cited by Kovac 2002).

f) conflict between local populations and local government, and between the forest industries over income;

g) Conflict inherently linked to goal setting, benefit sharing, establishment of the annual allowable cut, etc.

Proscolli (1997) stated that the reasons for conflict in the area of resource management include a lack of knowledge, differences in the interests and values of the actors (e.g., each participant has his/her own concepts, perception of the reality and means of expression). Their tools and conceptual frameworks are different because the expected results are different. Pluralism means incoherent processes and relationships; the interdependence of people and tasks; jurisdictional ambiguity; functional overlaps; competition for scarce resources; differences in organisational status and influence; incompatible objectives and/or methods; differences in behaviour; differences in information; distortions in communication; unmet expectations, needs and interests; unequal power and authority; misperceptions; historical animosities and ethnic stereotyping. Conflicts always involve at least two parties, each of which is trying to meet his/her own objectives. Given the nature of the situation, they come to see each other as obstacles to the achievement of their objectives, resulting in a dispute.[175] According to Buttoud (1999a,b) conflict is normal in society, and contributes to society's dynamics. He highlighted the importance of conflict in social dynamics on the basis of various theories:

a) Theories of social stability: according to the system theory a social optimum is illusive, and society is constantly adapting to find balance and stability; conflict is the main element of instability that the system has to overcome. Some of the conflicts that arising between actors' groups can result under the structure theory in changes to the groups' structure. As under the system theory, conflict is deemed to have a negative effect, which has to be compensated for by social procedures; conflict is a problem to be solved. However, conflict is a basic constituent of society.

b) Theories of social change: society is always changing, to reach new levels and new equilibrium (e.g. developmentalist and Marxist theory). Conflicts are the main elements of change, a basis for analysis.

Conflict has a positive role in social development, and can be controlled, managed even, for a better development. In this case one refers to conflict management rather than conflict resolution. Without a solution to a conflict, or at least a limiting of the conflict, sustainability

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[175] See, for example, Priscoli (1997); Hellström (2001).

cannot be attained, and this dispute may grow to the point that the parties come to see each other as adversaries. However, one can also argue in favour of public involvement in FMP because the law mandate this. Jonsson (2005), Ayres et al. (1998) and Priscolli (1998) stated that collaboration and participation provide for better-informed actors, legitimate plans, more efficient implementation of measures, and a lessening of conflicts between actors. These may also replace traditional enforcement activities, and thereby lower costs. Furthermore, increased collaboration may improve the democratic process and collaborative learning by involving people in decision-making processes and subsequently preventing the re-appropriation of power by the stronger actors.

These authors deemed it important that the main actor groups become actively involved in natural resource management as early as possible. One cause of the failure of conflict management might be found in the distribution of power between actors. Previous research has shown that a co-management system by which the distribution of power between actors is uneven is not robust enough to be maintained.[176] At the root of the controversy lie the property rights issue and the decentralisation process, specifically the distribution of incomes from the forest. Earlier research has shown that forest communities experience difficulties receiving recognition of their rights. This is because the legislation governing the relationships between the actors does not grant sufficient rights or protection to the local communities. Depending on how the institutional framework is constructed, the distribution of power between the actors may vary significantly. This might potentially allow for the use of local knowledge and other actor resources in the development of cost-effective mitigation plans, and serve to increase the acceptability of these plans amongst the actors. This constitutes a power sharing and partnership building process, which should be defined as co-management, joint management or collaborative management.

This new approach aims to address the following goals, as developed by Priscoli (1997)[177] and McCay/ Hanna (1998):

a) to enhance the credibility of those with power sharing responsibilities in the eyes of those who will be affected. Many have recognised that the forest companies have little credibility with local people. Inclusion is required urgently, meaning that the involvement of multiple social actors is necessary for the sufficient representation of all affected and interested actors. This represents a move away from classical or traditional forms of forest

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[176] Berkes (1989); Ostrom (2000).
[177] Priscoli (1997, 1998); Ayres et al. 1998).

management. Consultation and inclusion also represent an important learning experience for the participatory policy makers, bureaucrats and professionals, by challenging their beliefs, attitudes and behaviour through debate and interaction with people and ordinary citizens;[178]

b) to identify the actors'concerns and values. There are many relatively open and straightforward techniques to do this;

c) to develop consensus amongst the affected actors. In difficult situations, consensus is rarely achieved, but it is satisfying when it is;

d) to create a high level of 'unsurprised apathy.' In many cases, it is not necessary for everyone to be involved, nor will they all want to be involved in every issue, all of the time. Most people may be involved only to a limited extent, but they should never be surprised by events. They should be kept informed; in others words, they should remain 'unsurprised;'

e) to produce better decision-making. Public involvement can often produce better 'technical decisions' than a strictly technically-oriented decision-making process; and

f) to enhance democracy.

This model design is also based on the following approaches or insights of Dietz et al. (2003)[179] and Berkes (1998)[180]:

a) include non-traditional decision-makers; non-traditional meaning other than state or industry managers;

b) encourage the active participation of the local community in the management of natural resources in some capacity;

c) the process is consensus-based, with decision-making power shared between the various actors;

d) stress negotiation rather than litigation in situations of conflict;

e) combine western scientific knowledge and traditional environmental knowledge;

f) include decision-making arrangements and agreements from participation initiatives.

In this working paper, it has been assumed by the author that a relationship between the forestry department, forest industries, local populations, and other actors is possible.[181] The design IGS as a collaborative planning approach constitutes an iterative learning process for all parties. This approach to active participation may complement legal requirements (but

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[178] Yunusova (2005).
[179] Dietz et al. (2003).
[180] See also Berkes (2002, 2006).
[181] See also Chorfi 2004; Dogmo 2008c.

cannot conflict with legal provisions, or property and user rights, see also the Cameroon forestry Law 1994), may be fair and transparent, is based on participants acting in good faith, and does not guarantee, or predetermine, what the outcome will be.[182] This proposed IGS model has been designed specifically for medium-sized forest units. These represent examples of sites on which the local people rely greatly for their well being, and are one of the areas in Cameroon where attempts have been made to achieve conservation through collaborative management. However, it can be adapted to other ownership situations and other regions of the world, including the temperate forests of Europe. The IGS is a model linking the IAD framework with active participation and conflict management (democratic resolution of a problem). In other words, This IGS model for planning derives from new institutional economics (NIE), as a political and social method for partnerships that takes into account the dynamic of the system, or the institutional change (such as taxation, decentralisation and property rights reforms).[183] This may be a model critical to achieving consensus. This is new to forest management planning, where decision-making has traditionally been left to forest owners or holders and/or forest administrative bodies and/or experts, sometimes without any negotiations with the actors, specifically the local users. Most of the time, the actors were only consulted, or informed, at the end of the planning process.[184] This is critical to achieving consensus. Through an analysis of interaction, a consultative and multi-actor consensus-building process involving various interest groups results in a clear understanding of roles, responsibilities, authority and accountability at various levels. This new model is like participatory democracy, which means that any person that may be affected should be involved in each step of the process when plans are made, put into action and evaluated.[185] This may be accomplished over the course of gradual, sequential phases, in a mutually agreed and equitable manner at all levels. There is a need to design an IGS that is a collaborative planning system with an adaptive perspective and incorporates monitoring, learning from experience and the option to revise plans accordingly. Through the development of stronger working relationships with other actors in society, meaningful social change can be achieved. It can also be seen as a tool that can help to fill the "forest governance gap" between assessing and accelerating field level progress in SFM.[186] This IGS model, displayed in Figure 2-4, p. 40 can be summarised in two parts:

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[182] Joint FAO/ United nations commission for Europe (ECE)/ILO committee on forest technology, management and training (Wenner (2000)).
[183] See also Dogmo (2008b, WR 53).
[184] Doucet/ Vandenhaute (2006); Biesbrouck / Van den Berg (2000).
[185] Shannon (1981b); Yunusova (2005).
[186] Bass (2002).

a) The first part of the Figure is based on an institutional analysis focusing on the role of the rules or planning process/outcomes in influencing human behaviour in different spheres; traditional rules or customs, market systems, or social arrangements. The design proposed here is based on the institutional analysis and development (IAD) framework developed by Elionor Ostrom and her colleagues.[187] The IAD was selected because the recent changes to the forest area in Cameroon have impacted significantly upon the set of actors and the rules governing access to land and land use. The IAD can be used to analyse the interactions between FMP actor's vs (see chapter 3). Without this understanding, there will be no drafting and implementation of a fmp. Furthermore, this analysis constitutes a way to address the limits of participation as described by the FAO/ECE/ILO[188] Joint Committee team of specialists on participation in forestry, which originate from within and beyond the participatory process:

- there are limits related to the cultural or institutional context – including the regulatory and ownership context, which may or may not be favourable to participatory approaches. Whatever the context, public participation may complement legal requirements, but cannot conflict with legal provisions, property and user rights;

- there are limits related to the motivation behind the participatory process. The perceived costs of participation may hinder widespread participation, while representative participation entails communication related constraints;

- finally, some actors may be unable to participate because of a lack of information, interest, trust or access; or because there are other factors influencing their decisions.

b) The second part of the Figure is based on democratic approaches to dealing with a problem, with the aim to reach a consensus between the actors through negotiation, which will be an important incentive for implementation of the forest management plan (see chapter 4). This will increase public awareness of forests and forestry through active collaborative learning, mutual recognition and constructive co-operation between forest-related actors, and at the same time maximise the total benefits offered by forests, by improving forest products and services, defining jointly how the costs and benefits may be shared equitably, and enhancing the social acceptance of sustainable forest management through better informed and more widely accepted forest management. According to the

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[187] Ostrom 1986,2005.
[188] Wenner (2000).

game theorist, there will be mistrust and unwillingness to make concessions if one of the parties in the dispute is undemocratic or if any of the interest groups is acting out a non-equilibrium strategy and expects others to follow similar strategies.[189]

Participatory approaches within the IAD framework as can be see in the Figure 2-4 open up new opportunities for the improvement of relations with the interested public, and for a better recognition of the investments made by private forest enterprises, and the challenges of sustainable management. However, challenges to the institutionalisation of user participation in both forest management and research remain. Furthermore, this must be perceived as being socially legitimate, which is in turn facilitated by a shared understanding (worldview) between the actors of the interconnectedness of the social, economic and ecological systems.[190] It also opens up new perspectives in response to the demand for new forest products and services. To make the best use of these opportunities, institutional and technical support is necessary. Figure 2-4 below illustrates the two main parts of the IGS approach, namely the adapted IAD framework and the democratic manner of dealing with problems. These two elements of the IGS and their application will be discussed in the following chapters 3 as first part and chapter 4 as second part.

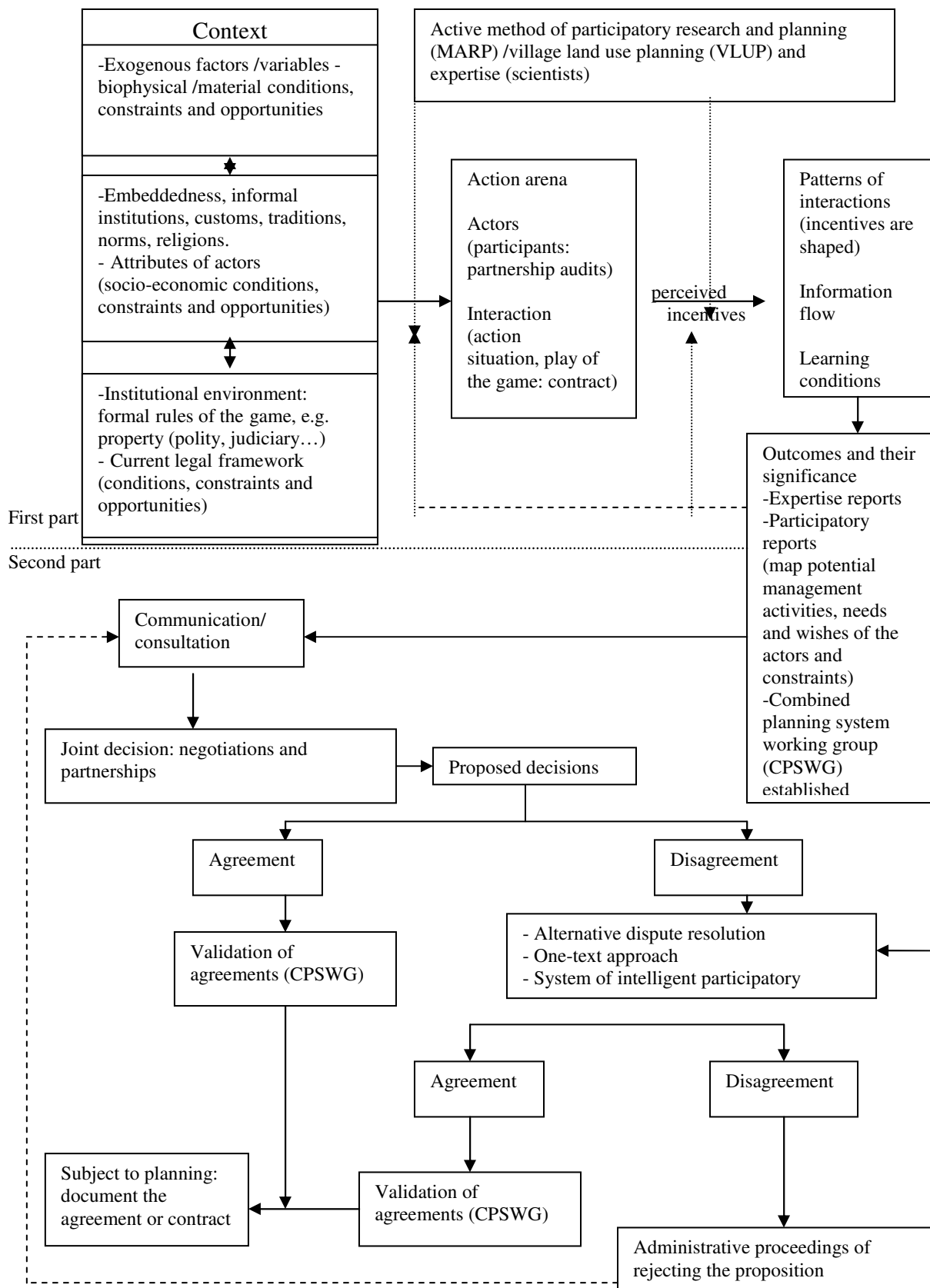[189] Nash (1950; 1951).
[190] Hahn (2003).

Figure 2-4 An institution governance system for forest management planning in the Congo Basin as a result of an adapted IAD framework and a democratic manner of dealing with problem

3 First part in the IGS design: the adapted institutional analysis and development framework

Over the last decades, the devolution of resource management and access rights from the state to local communities and user groups has become an important policy tool in developing countries.[191] An increasing awareness of environmental issues and the growing desire of all actors to be involved in the decision-making concerning the management of natural resources have brought about major changes. To address this issue, the IAD framework,[192] as illustrated Figure 2-4, p.42, first part, is an important approach to identifying the main variables that influence actor involvement in FMP processes. The most important aspect of the IAD framework is that it introduces an arena as well as a context within which actors or participants interact to develop, implement and monitor an fmp shaping their collective decisions and individual actions. An IAD framework focuses on identifying actors or participants of FMP, their connections and inter actions, their histories and their interests (in specific places, situations and events) and to reconstruct the structures of power and the nodes in the network. This fact assumes that, if the FMP process is carried out with the active participation of actors, this procedure is essential for the generation of legitimacy and agreeing on a contract, the second part described in Figure 2-4, p.42. In summary, the IAD approach is built upon a three elements mapping procedure in a predefined framework (see Figure 2-4, p. 42, first part):

a) identifying and mapping the action arena (action situation and actors),

b) identification of factors determining the action arena (the rules, the attributes of a physical world, and the nature of the community),

c) elaboration or projection of how 'a' and 'b' combined generate patterns of interaction and specific outcomes over multiple action arenas.

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[191] Agrawal/ Ribot (1999); Ribot (2002a,b); Behera/ Engel (2006).

[192] The roots of and inspiration for the IAD framework developed within the new-institutionalism movement, lie in experiences gleaned from the study of common pool resources by a group of scholars associated with the Indiana University Workshop for Political Theory and Policy Analysis (by Ostrom and her colleagues since the early 1980s), and also the 'the theory of the commons' (Ostrom (1986); Gardner et al. (1994, 2005); Anderson (2000); Anderson/ Ostrom (2006); Anderson et al. (2005)). This framework is also a result of North's urging of social scientists to move beyond static analysis, enabling us to show why some situations produce an equilibrium that leads to substantial net benefits while others produce suboptimal equilibria. There is a need to develop a cluster of tools for the analysis of dynamic systems, and it is helpful, to begin with, to attempt to understand change in one specific type of setting (Agrawal/ Ribot (1999); Ostrom (2005); North (2005)). See also chapter 2 of this paper.

The main objective of this IAD framework as proposal may be to identify or to study the institutional conditions conducive to effective forest management planning, and how these relate to its implementation taking into account the current policy reforms. This highlights the need for a "sound" understanding of the institutional configuration and of the situational logic of the environment in which a fmp is to be implemented. It is also necessary to assess the balance between the intended and unintended consequences of those planning decisions, and is ultimately necessary for its success. This first part in the IGS design is also an attempt to contribute as a social method; to anchor it in the relevant literature. However, it is necessary to examine the way it operates and the incentives for the actors involved. This must be done before efficiency, equity and accountability can be evaluated.

3.1 Action arena or "social action field" as a focal point

The determination of the action arena (or conceptual unit, see Figure 2-4, 42)[193] is the first step within the IAD framework.[194] It includes actors or participants who interact in an action situation. They (actors and action situation) have been affected by exogenous variables. Those variables in turn affect the actors and the action situation. Exogenous variables are the biophysical environment of the actors, but also the legal framework or rules and other community attributes (see section 3.2). Outcomes of interactions taking place within the action arena have an impact on exogenous variables and the arena itself.[195] In this respect, to identify the factors that influence the FMP in relation to specific CPRs, like PFE in the Congo Basin tropical forest countries, the action arena may be defined according to the objective of this paper as FMP outcomes or decisions process. It is to be understood to be an institutional arrangement[196] (institution) and can also be called a multi-actors or social contract for SFM. In this respect, a FMP as institutions may provide incentives for the actors as CPSWG members (see section 3.1.2)[197] to take certain actions to achieve the desired planning outcome. The development of these institutional arrangements like planning outcomes within the action arena framework requires an investment of time by the members of the CPSWG.

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[193] Or to establish boundaries of the analysis.

[194] This framework offers a mapping method not only for stakeholders and institutional structures but also for the processes involved.

[195] Ostrom (2005).

[196] In essence, institutional arrangements are sets of property rights or rules of behaviour that each stakeholder possesses in relation to the forests resources, and the rules that define what actions they can take in utilising their rights. For example the need to internalise externalities (Ostrom (1990)).

[197] In the face of uncertainty in resource availability, working group members or actors are willing to agree to collective assurances that the production forests will be used in a more equitable and sustainable manner.

In addition to the time consumed transaction costs, which are the costs of negotiating a forest management plan or contract, must also be considered.[198]

Putting emphasis on PFE, the fmp elaboration and the resulting institutional arrangements for common property management is often done by planning experts and controlled by a government-based management planning system (classical planning model). Such a system often fails to recognise traditional community resource management regimes, as well as the interests of the other actors, such as conservationists, NGOs, the general public, etc. In this respect, the action arena is the focus of examination, mapping and prediction and has two components: an action situation component and an actors or participants component. In other words, an action arena is composed of an action situation involving actors who have preferences, information-processing capabilities, selection criteria, and resources and who must decide among diverse actions in light of the information they possess about how actions are linked to potential outcomes and the costs and benefits assigned to actions and outcomes.

3.1.1   *Action situation in forest planning system*

Action situation refers to the social space within which the different actors or participants interact, exchange goods and services, engage in appropriation and the provision of activities, solve problems, or fighting, or produce collective goods and services that make up the forest management plan. It is determined by a set of factors, the rules organising the relationships between individuals, the attributes of a physical world, and the nature of the CPSWG within which the arena is located.[199] The action situation refers to a specific type of interaction that actors engage in to arrive at such a decision. Anderson/ Ostrom (2006)[200] gives one example of an action situation entailing possible conflicts that may arise between different forest user groups with unclear boundaries or property rights. The behaviour of each actor group in this action situation can be explained in terms of contextual factors that the IAD framework breaks up into three main categories: physical conditions, actors' attributes, and locally arranged institutions (see Figure 2-4, 42). Four key elements are mapped out:

a)   actor's preferences regarding certain actions and outcomes;

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[198] It includes the cost of collecting relevant information and negotiating the terms of an agreement specifically:
a) gaining information about the resource and what users are doing with it;
b) reaching agreements with others in the group with respect to its use; and
c) enforcing agreements that have been reached. For common property regimes, these costs are part of the collective decision-making process.
[199] Gardner et al. (1994); Andersson/ Ostrom (2006); Aligica (2004, 2005).
[200] Anderson/ Ostrom (2006).

b) the way actors acquire, process, and use information;

c) the decision criteria actors use regarding a particular course of action; and

d) the resources that an actor brings to a situation.[201]

In another example Ostrom (2005) highlights that one can think of human interactions as situations composed of actors choosing among actions at particular stages of a decision-making process.[202] She shows also that before predicting likely actions of actors and resulting outcomes, a theorist must make assumptions about the individual participants the information they have, their preferences, and how they make decisions.[203] Within the framework of this paper, the action situation is referring to each step of the FMP process. Each of these steps constitutes an action situation, for example, a goal setting step, a planning areas establishment, a yield estimation etc. Consequently, each actor group's incentive in implementing the planning outcome depends on each action situation outcome.

3.1.2 *Actors or participants analysis of configurations of actors and institutions*

Once the general arena is defined, it is necessary to identify the main actors or participants groups in relation to FMP. In this context, forests have to be understood as CPRs. Freeman (1983)[204] showed that the growing popularity of "actor's analysis"[205] reflects an increasing recognition of how the characteristics of actors influence decision-making processes.[206] Any social change initiative, any forest management plan project must be based on normative, strategic and tactical analyses to be able to include all beneficiaries[207] of the FMP outcome by an exhaustive actor's survey, identifying the following:

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[201] Gardner et al. (1994); Aligica (2004, 2005).

[202] In light of their control over a choice node, the information they have, the outcomes that are likely and the benefits and costs they perceive for these outcomes.When analysed formally, these are the working parts of a game.

[203] Maximise own net benefits, or use heuristics, or engage in conditional cooperation.

[204] Adapted from Freeman (1983), see also Freeman (2004).

[205] The process of stakeholder analysis is a useful way to gather contextual information about the issue in question by gaining an understanding of stakeholder knowledge, perceptions and interests. A stakeholder analysis includes identifying the stakeholders and maps out their relative power, influence and interests in a certain domain or in regard to a specific initiative, identifies their role and action arena of each stakeholder and indicates the relative priority to be given to meeting the interests of the stakeholders, thus assessing the importance of each stakeholder to the success of the forest management planning process has to be the main element of the stakeholder analysis. It is a process of systematically gathering and analysing qualitative information to determine whose interests should be taken into account when developing and/or implementing a planning project or outcome. The tools of the "stakeholder analysis" are to identify who the actors are. The next step is to work out their power, influence and interest, so one knows who to focus on. The final step is to develop a good understanding of the most important actors for forest planning to know how they are likely to respond, and to work out how to win their support. These tools can be used to create an actor's map.

[206] Studd (2002); Aligica (2005).

[207] Beneficiairies are affected positively or negatively by forest management planning outcomes.

a) key actors likely to play a facilitating or mediating role for each one or several interest groups,

b) recognised representatives for each interest group and the normal decision-making and organisational processes in the perspective of active participation,[208]

c) potential support or opposition among all actors, as well as potential coalitions of support[209] for the FMP process, for scenario and strategy building, and for assessing the relative risks entailed.

An actor analysis is a basic tool for highlighting the relevant institutions' roles and the inter-institutional linkages.[210]

In this respect, actors in an action situation are decision-making entities or represent institutional governance for the FMP process. Within this context the author suggests the establishment of the combined planning system working group (CPSWG),[211] as institutional governance for forest planning. In this paper, the CPSWG is assigned to a position of conducting the FMP process and not a forest planner alone as knowm in the traditional planning. It (CPSWG) is capable of selecting actions from a set of alternatives made available, at nodes in a planning process. Theoretically, in an action situation the CPSWG participants can be corporate actors or moral entities.[212] The CPSWG is a framework for actor's interactions. The aim is to enhance commitment and confidence of all involved to the FMP outcomes. Through collective discussions during which each actor or CPSWG member publicly expresses his own position and listens to the viewpoints of the others. Progressively, the position expressed by each of the actors at the beginning of the procedure, some of the disputable points change making the negotiation of a common solution possible[213]. The aim is the institutionalisation of a CPSWG as a permanent advisory board or forum for democratic governance.[214] This board has to be a learning forum as defined by Cortner & Shannon (1993)

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[208] This analysis of who expects and needs to be involved to allow an effective and equitable process is a key factor in process design

[209] By assessing stakeholder expectations, identifying the knowledge and resources they could bring into a process, and identifying existing good relationships that could be built on and potential conflicts of interests that could arise (Studd (2002).

[210] Aligica (2004); Andersson & Ostrom (2006).

[211] The CPS represents a FMP model developed by the author during his PhD and by incorporating all key stakeholders the CPS working groupd integrates aspects of the collaborative planning framework. This concept (CPSWG) is following one of the four general options for improving the institutional framework for ecosystem management and biodiversity conservation (Hahn (2003)) consisting of establishing functional linkages between key institutional actors after decentralising the resource management decision-making and engaging and reorienting governement institutions and establishing new national and international institutions. CPSWG builds a network of key individuals representing stakeholders and institutions at the local level (FMU level).

[212] Adapted from Ostrom (2005).

[213] Adapted from Buttoud (1999a.))

[214] Adapted from Chorfi 2004.

tackling the challenges posed by ecosystem management through recognising resource planning as a forum for "public" deliberation. In this context the 'public' is understood to be the CPSWG which is a dynamic[215] FMP actors group open to learning[216] from one another, and whose preferences can be shaped through the planning discussion.

All CPSWG members need to find a favourable balance between the multiple uses of the forest.[217] Therefore, the outcomes of the FMP process may depend on the behaviour of CPSWG members, so that planning decisions are neither the result of the will of one powerful interest group, nor an optimisation or linear programming.[218] Adapted from Studd (2002),[219] the following criteria for selecting the CPSWG members to guide their FMP have been described: statutory obligations, rights to resources (including land), dependency on resources,[220] unique knowledge and ability to manage resources; interests affected by changes in management, present and potential impact on the issue at hand, historical and cultural links to the issue. In relation to more practical issues, these criteria include: ability to represent the interests of those unable to participate (e.g. future generations, non-human entities), the authority to make judgements on behalf of those they are representing (either an organisation or a constituency), those who have an influence over the issue (whether direct or indirect). More specifically, based on Berkes et al. (2004), this paper highlights or identifies the essential conditions for successful CPSWG:

a) vision, leadership and trust;

b) facilitation, rules and norms that create social space for ecosystem management;

c) funds for responding to environmental change and for remedial actions;

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[215] This has to be seen as an institutional or organizational flexibility which is important in other to cope with the variability of environmental and social change and such described as governance system for complex ecosystem (Hahn 2003).

[216] In fact, CPSWG rise up because of the week legitimacy of the state or government to be guarantor and referee in local participatory management. The state as "owner" has fail in his role of ensuring the control of access and the uses on the forests. The state should not be any more guarantor, third party, arbitrator of coexistence of the legal uses. In fact collusions have turned out to exist between certain civil servants (civil and military) and the illegal users of the forest resources. Corruption, favours and arrangements of all kinds are common practice, at all hierarchical scale (ATIBT (2005a,b)). Thus, CPSWG should help avoid for example a 'double payment' of the forestry company's social contribution to the state. In fact the elaboration and the implementation of appropriate social measures can not be done without the implication of all stakeholders in the participatory or conflict management process.

[217] forest as the subsistence base for the majority of the local populations and local cultural links with the forest on the one hand, and the forest as a source of timber revenues from which the local populations should benefit also on the other; while ensuring that the forest remains intact and its resources will not depleted (adapted from Biesbrouck & van den Berg (2000)).

[218] The CPSWG appears to create arenas for communication/consultation, capacity building or preference formation, creating meaning, negotiations and consensus building among actors in relation to forest management planning issues arising in a forest area. It is a dynamic system network which makes collaborative planning possible for different knowledge systems (see Fig. 2.3).

[219] Studd (2002).

[220] This may originate from geographical proximity, historical association, dependence for livelihood, institutional mandate, economic interest, or a variety of other concerns.

d) monitoring and responding to environmental feedback;

e) information flows through social networks;

f) the combination of various sources of information and knowledge;

g) reasoning for ecosystem management, and

h) arenas of collaborative learning for ecosystem management.

Within this framework, the CPSWG members' input can therefore improve the quality of FMP outcomes and anticipate what people's reaction will be during the implementation phase. In fact, the quality and credibility of planning decisions will be improved and the actors' confidence in the process and the ultimate decision will be increased only through comprehensive actors' involvement.[221] The potential range of actors in FMP is largely determined by the breadth of the definition of natural resource management and forest[222] planning itself. Previous studies on Central Africa have shown that the active involvement of all users in forest management planning processes is a necessary condition for making the implementation possible[223]. The CPSWG is a framework in which actors including forest planners jointly plan and carry out the fmp. However, one of the hardest parts of collaborative planning processes with the CPSWG is to get the actors to agree to participate through facilitation and mediation. There are two factors for getting them to actively participate in the FMP process. The first one is based on the fact that better alternatives may be available: people are unlikely to be willing to negotiate if they think they can get a better outcome by using another source of power, usually some form of force. In this context force does not mean violence, but any sort of process, such as the courts, which will enforce action that would not be taken otherwise. If actors think they can prevail completely without compromising, they are likely to refuse to negotiate, since negotiation usually involves the exchange of concessions or compromises. The only way to overcome this problem is to demonstrate that negotiation is likely to yield a better outcome than other alternatives. This is easiest once the conflict has reached a point of stalemate, once conflicting sides have won what they can, and the parties are at a standoff, neither able to win more, yet not willing to give up either. This is when a conflict is said to be "ripe" for resolution, and this is usually the best time to 'get people to the table'.[224] Another factor that is important in getting people to

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[221] SC 2000; McCay/ Hanna 1998.

[222] Forests as common pool resources.

[223] FAO (1999); FAO (2000); FAO (2002a); FAO (2002b); FAO (2002c); FAO (2002d); Karsenty (1999b); Fines et al. (2001); Carret (1998); Emerit (2003); Amsallem et al. (2002); Aligica (2004, 2005); Merrill (2004, 2005); ASFE (2007); Nguinguiri (1999); Oyono (2005).

[224] See Priscoli (1997, 1998); Ayres et al. (1998).

the table is convincing them that it is a "safe" place to be. Often parties with little power are afraid that they will be over-powered in any negotiation. For that reason, they tend to rely on covert forms of force such as nonviolent direct action or sporadic violence, rather than negotiations to try to get attention and be taken seriously. Therefore, the mediator must assure all parties that their interests and needs will be fairly considered in the negotiation process, and that they will not be co-opted or over-powered, due to a perceived inferior status. This is an important issue in view of the immense commercial value of timber, and the different interests among actors, political and economic power, and in capacities to voice and defend their views. In Cameroon, for example, local communities block roads and thus disturb the logging activities because their needs were not considered by forest holders. Conservationist, mostly NGOs from the northern hemisphere like "Terre des Hommes", "Amis de la Terre", or the Rainforest Foundation have been aggressive and clear in their position to promote the boycott of tropical hardwoods as the most effective way of stopping the destruction of the rainforest.

In order to legitimise the FMP outcome, reach comprehensibility and gain the actors' confidence recognised representatives of the different actor must be identified for active collaboration. Consequently there is a need to identify key people likely to play a facilitating or mediating role for one or several interest groups. Nonetheless, the drafting of a fmp must comply with Cameroonian law, for example, with regard to forest ownership, e.g. in the case of state ownership or when dealing with concession holders acting on behalf of the owner.[225] A fairly controversial question is who should be represented in the CPSWG?[226] Representation is especially problematic in the case of loosely structured and loosely defined groups that do not have any one leader or leadership structure. If the negotiators do not seem to be accepted by their constituents, it is essential to find out who does legitimately represent that group and negotiate with them. If a group has no legitimate leader, there is no point in negotiating until one can be established. This is one way in which a 'third party' can be helpful. If the third party will provide a neutral setting for the disputants' meetings, they may be more likely to negotiate than they would be if one side tried to get the other to come to its "home turf" for negotiations.[227] Figure 3-1, p. 54 illustrates a cluster of six broad key actor

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[225] In Cameroon the forest management planning has to be performed by the forest holder.
[226] McCay/ Hanna (1998).
[227] In the CPSWG the concept of intrinsic motivation has to be integrated according to the extensive study by Teresa Amabile (cited by SC (2000)): "People will be most creative when they feel motivated primarily by the interest, enjoyment, satisfaction and challenge of the work itself - not by external pressure (Oakerson (1990); Dourojeanni/ Sève (2007); SC (2000).

groups (as CPSWG board) in FMP who have been identified by various authors.[228] These six member groups of the CPSWG were seen as the major players in the forest management planning in the Congo Basin rainforest region and particularly Cameroon for each FMU and/or concession and/or forest council. The CPSWG includes conservationists or environmentalists group, the forest enterprise group (FEG), the local actor group, the forest planner group, the forest donors group and the government group. All these CPSWG members have been identified and should be the institution which has the responsibility to design and implement fmps.[229]

a) The government group (GG) as policy makers is the first CPSWG member: in the Congo Basin and Cameroon in particular it is represented by the ministries responsible for forests and fauna and the regional and departmental delegations as acting as forest owners and defining the rules and norms of forest management planning and/or approving technical protocols suggested by forest enterprises prior to management measures. The ministry must also validate the planning outcome and monitor and control its implementation. In the case of Cameroon, the responsible authority is the agency national d'appui au développement forestier (ANAFOR). Other actors which may be taken into account in this group are representatives at different levels: village chiefs, canton chiefs, mayors, sub prefects, territorial unit staff on one side and the local governments of the municipality,[230] to which the FMUs or forest councils are allocated, on the other side. According to working paper 53[231] the local government is integrated into this GG, which shows the failure of the decentralisation process and why the local government is incorporated into this group.

b) External actors or forest donors (for services: assistance and support) are the second actor group within the CPSWG. They contribute to important financial support and the forest management planning process. They intervene with the government in support of the definition of forest policies. They also provide funding for forest logging company capacity building in planning and for their certification. Members of this group represent,

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[228] FAO (1999); FAO (2000); FAO (2002a); FAO (2002b); FAO (2002c); FAO (2002d); Karsenty (1999b); Fines et al. (2001); Carret (1998); Emerit (2003); Amsallem et al. (2002); Aligica (2004, 2005); Merrill (2004, 2005); ASFE (2007); Nguinguiri (1999); Oyono (2005).

[229] These stakeholder group characterisations has are based on Chorfi (2004); FAO (1998); Nasi et al. (2006); Aligica (2004, 2005); Merrill (2004, 2005); ASFE (2007); Nguinguiri (1999); Oyono (2005).

[230] A fundamental element is information of all stakeholders on the situation of payments from the company's tax share which is destined for financing of local development by the state. This information enables the clarification of everyone's level of respect for the rights and obligations of each stakeholder.

[231] Dogmo (2008b, working report 53-2008).

for example, forestry governance facilities (FGF), the Central Africa Regional Program for the Environment (CARPE), the "Deutsche Gesellschaft für Technische Zusammenarbeit" (GTZ), the "Organisation Néerlandaise de Développement" (SNV) and the World Bank (WB); the International Monetary Fund (IMF); the French Cooperation (FC), European Union (EU) etc.

c) Forest planners form the third group in the CPSWG; their responsibility is to conduct the forest management planning process with a neutral position as third party. They play an important role in the forest management planning process, because they draw up and examine the forest management plans as technical experts. They also play an advisory role for the CPSWG concerning sustainable forest management. Group members are forest planning consulting firms for the conception and elaboration of forest management plans, such as: Forest Resources and Management in Montpellier (FRM), Nature+ in Gembloux; Bureau Veritas, Centre for International Forestry (CIFOR), Bureau veritas, private planners etc.

d) The public is the fourth group representing civic society. Within this cluster two specific groups of actors must be integrated: local actors and conservationists or environmentalists. The former represent the fourth CPSWG member which mostly encompasses local communities living near or inside the FMU or forest council including associative groups and local NGOs, local management committees, councils of village elders, Village Development Committees, etc. All general forestry concerns are linked to historical rights or privileges and are important to actors, who must be involved in the planning at different levels in accordance with the planning area. In the Congo Basin, according to Biesbrouck & van den Berg (2000), special attention must be paid to Bagyeli or Bakas people and Bantu farmers[232] who represent politically marginal groups in forest management,[233] whereas those responsible for industrial logging dominate any decision-making within the forestry sector. The local people should be the primary beneficiaries of the FMU or forest council's activities. Therefore, the CPSWG specifically the forest planners group should work with local communities and develop effective mechanisms that will facilitate

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[232] The Bagyeli, Bakas and Bantu depend on timber and non timber forest products (NTFPs) for their survival and for their economic development.
[233] Anther reason is that there is no single type of local leadership or organisation at village level which can represent the interests of Bantu groups, let alone of both Bantu and Bagyeli or Bakas in any decision-making. Local representation implies the right to speak on behalf of the local populations. Such a right can only have value when it is based upon shared agreement among those people who delegate their voice. There is no institutionalised type of local leadership, which satisfies this precondition (Biesbrouck/ Van den Berg (2000))

effective and enduring two-way communication, as well as permanent negotiation and consensus building between CPSWG members, specifically between forest planners and local communities.[234] Examples for possible local actor groupr are: Centre pour l'Environnement et le Développement (CED), Centre Internationale d'Etudes Forestières et Environnementales (CIEFE), Organisation pour l'Environnement et le Développement Durable (OPED), village development committees, comité paysans forêts, etc. The second group within this cluster involved in the CPSWG are conservationists or environmentalists: These play a very important role in the conservation of biodiversity and ecological sustainability. Examples are: International Union for Conservation of Nature (IUCN), Global Forest Watch (GFW), and World Wide Fund for Nature (WWF), World Conservation Service (WCS).

d) The forest enterprise group (FEG) is the sixth CPSWG member. This group is also known as the private sector comprising forestry firms or mostly multi-national corporations, specifically industrial operators, titleholders of the concessions, forest loggers as well as their syndicates and associate organisations like (IFIA). Sometimes, the concession is under tenant farming, which means the title holder of the concession and the forester are both represented and implicated in the participatory process. Examples are: Entreprise Forestière Tagne Djedom (EFTD), Pallisco, Société d'Explotation du Bois au Cameroun (SEBC), Société d'Exploitation Forestières et Agricoles du Cameroun (SEFAC), Société Forestière et Industrielle de la Doumé (SFID), Société Forestière Wanda (SFW), Timber Transformation of South Cameroon (TTS), WIJMA, Cameroon United Forest (CUF), Association Technique Internationale des Bois Tropicaux (ATIBT) and ALPICAM, etc… The figure below (Figure 3-1) displays the six different groups of participants in the forest management planning framework. These have to jointly plan the forest management.

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[234] In this respect, three features should be recognised in encouraging rural community participation in sustainable forest management: first of all a clear recognition and respect for the rights of indigenous peoples who live in or have a traditional dependence on tropical forests, then promoting collaboration amongst people and institutions who are involved in the various aspects of forest management, including wood production, integrating professional skills and training with traditional knowledge and resources of local populations in order to support the needs of rural communities more effectively and minimise or avoid conflicts in forest management, and finally enhance the well-being of forest workers and local communities.
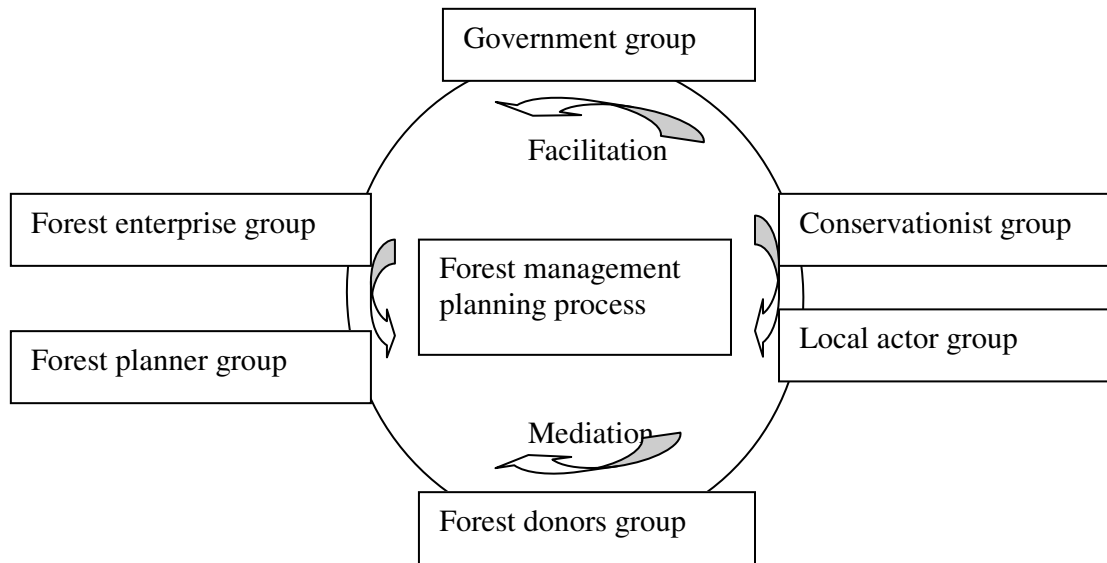
Figure 3-1   the six major actors groups within the CPSWG.

These six groups which constitute the CPSWG cannot always be clearly distinguished and are expected to interact in certain ways, as Figure 3.1 above shows. As long as the planning process is not tightened between actors groups and well structured in terms of CPSWG, any initiative, no matter how analytically and pragmatically grounded, may be likely to be dissipated, eroded and emasculated in the implementation process[235]. The CPSWG has to be institutionalised formally or informally in order to improve the legitimacy of the planning outcome. According to Figure 3.1 the choice regarding a form of institution or partnership for governing commons, like forests, depends upon the integration of and cooperation between the CPSWG members. Then its suitability is determined by the factors important for achieving sustainability, equity, and efficiency of the commons. Apart from its effect on the forest condition and the optimum resource use, shared understanding of social norms plays a crucial role.

Among the arguments against a CPSWG may be the fact that it is hard enough to get the actors to work together, for example, industry cooperating with local communities, conservationists, and government and forest donors in an equitable and transparent process. The knowledge as well as the power distribution among the CPSWG members is unequal and their interests are conflicting most of the time. Some actor's best know the details of forestry, markets, past regulatory systems, etc.; and others are most vulnerable to management changes and failures. However, without broader actors[236] support for the development of strong forest

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[235] Aligica (2004, 2005).
[236] Specially the local communities and conservationists.

management plans as a 'social contract', it may be very difficult to get the planning outcome to go ahead with the task of implementing without being based on agreements. Thus, without the involvement of the CPSWG members and bridging or reducing the gap or conflict between actors groups, forestry will continue to be increasingly marginalised.[237] In this respect, one of the most central tasks of the CPSWG may be the facilitation and mediation of the dialogue for conflict resolution and reaching an agreement. An independent facilitation and mediation (see Figure 3-1) is an important part of any active participative planning process. It involves assistance in the design and conduct of problem-solving meetings by an individual who is impartial towards the issues or topics under discussion. A facilitated meeting has the feel and structure of a business meeting, working on an agenda that has been jointly created by the CPSWG members. A facilitator will make sure that all members or parties feel listened to, ensure that the meeting stays on track, and may suggest procedures that are helpful in arriving at a solution. Typically, the facilitator is granted considerable influence over how the meeting is run, but is not permitted to influence the substance of the decisions reached.[238] Facilitation is one of several approaches to conflict resolution that uses a 'third party' intermediary to help the participants explore ideas to resolve their conflict and move towards desired goals.[239] An external facilitator should be seen as independent of all interests or positions represented, only assist the parties in their efforts to formulate a solution of their own. Facilitators will also usually record what was said, and may write up a short report summarising the discussions and any agreements that were reached. Unlike mediation, where the third party actually makes the decision about how the conflict should be resolved and is considered to be a more active and powerful third party role after arbitration, in part because it presents a 'no lose' approach to dispute resolution.

The mediation process begins with the assumption that parties are willing to discuss the issues and that they are willing to compromise to some extent. The parties recognise that they were not able to resolve the disputed items by themselves and that a trained 'neutral' mediator is the key driver who used routine procedures to focus the disputants on the resolution, and who

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[237] Boycott of tropical timber since 1980s.
[238] Fisher & Ury (1981); Ting-Toomey (1985); Priscoli (1997); Hämäläinen & Siitonen (2004).
[239] Facilitators are an important tool to create and maintain non confrontational conditions by:
a) agreeing on ground rules with participants (e.g. attitudes towards offensive language, length and frequency of submissions),
b) agreeing on rules for debates (boundaries, non-coercion etc.);
c) guiding and encouraging the active participation of all and reducing power play;
d) adopting techniques to help people reach conclusions;
e) ensuring the debate is able to develop and remain focused by summarising and clarifying deliberations so key points and main conclusions are clear and accessible (Shannon (1992)).

can be as innovative as imaginations permit in getting the parties reach a settlement or to agree.[240] The procedure is non-binding, so disputants do not have to accept a proposed resolution they do not like.[241] Mediation is accommodative, rather than adversarial, helping to preserve relationships.[242] The procedure is confidential, so everything discussed can be kept off the record should the parties decide to move on to arbitration, litigation, or another form of alternative dispute resolution (ADR). Mediation also is quick, so little time is lost, and it is inexpensive, so little money is required; in fact, a pittance compared to the huge sums that litigation and even arbitration can consume. Mediation can be described as an interest-based negotiation under the guidance of a third party. The parties choose a mediator to 'guide' them in designing a process and reaching agreement on a mutually acceptable solution. Although the mediator makes recommendations about the process, the parties themselves make the important decisions about the problem-solving process and the outcome. The presence of the mediator creates a 'safe' environment for the parties to share information, address underlying problems, and vent emotions; mediation enhances confidentiality between actors. Keith (2006)'s[243] perspective shows that: "Mediation is a powerful, yet underutilized tool for resolving serious conflicts, and often saves important business and personal relationships as well. Although mediation is not magic, and requires hard work by the parties, as an experienced mediator I have time and again directed its power to turn difficult situations around and end bitter drawn-out litigation. I invite you to consult with me, as I am committed to the mediation process and fostering understanding of how mediation can help you and your business or clients." A successful mediation can give the parties confidence in themselves, each other, and consensual processes, to negotiate without a third party in the future. Mediators not only facilitate discussions, but they usually impose a structure and process on

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[240] Merrill (2004, 2005); Keith (2006); ASFE (2007).

[241] As innovative neutral parties may be, however, they cannot succeed unless the disputants want to succeed. For that reason, the most satisfying outcomes are achieved when disputants enter mediation with an open mind and a willing ness to try to understand the opposing party's point of view. The conflicting parties must accept and make "Rules and Procedures" a part of the mediation process that will be administered and conducted by the mediator unless specified otherwise. Mediators have written permission from ADRs to utilise those specified rules and procedures in the mediation proceedings: agreements on rules and procedures; rule or procedure in relation to legalconflicts, initiation of the mediation process, case administration, party representation and observation, general communications, appointment of a mediator, mediator disclosure and disqualification, location of the mediation date(s), postponement or cancellation, pre-session administrative conference, mediation session procedures, appeals, fees, costs and expenses additional mediations, court actions, authorised use of rules and procedures, international mediation rules and procedures (Fisher/ Ury (1981a,b, 1991); Ting-Toomey (1985); Hämäläinen/ Slotte (2005); ASFE (2007); Merrill (2004, 2005).

[242] The mediator's role is not to decide who is right or wrong, but to facilitate discussions between the parties to help them reach a settlement that is fair and equitable to both parties, in other words, their role is to assist the process by suggesting techniques and procedures and helping the group explore the issue in a constructive way to reach an endpoint (Studd (2002)).

[243] Keith (2006).

the discussions that is designed to move the parties towards mutual understanding and win-win agreements[244].

The fundamental difference between a facilitator and a mediator is to observe in action. Or the differences one observes may have more to do with the personal styles of the facilitator or mediator than their roles. It is true that the roles overlap, and use many of the same skills, but there are some distinctions according to Priscoli (1997).[245] First, the venue is different. The facilitator is typically the leader of a meeting, workshop or collaborative problem-solving session. The mediator is the leader during the negotiations. However, many of the best approaches to mediation are a form of collaborative problem solving. Facilitation is useful even if the parties are not well defined. Based on ideas by Priscoli, for example, members decide for themselves if they attend CPSWG meetings. In mediation there are designated representatives of the various parties. In facilitation the issues may also be less well defined. The outcome of a facilitated session may simply include sharing of feelings, team building, identifying options, or reaching agreement. The outcome of mediation is a decision by the parties. The other place where there are differences is in what happens between meetings. Between meetings a facilitator would typically only meet with the parties to plan the next meeting. While a mediator might participate in a planning meeting, he or she might also meet with the parties individually to help them shape proposals that might be acceptable, or help them assess their position and interests. A mediator may also assume control over the schedule of meetings, timing them so they will be most productive and avoiding them when they could polarise the situation further. At some point in the process, a mediator might even develop a proposal, on behalf of the group, that might embody a number of reciprocal concessions that the groups are considering in private, but feel they cannot put forward

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[244] Thus, mediators bring the parties together (or sometimes shuttle between them), help them describe the problem in terms of negotiable interests and needs rather than non-negotiable positions, and develop a set of ideas for how the interests and needs of both sides can be met simultaneously. The mediator will then help the parties assess the relative merits of the different options and draft an agreement that works best to satisfy everyone's interests. It is up to the parties, however, to decide whether to accept the final agreement or not. While there may be considerable social pressure to agree to the settlement, if it does not meet the needs of a party, an alternative approach might, nonetheless that party is still free to reject the settlement and try an alternative conflict resolution technique, be it litigation, direct action, an election, or war. While many different styles of mediation are common, most mediators ask conflicting parties to sit down together to explain to each other their views about the nature of the problem and how they think it might best be solved. The mediator often tries to get the disputants to focus on underlying interests (the things they really need or want) more than their initial opening positions (what they initially say they need or want). By clarifying the divergent views and reasons for those views, mediators can usually get the parties to develop a common understanding of the situation, which often yields a solution which satisfies the interests of all parties. While some mediators take a stronger role in option identification and selection than others, mediators do not have the power to impose a solution. At most, they can suggest a solution, which the disputants may or may not accept (Hämäläinen & Siitonen (2004); ASFE (2007)).
[245] Priscoli (1997).

themselves. Both facilitation and mediation are valuable forms of assistance. They simply represent different levels of formality and structure in the kind of assistance that is given[246].

This paper argues that the forest planners who are members of the CPSWG should also be able to play the role of the third party, if the forest planner is a neutral entity and not in the service of any of the CPSWG members. In this respect, technical excellence remains necessary for creating SFM. The CPSWGs need technical engineering competence. However, this in itself is not sufficient. The ability to put that competence to use for the benefit of those who need it, depends, in many cases, on changing the relationship between the planners and those CPSWG members they are serving. Therefore, like Priscoli (1997) highlights in his training course about participation, consensus building and conflict management: 'the new natural resources decision-making environment requires at least two sets of skills. First, it requires excellent and broad technical skills that reach across disciplines to consider alternatives that in the past were often not evaluated.[247] Second, forest planners and managers need another set of skills: the skills of designing and conducting processes that draw together partners, actors, and publics, resulting in decisions that enjoy broad cross-sectoral, and often transboundary, public support.' This view shows that the era during which forest planners and managers decide, announce, and implement, is rapidly disappearing[248]. In this new era, forest management plans should be done with (as opposed to being done 'for' or 'to') the CPSWG members with forest planners potentially being the 'third party'. Therefore, this paper argues that the forest planner should not only have the technical knowledge of major forestry issues but also of social, economic and ecological issues. With this abitility, the forest planners may bring the CPSWG members together to reach an amicable settlement. As long as forest planners pretend that resource conflicts can be resolved by dividing the 'forest pie' into several different pieces, society's relationship to the forest cannot be recognised. In fact both components of eco-social systems are inseparable in that they are mutually defining and interdependent in their structure and function. According to this perspective, natural resources

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[246] Priscoli (1997).

[247] In fact, today's natural resource decisions often rest on a scientific basis that is itself incomplete. This sometimes means that natural resources decision makers must first agree on what studies need to be conducted and what data should be collected, to ensure that decisions are based on science, not rhetoric. As a result, natural resource planners and managers need a breadth of technical knowledge that goes beyond the traditional excellence in engineering (Priscoli (1997)).

[248] In fact the forest planner has to move his focus away from the tangible "things" that are part of the resource relationship and toward the resource relationship itself. This may be a simple and obvious point. Nevertheless, many of our resource conflicts hold forest planner captive because of their myopic focus on "things" as if they were "resources",- the "things"- a log, water, deer, fish, scenic beauty- is only one element of the resources relationship. (Shannon (1992); Merrill (2004, 2005); ASFE (2007)).

represent the primary organisation of a society[249]. Therefore, forest planners might act as a 'third party', arranging meetings, setting agendas, and guiding productive discussions.[250] Forest planners may acquire new expertise in communication skills in order to achieve mutual trust within the CPSWG and to be able to mobilise the necessary means to implement this approach.

In conclusion, the CPSWG members are engaged in a multi-actor planning process for managing conflicts through facilitation and/or mediation, i.e. a third party approach aimed at consensus building (negotiation and coming to agreements) that is perceived as 'fair' by all involved as mentioned in chapter 4 of this paper. The author suggests the implementation of the CPSWG as institutional governance for forest planning in the Congo Basin, taking into consideration the design of the planning areas unit in the tactical or medium term planning. In fact each planning level should have a specific CPSWG which integrates relevant actors at each level. For example, in the case of FMUs or forest councils, the CPSWG should start as early as the tactical or medium term planning phase. Thus, each step of the planning process has to be commonly validated first of all in the smallest planning unit, then at the compartment level and afterwards at the enterprise level (corresponding to the FMU level). In this respect, the smallest planning unit, there should be broad active participation of the actors, specifically the local peoples near or inside the small planning unit. This would imply working with different communities at various moments of the planning process, mostly Bagyeli or Bakas people and Bantu farmers. Based on Biesbrouck & Van den Berg (2000), the CPSWG deserves particular attention in relation to the issue of integrating local people. They show that several authors point to the fact that there are important differences in power within local communities and between such groups and the other actors. They conclude that the complex social organisation of communities should not be used as an excuse to avoid active participation in the planning process, for this would be 'throwing away the baby with the bath water'.

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[249] based on Shannon (1992).
[250] Studd (2002).

3.2 Context analysis

This stage of the IAD procedure identifies how rules are linked to the physical and cultural environment to influence the way the elements of an action situation generate particular types of situations and processes. Thus, the institutional analysis procedure looks at these factors while simultaneously identifying "some of the typical action situations that result from particular combinations of these factors".[251] In fact, the action arena depends on political, cultural, ethical and historical frameworks. A change in any of these elements produces a different action situation and may lead to very different outcomes. Whenever one is interested in understanding processes of structural change of a particular situation itself, however, one has to open up and overtly include one or more of the underlying 'exogenous' sets of variables. Their basic characteristic is to create the system dependence of people and groups and thus they appear as subjects in the political system, as clients in the public service ruling system and as consumers in the economic system.[252] Figure 2-3, first part, underlies three broad variables: firstly, the biophysical conditions or natural exogenous factors, secondly, the broader community of the actors themselves, and thirdly the rules-in-use or legal framework. All of these variables are composed of multiple subparts.

3.2.1 Attributes of biophysical conditions

Across the globe the sustainable forest management principle requires a wide variety of planning approaches for its conception and/or implementation. Unfortunately, planning actor groups like the CPSWG that design and implement such approaches depend on the information on physical conditions available to them.[253] One of the most important aims of this paper is to provide sufficient contextual background to allow for the development of a precise and locally acceptable survey tool for acquiring information on the physical conditions for the forest management planning process. The attributes of the relevant physical conditions may yield different types of action situations, patterns of interaction and outcomes depending upon the configuration of the physical environment.[254] This issue is to define the nature of the good or physical condition that is involved in the action situation of the action arena. This comprises the description of the common pool resources (CPRs), such as the FMU

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[251] Gardner et al. (1994); Aligica (2004, 2005); Ostrom (2005).
[252] Ljubiša (1999).
[253] Furthermore, the art and science of ecosystem management is constantly becoming more complex as new studies continue to provide insights into the dynamic interdependencies between various combinations of species and their environment(s) that cross social, ecological, and economic dimensions.
[254] The interaction between stakeholders are shaped or influenced by the outcomes of biophysical analysis

and council forest (CF), and the resulting knowledge[255] may suggest that institutions are needed to prevent a 'tragedy of the commons' and/or the 'tragedy of the anti-commons'. In order to handle the complex planning demands and understand the incentives of the players involved in the planning process, as well as their interaction, forest management planning has to evolve to take advantage of integrated information from various sources, such as geospatial information, control of planning execution from the previous planning horizon, databases, current forest inventories etc. This paper proposes integrated forest management planning information (IFMPI)[256] which will be used to support the forest management planning activities. Figure 3-2 shows the data collection and construction of the IFMPI as a strategy for gaining information about the behaviour of the players within the action arena framework. The components are linked and include:

a) forest service report ('Vorbericht');

b) inventory and map work ('Inventar- und Kartenwerk'), geographic information system (GIS), and an image processing system;

c) control of execution within the previous forest management planning timeframe ('Kontrolle des Vollzuges im abgelaufenen FE-Zeiraum').

3.2.1.1   Forest service report

The aim of the forest service or administration report is to give information on the condition of the forest resources and to carry out a preliminary assessment of the relevance of the ongoing forest management activities. The forest management history should be recorded, if known[257]. It is concerned with the general conditions of the forest and specifically the situation, brooks, forest organisation and potential yield or production of the main tree species, the socio-economic and ecological importance or functions of the forests.[258]

3.2.1.2   Inventories and mapping

Data can be collected through inventories of all forested land which should be carried out to accumulate and process forestry and socio-economic information, as well as to establish its

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[255] Constraints and the opportunities of the resources.
[256] The IFMI also has the ability to maintain current forest inventories and generate maps; specifically of spatially-oriented data (e.g. attributes of entities depicted on a map, such as group of species, villages etc., whose location can be fixed on a map).
[257] ITTO (1992, 2005).
[258] See Bachmann (1992); Kurth (1994); Oesten (2004); Oesten (2003).

(inventory) suitability.[259] The inventory has been developed to provide the CPSWG with up-to-date information about the forest resources based upon forest surveys. To address the problem of non-availability of accurate maps or latest maps, GIS, remote sensing and geographic positioning system (GPS) and aerial photographs may be integrated.[260] This integrated approach of data fusion combines data sets from multiple sources into a single set of meaningful information[261]. The availability of digital data sets is significantly growing and thus available for processing and combining by data fusions methods. Moreover, remote sensing provides a data source which has the advantage of being continuously collected over wide areas, repeated coverage in certain time intervals, in a standard format and accessible to everybody.[262] There are forest parameters as well as data collection tools[263] which may be a part of an inventory process; naturally few inventories may contain all of them. The forest resources inventory is therefore an important element in developing a management plan. The forest land is evaluated for its potential productivity based on a number of site factors and economics information.[264] In general, knowledge of the area is a fundamentally important variable in an action situation.

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[259] For the following purposes: a) production of timber (quantifying standing timber volume of both presently merchantable and as yet unmarketable species, and regenerative capacity) which can be expressed in cords, cubic feet, or other units of measure; b) production of non-timber products (both of present and potential value); c) nature conservation or protection including wildlife; e) various agricultural and other land uses (minerals such as coal, oil, gas, etc., present on the forest land and other goods and services). Indeed, an inventory of the forest resources is essential for forest management planning.

[260] The most appropriate use should be made of remote sensing satellites and computer technology software like GIS, GPS, as well as aerial photographs: a) Aerial photographs are helpful for identification of geographic features and for orientation in the field. They are a practical tool for mapping rivers, ridges, coastlines, swamps and other geographic features. Where vegetation patterns are distinct, aerial photographs are valuable for recognising and interpreting forest types for zoning and stratification at an early stage in inventory planning. Aerial photographs are also useful for locating permanent sample plot positions, silviculture, forest protection, community settlement planning and for ecological research ; b) Satellite imagery (remote sensing) for forest management planning mapping, Where photographic coverage is limited, or is difficult to obtain because of persistent cloud cover, satellite imagery is more useful than aerial photography. c) GPS technology in planned forest management is a system of satellites orbiting the earth which transmit precise time and geographic position information. d) GIS: the term is applied to the computerised storage, processing and retrieval of geographically referenced spatial data, such as various types of maps, and the corresponding statistical and other attribute information. The capability of combining different maps, known as "overlaying", is one of the most important GIS functions. Three-dimensional images can be generated from contours. The greatest value of GIS in natural forest management is for modelling alternative technical options as an aid in decision-making.

[261] For more see Dogmo (2005); ATIBT (2007); Bachmann (1992); Kurth (1994); Oesten (2004); Oesten (2003).

[262] However, the integration of remote sensing data and other relevant data layers demand appropriate data fusion methods. Only if these methods are available, increasing amounts of new information from various different data layers can be optimally utilised (Dogmo (2005)).

[263] The forest parameters include: tree species, tree age, stand structure, timber volume, etc.., soil maps, pedagogical features, such as: soil moisture, soil type, nutrient supply, soil depth, topographic maps; topological features such as : streets, lakes building etc.; terrain model; terrain features, such as slope aspect illumination; height zones in raster format; height zones, colline, submontane montane, subalpine, etc..; Satellite classification in raster format crown-forest damages; aerial photo interpretation in vector format; forest parameters crown closure, needle loss, vertical stand structure etc.

[264] There are several factors which influence the productivity of a site.
*a)*Soil: this is probably the single most important factor. Different soils have different levels of natural fertility, depth, moisture holding capacity, slopes, etc.

The main purpose of an inventory (static and dynamic) is to assess the possibilities for timber harvesting and longer-term timber production in order to identify the incentive within the IAD framework and then understand the interaction between actors according to this kind of information as a parameter of an action situation. Quantitative information should be gathered on both commercial and presently non-commercial tree species, including the lower diameter classes, and regeneration. The conditions under which inventories of various scales and intensities should be used need to be established. During timber inventories, other aspects of the forest, such as its importance for wildlife populations and the occurrence of non-timber forest products, can be qualitatively assessed at little extra cost. Cooperation with other institutions and facilitation of the exploitation of inventory data by researchers from other disciplines can help to improve the utility of forest inventories. Continuous forest inventories provide data needed for the construction of yield tables and growth models which may be used, together with current forest inventory data, for growth and yield forecasting. It is also a system monitoring the stocking and development of forests and the rate of growth which enables any unexpected or unfavourable developments to be detected and measured. An important requirement for sustainable tropical forest management is the collection of good quality forest growth and development data through continuous forest inventory so that the sustainability of forest ecosystems may be properly determined[265]. All the data or information in a management plan (see Figure 3-2) and their analysis may be a tool in the IAD framework as well as for planning initiation: planning problem identification. A management inventory supported by a detailed map is indispensable for preparing working plans for each forest area. There may also be a need for environmental impact assessment (EIA) because forest management operations can have important positive or negative environmental consequences in the forest itself. These consequences should be assessed prior to operations to ensure overall sustainability. Conditions under which an EIA should is required must be specified.

In conclusion, it is beyond the scope of these guidelines to describe the details of a resource inventory but some guidance is provided and consists of, firstly, the land description (location, ownership, boundaries and area, history, topography and drainage, climate, geology and soils), secondly, the economy (see the section 3.1.2); thirdly, the forest description

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b) Exposition: this is probably the second most important factor. For example, north and east facing slopes are more productive than south and west facing slopes.
c)Slope: it can limit equipment usage, water infiltration, and road construction.
d)Drainage: it is one of the best suit to site productivity.
[265] FAO (1998).

(natural vegetation and forest types, management subdivisions, site qualities, present growing stock, damages, growth and mortality), fourthly, the former management (prior to the original management plan, the former management periods), finally, on mapping the forest area (site, functions and biotopes, risk and socio-economic situation).[266] The design and conduct of a resource inventory for a tropical forest is a detailed task and should always involve the knowledge and experience of inventory specialists, as well as that of the local people living near or inside the forests.[267]

3.2.1.3   Control of execution within the previous forest management timeframe

Control of execution within the previous forest management timeframe is based on a retrospective comparison of the results achieved at the end of the planning period. The information acquired is useful for the analysis of each action situation showing trends (underpin planning) which integrate the socio-economic and ecological evaluation of the planning outcome implementation.
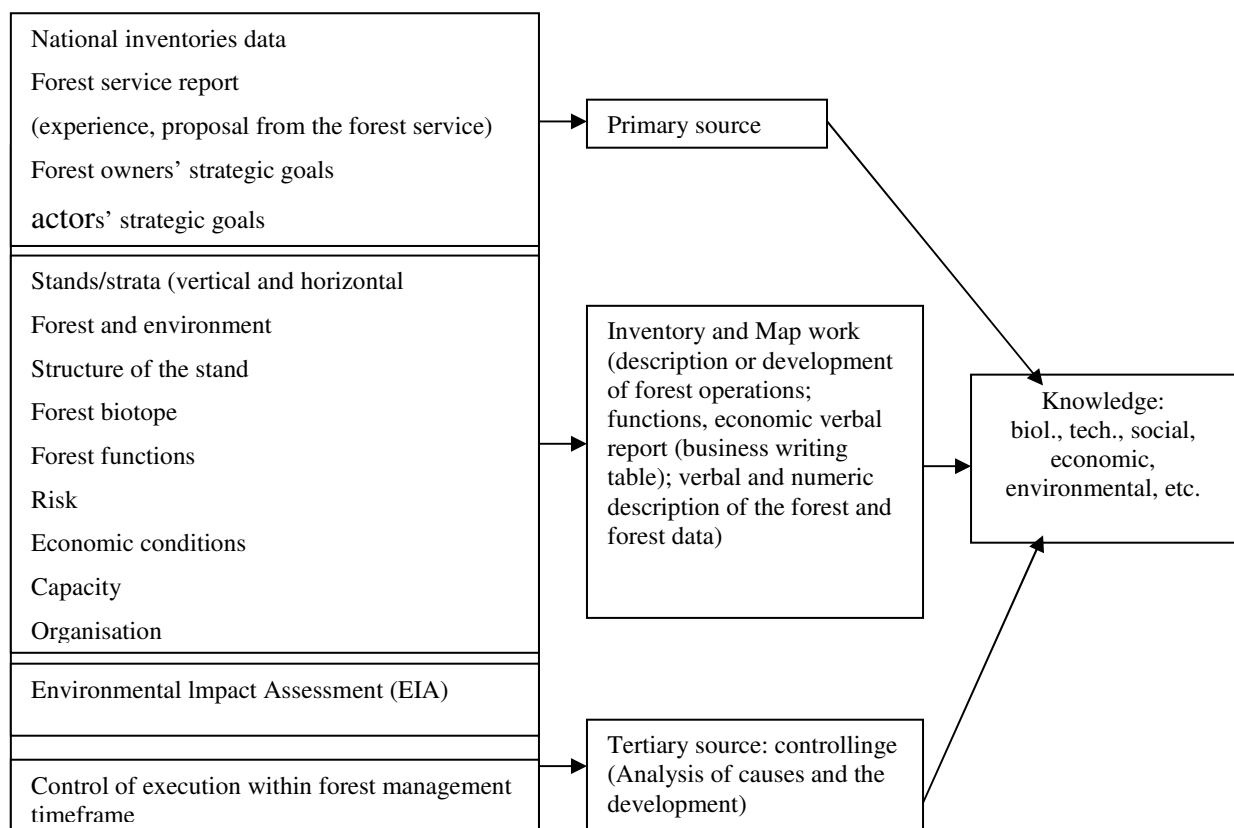

Figure 3-2 Components and information content of the planning information system: ideal forest resources information requirements.

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[266] Bartoo et al. (1961).
[267] Forest Growth and Yields (FAO (1998, Part II, 1.4). See also for complete guidelines for forest inventories based on timber as the principle object (ATIBT (2007)).

3.2.2 Attributes of actor groups

The social environment is a composite of numerous interrelated factors. Although these items may be identified from checklists, interviews, etc., the inter-relationships are generally poorly understood and have largely been ignored in the planning process. In part, this problem is caused by a failure to recognise that social processes have impacts on planning.[268] Socio-economic studies are described as a key element of the forest management planning process. On the one hand it estimates socio-economic effects such as changes in employment, transportation or recreation, or changes in the aesthetic value of a landscape, changes in rules and social conditions etc., and on the other hand, it estimates the impacts on society not only of these socio-economic changes but also of the various biophysical effects caused by the proposed management action.[269] This step requires specialised knowledge of the social sciences,[270] rural management,[271] and also knowledge of social communication in sometimes delicate contexts. [272] At the outset, however, it should be emphasised that the socio-economic environment is difficult to quantify.[273] In fact, this is one reason why socio-economic impacts are not considered in some jurisdictions; and why they are included in some other cases, mainly to satisfy agency requirements, rather than because the assessor feels that a socio-economic assessment would be helpful to the decision-maker. Socio economic data collection has to be participatory and interactive based on listening, exchange, and mutual comprehension. It summarises what exists and what is needed in order to adapt each measure (health, schooling, mapping of habitats, human activities, etc.) and identify the resources people and companies will rely on; a participatory platform is formed. Socio-economic data also identify the neighbouring villages and camps in the FMU or concession and characterise the demographic trends, especially through an evaluation of people's needs for agricultural land (agro forestry series). This requires knowledge of the villages' limits of their territories, at least approximately; the origin of the population and the reasons for migratory movements, and about all the rightful beneficiaries of the forest management planning by an exhaustive

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[268] SCOPE (1977,1979).

[269] It also tries to include the theoretical aspect of what is very much understood by forestry, its role, its importance, its socio-economic value and finally, its contribution to the welfare of the people and the national economy. Indeed, forest resources apparently ignored in the ranking of the national economy could play a huge role contributing to the development of the country. Timber seems to be the only product within the forest management planning framework which is largely recognised when it comes to value the importance of the forest, with more emphasis on wood, and in most of the cases forgetting its role and other various services.

[270] Rural sociology and economics, socio-anthropology.

[271] Agronomy, agroforestry, organisation of the trade networks…

[272] Large scale poaching, ethnic differences… (ATIBT (2005a,b)).

[273] Here, the recommendation is made that the assessor should at least try to derive a short list of social impact indicators, and to estimate, using whatever means are available, their relative magnitudes in terms of the major special interest groups that will be affected. Impact indicators might include, for example, employment rates, rural depopulation rates, etc. (ATIBT (2005a,b)).

population survey. There is also the need for characterising and analysing the different uses of the natural resources in the forest concession area to assess if the human activities are ecologically sustainable and to identify the social criteria and indicators to follow the development of theses activities.[274]

Under this heading, the examination of how each actor group is related within and between clusters of other actor groups is needed for understanding interactions as specifically structured and institutionalised interaction patterns among people. The following background has to be considered: customs, taboos, traditional norms, culture, religion, values, beliefs, skills, knowledge, health conditions, poverty levels, and others socio-economic characteristics of the main actors.[275] Such informal constraints are usually present in a society for a long period, and are believed to be spontaneous in origin.[276] If groups of actors share a history of mutually beneficial interactions, chances or opportunities are that trust has developed in their relationship and this sense of mutual reciprocity will, in all likelihood facilitate solutions. However, constraints or conflicts between actors are the most dominant feature in current FMP and, therefore, this need to be incorporated into the framework analysis. Based also on these considerations, the economic analysis will also be performed in order to identify the economic and financial factors influencing the action situation of forest management planning on the one hand, and the identification of concrete managerial conditions of the action situation within the arena framework on the other hand. Furthermore, this will also comprise an analysis of the current uses of natural resources and actor expectations at FMU or CF level. . A mix of many factors will be taken into consideration, external factors such as the level of the population's welfare, social constraints at village level, policy frameworks for state interventions, possibilities for local institutions and administrative arrangements.

At the end of the socio-economic study, different maps illustrating the social situation in the study zone are produced. Five types of maps must be considered:

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[274] For example: ATIBT (2005a,b); Fines et al. (2001); Berg & Biesbrouck (2000); Tripathl & Psychas (1992); SCOPE (1977); Zola (1999); Butry & Pattanayak (2002, 2005).

[275] With some forethought, therefore, the assessor should be able to prepare a short list of effects that need to be investigated in his particular case. How large are the effects? What impacts will they have on the community? The following is an example of a process-specific set of socio-economic impacts: a) Demographic impacts: rural depopulation; suburban growth; etc. b) Economic impacts: income, employment, and taxes; the affected parties; impacts on business and large property owners; increased short-term and long-term employment; the 'boom and bust' pattern of project construction; problems of local inflation and short-term changes in supply and demand patterns; c) Impacts on social values and attitudes: community cohesion; the social integration of the community and the mechanisms by which individuals and groups within a defined area maintain functional ties with one another; life style, perceptual and behavioural dimensions, accepted values, and day-to-day behaviour in the affected communities, as well as outsiders' views of these values and behaviours.

[276] Aligica (2005); Andersson (2006); Behera & Engel (2006).

a) map of the socio-economic facilities (schools, medical facilities, drinking water, electricity, market, etc…);

b) map of the rural economy: production and commercialisation of products (fishing area and fishing camps, NTFP collection zones, agricultural zones; agricultural products, hunting camps, commercialisation of bush meat, supposed zone of big game hunting, supposed point of ivory, transit centre), human settlements, rivers and roads;

c) map illustrating the migratory fluxes: ethnic groups, current villages (regrouping, villages), and FMU boundaries;

d) map of the economic fluxes: production and commercialisation of products;

e) map of hunting activities.

Furthermore, forestry impacts as possible sociological effects which are of most concern for the forest industry and the forest service has to be examined.[277] The relevant set of these impacts and effects include as an example of a process-specific set of socio-economic indicators is given below:

a) Demographic impacts: rural depopulation; suburban growth; etc.

b) Economic impacts: income, employment, and taxes; the affected parties; impacts on business and large property owners; increased short-term and long-term employment; the 'boom and bust' pattern of project construction; problems of local inflation and short-term changes in supply and demand patterns;

c) Impacts on social values and attitudes: Community cohesion; the social integration of the community and the mechanisms by which individuals and groups within a defined area maintain functional ties with one another; Life style, a perceptual and behavioural dimension, referring to accepted values and day-to-day behaviour in the affected communities, as well as to outsiders' views of these values and behaviour.[278]

3.2.3   Legal framework: What are the current rules?

The IAD approach has important policy implications.[279] The legal framework refers to the institutional environment that human beings create through formal rules (e.g., constitutions, laws, property rights, etc.). This refers to rules and norms that are actually used by actors participating in forest management planning. Special attention is given to these rules as they are usually the most obvious and likely target of policies aiming at institutional change. Rules

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[277] SCOPE (1977,1979).
[278] SCOPE 1977.
[279] Aligica (2004, 2005).

are seen as 'prescriptions that define what actions (or outcomes) are required, prohibited, or permitted'.[280] These are important independent variables because these rules influence the incentives that each actor faces and ultimately help determine behaviour. For example, one of the central questions is whether the current rules are likely to solve the previously identified forest management planning problems (conflicts between actors). In fact, the manner in which people use environmental resources depends on the property rights governing these resources.[281] In particular, property rights significantly affect the incentives individuals' face, which ultimately determine the final outcome of resource management; this is a social dilemma related to forest management planning. For example, the linkage between forest departments and local communities in situations of conflict is mostly based on the relations of power and control. The basis of this framework is the policy principles and strategic directions expressed in the national concept for forestry development and constitute the rules organising relationships between individuals.

Three levels of rules cumulatively affect the actions, interaction patterns and outcomes in any setting, and the IAD approach distinguishes between the operational levels, which are the collective-choice level the 'constitutional' or 'constitutive' decisions level.[282] Constitutional or 'constitutive' decisions are the most fundamental because they are decisions about rules governing future collective decisions. They determine the rules to be used in crafting the set of collective choice rules that in turn affect the set of operational rules. They also determine who is eligible to get involved in the process. The collective-choice level is the level at which this is determined, enforced or altered. It specifies the basic framework within which actions take place. This level shapes who will be affected by the rules at the operational level and how. The operational level consists of direct actions and strategies depending on and directly reacting to everyday, concrete circumstances, expectations etc. In this case, the sphere of action and decision is established by the other, higher levels. Although these actions and decisions affect the higher levels, they only do so in an indirect and aggregated way.[283] The importance of identifying and analysing the rules is hard to exaggerate as rules provide information not only about the actions an actor 'must' perform, 'must not' perform, or 'may' perform but also about the nature of sanctions that result from failure to follow them.[284]

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[280] Aligica (2004); Behera/ Engel (2006).
[281] Behera/ Engel (2006).
[282] Ostrom (1986); Andersson (2002, 2006); Aligica (2004, 2005).
[283] Aligica, (2004, 2005).
[284] Aligica (2004).

3.3   Interaction patterns: What are the conditions for learning and information flows?

This dimension of the IAD framework deals with how the game is played or the 'governance of contractual relations'. Multiple interactions in the different action situations create patterns of interaction that, over time, result in predictable outcomes. By studying these patterns, one can identify institutional incentives of the different actors in a given action situation. Because of the framework's design, these incentives can be traced back to specific contextual factors that seem to generate the observed incentives.[285] So the motivational problems faced by actors that may prevent them from trying to alter the rules at the collective choice level has to be addressed through this analysis and the search for a way to create accountability mechanisms to address motivational problems. The extent to which the social dilemmas are resolved may be evaluated by sustainability criteria, the process is reiterative, as it will affect the contextual variables as well as action arenas in future interactions in any case. Within the interaction patterns, actors face varying opportunities to learn from the experience of individuals, depending to a great extent on the social connectivity. The IAD framework guided analysis explicitly relates the information available to different groups of actors and asks the facilitator to characterise the information flow in the action arena addressing two main questions: who has access to what information? And to what extent is the flow of information transparent to others? The three main dimensions of information flow that seem crucial for organisational learning and good local governance are: downward flow, upward flow and horizontal flow. All these interaction patterns entail a very important assumption about how things work in reality and about the connections between actors, conditions and consequences, in other words about social causality.[286] This stage consists of an analysis of relationships between actors involved in the planning process assisting in gaining an understanding of the way relationships are organised around the forest planning process. The detailed data on relationships is devised from the previous stage of the IAD framework. According to Chorfi the following points have to be considered:[287]

a)   influential people or interest groups,

b)   composition of property rights,

c)   conflicts related to forest planning and other issues,

d)   interest and motives of various groups for participating or not participating in the forest planning process.

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[285] Anderson (2000); Anderson/ Ostrom (2006).
[286] Andersson (2000); Anderson/ Ostrom (2006).
[287] Chorfi (2004).

In essence, institutions, which are a set of rights and rules of behaviour for the use of resources,[288] arise out of the need to internalise externalities. Institutional arrangements are sets of property rights that each actor possesses in relation to the forest, and the rules that define what actions they can take in making use of their rights. In the face of uncertain resource availability, group members are willing to trade-off some benefits from individual use of the resource, for the collective assurance that the resource will be used in a more equitable and sustainable manner. Institutions, through rules, provide incentives for the group members to take certain actions to achieve the desired outcome. The developments of institutional arrangements require an investment of time by the members of the community. The transaction process of developing institutions will produce costs. These include the transaction costs of the negotiating a contract, which deals with the cost of collecting relevant information and negotiating the terms of an agreement, specifically:

a) gaining information about the resource in question and what users are doing with it;

b) reaching agreements with others in the group with respect to its use;

c) enforcing agreements that have been reached.

For common property regimes, these costs are part of the collective decision-making process. In the case of fisheries resources the institutional arrangements for common property management are often a heavily centralised command and control type of government-based management system. Such a system often fails to recognise traditional community resource management regimes.[289]

3.4 Participatory rural assessment and expertises

The promotion of community participation in natural resource management is currently a central concern for natural resource management projects. This is primarily due to the fact that the strategies implemented thus far have not been very effective, because of their essentially technological bias. The IAD framework, as well as the whole planning process involve participatory or collaborative techniques and awareness raising activities from social sciences.The active method of participatory research and planning (MARP), as well as the tools of the Rapid Rural Assessment and Participatory Rural Assessment as community or bottom up approaches, are all social science methods aiming to address the alarming scale of

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[288] Ostrom (1990).
[289] Dietz et al. (2003).

miss implementation of forest management planning mechanisms and is all the more urgent. The MARP uses tools developed by the people involved. The use of these tools promotes the development of the local populations' know-how and can be used effectively as instruments to obtain an understanding of local realities, to enhance the empowerment of local people and define forest management planning interventions. This process stimulates internal discussions, self-evaluations, feedback and analyses, contributing in turn to the further development of technical menus or "baskets of technical options". It leads to a more comprehensive understanding of community forestry and participatory resource management, generating an approach that integrates socio-economic, political, cultural, gender, technical and ecological aspects[290]. These methods used various instruments, such as maps of resources, sociological maps, matrix classifications, Venn diagrams, flow charts, observations, interviews, meetings and secondary sources. The scope and length of the MARP phase can vary. The most common approach is to start with a concentrated effort of data collection over a few weeks, so that a first assessment can be made of the general opportunities and constraints.[291] Simultaneously, the MARP is applied in specific problem areas which as in this case of forest resources.

In other words, in most projects the MARP collects general information using 'traditional' research tools. Therefore, attempts at regulation and management by technical bodies have resulted in the destruction of traditional management mechanisms, thereby creating conflict situations which are often difficult to resolve. Awareness of the present fragility of resources is very high within the village communities, which are endeavouring to implement more appropriate management models. These initiatives are not always taken into account and made use of in the definition of an institutional framework for the management of the forest.[292] Furthermore, the findings of Ostrom and colleagues repeatedly show that resource users, who have relative autonomy to design their own rules for governing and managing common-pool resources, tend to achieve better outcomes than experts doing the planning for them.[293] Shannon (1992) shows that public choices cannot be made by experts working alone with computerised data-bases. Rather experts should apply their knowledge and analytical techniques to develop useful information like grist for the mill of public deliberation.[294] In

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[290] Chorfi (2004); Cornet/ Muslim (2004); Nguinguiri (1998).
[291] see Stiles (1995); Manga et al. (1999); Assolo et al. (1999); Nguinguiri (1998).
[292] Stiles (1995).
[293] Ostrom (1990); Nguinguiri (1998); Agrawal/ Gupta (2005); Gibson/ McKean/ Ostrom (2000); Blomquist (1992); Gardner et al. (1994); Ostrom/ Shivakoti (2002); Acheson (2003);Ostrom/ Schlager (1992); Schlager (2002); Shannon (1992); Dietz et al. (2003); Berkes (2002, 2006).
[294] Shannon (1992).

addition she highlights that through "extensive fieldwork and statistical analysis, we have used game theory to illustrate how the rules that resource users have developed generate positive outcomes[295] as well as undertaken extensive experimental studies to verify these patterns under controlled conditions.[296] Furthermore, she argues that farmers in old and established systems tell researchers that they do not know much about the origin of the rules they use. In some cases, rules are treated as part of a sacred religious system and are monitored and enforced by priests.[297] Additionally, the writings of scholars of the commons, with historical and contemporary evidence, have shown that resource users often create institutional arrangements and management regimes that help them allocate benefit equitably, over long periods, and with only limited efficiency losses.[298] Recognising this, governments in more than 50 countries, including Cameroon, have adopted new initiatives that will support the transferral of some control over resources to local users, according to a recent survey on forest policies.[299] In contrast to this approach, agricultural scientists and engineers have treated these systems as being based on superstition. In Bali, for example, after the Indonesian government required higher rice yields from farmers, external experts tried to teach the farmers how to manage their irrigation systems in a 'modern and more efficient manner'. The rice varieties of the green revolution were implemented in order to reach three crops per year. This change meant that the farmers did not follow their original rhythm of rice production. The experts discovered, however, that the age old system was really relatively sophisticated in its manner of averting the spread of pests as well as careful coordination of water delivery itself. In light of disastrous pest outbreaks and after some of the farmers had changed back to their earlier practices, the experts have had to reverse their earlier efforts to make the peasants adopt modern management techniques for their irrigation systems.[300] FAO (1999) reports that consistent findings from a comparative analysis of case studies on participatory planning highlights that there are fundamental reasons for using participatory methods including the following:

a) participatory approaches facilitate local empowerment,

b) participatory planning facilitates a two-way learning process between the local community and the project;

c) participatory planning will enhance political commitment and institutional support for local planning by building a common understanding between institutions and local groups;

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[295] Gardner et al. (1994); Ostrom (1995); Acheson (2004); FAO (1999).
[296] Gardner et al. (1992); Ostrom/ Walker (2000); FAO (1999).
[297] Lansing (1991).
[298] McKean et al. (1995); Ostrom (1990); Agrawal (1999); Ghate (1983).
[299] FAO (1999).
[300] Lansing/ Kremer (1993); Janssen/ Ostrom (2001); FAO (1999).

d) the use of participatory approaches will allow the integration of local knowledge systems into local project planning and implementation. All these assumptions were demonstrated through case studies from many countries like Nepal, Pakistan, Rwanda, Burundi and Cameroon.

However, despite successes of the participative method in community forestry, expertise is needed to identify specific tasks in forest management planning for medium sized planning areas or in forest concessions where a forest management plan is needed for economic efficiency. In fact, farmers, who lack education or formal training, can on average outperform highly educated engineers in the design and operation of forest management planning operations. Nonetheless the farmer also needs the technician's "know how".[301] Yunusova (2005) showed in an example about the contribution of actors to forest policy formulation that the majority of actors had neither a strategic vision nor much experience in the forest planning process. Thus, technical and practical issues related to their daily lives and professional activities were dealt with in more detail during the discussions, whereas strategic policy aspects were left out. This dynamic demonstrates that a bottom-up approach alone is not sufficient for a comprehensive decision. The input of many actors was limited by their scope, knowledge and experience. Therefore Yunusova recommended that a technical expert analysis should complement the communicative processes. Consequently expertise can also contribute to a better methodology for generating forest inventories and managing forestry practices, potentially saving forest management planning operations. So cost effective and optimised forestry planning are key issues and efficient planning relies on dependable expertise, for example on forest covers, especially the spatial distribution of the species etc. In this respect Chorfi (2004) proposed the used of a village land use plan (VLUP).

The objective of a VLUP is a step-by-step guide to assist the local population in the development of a management plan for privately and commonly owned hillsides and farmland. The planning process is implemented by villagers and an interdisciplinary team of outsiders, and goes through the following, phases: preparation, analysis of village land, social organisation, and development of management plans for specific land use units, and implementation and monitoring of the plans. The outcome of this process is a village land use plan based on the socio-economic and biophysical constraints and opportunities in the village, on the needs and wishes of land users, and the services that the project can provide, all

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[301] Berkes (2002, 2006).

summarised in the so-called 'social forestry menu'.[302] The VLUP is partly represented in the IAD framework to contribute to data collection. This VLUP is a process for the elaboration of a village land use plan, including important steps like the establishment of elders committees (OC), village development committees (VDC) and women organisations (WO) who represent all community sections and ultimately transform themselves into local community based organisations for improved natural resource management. Nonetheless criticism exists about the effectiveness of the VLUP in participatory planning processes, because it is clear that in many cases participation of local people is more a means than an end.[303] The methodology proposed in this paper for cquiring information in socio economic area should be a combination of MARP, VLUP and the forest management planning framework, specifically the IAD framework. These are three main ways choosen for data collection in natural resource management and the linkages between these three are especially important, thus, one can not exclude another. The IAD framework offers best conditions for this linkage. It is assumed that neither the logic of the top-down approach for data collection nor the bottom-up approach are successful in the case of FMP in medium sized forest areas (production forest) for four reasons: firstly, the forest legislation, governance and fiscal reform (institutional change situation); secondly, private investments or economic efficiency; thirdly, the social needs, and finally, the ecological needs. Accordingly, the elements within the IAD framework effectively aimed to bring experts, VLUP and the MARP together linking these three approaches which potentially produces beter and more qualitative and quantitative results than just one of the methods applied separately. Different means of integrating ideas and values of experts, MARP and VLUP are adopted. This poses challenges in that these different methodologies have very different goals, use different types of language and hold very different information about the issue at hand. There is a risk that public representatives may be less willing to voice their opinions if experts are present. By focusing on values rather than technical details the processes below aim to contribute on solving

this issue. As can been seen in Figure 2-3, p.40, the MARP, VLUP and expertise are used simultaneously for data collection within the IAD framework.

SCOPE (1977)[304] reviews some alternative methods of data collection[305] which include:

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[302] Armitage/ Garcha (1995); Stilles (1995).
[303] Chorfi (2004); Cornet/ Muslim (2004); Steimann (2004).
[304] SCOPE (1977).

a) using existing data: examples of existing data include statistics on age, sex, and income distribution, ethnic origin, mortality, housing type and occupancy, and education (see Figure 7-1 in Annex 1).

b) asking questions: survey techniques range from highly structured, randomised pre-coded questionnaires to informal, unstandardised interviews. A distinction between the two ends of the spectrum is that the latter sometimes employs specific key informants, the rationale being that some people are better informed on the interview topic. A scale of the knowledgability is often included in questionnaires on technical issues.[306] However, Grima and Wilson-Hodges (1977)[307] dispute this view, citing evidence that in cases where both public hearings and opinion polls have been held, there have been no significant differences in the results. The data collection methods such as this have the following characteristics:

- they are systematic;
- they minimize bias created by dominant individuals;

- they produce consistent comparison;
- they aid in the conveyance of judgement (controlled feedback).

c) observing individual and group behaviour: firstly, direct observations of human behaviour. It can be observed directly by watching the behaviour of people in public places; watching the behaviour of people during a heat wave or a drought; watching the response of a community to a warning of a tornado or blizzard etc. Secondly, indirect observations of human behaviour through measurements of the width and wear of footpaths; studying the extent of littering; counts of numbers of automobile traffic, park users, etc.; historical records from newspapers; etc. An example is a study of rural water supply in Ethiopia to determine the benefits of a

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[305] data collection methods such as this have the following characteristics: they are systematic; they minimise bias created by dominant individuals, they produce consistent comparison and they aid in the conveyance of judgement (controlled feedback).

[306] Information about attitudes, feelings, and beliefs cannot be easily obtained except by asking questions. The less structured the interview the more likely it is that the interviewer can probe more deeply, if he receives an unexpected reply or comment. On the other hand, the responses will appear less systematic and may be harder to interpret. There are many different techniques that have been developed for asking questions. Two particular methods deserve special mention here, public hearings and the Delphi technique. At their best, public hearings may reveal aspects of the local socio-economic environment previously unrecognised by researchers, may inform and reassure the citizens about government or industry proposals, and may act as a safety-valves for pent-up feelings. As an additional benefit, much of the planning process becomes open to the public, and this exerts pressure on administrators to adhere to the specified decision-making procedures. At its worst, a poorly organised public hearing can be counter productive, leading to polarisation of views, or to unfounded fears about the socio-economic impacts of the project. From time to time, an opinion is expressed that the input to public hearings is mainly by special interest groups and is unrepresentative of the general population.

[307] Grima/ Wilson-Hodges (1977 in SCOPE (1977)).

deep well. The investigators used a combination of direct and indirect observations.[308] During the annual dry season the well was the main source of supply, but poorer quality water sources were preferred in the wet months because they were closer and cost nothing, indicating that water quality was not considered to be more important than convenience or cost[309].

3.5 Outcome

Since it is the aim of the IAD process, the desirable outcome of the main action arena is defined as well as what needs to happen in each action situation in order to produce this outcome.[310] In the case of this paper, the ultimate or possible outcome from this analysis is firstly, the characterisation of a planning decision problem which may have a strong impact on actor preferences.[311] Secondly, there will be the establishment of the CPSWG as an institution for designing and implementing the forest management plan as well as providing the expertise and participatory reports. Thirdly, it is the description of the interaction patterns between the main actors groups in each action situation within an action arena, which is the forest management planning process in this case. The overall aim of the IAD framework, as the first part of the IGS model presented in this paper suggests is to identify the sources of conflicts in FMP processes and their implementation. Chapter 4 of this paper will therefore design a possible approach to active participation and conflict resolution mechanisms, which represent the second part of the IGS model (see Figure 2-3). There may be an increase or improvement of trust between the main actor groups through the analysis of the interaction patterns on the one hand and the legitimacy of the 'social contract' or the forest management plan resulting from negotiations on the other hand.[312] The overall outcome of this paper aims to develop a partnership between the local communities, forest companies, forest departments, conservationists, planning 'experts' and forest donors for the sustainable management of forest areas on the basis of trust and mutually defined rights and responsibilities of all the parties involved.

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[308] On-site observations of the local population -where people went for water, how often, seasonal changes- as well as indirect observations obtained from questionnaires, interviews, data on government water sales, etc.

[309] SCOPE (1977).

[310] Gardner et al. (1994); Ostrom (2005); Andersson (2000, 2006).

[311] Likewise defined as open for the evolvement of new viewpoints and frames, see Hämäläinen & Siitonen (2004).

[312] Hämäläinen & Siitonen (2004).

4 Second part of the IGS: active participation and conflict resolution mechanisms in forest planning as a way of democratically dealing with problems

Sound rational knowledge is necessary for forest production (FMU, forest council) governance, but not sufficient in the tropical Congo Basin region. Too many strategies for governance of these CPRs are often designed by agencies, experts etc. ignoring other actors' knowledge, interests as well as local conditions.[313] For example, some actors do not support administrative decisions and/or forest logging activities and frequently challenges these through appeals and/or lawsuits to delay their implementation. This has often resulted in antagonism between groups. It has made it difficult for the government and/or forest companies to communicate with other actors. This increase in difficulties faced by central authorities or forest companies has pushed practitioners (foresters) as well as planning scholars, to search for alternatives (to the present model)[314] based on the ongoing social, economic, political and ecological discourse and promote understanding of the governance of FMU or forest councils as CPRs as quickly as possible to avoid the destruction of resources that will otherwise ensue. Thus, there is a need to design a forest plan as a social contract or an institutional arrangement between actors to which each of them agrees.[315] In this context actors' active participation and conflict management mechanisms must be aimed for.[316]

The active participation and conflict management mechanisms have already been reviewed by various scholars. Jonsson (2005)[317] showed that these approaches have to be seen as a goal in itself in planning processes. The degree of participation and the target groups envisaged in this paper are shown in Figure 3-1, p.52. This figure helps to think through the process of

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[313] Critics complain that traditional methods do not address all actors' concerns because they:
a) do not provide an adequate forum for representing public interests;
b) exclude the general public in favour of polarised interest groups;
c) do not allow for adequate information exchange between the public and agency professionals (Shannon (1981a,b); Still (1995); Dietz et al. (2003)). Jonsson shows that many natural resource development projects around the world have performed poorly because they failed to take into account the needs, constraints, and practices of local people.
[314] To the traditional or classical model presently still in use.
[315] With the overall aim to simplify the planning outcome implementation.
[316] Stakeholders participation in natural resource management in general raises new questions for forest management planning research, including how to design appropriate mechanisms for organising stakeholders and facilitating collective action (Dietz et al. (2003)).
[317] Jonsson (2005).

aligning levels of influence to a technique and power sharing approach. It highlights that the relationship between actors is not limited to consultative and advisory roles, especially for local communities. Active participation and conflict management is therefore an essential tool in designing any planning process. In fact, this approach in planning is expected to achieve what coercion and subsidies could not, namely to make the Congo Basin tropical forests more productive and sustainable. According to Priscoli (1997), today, the major concern is how actors can agree on a proposed decision. He shows in short that 'we have moved from the idea of educating actors and publics, to also being educated by them, to now mutually deciding with the publics and actors'. Within the context of this paper, active participation is based on Priscoli's (1997) definition[318] and refers to processes that involve a range of actors groups exploring and discussing ideas, values and experiences relating to a planning process (see chapter 3-1, p.52). It is used for such a broad range of activities that without further details of its role in any particular case, referring to participation can be misleading and confusing. In this respect, Holmes/ Scoones (2000)[319] have identified a series of characteristics of the participation process:

a. social interaction (usually face to face, but increasingly practitioners are exploring the potential role of information and communications technology);

b. processes based on language - usually verbal discussion and debate;

c. processes require respect for the different views and positions held by participants;

d. processes have a reflective capacity - designed to encourage participants to evaluate and re-evaluate their own position in relation to the statements made by others;

a) the emergence of mutual understanding and/or a consensus through a process of reasoned dialogue is seen to be of greater value than the quality of the decision that emerges;

b) discussion is encouraged to take a relatively open-ended and unhurried approach to allow time for discussion and learning.

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[318] Priscoli (1997).

[319] Also Priscoli (1997) identifies six goals for participation, conflict management, and consensus building which are the most common. While all are rarely achieved, mixes of these goals may be attained. These include: a) to build credibility with those who will be affected, those who will pay, and those who will use the project. While the point does not need to be elaborated, many recognise that a credibility gap has existed between policy makers and significant segments of the public; b) to identify public concerns and values. There are many techniques that do this in a form that is relatively open and straightforward;

c) to develop consensus among the affected parties, users, and those who pay. In difficult controversies, consensus is rarely achieved, but it is satisfying when it is;

d) to create the greatest number of "unsurprised apathetics." In many cases, not everybody needs or wants to be involved in every issue all of the time. Most people are partially involved, but these people should not be surprised. They should be kept informed, in other words, 'unsurprised;'

e) To produce better decisions. Public involvement can often produce better "technical decisions" than a strictly technically oriented decision process;

f) To enhance democratic practice.

There is a whole range of benefits that can be linked to this approach of active participation and conflict management mechanism. These can be referred to as 'educative' benefits[320]:

a) personal benefits: the inclusion of values and needs of those voices formerly underrepresented in the decision-making process may encourage reflexive behaviour among participants as they try to understand the positions of others, and as a result reflect on their own assumptions and think beyond their own interests.[321]

b) relational benefits: information exchange and a transparent decision-making process can aid in the development of trust in the honesty, integrity and sincerity of other individuals, and confidence in the knowledge, capabilities and authority of individuals/organisations involved in the decision-making process.[322]

c) organisational benefits: the agency can benefit from listening and learning about the values and needs of the participants through scoping ideas and objectives for future projects, or analysing and reviewing existing initiatives.[323]

Commitment to participatory approaches may demand significant changes in the way we think about both the theory and practice of sustainable forest management. Participation implies that actors will work together to set criteria for sustainable management, identify priority constraints, evaluate possible solutions, recommend technologies and policies, and monitor and evaluate impacts[324]. Buttoud[325] highlights three empirical arguments for participatory and conflict management:

a) ethical: in democracy local people have to express their positions and participate in decisions that closely affect their life;

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[320] Button/ Mattson (1999).

[321] The participants can gain more personal benefits if they are given the opportunity to develop, express and explore their points of view through discussion. Through feeling that their views are valued, participants may feel they are a more knowledgeable and active member of society (Studd 2002).

[322] In other words, deliberative processes can help develop social capital, find and build common ground and move from extremes on the one hand, and help reconcile the discontinuities between geographic and jurisdictional boundaries, manage the tension between the technical and political, meet the ethical dimensions of forest management planning and help meet the ethical dimensions of forest management planning as well as meet legal or formal policy requirements and to reach sustainable or durable agreements on the other hand. Social capital can be defined in terms of networks, norms and trust between participants, which improve the capacity of the community to act together (Priscoli (1997); Studd (2002))

[323] This can help the organisation shape its policies and processes to become more reflexive and relevant to local needs, and build trust between agencies and the public. This can also improve public confidence and the perceived legitimacy of their work. Organisational change tends to be hard to link to any particular event, but can be one of the most lasting influences of a participatory effort (Studd (2002)).

[324] Johnson (2001).

[325] Buttoud (1999a, b)

b) pragmatic: in many cases, especially when people are numerous, the punitive system is not effective, and results sometimes in the opposite as is the case in many forest concession areas in Cameroon;

c) administrative: there is a decrease of the role of the administration, and a change in its tasks related to planning decision-making.

The role of the central state is criticised in the framework of the structural adjustment programmes for the national economies, finally participation has become a framework condition for the most important donors in forestry. Also these characteristics of a participatory planning approach are said to facilitate decision implementation by resolving conflicts during the planning process, rather than delaying implementation of completed plans while decisions are reviewed through appeals and adjudication. In a review of procedures for research on rural communities and rural issues Black and his colleagues (2000)[326] identify the following advantages of participative experimentation, learning and action:

a) recognition of the importance of local ways of knowing and drawing upon the accumulated knowledge and experience of the community;[327]

b) support local innovation and adaptation, accommodate and augment diversity and complexity, enhance local capabilities, so it is more likely to generate sustainable processes and practices;[328]

c) consistent with the ethical principle that there should be actor involvement in any research that is likely to have social and financial impact on the community;[329] and

d) encourage community 'ownership' both of problems and solutions[330]

Black and his colleagues (2000) noted however that there are critics of some aspects of participatory methodologies, especially when these methodologies are advocated as the only worthwhile approaches. [331]

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[326] Black et al. (2000 cited by SC 2000).
[327] Cornwall et al. (1993).
[328] Pretty/ Chambers (1993).
[329] Marsh/ Pannell (1998).
[330] Marsh/ Pannell (1998).
[331] For example: a) authors such as Cornwall, Guijt and Welbourn, Scoones and Thompson and Gray, Dunn and Phillips[331] point out that the 'local community' which is urged to control its own research and develop its own solutions to problems is typically made up of people with diverse interests and with different access to resources, including biophysical and financial resources, education, interpersonal skills and social support. Consequently, there are competing conceptions of community needs, depending upon which interest groups and individuals are involved or considered;
b) although valuable knowledge may be developed with local groups, there may be little documentation and dissemination of that knowledge beyond the group. In that case, the accumulation of knowledge is impeded;
c) whereas research and action at a local level may be necessary for the achievement of some social goals, other goals require research and action on a much broader front. Policy-making at regional, state and federal levels needs to be informed by research at an appropriate scale (SC (2000)).

This chapter presented the second part of the IGS which is evolving as an approach or method for collaborative planning of CPRs, known here as active participation and conlict management.[332] It follows the outcomes from the IAD framework discussed in the last section, specifically, the expertise reports, participatory research reports (map potential management activities, needs and wishes of the actors and constraints), the combined planning system working group (CPSWG) establishment from the IAD framework (see Figure 2-3, p.40. It involves the sharing of management responsibility and/or authority of a resource between actors as users of the resource[333]. This approach is expected to lead to improve planning processes as well as it implementation and it appropriation by the actors'groups. This approach also aims to improve the FMP outcomes in terms of economic efficiency, equity and biological sustainability. In this context an implied assumption of this chapter is that the transaction costs of active participation and conflict management in planning are equal to or lower than centrally based forest planning.[334] However, it must be borne in mind that the example of co-management in fisheries has already demonstrated that it is rarely possible to know, a priori, whether the transaction costs of centrally managed fisheries institutions are higher or lower than co-managed institutions according to Abdullah et al. (1998).

In this review, the terms expert based planning or 'government-based planning' and refer to the "pure" planning models or two extreme ends of the spectrum, recognising that these extremes rarely exist in reality and that typically there is some form of intervening arrangement.[335] The new approach here in planning as a collaborative planning approach therefore represents the varying degrees of involvement/interaction of actors. In short, collaborative planning is a placed in the middle between top-down controls in forest planning for efficiency and equity, and a bottom-up approach characterised by local control, self-governance, self-regulation and active participation. It can serve as a mechanism for both FMP and community and economic development by promoting participation of planning actors and the public in actively solving problems and addressing their needs.

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[332] It is believed that collaborative planning will effectively address some of the problems of forest overexploitation; dissipation and redistribution of resource rents; limited community participation and conflicts among the different groups of resource users.

[333] Commitment to participatory approaches may demand significant changes in the way we think about both the theory and practice of sustainable forest management. Participation implies that stakeholders will work together to set criteria for sustainable management, identify priority constraints, evaluate possible solutions, recommend technologies and policies, and monitor and evaluate impacts (e.g.Berkes (1994,2002, 2006)).

[334]based on Abdullah et al. (1998).

[335] based on Berkes (1994,2002, 2006).

This chapter introduced principles and practices of processes to engage actors for consensus building in FMP processes. In fact, the paradigm of active participation and conflict management in forestry is also related to the concept of multifunctional aspects of FMP. Forests produce multiple goods and services for various users with multiple objectives. Therefore, this second part of the IGS, active participation and conflict management mechanisms, may contribute to reconcile the users.[336] The idea promoted here is that actors should have better control of forest land uses and the process may lead to more agreement between actors.[337] To further clarify the range of tools covered by participation and conflict management in FMP, a 'typology' of this second part of the IGS approach (see Figure 2-3, p.40) is outlined below. The approach is an adapted version based on the work of some other scholars.[338] It includes:

a) communication and/or consultation;

b) consensus building process framework (negotiations);

c) agreement;

d) democratic dealing with problems.

The approach depicted in Figure 2-3, p.40 illustrates a possible change in the relationship between forest companies and other actors, particularly local communities, moving from information campaigns to empowerment. As mentioned before there is an increasing emphasis on the active involvement of actors in FMP. This will be discussed further in the following.

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[336] Such a situation is due to the unpredictable behaviour of participants, who may generate four initial conflict situations (Prisoli (1997)):
a) of four situations, the "agree-agree" situation is the easiest and can be managed on an objective basis;
b) the "disagree-agree" situation is generated by insufficient knowledge. In many cases, supplying proper information will solve the conflict, as the opponent is prone to solving the problem. If this is not the case, negotiations to persuade this person to understand or to change beliefs are indispensable;
c) the opposite "agree-disagree" situation is very similar, In this case the opponent agrees with the issue, but is not in favour of the chosen solution: both cases sometime require the additional involvement of mediators;
d) the most complicated situation is the last one: "disagree-disagree", which requires a great deal of negotiating. According to the findings presented in the previous chapter, this study assumed that the situation of concern is one of an agree-agree nature, which will be explored further in the next chapter. In this respect, the result from the consensus building process described below presents two situations in which all agree or in which at least one of the participants disagrees. These are two significantly different situations, which may result either in an enforced decision or in an impasse.
[337] Buttoud (1999a).
[338] Kovac (2002); Studd (2002); Chorfi (2004); FAO (1998); ATIBT (2005a,b, 2007).

4.1 Communication and consultation

Communication and consultation are considered to be the basis for active participation and conflict management for SFM (see Figure 2-3, p.40). They involve the CPSWG on the one side and the public as a whole on the other side. Communication and consultation gives the opportunity to build up confidence between the actors involved in the FMP process. It provides objective information, input and feedback through facts sheets, newsletter, letters, news releases, workshops, websites and surveys, open houses, public meetings, etc. In this frame, FMP requires to take into account the actors perceptions, attitudes, behaviours and tactics, analyse in the IAD framework. However, the lack of adequate data, knowledge and expertise on the ecological, socio-economic, silvicultural and institutional dimensions of the Congo Basin forests affects and influences these actor's perceptions of the resource, masks its importance and potential, and often results in poor management, resource degradation and inappropriate outcomes.[339] Whenever actors or CPSWG members work together in designing the fmp, they have to communicate at two levels at least:

a) Content: CPSWG members communicate about the subject matter, the facts of the case, the information (see Figure 4-1, p.90);[340]

b) Relationship: actors also communicate how much they accept each other, care about each other's needs and problems, and how concerned they are about preserving the relationship. actors' participation involves disseminating information to the actors, and getting their ideas, issues, and concerns (see Figure 4-1, p.90).[341]

Priscoli (1997)[342] highlighted that many conflicts are communication and consultation problems and it may be therefore necessary to employ several different communication strategies to approach these sequentially. Two sources of conflict have been described by him as relationship and data conflicts:

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[339] ITTO (1992); Marjuni (1992); Marjuni (1990).

[340] Public information or education, stakeholders are informed about decisions already made, one way communication (open house, public meetings, public hearings).

[341] Public hearings, two way information exchange, stakeholders begin to enter management planning, joint management actions, may take place without joint jurisdiction over the resource and without negotiation of a contract. Stakeholders are assumed to have some influence on the decisions and techniques, a hearing (one way communication) is not useful for achieving this. The levels of expectation were not met. The point is that not all techniques must provide full influence and power over decisions (see Fig. 2.3). In this case education is promoted through a collective learning process during which all participants acquire and share information and all participants accept responsibility (Margerum (2002)).

[342] Priscoli (1997).

a) relationship conflict: this is conflict rooted in poor communication, misperceptions, duelling egos, personality differences, and stereotypes;[343]

b) data conflict: This conflict results from a lack of key information, contradictory information, or misinformation. It may also involve different views as to which information is important or relevant, different interpretations of the data, or different assessment procedures.[344]

In this context, the starting point of any dialogue intervention should not be one given method, but depend on the needs and challenges involved. This dialogue allows actors to see systemic complexity as well as how attitudes and positions can affect the whole group[345]. The emphasis is on establishing relationships between members within the CPSWG framework which can help lessen many of the problems related to conflict escalation, and can be a forerunner to official negotiations and conflict resolution. By establishing the members' relationships in the CPSWG, stereotypes are broken down, and people come to see the 'enemy' as a real, living, breathing, feeling, caring person, not just an abstract, hostile, evil enemy.[346] Once this change of attitude takes place, mutual understanding and trust can slowly be developed between adversaries. Although the parties may still have divergent interests or unmet needs, they can reach a point of mutual understanding, making it clear that problems must be solved by cooperating, not competing or trying to destroy the other. This communication and consultation action is 'oriented to achieving, sustaining and reviewing consensus and indeed a consensus that rests on the intersubjective recognition of criticisable validity claims'.[347] The theory of communicative action belongs to the set of modern post-Marxist and neo-Marxist theories which represent a critical theory of society. To each degree of the social development, according to Habermas (1981), corresponds a degree of

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[343] This kind of conflict produces strong emotions and often must be addressed before people are able to resolve other forms of conflict. Sometimes this kind of conflict is resolved by increased communication or by getting to know each other better. But in polarised situations, increased communication may actually reinforce misperceptions and stereotypes. In such situations the intervention of a third party is often needed to create an appropriate climate for better communication (Priscoli (1997)).

[344] In a conflict situation, conflicts over data are sometimes hidden because people may break off communication. They do not even know that their arguments are based on a different set of facts. These conflicts are often resolved quickly once communication is re-established and there is an open exchange of perceptions and information. In other situations the information needed may not exist, or the procedures used by the parties to collect or assess information are not compatible. In this situation, resolution may require that the parties agree on a strategy to get the information they need to resolve the issue. There is a tendency among water professionals to define most water conflicts or potential conflicts as data problems. The unspoken assumption often is: "if they only had better information they would understand and agree." However, perfect information could result in understanding the conflict perfectly and there may still be no resolution (Priscoli (1997)).

[345] Hämäläinen & Slotte 2003; Hämäläinen & Siitonen (2004).

[346] Adapted form Priscoli (1997).

[347]Habermas (1981).

understanding social facts (knowledge), moral justification (legitimacy) and legal norms (regulation). If the development of these dimensions is not mutually coordinated, a society is subjected to conflicts, crises and changes[348]. In this communication process arguments are central to the rationality process. It also presupposes that actors are capable of mutual criticism. Variations of arguments to be included within the rational set are: the aesthetic, the therapeutic, and the explicative. The function of this approach is to help the CPSWG with different perspectives to agree on a common problem and a shared commitment to action. Their focus is on overcoming individual and social barriers for shared meanings, values and understanding. Of course, adequate prerequisites must be met. Most of all, it is necessary to abolish compulsion in communication; then it is necessary to develop universal communication ethics and establish adequate democratic procedures among social groups and point out contextual and other conditions as well as assumptions in which the rational discourse can be held.[349] Habermas thinks that free communication can resolve conflicts and crises and achieve legitimacy in modern (capitalist and socialist) society which, among other things, also suffers from the 'legitimacy crisis', meaning that it is faced with the crisis of its own identity, in addition to being overwhelmed with doubts about a variety of ideologies, worldviews, strategies and ways of governing.[350] A characteristic of any genuine dialogue is that participants open themselves to other points of views and accept them as being worthy of consideration. Therefore, in the planning by the CPSWG the use of dialogue is recommendable for both ethical and pragmatic reasons.[351]

The rules of communication and consultation, the skills and the virtues practiced provide aid to participants in overcoming personal, systemic and cultural hindrances to meaningful communication and avoiding undesired but frequent outcomes of joint investigation such as groupthink, as well as defensive and limiting interpersonal reasoning.[352] The methods for communication used should be transparent and participative, enabling rather than controlling. It is important to emphasise the high cultural value of communication, specifically in the case of the Congo Basin region as stated by the OTPIC (2007): 'effective communication with people of different cultures is especially challenging. Cultures provide people with ways of thinking-ways of seeing, hearing, and interpreting the world. Thus the same words can mean

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[348] Habermas (1981); Ljubiša (1999).
[349] Habermas 1981.
[350] Habermas (1981); Ljubiša (1999).
[351] Ethical, because participants involved have the moral, democratic and juridical right to be heard. Pragmatic, because dialogue allows for different alternatives and points of view to thrive and therefore supports good structuring (Habermas (1981)).
[352] Kahneman et al. (1982); Hämäläinen & Siitonen (2004).

different things to people from different cultures, even when they talk the 'same' language. When the languages are different, translation has to be used to communicate, the potential for misunderstandings increases'. Ting-Toomey (1985) describes three ways in which culture interferes with effective cross-cultural understanding. The first is what she calls 'cognitive constraints.' These are the reference frames or world views that provide a backdrop that all new information is compared to or inserted into. Secondly she mentions 'behaviour constraints.' Each culture has its own rules about proper behaviours which affect verbal and nonverbal communication. Whether one looks the other person in the eye or not; whether one says what one means overtly or talks around the issue; how close the people stand to each other when they are talking; all of these and many more are rules of politeness which differ from culture to culture. Ting-Toomey's (1985) third factor is "emotional constraints." Different cultures regulate the display of emotion differently. Some cultures get very emotional when they are debating an issue. They yell, they cry, they exhibit their anger, fear, frustration, and other feelings openly. Other cultures try to keep their emotions hidden, exhibiting or sharing only the 'rational' or factual aspects of the situation. All of these differences tend to lead to communication problems. If the people involved are not aware of the potential for such problems, they are even more likely to fall victim to them, although it takes more than awareness to overcome these problems and communicate effectively across cultures. This kind of dialogue requires a three-step procedure. The nature of the different steps and their role in planning processes are presented in the follwoing. Difficult decision problems can be characterised as defying an optimal, final or objective solution because the actual problem is seen in different ways. For example: The problem is defined differently depending on the person. Information related to the problem is interpreted in various ways. The steps are presented from the facilitators' point of view (see Figure 4-2, p.97) and adapted from the decision structuring system presented by Hämäläinen & Siitonen (2004). This model[353] has to solve the three basic kinds of problems which may be useful for the CPSWG, including:

a) first source for problems are the differences in perception among the parties. Since most conflicts are based on differing interpretations of the facts, it is crucial for all parties to understand the others' viewpoints. The parties should try to put themselves in the others' places.[354]

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[353] Fisher & Ury (1981).
[354] Therefore, parties should not simply assume that their worst fears will become the actions of the other party. Nor should one side blame the other for the problem. Each side should try to make proposals which would also appeal to the other side. The more the parties are involved in the process the more likely they are to support the outcome.

b) emotions are a second source of problems. Negotiation can be a frustrating process. People often react with fear or anger when they feel that their interests are threatened. One approach in dealing with emotions is to acknowledge them, and to try to understand their source.[355]

Based on Sidaway (1998), this paper identifies common elements which may fuel conflicts, i.e. misunderstandings between individuals and organisations, competing interests, and opposing beliefs or values. Sidaway (1998) identified six ways of resolving these conflicts, one of them being the avoidance of the issue. Other solution are:

a) informing actors or CPSWG members of results derived from the IAD framework[356] and introducing communication skills and rules to enable participants to learn from each other and to join forces in order to collectively structure and define the problem. The skills and rules are described below; [357]

b) capacity building as a precondition for quality participation as demonstrated by Yunusova (2005) using the example of Kyrgyzstan. In fact the lack of training of actors will lead to the non-implementation of the agreement so capacity building shows how the interests of less powerful groups can be accommodated in the planning process (see section 4.2 and 4.3);

c) listening and learning - where CPSWG members are offered the opportunity to comment on IAD results as well as the proposed decisions, but are not able to contribute their own ideas to the planning and implement these. At this stage actors proceed to inquire into the planning process and seek a dialogue. In doing so participants define a problem together and refrain from debating and negotiating about which definition or whose points of view are the best or

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[355] The parties must acknowledge the fact that certain emotions are present, even when they do not consider those feelings to be reasonable. Dismissing another's feelings as unreasonable is likely to provoke an even more intense emotional response. The parties must allow the other side to express their emotions. They must not react emotionally to emotional outbursts. Symbolic gestures such as apologies or an expression of sympathy can help to defuse strong emotions. Communication is the third main source of problems. Negotiators may not be speaking to each other, but may simply be grandstanding for their respective constituencies. The parties may not be listening to each other, but may instead be planning their own responses. Even when the parties are speaking to each other and are listening, misunderstandings may occur. To combat these problems, the parties should employ active listening. The listeners should give the speaker their full attention, occasionally summarising the speaker's points to confirm that points made were understood. It is important to remember that understanding the other's case does not mean agreeing with it. Speakers should direct their speech toward the other parties and keep focused on what they are trying to communicate. Each side should avoid blaming or attacking the other, and should speak about themselves.

[356] Participants, expert reports, proposed decisions, incentive structures, etc.

[357] The dialogical skills and rules enable participants to move from conflicting and competitive individual points of view to collaboration (Hämäläinen & Siitonen (2004)). This stage consists of an information campaign which explains the objectives of forest management, the issues, and the accompanying legal framework to all of the beneficiaries (including the employees of the forestry company) and specifies the forestry company's role in the process of forest management, its duties and also the limits of its action, as well as the role of the others actors.. This information campaign is aimed at all beneficiaries and must be organised with and promoted by the forest administration. Broadcasting on rural radio is inexpensive but has a maximum impact within a short period of time as all the villages have a radio receiver.

the soundest, i.e. it is rather a consultation, during which planners ask a group of actors to give their opinions and provide advice on the topics at hand;[358]

d) exchanging: exchanging ideas and views to make the decision together;

e) consultation - offering a number of options, or a draft for negotiations, and asking for feedback. It includes a problem analysis.

These different options cover process-oriented goals such as encouraging social, political and institutional learning (educative), or enabling citizens to develop, express and explore their values and ideals through discussion (conflictual).[359]

Dialogues enhance the so-called Systems Intelligence and enable participants to gain a systemic perspective on the problem (systems thinking), an understanding of how their own interaction and communication affects the whole situation, as well as the means to improve their own interaction and communication.[360] Decision Structuring Dialogues are designed to be used in the early stages of complex group decision-making. This decision structuring dialogue was developed as a method to increase the quality of conversation, develop new perspectives of the problem, and aid mutual understanding especially in participatory approaches to decision-making involving the structuring of problems. The role of the Decision Structuring Dialogue is to contribute to understanding the decision situation and strengthen the participant's confidence in the decision process. This central to the structuring of problems and decisions.[361] Decision Structuring Dialogue is based on elements from both the Socratic and the Bohmian dialogue methods.[362] In this respect the CPSWG makes sure that the influential actors attend the meetings. During this stage, the message to be transmitted includes problems of forest management planning, reasons and effects on the communities'

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[358] Theoretically according to OTPIC (2007) dialogic listening is an alternative to active listening. Dialogic listening has four distinctive characteristics. First, it emphasises conversation as a shared activity. It encourages people to attend to their own views and the other person's views at the same time, while active listening focuses primarily on the other person's views alone. Second, it takes an open-ended, the authors even say 'playful', attitude towards conversation. It demands modesty, humility, trust, and recognition of the opponent as a choice-maker. Third, the parties focus on what is happening between them, not what is going on in the mind of one or the other person. And fourth, dialogic listening focuses on the present, rather than on the future or on the past. In this way, parties can work together to frame the nature of their problem, can come to a new understanding about each other, their relationships, and the options before them. While the same outcomes can occur by using active listening, dialogic listening is more of a joint process, and thus is more likely, the authors argue, to yield a shared understanding of the problem, and potentially a shared solution.

[359] In other words this creates opportunities to build up confidence between the actors involved in the forest planning process and thus enhance awareness in each actor of the essential need to do something to stop conflict.

[360] Hämäläinen & Saarinen (2004); Hämäläinen & Slotte (2003); Hämäläinen & Siitonen (2004).

[361] Belton & Stewart (2002 cited by Hämäläinen & Siitonen (2004)).

[362] Hämäläinen & Siitonen (2004).

development and forest degradation.[363] Additionally the CPSWG analyses and processes the existing information from different sources and key issues highlighted by the outcomes of IAD framework. All these data are combined and cross-checked for exchange and reflection. Exchanging the data gives an idea of each element of the forest planning process. The task of a skilled facilitator of the CPSWG is thus to develop the participants' listening and communications skills to improve their capacity for constructive communication and action. During the dialogue participants are encouraged to internally reflect on how changes in their own attitude and ways of communication alter their perception of the problem.[364]

In this respect, Priscoli (1997) highlights the role of the facilitation or 'procedural assistance' (see Fig. 4.1) in the process of communication and consultation in natural resource management. The facilitator's role is to remove process issues, such as how meetings are run, as a source of dispute by delegating those to a third party impartial to the substantive outcome and acting on behalf of all participants.[365]To define problems and goals, as well as personal and institutional support a preliminary step can be to identify a dispute resolution process. The characteristics of facilitations (see also section 3.1.2) are described by Priscoli (1997) who shows that a meeting involving three or more parties,can be steered by an impartial facilitator who may not influence decisions, but can have influence over how a session is conducted. The facilitator will help create the climate for a collaborative problem-solving process.[366] He will suggest procedural options to help the group work more effectively. Under the following circumstances a facilitator may be useful:

a) conducting public meetings, workshops, or hearings;

b) conducting an information-exchange meeting between disputing parties;

c) conducting a collaborative problem-solving session to resolve an issue or dispute;

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[363] based on Chorfi (2004).

[364] based on Hämäläinen & Siitonen (2004).

[365] A facilitator does not have the authority to make substantive decisions for the group, but will make some decisions about how the meeting is run, and will consult with the group about major decisions in relation to the procedure, e.g. a significant change in agenda or meeting procedures. In those cases the facilitator consults with the group and it is his or her job to identify why a decision is needed, identify options for participants to consider, and, if appropriate, make a recommendation. But the ultimate decision-making authority lies with the participants. It is just more efficient to leave all but the major procedural decisions in the hands of the facilitator. In this paper facilitation is undersood to be an information exchange generating options for problem-solving with the assistance of a third party skilled in meeting leadership in low to medium level conflict situations.

[366] The facilitator supports the dialogical process and refrains from any involvement in matters of content. According to Gregory & Romm 1993 cited by Hämäläinen & Siitonen (2004), critical facilitation consists of creating openness to the discourse. In their approach, they follow this principle in the sense that the facilitator encourages and aids participants in following rules and attaining dialogical skills. According to Hämäläinen & Siitonen (2004) it is the facilitator's role to contribute to the process and the structure of the dialogue. However, the facilitation of the group's dialogical interaction will presumably have an indirect impact on the content and help the parties educate each other about their interests.

d) conducting a team-building or partnering session;

e) conducting inter-agency or multiple-party meetings in which one participant may have more power than the others.[367]

For the CPSWG points b), c), d), and e) are particulary relevant.

The overall outcomes will be a trusting relationship and information exchange between actors forming the basis for negotiations.

A way to measure the power distribution between involved actors is to use the ladder of co-planning as developed by Arnstein as cited by Berkes (1994). As Figure 4-1 shows, the management arrangements vary from situations where one actor has all power and only informs the other resource users of decisions already made, to situation where all the involved actors establish a 'partnership of equal, rung.' In practice, a co-planning arrangement may include several of the rung, and the balance of power among the actors may change over time. Co-planning or collaborative planning is misnamed unless it involves at least the right to participate in making key decisions about how resource should be used, by whom and to what extent.[368] In other word it is important to grand the degree of influence to those involved in order to be able to define the situation as co-management arrangement In other words critical evaluation or the co-management level is important to identify the strengths and weaknesses of collaborative planning approaches and to examine the applicability of the theoretical premises that underlies such approaches. To assess the application of collaborative planning approaches, the following Figure 4-1 developed a set of evaluative criteria, based on a review of the participatory literature. The level of application of co-planning power distribution is used to analyse the issue evaluative criteria. this paper have categorised the criticisms of the traditional public participation process utilized by public land management agencies into five issues and identified a participatory democracy interpretation of each issue. The first issue, efficacy, relates to achieving desired results. The other four representations and access, information exchange and learning, continuity of participation, and decision-making authority relate to the process of achieving those results.

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[367] Priscoli (1997).
[368] Pinkerton (2003).

High

IGS (equal partnership, joint decision-making)
institutionalised and formally recognised, inter-area coordination

Agreeing to decision → Conciliation/mediation
(dispute resolution)

→ Assisted negotiations
Collaboration mediation (local actors are given the opportunity
to participate in developing and implementing plans; input
plays more than just an advisory role (management on
boards)

→ Collaboration mediation

Having an influence on decisions
(consensus seeking, advisory committees)

Facilitation/interactive workshop or co-operation (local
actors start to have input into management, local knowledge
is solicited, community members are involved as assistants
and guides, still limited by management planners
Task Forces/advisory (partnership in decision-making starts,
joint action on common objectives, local actors of advisory role
decision is non binding

Being heard prior to decisions
(formalised people involvement)
Conferences
Public hearings, two way information exchange, locals
begin to enter management plan, joint management actions,
may take place without joint jurisdiction over the resource

Knowledge about decision

Public information or education, local actors are informed
about decisions already made, one way communication
(open house, public meetings, public hearings)

Advertising

→ Lobbying

Low

Degree of participation: Objective: Persuasion-information, dissemination-information, feedbacks from meetings
& shared decision-making based on consultation
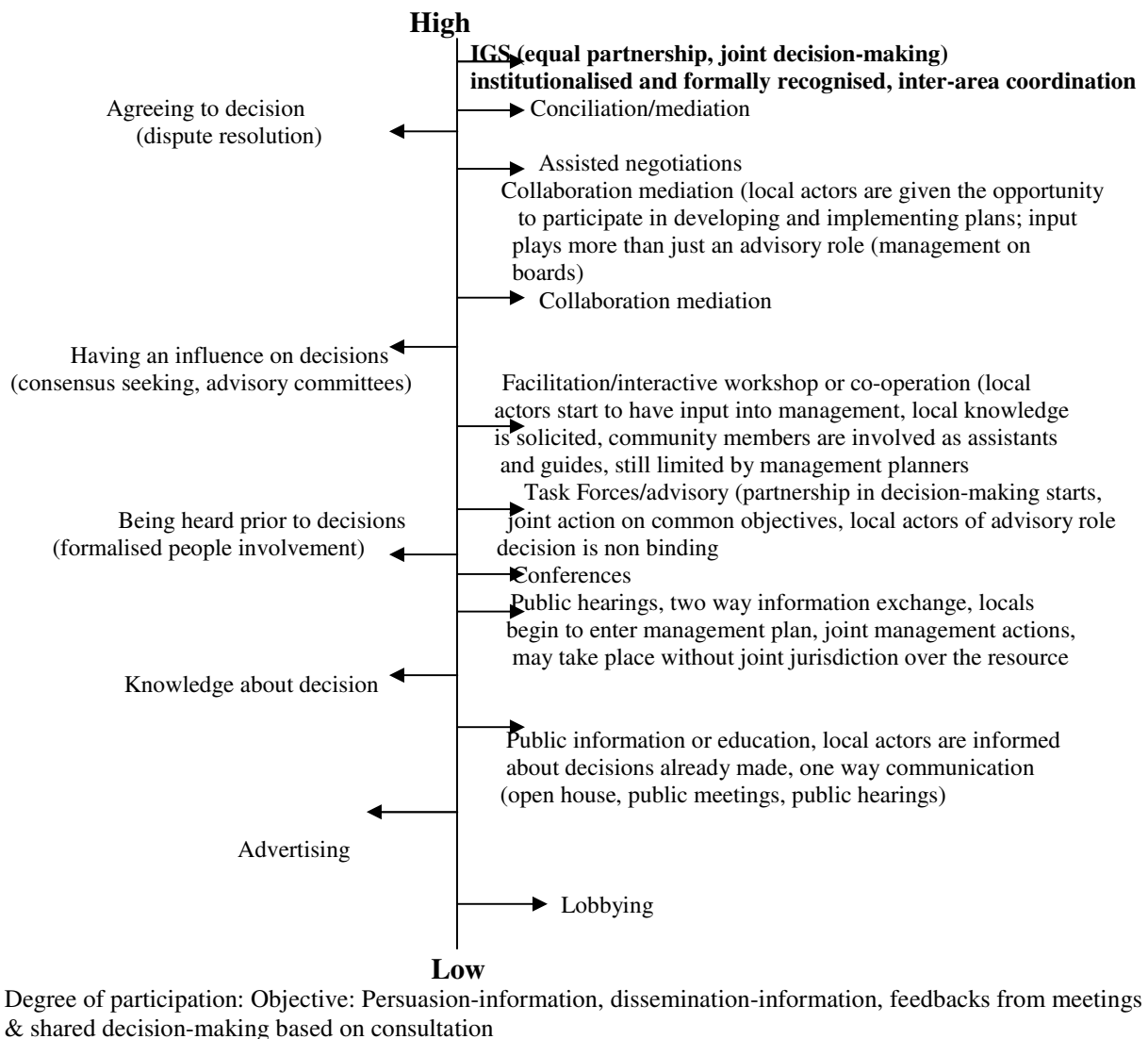
*Figure 4 -1   A hierarchy of participation and conflict management mechanisms with the various
degrees of participation.[369]*

4.2   Consensus building process or joint decisions framework

Consensus building is increasingly carried out through deliberative procedures instead of
more traditional remote processes of surveys and sending out written consultation documents.
In fact, there is a need for a rigorous methodology which is needed for facilitating the process
of deliberation. Consensus building[370] is an approach which incorporates a range of
participatory techniques to help participants identify common grounds and mutually

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[369] Based on Priscoli (1997), Creighton, (1998), Jonsson (2005) and McCay (1998); Abdullahet al. (1998);
Moote (2005); ERI (2006); Tyler (2006).
[370] Also called collaborative problem solving or collaboration or stakeholder dialogue. Consensus building is
also known as 'a collaborative problem solving or stakeholders dialogue to making a decision in which the
interested parties identify common ground and work voluntarily towards finding a mutually acceptable solution
to a contentious problem' (Studd 2002).

beneficial solutions.[371] Consensus building is an essential mediation tool in conflict situations involving many parties. Usually, the conflict also involves multiple and complex issues. While consensus building is probably most often used in environmental disputes, it is applicable to many other kinds of public policy disputes at community, state, and international levels. It represents a general or widespread agreement and usually leads to an outcome that 'every actor involved can live with', as well as unequivocal agreement as a win-win solution.[372] This is a set of processes in which rules are negotiated by which planning decisions are made. The processes adopt a flat or non-hierarchical planning decision structure, involving all actors in defining the problem, devising the methods and creating the solutions. The needs of the different parties and the values underlying these needs are used as the focus of debate.

In regulated rule-making, representatives of actors'groups like CPSWG members have to work within the legal and policy framework, come together to negotiate and reach agreement on the rules within which a regulation is devised. The emphasis is on basing dialogue on the needs of different interests rather than the positions they adopt, and working towards a win-win solution or the 'mutual gains method' so that co-operation among vs is the only way to reach a compromise, and not only gains (or benefits) are additive. The best solution for the community will be when the sum of the individual gains is the most important. Sometimes the "4R" method is also used defining each actor's "4R" (rights, responsibilities, revenues and relations) in the decision-making process. In this case the mediator's first task is to evaluate the level of coherence between the "4R", and deal with all the points showing incoherence.[373] Goals are to reach consensus (consensual) widely supported and well reasoned for, or specify a task which could then support further decision-making (instrumental). The principle could also be applied to situations in which the responsible agency does not want to or is not able to devolve its control or authority to the group. In other words interests or outcomes from the previous step are brought together to decide the best way forward, but plans implemented by forest industries and forest administrations often hold responsibility for that decision. In this respect, deciding together and forming a partnership to implement the decisions also means to share responsibility. However, to be successful mediation is a key issue in the process of consensus building or deliberation[374].

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[371] Fisher & Ury (1981); Fisher et al. (1991); Hämäläinen/ Siitonen (2004).
[372] Studd (2002).
[373] Buttoud (1999b).
[374] Yunusova (2005).

Consensus building is usually carried out by a mediator or a facilitator (see Figure 4-2, p.97) who takes a more active role in brokering negotiations between conflicting parties, through a process of joint and independent meetings of the CPSWG. As mentioned above in the case of the CPS the mediator or the facilitator may be a forest planner or an independent party within the forest management planning frame. Often a team of intermediaries is involved. If disputes exist between two or more parties, the mediator of a consensus building effort moves through a series of steps which will be discussed in the following sections. These include:

a) Negotiations, identification and evaluation of alternative solutions;

b) decision-making, agreement or contract, finalisation and approval of the settlement or the result is subject to planning (Fig. 2.3).
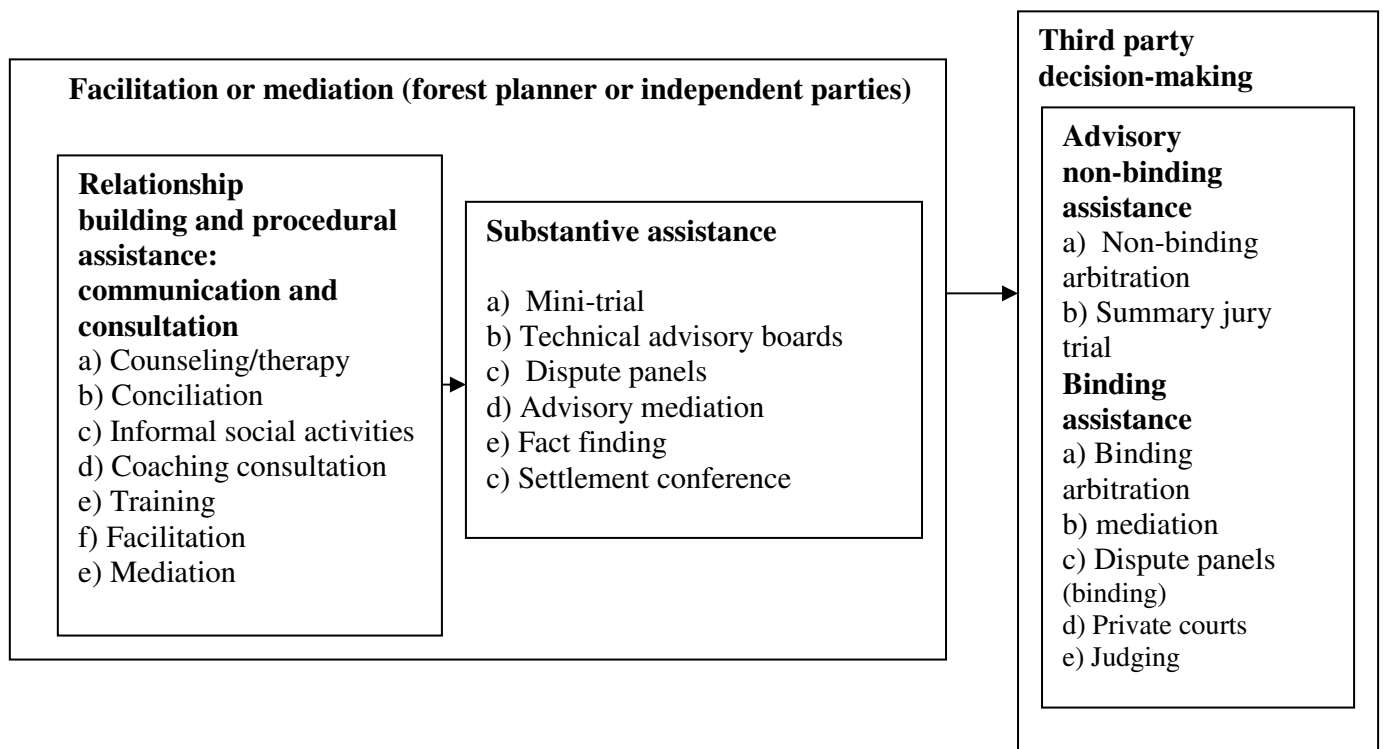
c) democratic dealing with problems

Facilitation or mediation (forest planner or independent parties)

Relationship building and procedural assistance: communication and consultation
a) Counseling/therapy
b) Conciliation
c) Informal social activities
d) Coaching consultation
e) Training
f) Facilitation
e) Mediation

Substantive assistance

a) Mini-trial
b) Technical advisory boards
c) Dispute panels
d) Advisory mediation
e) Fact finding
c) Settlement conference

Third party decision-making

Advisory non-binding assistance
a) Non-binding arbitration
b) Summary jury trial
Binding assistance
a) Binding arbitration
b) mediation
c) Dispute panels (binding)
d) Private courts
e) Judging

Figure 4-2   Interactive and participatory forest planning techniques based on Priscoli[375]

4.2.1   Negotiation

4.2.1.1   Overview on negotiation

Negotiation is one of the most common approaches used to make decisions and manage disputes. It is also the major building block for many other alternative dispute resolution

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[375] Priscoli 1997.

procedures[376]. The goal is to convene interest to reach consensus through facilitating resolution or mediation tools (Figure 4-2, p.97).[377] Negotiation is a fundamental form of dispute resolution. In simplest terms, it involves a discussion between two or more disputants who are trying to resolve their dispute. It may even be done in advance to avoid disputes. Negotiation requires participants to identify issues about which they disagree, educate each other about their needs and interests, generate possible settlement options, and bargain over the terms of the final agreement. Successful negotiations generally result in some kind of exchange or promise being made by the negotiators to each other. The exchange may be tangible[378] or intangible.[379] Negotiation is the principal way that participants redefine an old relationship that is not working to their satisfaction or establish a new relationship where none existed before. Because negotiation is such a common problem-solving process, it is in everyone's interest to become familiar with negotiating dynamics and skills.[380] For example, Lax and Sebenius[381] show that 'when we discuss simple life choices with family members - who does which chores, what family activities are planned for when - we are negotiating. When we bargain over the price of a product or service, we are negotiating. In order, to live or work effectively with others, good negotiation skills are critical.' Lax and Sebenius[382] also argue that negotiation includes both cooperative and competitive elements and that there is tension between these elements. Negotiators or mediators face a dilemma in deciding whether to pursue a cooperative or a competitive strategy. Lax/ Sebenius (1992)[383] suggested strategies to resolve this dilemma encouraging cooperative approaches to creating mutually beneficial outcomes. They highlight that conflict analysits tend to view negotiations either as a matter of cooperating to create values, or as a matter of competing to claim values. In the value-creating view, negotiators work primarily to increase the available resources, to find joint gains or 'win-win' solutions, so all the parties will benefit.[384]

Theoretically negotiation can take several forms. In their best-selling book on negotiation, 'Getting to Yes' Fisher et al. (1991) highlighted three forms of negotiation or bargaining: hard, soft, and principled.

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[376] Priscoli (1997).

[377] Moote (2005);

[378] Such as money, a commitment of time, or a particular behaviour.

[379] Such as an agreement to change an attitude or expectation, or make an apology.

[380] Fisher, Ury & Patton (1991); Priscoli (1997).

[381] Lax & Sebenius (1992).

[382] Lax & Sebenius (1992).

[383] Lax & Sebenius (1992).

[384] Negotiators must act cooperatively, and successful negotiators are open and creative. They share information, communicate clearly, maintain a cooperative attitude and focus on developing common interests. This concept is what they call 'avoiding the dilemma and achieving joint gains'.

a) hard bargaining is adversarial - they argued that 'you assume that your opponent is your enemy and the only way you can win is if he or she loses. So you bargain in a very aggressive, competitive way.'Hard bargaining strategies emphasise results over relationships. Hard bargainers will insist that their demands are met completely and accepted before any agreement is possible. While this approach avoids the need to make concessions, it also reduces the likelihood of successfully negotiating an agreement, and usually harms the relationship with the other party as well;

b) soft bargaining is just the opposite. They showed that 'your relationship with your opponent is so important that you concede much more easily than you should. You get taken advantage of in your effort to please, and while agreement is reached easily, it is seldom a wise one.' Soft bargaining involves the negotiation of positions, rather than interests. However, to avoid the common problems associated with bargaining over positions, the negotiators will take a 'soft' approach: treating the participants as friends, seeking agreement at almost any cost, and offering concessions easily in the interest of preserving (or creating) a good relationship with the other side. Soft bargainers will trust the other side, and will be open and honest about their bottom line;[385]

c) Fisher et al.(1991) suggest a third alternative, which they call 'principled negotiation' which negotiates interests rather than positions. They considered this to be the best alternative to either hard or soft bargaining. This approach asks of negotiators to advocate five fundamental principles to negotiate effectively with each other instead of against each other:

- firstly, separate the people from the problem;

- secondly, negotiate about interests, not positions;

- thirdly, invent options for mutual gain;

- fourthly, insist on objective decision criteria, and

- fifthly, know your best alternative to a negotiated agreement (BATNA).

However, critics of principled negotiation argue that it only works in situations in which win-win outcomes are possible. In unavoidable win-lose conflicts, some critics argue, the techniques of distributive bargaining are superior. Distributive bargaining starts with the assumption that there is only a limited amount of 'stuff' to go around and that the more one side gets, the less the other side will be able to have. This is inherently a competitive situation, which calls for competitive negotiating tactics. While negotiation is the 'pure' form of

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[385] This leaves them vulnerable to hard bargainers who will act competitively–offering few, if any concessions, concealing their bottom line, even making threats. In a negotiation between hard and soft bargainers, the hard bargainers will almost always emerge with a substantially better deal. Yet two hard bargainers competing against each other may end up both losing–hence the advice to follow the principle of hard bargaining in all cases is not wise.

bargaining, it can be enhanced in many ways. Mediation, for example, is assisted negotiation, as is consensus-building.

Based on the three forms of bargaining previously described, bargaining is a type of negotiation in which the buyer and seller of a good or service argue about the price which will be paid and the exact nature of the transaction that will take place, and eventually come to an agreement. In the regions where bargaining is common, only certain transactions are considered appropriate for bargaining. The context determines the appropriateness. For instance, a comfortable and air-conditioned store may not allow bargaining, but a stall in a bazaar or marketplace may. In some areas, the phrase fixed price indicates that bargaining is not allowed. Behavioural theories assume that the type of personality determines the bargaining process and its outcome. A popular behavioural theory distinguishes between hard-liners and soft-liners. Various research papers refer to hard-liners as warriors, while soft-liners are shopkeepers. The game theory argues that bargaining games refer to situations where two or more players must reach agreement regarding how to distribute an object or monetary amount. Each player prefers to reach an agreement in these games, rather than abstain from doing so. Each prefers the kind of agreement most favouring one's own interests. Players facing a bargaining problem can bargain for the objective as a whole at a precise moment in time. The problem can also be divided so that parts of the whole objective become subject to bargaining during different stages. In the case of a classical bargaining problem the result is an agreement reached between all interested parties, or the status quo of the problem. It is clear that studying how individual parties make their decisions is insufficient for predicting what agreement will be reached. However, classical bargaining theory assumes that each participant in a bargaining process will choose between possible agreements, following the conduct predicted by the rational choice model. It is particularly assumed that each player's preferences regarding the possible agreements can be represented by a von Neumann-Morgenstern utility function. Nash (1990)[386] defines a classical bargaining problem as being a set of joint allocations of utility, some of which will correspond to what the players would obtain, if they reached an agreement, and another which represents what they would get if they failed to do so. A bargaining game for two players is defined as a pair (F,d) in whcih F represents the set of possible joint utility allocations (possible agreements), and d is the disagreement point. For the definition of a specific bargaining solution it is a common procedure to follow Nash's proposal, setting out the axioms this solution should satisfy. Some

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[386] Nash (1950 cited by OTPIC (2007)).

of the most frequent axioms used in the building of bargaining solutions are efficiency, symmetry, independence of irrelevant alternatives, scalar invariance, monotonicity, etc.

4.2.1.2   Other negotiations strategies

There are four basic negotiation strategies according to Pruitt (1991). He discussed these basic negotiation strategies as factors which affect the choice of strategy, and how the choice of strategy affects the negotiation's outcome. These strategies include: problem solving, contending, yielding, and inaction. Problem solving seeks to reconcile the parties' aspirations. Problem solving tactics include increasing the availability of resources, compensation, exchanging concessions on low priority issues, minimising the costs of concessions, and creating new mutually beneficial options. The advantage of problem solving strategies is that they yield the best outcomes. Mutually beneficial outcomes are more likely to last, to improve the parties' relationship, and to benefit society as a whole. Problem solving outcomes are likely to benefit all parties when the situation has high integrative potential and the parties have reasonably high aspirations. In addition parties must be firm about their aspirations or goals, but also flexible regarding the means used to reach those goals. The risk of problem solving strategies is that they may backfire if the other side pursues a contentious strategy.

Contention seeks to persuade the other party to agree to a solution that favours one's own interests. This strategy has also been called positional bargaining. Contentious tactics include inflated demands, irrevocable commitments, persuasion, and threats. Contentious strategies alone tend to yield poor outcomes. Contending may escalate into a conflict. When outcomes are finally reached they may be low-level compromises. Contention is often used as an opening strategy, to be replaced by problem solving at a later stage. In such cases the early use of contention may still yield beneficial outcomes. When parties yield they reduce their aspirations. Yielding is an effective way to close negotiations when issues are unimportant and time pressure is high. Yielding can also contribute to a successful problem solving approach. However, outcomes tend to be depressed when both parties use a yielding strategy. The strategy of inaction is usually used to increase time pressure on the other party.

4.2.1.3   Informal and formal negotiation

Negotiation is the first step of the consensus building process. It includes first of all a pre-negotiation which refers to the discussions that precede formal negotiations. The topics

usually include procedural questions: where and when the negotiations will take place, how they will be structured, and what the agenda will be, and so on. Often these decisions are made before the parties actually sit down together. The mediator will discuss the questions with each side individually, will make a proposal, and then will use shuttle diplomacy to reach agreements on process and structure before the parties sit down together. Then, the negotiation process include the formal negotiation. In fact, at the outset the mediator tries to synthesize the results from the previous stages specifically by defining, and often re-defining or 'reframing' the conflict. Facilitators or mediators usually try to get the disputants to reframe the issues in terms of interests, which are usually negotiable, rather than positions, values, or needs, which usually are not. The mediator also usually proposes a process and an agenda, but gets the participants involved in a cooperating enterprise right away as they negotiate the details of the process and agenda. This gives the participants a sense of control of the process. It is also a relatively easy way to give the disputants the sense that they can cooperate and effectively work together. This builds trust between the disputants and the mediator, amongst the disputants, and in relation to the overall process during the consensus building process. Facilitators then get the parties to brainstorm in order to generate ideas for alternative approaches to the problem. Sometimes this is done within the CPSWG; the CPSWG may be subdivided into smaller groups tackling different issues or different aspects of the overall problem. An effort is made to develop new, mutually advantageous approaches, rather than going over the same win-lose approaches that have usually been on the table before.

After the parties generate a list of alternatives, these alternatives are carefully examined to determine the costs and benefits of each (from each party's point of view), and the barriers to implementation. Eventually, the choice is narrowed down to one approach which is fine-tuned, often through a single negotiating text, until all the parties at the table agree. Thus consensus building differs from majority rule decision-making in that everyone involved must agree with the final decision- there is no vote. The negotiators then take the agreement back to their constituencies for approval. This is one of the most difficult steps, as the constituencies have not been involved in the ongoing process, and often have not developed the level of understanding or trust necessary to understand why this is the best possible agreement they can get. Negotiators need to be able to explain exactly why the settlement was drafted as it was, and why it is to the constituencies' benefit to agree to it. Based on Priscoli (1997), the negotiation process is also illustrated in Figure 2-3, p.40.

4.2.2 Agreement or Contract

If all the parties sign the agreement, the last stage is to submit the forest management plan for implementation. This stage is difficult, too, as unforeseen problems inevitably develop. But successful consensus building processes are usually able to surmount such problems because the process improves the opponents' relationship so much that they are able to work together effectively in the future to overcome implementation problems. The methods proposed are based on a model developed by Fisher/ Ury (1983) who name four principles for effectively reaching agreement. They also describe three common obstacles to reaching an agreement and discuss ways to overcome these. Fisher/ Ury (1983) explain that a good agreement is wise and efficient and improves the parties' relationship. Wise agreements satisfy the parties' interests and are fair and lasting. Their goal is to develop a method for reaching good agreements and argue that positional bargaining does not tend to produce good agreements. It is an inefficient means of reaching agreements, and the agreements tend to neglect the parties' interests. It encourages stubbornness and so tends to harm the parties' relationship. Principled negotiation provides a better way of reaching good agreements. Fisher/ Ury's (1983) four principles are:

a) separate the people from the problem;

b) focus on interests rather than positions;

c) generate a variety of options before settling on an agreement; and

d) insist that the agreement will be based on objective criteria.

These principles should be observed at each stage of the negotiation process. The process begins with the analysis of the situation or problem, of the other parties' interests and perceptions, and of the existing options. The next stage is to plan ways of responding to the situation and the other parties. Finally, the parties discuss the problem trying to find a solution on which they can agree. Fisher/ Ury (1983) highlight also that no negotiation method can completely overcome differences in power. However, they suggest ways to protect the weaker party against a poor agreement, and to help the weaker party make the most of their assets. Often negotiators will establish a "bottom line" in an attempt to protect themselves against a poor agreement. The bottom line is what the party anticipates as the worst acceptable outcome. Negotiators decide to reject any proposal below that line prior to the negotiations. Fisher/ Ury (1983) argue against these bottom lines for exactly this reason. Since the bottom line figure is decided upon in advance, the figure may be arbitrary or unrealistic. Having

already committed oneself to a rigid bottom line also inhibits inventiveness in generating options.

Instead, in their view, the weaker party should concentrate on assessing their best alternative to a negotiated agreement. They note that 'the reason you negotiate is to produce something better than the results you can obtain without negotiating.' The weaker party should reject agreements that would leave them worse off than their agreement. Without a clear idea of their agreement a party is simply negotiating blindly. The agreement is also a key to making the most of existing assets. Power in a negotiation comes from the ability to walk away from negotiations. Fisher/ Ury (1983) conclude that 'developing your BATNA thus not only enables you to determine what is a minimally acceptable agreement, it will probably raise that minimum.'[387]

Fisher/ Ury (1983) also show that sometimes parties will use unethical or unpleasant tricks in an attempt to gain an advantage in negotiations such as good guy/bad guy routines, uncomfortable seating, and leaks to the media. The best way to respond to such tricky tactics is to explicitly raise the issue in negotiations, and to engage in principled negotiation to establish procedural ground rules for the negotiation. They identify the general types of tricky tactics. Parties may engage in deliberate deception about the facts, their authority, or their intentions. The best way to protect against being deceived is to seek verification with regard to the other side's claims. It may help to ask them for further clarification, or to put the claim in writing. However, doing so it is very important not to bee seen as calling the other party a liar, which may be interpreted as a personal attack. Another common type of tactic is psychological warfare. If a tricky party uses a stressful environment, the principled party should identify the problematic element and suggest a more comfortable or fair environment. Subtle personal attacks can be weakened simply be recognising them for what they are. Explicitly identifying them to the offending party will often put an end to such attacks.

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[387] Fisher/ Ury (1981) also highlight some tips when the other party will not use principled negotiation. They show that sometimes the other side refuses to budge from their positions, makes personal attacks, seeks only to maximise their own gains, and generally refuses to partake in principled negotiations. Fisher & Ury (1981) describe three approaches to dealing with opponents who are stuck in positional bargaining. First, one side may simply continue to use the principled approach. They point out that this approach is often contagious. Second, the principled party may use "negotiation jujitsu" to bring the other party in line. The key is to refuse to respond in kind to their positional bargaining. When the other side attacks, the principled party should not counter attack, but should deflect the attack back onto the problem. Positional bargainers usually attack either by asserting their position, or by attacking the other side's ideas or people. When they assert their position, respond by asking for the reasons behind that position. When they attack the other side's ideas, the principle party should take it as constructive criticism and invite further feedback and advice. Personal attacks should be recast as attacks on the problem. Generally the principled party should use questions and strategic silences to draw the other party out.

Threats are a way to apply psychological pressure. The principled negotiator should ignore them where possible, or undertake principled negotiations on the use of threats in the proceedings. The last class of trick tactics are positional pressure tactics which attempt to structure negotiations so that only one side can make concessions. The tricky side may refuse to negotiate, hoping to use their entry into negotiations as a bargaining chip, or they may open with extreme demands. The principled negotiator should recognise this as a bargaining tactic, and look into their interests in refusing to negotiate. The situation may escalate and pave the way for further demands for every concession made. The principled negotiator should explicitly identify this tactic, make it known to the participants, and give the parties a chance to consider whether they want to continue negotiations under such conditions. Parties may try to make irrevocable commitments to certain positions, or to make-take-it-or-leave-it offers. The principled party may decline to recognise the commitment or the finality of the offer, instead treating them as proposals or expressed interests. It should be insisted upon evaluating any proposal and there should be no hesitation in relation to pointing out dirty tricks.

Priscoli (1997) also highlights the way to achieve sustainable and durable agreements and settlements. These are:

a) substantive interests: content needs, money, time, goods, or resources;

b) procedural interests: the need for specific types of behaviour or the "way that something is done.";

c) relationship or psychological interests: needs referring to how one feels, how one is treated, or conditions for ongoing relationships. These interests can be seen in Figure 4-3 often called the "satisfaction triangle."

The above interests are represented by the three sides of the triangle. Ideally, any public involvement and conflict management process would be designed to seek point A. This point represents optimal satisfaction with the procedural, psychological, and substantive interests of each of the parties. Frequently, technical professionals, in designing conflict management and public involvement processes, implicitly or subconsciously behave as if they are reaching for point B.
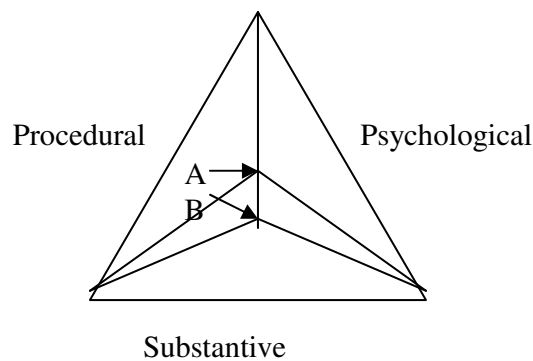
Figure 4-3 Achieving agreements: the satisfaction triangle

Among other fundamentals, co-management implies that each participant at the negotiating table has the right to equal participation. That is, each participant represents an enforceable position, ideally established in law and policy, which can then be formally institutionalised in the co-management process.[388] Point B represents a situation reaching a high level with regard to substantive or content aspects but relatively low levels in relation to psychological and procedural aspects. The point of this triangle is that public involvement and public awareness require an explicit design that seeks to maximise procedural and psychological as well as substantive concerns. Lincoln (1986)[389] shows that"We know we have achieved procedural satisfaction when the parties to the process say they would use the process again. We will speak in a moment of different process techniques that have been developed over the last ten or twelve years. Substantive satisfaction is familiar to us. It is the water resources context with which we spend our lives. We know when we have achieved it. Psychological satisfaction is a little more difficult to conceive. Priscoli (1997) shows one way to understand psychological satisfaction which contains two columns 'Won' and 'Lost'. The words under each column indicate how people may feel when they perceive they have either won or lost in a dispute." 'Satisfaction' means meeting a mix of people's substantive, procedural, and psychological interests.[390] The message of the satisfaction triangle is that the three interests are interdependent. All three must be met to a greater or lesser degree for creating 'satisfaction.' This is why people sometimes refuse solutions that appear to meet their substantive needs, because the solution requires them to lose face or they feel they have not been treated fairly. Or people may say that while they do not disagree with an action, they believe that the

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[388] Campbell (1996).
[389] Lincoln (1986 cited by Priscoli (1997).
[390] Priscoli (1997).

decision-making process was not good because certain procedures previously agreed on were not followed.

After an agreement has been reached, it is necessary to document the agreement to reduce the risk of subsequent misunderstanding. Verbal agreements run the risk of misinterpretation and there can be honest differences in how an agreement is remembered. However, the documentation should be tailored to the complexity of the situation. In case of resolving a contract dispute, the resolution and its justification need to be documented as carefully. In a less formal situation, documentation may consist of recording all the key points on a flipchart, getting the flipchart sheets typed up, and distributing it for everybody's review. If there is a good level of trust between the parties, one person may agree to write up a summary of the agreement and distribute it for review. But if there is still mistrust, it is better to get agreement planning decision making processs while everyone is present. Otherwise, there is a danger that a legitimate misunderstanding may be interpreted as an effort to manipulate the process.

4.2.3   *Democratic dealing with problems or disagreements*

If any one of the groups represented in the consensus building process disagrees at the final stage of the planning decision making processs, they are likely to refuse to sign the agreement and the agreement may well fall apart and the next step of democratically dealing with a problem has to be activated. Fisher & Ury (1983)[391] show that when the other party remains stuck in positional bargaining there are three elements to be considered (see Figure 2-3):

a) one-text approach

 b) assisted dispute resolution, and

c) system intelligent tools;

d) constructive confrontation

4.2.3.1   Alternative dispute resolution (ADR): third party or arbitration

According to Priscoli (1997)[392] ADR is an alternative to adversarial processes such as litigation or administrative processes that result in "win–lose" outcomes, in other words ADR is based in a 'mutual gains' or 'win‑win' model, which calls for interest‑based negotiation

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[391] Fisher & Ury (1981).
[392] See also Priscoli (1998a,b).

and consensus‑based decision-making to develop management options that will benefit all parties. ADR is an effort to arrive at mutually acceptable decisions. It involves structuring the process to minimise the destructive elements and promote productive uses of conflicts. It involves the application of theories, procedures, and skills designed to achieve an agreement that is satisfying and acceptable to all parties. It attempts to achieve a 'win–win'[393] solution through so-called interest-based bargaining, which differs from positional bargaining most people are familiar with. In this respect, interest-based bargaining incorporates parties in a collaborative effort to jointly meet each other's needs and satisfy mutual interests. Rather than moving from positions to counter-positions to a compromise settlement, negotiators pursue a joint problem-solving approach, identifying interests prior to examining specific solutions. After the interests are identified, the negotiators jointly search for a variety of alternatives that may satisfy all interests, rather than arguing for any single position. The parties select a solution from among these mutually generated options. In this approach, the emphasis is on cooperation, meeting mutual needs, and the efforts of the parties to expand the bargaining options so that a wiser decision, with more benefits to all, can be achieved[394]. Advocates of ADR say it allows disputing parties to jointly develop proposals and make decisions that are more innovative and more widely supported than those made through traditional "zero‑sum" negotiations. Collaboration as a form of alternative dispute resolution involves extensive dialogue during which participants' share their values and goals and use a consensus approach to identifying and selecting actions that will benefit everyone.

Priscoli sees some benefits in ADR. These include:

a) the voluntary nature of the process: parties choose to use procedures because they believe that they hold the potential for better settlements than those obtained through litigation or other procedures involving third-party decision-makers. No one is coerced into using these procedures;

b) expedited procedures: since procedures are less formal, the parties are able to negotiate what the procedures will be. This prevents unnecessary delays and expedites the resolution process;

c) non-judicial decisions: decision-making is retained by the parties rather than delegated to a third-party decision-maker. This means that the parties have more control over the outcome and there is greater predictability;

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[393] Identified as gained broad support for ecosystem management among a diversity of actors.
[394] Priscoli (1997); Hahn (2003).

d) control by managers: procedures place decisions in the hands of the people who are in the best position to assess the short and long-term goals of their organisation and the potential positive or negative impacts of any particular settlement option; this means decisions are made by those who best know the needs of their organisations. Third-party decision-making often asks a judge, jury, or arbitrator to make a binding decision regarding an issue about which he or she may not be an expert;

e) confidential procedure: procedures can provide for the same level of confidentiality as is commonly found in settlement conferences. Parties can participate in ADR procedures, explore potential settlement options, and still protect their right to present their best case in court at a later date without fear that data divulged in the procedure will be used against them;

f) greater flexibility in ralion to the terms of the settlement: procedures provide an opportunity for the key decision-makers from each party to craft customised settlements that can better meet their combined interests than a settlement imposed by a third party. Conflict management enables parties to avoid the trap of deciding who is right or who is wrong, and to focus the key decision-makers on the development of workable and acceptable solutions. Procedures also provide greater flexibility in the parameters of the issues under discussion and the scope of possible settlements. Participants can "expand the pie" by developing settlements that address the underlying causes of the dispute, rather than be constrained by a judicial procedure that is limited to making judgments based on narrow points of law,

g) savings in time: in many cases 'time is money' and delayed settlements are extremely costly;, a resolution developed through the use of an ADR procedure may be the best alternative for a timely resolution;

h) cost savings: procedures are generally less expensive than litigation and certainly less than overt violence. The cost of neutrals is typically less than that of attorneys. Limiting the costs of discovery and speeding up the time between filing and settlement can reduce expenses and avoid delay costs. These front-end expenses are often the most costly components of legal costs.

There are certain general principles that underlie the use of conflict management and dispute management tools. These include the following elements: firstly, define the problem, rather than propose solutions or take positions; secondly, view the situation as an opportunity for collaboration, not competition; thirdly, negotiate over interests, not positions; finally, employ effective communication skills. Priscoli and Creighton et al.[395] show that the ADR techniques

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[395] Priscoli 1998a,b; Priscoli 1997.

as presented in this paper represent the aforementioned third-party assistance (see Figure 4-3 and 4-4). In fact most conflict management techniques involve the assistance of a neutral third party, usually someone who is skilled in encouraging the resolution of disputes. The third party may not be a technical expert in the subject matter of the dispute, but someone skilled in creating a process that contributes to resolution. Instead of influencing what the resolution will be, the third party concentrates on structuring how the parties work together, knowing that how people work together can significantly affect whether or not they reach an agreement. Other processes use third parties as technical experts, calling on them to provide neutral counsel to all parties on substantive issues. In other words, techniques range from those that provide process assistance to those that provide counsel on what constitutes an equitable substantive outcome. The major third-party assistance techniques are described below, beginning with those that concentrate on the process, then moving to those with increasing involvement of the third party in the substance of the decision.
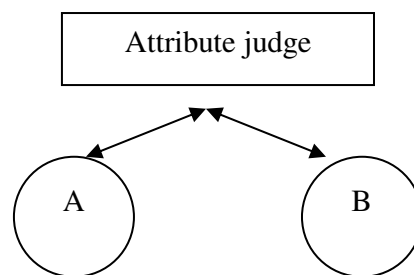

Figure 4-4 Third party decision-maker (A&B are actors in dispute)

This outlook is understandable, but not very reasonable and it is useful, if a technique like mediation is unsuccessful. The arbitration process allows the parties to select an individual or several individuals with a specific expertise in the subject matter of the dispute to review the evidence and listen to the parties and witnesses or other specialists, and render a decision.

4.2.3.2   One-text approach

In this approach a third party should interview each side separately to determine what their underlying interests are. The third party then assembles a list of interests and asks each side for their comments and criticisms of the list. The third party then takes those comments and draws up a proposal. The proposal is given to the parties for comments, redrafted, and returned again for more comments. This process continues until the third party feels that no further improvements can be made. At that point, the parties must decide whether to accept the refined proposal or to abandon negotiations.

4.2.3.3   System intelligent participation process (SIPP)

The system intelligent participation process (SIPP) is a new system for forest planning, which shifts the focus from conflicts into defining a common goal and innovative ways to reach it. The process aims to create self encouraged co-operation and trust among the participants by recognising and avoiding the systemic responses originating from reactive and conflict driven thinking and interactions. It is an essential tool to steer the process away from conflicts towards a positive and collaborative generation of creative solutions to a problem[396]. The idea is to create a shared vision of the desired future to embed different values and interests in the alternative strategies to reach it. The system's intelligent forest management process is seen as a step towards a culture of innovative collaboration, which can produce sustainable decisions[397]. The starting point of SIPP is the acknowledgement of the fact that every decision-making process is systemic which is related to systems thinking, which emphasises seeing and understanding a system as a whole with al its interactions and feedbacks[398]. The actors and participants react to how the process is carried out. The understanding of these reactions and feedback phenomena can be the most important driving forces steering the process. Thus, the proces is likely to be successful in reaching the goals, if all aspects are taken into account, i.e. in a systems intelligent manner. For example, if a situation is initially portrayed as a conflict then the participants are likely to react by choosing an adverse and advocate mode of behaviour. Furthermore, Saarinen & Hämäläinen show that in the systems intelligent approach, participants are directed to work together so that they understand their own impact on the system and the reactions of other people and actors in the system. Hence, a systems intelligent process encourages the participants to look for new perspectives and modes of actions, instead of letting the structures of the system to frame their thinking. The identification of key moments and issues to change the whole system is a crucial part of systems intelligent behaviours[399].

A systems intelligent facilitator creates a systems intelligent participation process. This paper proposes that it includes the following steps, which can also be repeated during the process:

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[396] Watkins & Mohr (2001 cited by Hämäläinen & Siitonen (2004).
[397] Hämäläinen & Siitonen (2004).
[398] Daenzer & Huber (1997); Saarinen & Hämäläinen (2004).
[399] Saarinen & Hämäläinen (2004).

a) see the situation as a system with feedbacks and interactions between the decision-makers and interrelationships of this human system with the dynamic forest ecosystem;

b) understand how visible and invisible structures of a decision-making process can create behaviours. Invisible factors, like fear, may lead the participants to behave in a defensive and adverse way, which blocks creative problem solving. In contrast, trust may release the participants' innovative capacity and encourage them to work together. This includes the initial framing of the situation not as a conflict but as a process of seeking an overall improvement.

c) initiate dialogues between the differnet parties involved. This gives people a voice and builds trust between them. Consider the participants as individuals, not as representatives of different interest groups. Based on the dialogues a shared vision of a common goal should be developed encompassing all benefits related to forest conservation. Acknowledge and evaluate the participants' different experiences in forest conservation, i.e. what kind of values, interests and strategies these stories reflect. Create and share new visions of the common future. Focus on the participants' behaviour, relationships and interactions in addition to the goals, needs and alternatives to achieve them. Treat participants fairly throughout the whole process.

d) create, evaluate and select practices, which support the achievement of the common goal. These practices may include changes in the visible structures, such as timing of harvesting, and invisible structures, such as the ways the participants meet each other. Seek new innovative alternatives beyond the set of immediate alternatives. Small actions may change the whole system.

e) monitor and evaluate the process in terms of visible and invisible results. This refers to the achievement of goals and changes in the invisible structures, such as the participants' relationships. For example, the participants may end up feeling that they share the same decision-making system, which encourages them to work together and makes the results sustainable. Consider also what is not achieved or created.

By means of various one-text approached and SIPP techniques for dispute resolution, there are two possible ways which must be considered: first, the process may result in an agreement and the proposed decision will be integrated into planning, and second the process failed to produce an agreement administrative proceedings or lawsuits may be recommended.

4.2.3.4 'Constructive confrontation' method

This method consists of listing and treating all the various disputable issues expressed by the participants to the process separately. The hypothesis is that for determining the solutions the divergences are more important in negotiation then common positions. The discussions are based on the analysis and positions expressed by the participants on the concrete present situation. The vs first present their views, then discuss them in common meetings with the others participants, and finally negotiate a compromise on each of them. Every item expressed by participants is classified into a typology distinguishing the positions which are commonly considered as always compatible, from those which are supposed to be compatible under certain conditions and the incompatible ones. This method has been proved to have some advantages compared to the other methods. First, it makes it possible to identify all related issues, from all participants, which is important in forestry considering the number of uses and corresponding users. It is based on realities and not only on principles or hypotheses about what the stackholders' interests and behaviours may be. Second, it is the only way to analyse the link between different and opposite uses and users. The involvement of representatives in the discussion is indeed the only means to understand the present balance in power among the actors in forestry. Theoretically it is the only way to achieve a compromise. This method is well adapted to the case of forestry with its numerous users.

5 Conclusions

This working paper has presented a novel approach called IGS to enhance legitimacy and the confidence of actors, as well as the generality and the modularity of planning systems. The IGS consists of two parts. The first part is the IAD framework, mostly focusing on the v analysis and interaction as well as the structuring of incentives. The second part emphasises the active participation and conflict management mechanisms as collaborative planning processes. The IGS approach to planning allows actors groups to come together in a CPSWG to jointly and simultaneously develop each step of a forest management plan. Such a system is typically very time consuming and outcomes are unpredictable, i.e. there are no guarantees for a "successful" outcome or any outcome at all. However, it reduces conflict, increases mutual learning and the vs' trust in the outcome and creates incentives for the implementation. Additionally, it complements the intuitive planning skills of planning experts (top-down effect) with the book-keeping capabilities of automated planning systems. These systems differ in terms of who has authority which, in this case, is the CPSWG and not the forest planner alone. The approach presented emphasised a holistic or illusionist (as opposed to exclusionist which focuses on economics only) approach to forest management planning. The IGS is an interdisciplinary approach. This IGS also address an institutional improvement of the forest management plan design, specifically, the establishment of the CPSWG, the IAD etc. The IGS provides a proposal for securing this collection action between actor on FMU level or forest council level.

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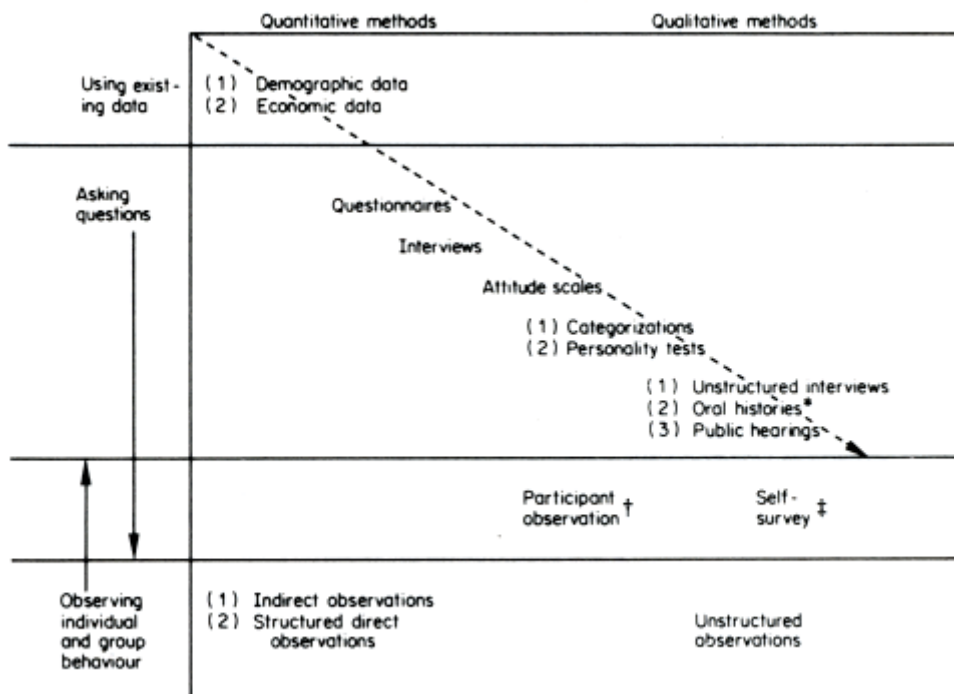
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7 Annex

Figure content (labels):

Quantitative methods   Qualitative methods

Using exist-ing data
(1) Demographic data
(2) Economic data

Asking questions
Questionnaires
Interviews
Attitude scales
(1) Categorizations
(2) Personality tests
(1) Unstructured interviews
(2) Oral histories*
(3) Public hearings

Participant observation †   Self-survey ‡

Observing individual and group behaviour
(1) Indirect observations
(2) Structured direct observations
Unstructured observations

*Oral histories - events are described to interviewers by persons who directly experienced them. The technique is of great value where no documentary material exists. Participant observation - the investigator becomes a member of the community being studied during the survey period. Self-survey - some members of the community being studied are trained to make observations of their own perceptions and behaviour.

Figure 7-1 Socio-economic data collection methods as quoted by SCOPE (1977)