Ahmad Maryudi

The Contesting Aspirations in the Forests

Actors, Interests and Power in Community Forestry in Java, Indonesia

Universitätsdrucke Göttingen

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This research is a part of the comparative research on "**Actors, Interest and Power as Drivers in Community Forestry**" conducted in the Community Forestry Working Group

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- General methodological approach and the formal context of community forestry by Rosan R. Devkota
- Theoretical foundation on power by Axel Bader
- Quantitative approach on power diagnosis by Carsten Schusser

Dedicated to:

Dyah, Adam and Hanifa
The source of strength and inspiration

and

My parents
Once were forest users

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Summary

The research rests on the question why community forestry, despite its promises on tackling forest degradation and the pervasive rural poverty in one single package of program, is yet to meet the high expectation. We observed that the research puzzle cannot be separated from the contexts of political processes and the dynamic of social interactions among the stakeholders involved in community forestry. We saw strong indications that key factors might be identified if we focus on the stakeholders and their power resources. The interplay between the local and external actors appeared to lay the explanation on the research puzzle since scholars hint that local institutions are vulnerable to influences from the more powerful peripheral actors. This suggests us to confidently underline that the powerful external actors are those defining the processes and outcomes of community forestry. We therefore offer a hypothesis that ***the activities and outcomes in community forestry depend mostly on the interests of the powerful external actors***.

We chose community forestry cases in Java (Indonesia), given the strong glimpses on the appropriateness of community forestry program. It is metaphorically said that no forests in the island are untouched by humans, indicating the closeness and the inevitably high magnitude of dependence of poor rural people on the forests. This research employed a mixture of quantitative and qualitative approaches. We started the research by defining power as a social relationship, where a stakeholder alternates the behaviour of another stakeholder without recognizing his/ her will. By expanding "Weber's power against resistance" with "Simon's power without resistance" based on trust, we offer three power elements: i.e. coercion, incentives and trust, with which a stakeholder can build his/ her power over another. Based on the power elements, we developed a quantitative framework on power prognosis which allowed the research to get the first tastes on the most powerful actors within the networks of the selected research cases. The framework benefits us to the extent that it allows us to focus further exploration on the power features through qualitative assessment on only the powerful actors, which we believe are those influencing the processes and the outcomes of the community forests. We further evaluated the outcomes of the community forestry cases, and later tested whether the outcomes are functional to the interests of the powerful stakeholders.

Our research has arrived to a comprehensive understanding that community forestry program in Java has had mixed impacts on the ground. On one hand, signals on the improved forest conditions are strongly emerging. Forest restoration activities have created visual greeneries and have improved the forest stocks while organized forest patrols have boasted the forest security. On the other hand, despite the disparity across cases on the degree of benefits gained, the forest users amass relatively few products and services from the forests. The

research has also come up a conclusive finding that the mixed outcomes of the community forestry, rather than 'created in a vacuum', have been 'intentionally set up' by the contestation of external interests. The powerful interests try to skew the outcomes in their direction, as a result the direct forest users which are supposedly the core actors in the community forestry, have become 'casualty'. We have learnt how few external actors -albeit at different degrees-, have influenced the processes of the community forest cases through different power features or a combination of them. They transmitted their interests in the community forestry activities that eventually defined the outcomes, coherent to the interests.

Overall, there has been a great deal of evidence and strong arguments on the connection of the existing outcomes of the community forests and the influence of the few powerful external stakeholders. Based on such findings, we are confident to argue that our hypothesis that "the activities and outcomes in community forestry depend mostly on the interests of the powerful external actors" were well-validated. Only few external actors prove to heavily influence the processes in community forestry, their interests as a consequence drive the outcomes of the community forests.

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Chapter 1 – The Promises and Realities of Community Forestry

The sun just climbed nearly on top of my head during a cruise in a teak forest in Java when I spotted an old man (**Photo-1.1,** Interviewee 91), at his 60s or 70s I suppose, sat under the shade of a young tree, which appeared only to offer a little help for the rivers of sweat trickling down from his face. It was unbelievably hot and moist in the young monoculture forests, and the sun itself was showing no mercy. A small bundle of dead/ fallen branches and a bamboo-made container full of wild grasses were next to him.

Photo 1. 1 A forest user

He was about leaving the forests when I approached him. He said that he is expecting the harvest of the maize crops planted between the rows of the young trees. For years he has been cultivating agricultural crops in the state forests owing the limited possession of farmland to sustain his daily needs. Asked on other forest products he can obtain from the forests, he pointed me to the firewood and fodder I initially observed. Fodders are not a big deal for him to collect. In addition, he picks up dead-branches for own uses as firewood, but some neighbors of his often send to the markets. He eventually added it has become harder in recent days to collect firewood from the forests; people have to go distances. He offered me a big grind when I asked about getting timber from the forests, assuming that I have already had the answer.

While asking me to look around the severely damaged forests -that not many big trees left-, he rather opts not risking himself, being caught of cutting trees in the state forests. He seemed to leave the place when I asked his knowledge that there is a formal collaboration between the forest authority and a village institution. He shrugged off his shoulders but suggested that he is aware of some meetings between few people of the village with the forest authority and some other people, who he believed do not come from neighboring regions. He then politely asked whether he can leave the place that I cannot afford to hold him for a little longer.

1.1 Research Background

The short story above provides a glance on the interaction between of forest users and the forests during my first fieldwork around the end of 2008 in a state-managed teak forest, which is now jointly managed by the forest administration and a local institution under a scheme of community forestry. Glimpses on the appropriateness of community forestry in the state forests of Java are strong. Java is the country's most densely populated island; it accounts for only six percents of the country's landmass -a quarter of which gazetted as forestland-, but is inhabited by 60% of the country's population (Badan Pusat Statistik 2010). It is often metaphorically said that no forests in the island are untouched by humans (Atmadja 2005), appropriately described 'villages besiege the forests' (Ardana 2000), that indicates the closeness and the inevitably high magnitude of dependence of poor rural people on the forests.

The management of Java's forests can be tracked back to the colonial era, during which the forest administration adopted 'centralistic forest traditions', a total control over the forest, the land and the people (Peluso 1992). The model of forest administration has not changed however, since the traditions were duly inherited by the administration of independent Indonesia that even exerts "more stringent control" as Peluso (1992: 124) argues. Such is also well-noted by Webb (2008: 25) who argues that the notion of centralized control by the state has usually been preceded by a similar model by a colonial power. The adoption of the colonial forest models -in that forests are gazetted for 'permanent forest estates'- was also preceeded with the exclusion of people from the forest areas violating the rights of the people who existed prior the gazettement (Fay and Michon 2003).

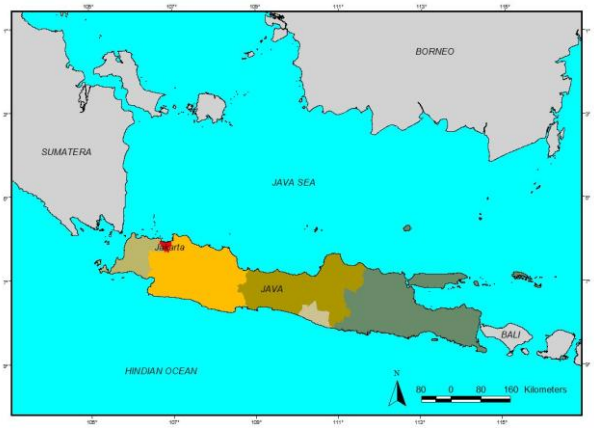


Figure 1. 1 Map of Java

The state's control over the forest resources is drawn in the 1945 National Constitution, principally the Article 33, which stipulates that the natural resources are to be controlled (*dikuasai*) by the state. With the legal framework, the state monopolizes decisions over the uses of the forests, and by default local people are effectively excluded from the forest management (Peluso 1993). Webb (2008: 26) argues that "the immediate or short-term impact of centralization policies was the

that traditional forest users were labeled as illegal and their activities were deemed to the contrary to the objectives of state management, regardless of the state's objectives". Given the tradition of centralistic controls, there has been limited articulation of the involvement of the locals in the forest management in the formal forest policy. Due the strong exclusionary policy (Peluso 1992), access on the forest resource by the people has been duly prevented.

The strong centralistic forest traditions have thus hinted on the little concern on local people. Nonetheless, endevors on community forestry program in the island have been sporadically emerging, principally post 1978 World Forestry Congresss themed '*Forest for People*', that was coincidentally held in the country. The forest administration has since elaborated poverty alleviation in some experimental projects (Sunderlin et al. 1990, Peluso 1992, Simon 1994, Lindayati 2000, Mayers and Vermeulen 2002, Nomura 2008). However, community forestry as a formal program only came to the equation around the end of the 1990s as the forest administration has embarked on forest policy shifts, adopting the more participatory approach on forest management by creating legal and policy frameworks for transferring some degree of authorities and responsibilities in forest management, to institutions of local people.

As experience of countries around the world, community forestry has been placed at the top of priorities of forest policy makers (Gauld 2000) to tackle forest degradation and the pervasive rural poverty in one single package of program. The policy thinking of community forestry is seen as 'radical' (Shivakoti and Ostrom 2008) as the program is to offer effective alternative to state-controlled forest management models (Kellert et al. 2000). The growing interests on community forestry is particularly due the the beliefs on the intimate synergies between local people and their environment (Stevens 1997). The meaningful involvement of the people is believed to contribute to sustainable forest practices and to produce numerous positive outcomes for themselves and the forests (Kellert et al. 2000, Blaikie 2006). Many countries across the globe have since experimented with community forestry; the program is now in the run, albeit at different stages of development (Gilmour et al. 2004, McCarthey 2004). It is estimated that over a tenth of the world's forests are managed accordingly to models of community forestry (Bull and White 2002).

Looking at the implementation of community forestry across the globe, scholars on the commons have been increasingly conclusive that to fostering the potentials on tackling on the dual forest-related problem, the program politically requires genuine power devolution from national to the locals, even at community levels (Ostrom 1999, Acharya 2002, Lachapelle et al. 2004, Nygren 2005) by principally involving local forest users into the common decision making procedures and implementation of forestry activities. World-wide experience however reveals decentralization policy rarely followed by genuine power

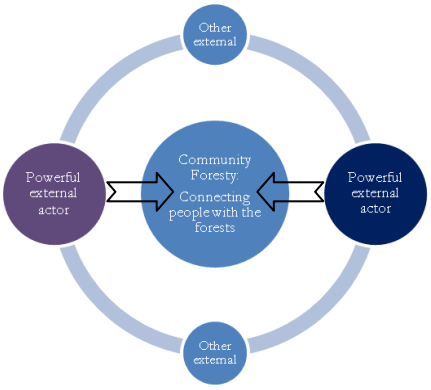
devolution to local forest users (Ribot 2004, 2009, Larson 2005, Blaikie 2006, Dahal and Capastrino 2006). Wollenberg et al (2008) indicate that two major models of decentralization in the forest sector, i.e. co-management and local governance model, only partially serve the official objectives of community forestry program. They notice that co-management is successful to increase the forest cover for biodiversity and timber, and produce some economic benefits to communities. But the options available for local forest users are narrowly limited and the elitisms within the locals have resulted in the captures of most of the benefits by already privileged groups. In addition, in the co-management model, the goals of the central forestry department, rather than local needs and objectives, dominate the forest use. Similarly, they argue that the model of local governance increases funding available for local development but failed to meet public goals in the forest. Instead, excessive self-interest of local groups was observed to dominate, causing degradation of the environment and weak local minorities benefit least. Further, Wollenberg et al. (2008) conclude that none type is yet to met the high expectations on community forestry program.

A pool of scientific research and analysis has indeed been dedicated to explaining the social processes of community forestry. Many of them nonetheless focus on the attributes of local users, such as what constitutes a "community" (Agrawal and Gibson 1999); interactions between forest users and the forests (Moran and Ostrom 2005); institutional settings for community forestry (Pye Smith et al. 1994, Ostrom 1999), power imbalance within intra-community level (Barrow et al. 2002, Thoms 2008) and the "effective" size of local groups for collective action in forest resource management (Agrawal and Gibson, 1999; Gibson et al. 2000). While all of this provides important insights and explains factors that foster models of local forest management, they do not give sufficient answers if political frameworks dominate the activities and outcomes of community forestry. We observed that community is yet to produce the expected outcomes cannot be separated from the contexts of political processes and the dynamic of social interactions amongst the actors involved in community forestry. While findings about the strong influence of the external framework of state and civil society on social choice make clear that internal factors of community forestry are probably might not be the determinant, it is here the paramount of importance to identify key factors which drive the political process and its outcomes.

1.2 Hypothesis

This research rests on the puzzle that community forestry -despite its potentials-, is yet to produce the expected outcomes. Looking at the political dynamics of the program, we see strong indications that key factors might be identified if we focus on the actors and their power resources. Here, we will test whether the actors and their respective power provide for an explanation of the activities and outcomes in community forestry settings. Indeed, scholars are sporadically aware that the interaction of local and external actors is to determine whether a forestry policy program is to produce the expected outcomes (e.g. see Yonariza and Shavakoti 2008: 128); we also see that the interplay between the local and external actors lays the explanation on uncovering the research puzzle. Theorists on the commons (e.g. Ostrom 1990, Gibson et al. 2000, Agrawal 2001, 2002, Gautam and Shivakoti 2005) have also explored the conditions under which institutions of direct users sustainably manage natural resources. They are nonetheless emphasizing less on the power dynamics influencing the locals.

Figure 1. 2 Research concepts



In fact, the local institutions are vulnerable to influences from the more powerful peripheral actors; Edmunds and Wollenberg (2001: 232-233) caution the fragility of local institutions that they can endure power abuses in their interactions with the external actors due their social status. Without leveling the playing field, Edmunds and Wollenberg (2001: 245) further argue that "the powerful groups are likely to exert more influence over the course of negotiations and the implementation of agreements". Peluso (1993: 156) similarly argues that powerful forces operating at national and local levels can distort the ideals of community forestry of the empowerment of local people in forest management. Those all suggest us to confidently underline that the powerful external actors are those defining the processes and outcomes of community forestry. We therefore offer a hypothesis that ***the activities and outcomes in community forestry depend mostly on the interests of the powerful external actors***. Here we need to elucidate that external actors are those who do not belong directly to specific local community forestry.

1.3 Research Objectives

In the attempt to explain how external powerful actors define and influence activities and the outcomes of community forestry, this research has the following subsidiary objectives:

- *Identify the stakeholders and their interests in specific community forests*
  Spectrum of actors with diverse interests might come to the equation of community forestry at different levels. Instead of dealing with all of them, we limit our focus on identifying the actors who are directly involved in particular/ specific community forests of the study cases. Due the specific localities, we assume that the actors of the specific community forests might not be as diverse.

- *Explain how the powerful stakeholders build their power*
  Actors might have different modalities, with which they attempt to build their power. We are interested to explain how the powerful actors build the power and influence the social relationships in the networks of specific community forestry. Seeing in this way, similar actors can use different modalities in other localities since they might have to deal with different actors having different power potentials. Also, we are convinced that powerful actors might need to combine their power features in order to ensure the optimal use of them.

- *Evaluate the outcomes of community forestry*
  We aim to evaluate the outcomes of community forestry accordingly to the formal objectives of the policy program. Further, we will test whether the outcomes confirm the interests of the strong stakeholders within the particular community forestry networks.

- *Validate that the outcomes of the community forestry is of the desire of the powerful stakeholders*
  We believe that only the powerful stakeholders are able to influence the processes in the community forests, which as a logical consequence to produce the outcomes that reflect their interests.

1.4 An Outline of the Research Designs

Before going further, we need to define 'stakeholders' in this research. They refer to "those who have interests in community forestry and the potential to influence the community forestry processes". It is the paramount of importance here to underline the 'potential to influence' of any interested actors, as one perhaps draws genuine interests and is tempted to be involved in particular community forestry. In circumstances in which he or she is not equipped with the potential to influence the community forestry, it is fair here to exlude him/ her from the contexts. The

actors place their interests and eventually wish to gain benefits from the particular community forest. The expectations regarding possible benefits from the community forest can span the entire political, social, economic and ecological scope. The actors might pursue their interests in the community forestry with different modalities/ power elements. They might have different degrees of power as they contend for the same resource (Peluso, et al. 1994); we will focus our analysis on the power in their social relationships (Krott 2005: 14). We will explain the relative position of the actors within the power network and how they impose their power in competition with other actors.

We will further specify the power elements in theoretical terms with making use of recent literature about community forestry, and operationalize the terms and use them for the empirical analysis of the power of individual actors. In identifying the powerful external stakeholders, their interests and power, we follow a combination of quantitative and qualitative approaches with the collection of both primary and secondary data. Once the powerful actors of specific community forests identified through the power diagnosis of quantitative appoaches, we focus on explaining their power features, how they build the power and impose it to the other actors in their networks. Further we will test whether the powerful actors through their power features determine how the particular community forest look like including in producing the outcomes. If the outcomes provide open or hidden benefits for the interests of the powerful actors we consider our hypothesis to be proven. We reiterate our expectations that the most powerful actors will not be situated in the inner circle of the community forestry network, but in the periphery. If this hypothesis can be proven the consequences are rather important. This would imply that for a diagnosis of a community forest, it is most important to look on the external actors whereas the individual management model of internal coordination and decision is of minor significance. Another conclusion would be that strategies for improving community forestry are most effective if they influence the setting of external actors and their network. The specified results of the project will provide a basis to further develop political strategies for community forestry.

1.5 Organization of the Book

- The short introduction in **Chapter 1** lays the foundation of the whole research project with the identification of the *niche* for the research on examining the social relationships of actors both internal and external of community forestry that are thought to be the key elements in defining the activities and the outcomes of the policy program.
- **Chapter 2** will provide the theoretical foundation, how we see power and how it is manifested on the ground. This chapter further defines and explains the power elements with which power is developed.

- The methodological framework of **Chapter 3** will clarify how we approach the research from selecting the research cases, identifying the actors of the networks of the selected cases, indicating their power through quantitative approaches, before further qualitatively assessing their power features. Further, this chapter will justify why we select particular indicators for the evaluations of the outcomes of community forestry
- The next three chapters will be the main part of the book. **Chapter 4** reviews community forestry at the formal contexts**. Chapter 5** outlines the actors identified in the cases' networks and further examines the power features of the powerful actors, how they build the power and exert it over the other actors. **Chapter 6** follows with on the evaluation on the outcomes of community forestry.
- We discuss whether the current outcomes of the community forestry are a function of and manifest the interests of the powerful stakeholders in **Chapter 7** and conclude in **Chapter 8**.

Chapter 2 – Defining Power in Social Interactions

2.1 Exploring the elements of power

This chapter aims to develop a logically and theoretically based and empirically verifiable concept of power. For this purpose, we start with Max Weber's (1964: 152) dictum of power: "*probability that one actor within a social relationship will be in a position to carry out one's own will despite resistance, regardless of the basis on which this probability rests.*" Here, power is the general characteristic of an actor that determines his political standing. The universality of Weber's notion however makes it rather difficult to apply it as an empirical research concept. For the sake of clarity, in this theoretical part, an actor exercising power will be called potentate while those receiving power referred to as subordinate. For Weber, power can only be verified at the presence of resistance and the use of **coercion** to break this resistance. This behavioral concept of power has some inherent weaknesses, as Offe (1977: 10) points out how influence cannot be verified. The better power 'works' in everyday life as he states, the fewer power would be verifiable. Even so, Weber (1972: 28) mentioned the *possibility to* exercise power as an equivalent to power. With the help of the *threat of power,* the behavioral concept avoids Offe's paradox. But the problem lies on how to measure the *threat of power.* Etzioni (1975: 333) proposes ways to examine the actors' resources and instruments. Historic experiences of a use would allow estimating, on what the threat is based on. Thus, power potential becomes verifiable beyond its simple exercise which was first mentioned by Krott (1990:90-93).

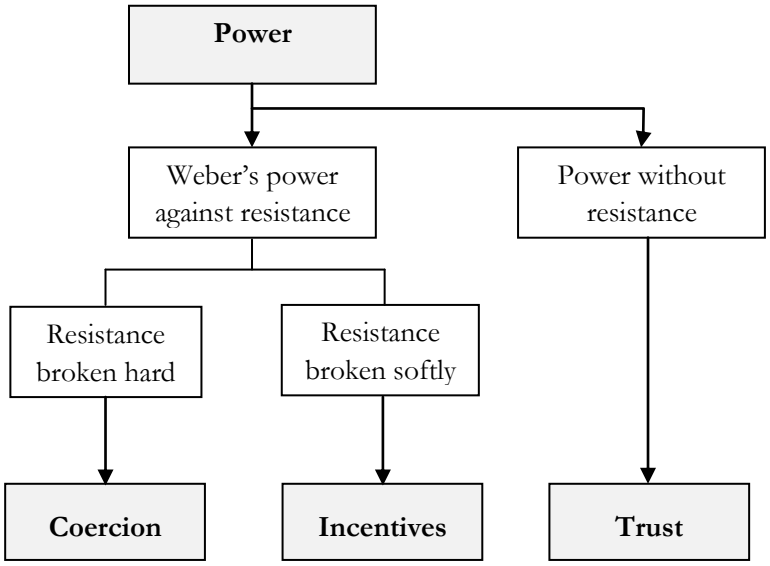
But power can be verified in the behavior of the subordinate, too. A subordinate can appropriate the preferences of a potentate in two ways, through: *unchecked obedience*, which could be called **trust**, or *a congruence of interests* which requires information to accomplish a critical check and autonomous decision making. Only in the case of trust one can find a power process, because here, the subordinate does not decide on his own free will. He/ she follows due to a brief overlook on the potentate's power resources and not to a congruence of interests. The subordinate's anticipatory obedience can be verified empirically at his deciding or failing to decide and the information he possesses (Simon 1981: 155).

But even if the subordinate possesses all relevant information and the right of an autonomous decision making, his behavior can be altered or even steered by a potentate, through **incentives**. Incentives structure the subordinate's list of preferences and provide ways to fulfill them. Through incentives, the potentate 'buys' to a good part the self-interest of the subordinate. The potentate compensates the subordinate's giving-up of his interests. To the subordinate, incentives do more good than an ongoing pursuit of his/ her (former, inherent) interests. This finally leads to a superficial congruence of interests between the

potentate and the subordinate. Under the condition of strong incentives, the amalgamation of the potentate's and the subordinate's interests is a logic consequence because it is a rational choice to the subordinate.

Looking at the considerations above, our concept of power thus states as follows: *"**Power is a social relationship, where stakeholder A alternates the behavior of stakeholder B without recognizing B's will**."* For the research, therefore we will expand Weber's theory on 'power against resistance' (coercion and incentives) with a new form of 'power without resistance' (trust), so that in our concept power consists of the three power elements.

Figure 2. 1 The concept of power, expanding Weber's theory to power without resistance



2.2 Definitions and theoretical roots of the power elements

This section first aims to develop distinct definitions of the three power elements as presented above, based on social science theory. Next, the instruments with which a potentate can carry out coercion, offer incentives and build up trust will be presented. The description of each power element ends with ideas of empirical findings.

2.2.1 Coercion

- **Definition**

Coercion is the practice of forcing another party to behave in an involuntary manner. This can be accomplished through either action or inaction. Coercion may involve the infliction of physical pain and psychological harm, but potentates usually use threats, intimidation, trickery, or some other form of pressure or force. Such actions can be seen as leverage, to make the subordinate act in the potentate's desired way. The threat of further harm may lead to the cooperation or obedience of the subordinate. Philosophers claim coercion is the opposite of freedom[1] and this adds a negative smack to coercion.[2] Thus, coercion is the application of pressure and that is why it is a top-down approach. It includes the ability to demote or to withhold other rewards. The desire for valued rewards or the fear of having them withheld ensures the obedience of the subordinate. As coercion builds resentment and resistance from the subordinate, it tends to be the most obvious but least effective form of power because it demands a load of control. Byman and Waxman (2000) define coercion as "the use of threatened force, including the limited use of actual force to back up the threat, to induce an adversary to behave differently than it otherwise would." To them (Byman and Waxman 2002), "coercion is not destruction. Coercive strategies are most successful, when threats need not even be carried out"; coercion is best understood in opposition to what Thomas Schelling (1966) termed "brute force": "Brute force succeeds when it is used, whereas the power to hurt is most successful when held in reserve. It is the threat of damage or of more damage to come that can make someone yield and comply."

- **Instruments – violence and threat of violence**

The instruments with which a potentate can carry out coercion are violence and threat. With the use of violence, a subordinate's will is broken the hard way. Threat is the perception of potential violence by the subordinate. Popitz (1992) defines violence as the physical or psychological harm done to a subordinate. There is an ongoing discourse among philosophers and psychologists whether violence is a means to an end or an end in itself. Popitz wrote violence is indeed an option of human behavior that is constantly present (ibid.). Analyzing child soldiers in Africa, Elbert et al. (2006) state violence can be an end in itself. Reemtsma (2008) identified three types of violence: *locating violence*, where a potentate expulses a body that got in the way fulfilling his interests (in a war,

[1] Kant, Immanuel: Mutmaßlicher Anfang der Menschengeschichte, A 234: „*Da nun jede Einschränkung der Freiheit durch die Willkür eines andern Zwang heißt…".*

[2] Kant, Immanuel: Was heißt sich im Denken zu orientieren?, A 326: „*Der Freiheit zu denken ist erstlich der bürgerliche Zwang entgegengesetzt.*"

deprivation, murder); *raptive violence*, where a potentate ursurps a subordinate's body to use him for his interests (e.g. all forms of sexual violence), and autotelic *violence* (intrinsically motivated, e.g. torture, bother), where a potentate has no other scope than violence and has a direct pleasure out of it. It is comparable to Schelling's "brute force".

Herbert Marcuse (1966) formulated a force working against the goal of states, to monopolize violence: The counter violence of subordinates and discriminates as a natural right of humans. In opposition to violence – *vis absoluta* (overthrowing force) – a threat is a yielding, a bending force (*vis compulsiva*). Very often, a threat precedes the act of violence, thus presenting the last change for the subordinate to avoid severe consequences. A threat can also be a strategic means. Threat without the possibility of force is a bluff, but this can only be seen afterwards. Therefore in strategy games bluffs and real threats cannot be separated.

- **Empirical finding – resources**

Coercion is not necessarily hard to be seen. One has to look at the instruments and their effects. Direct violence is clearly visible. Therefore, violence as an instrument of coercion is easier to detect than threat because physical harms as a result of violence are obvious, but psychological harms are much more hidden. Generally, potentates seek to hide acts of violence. A threat is hardest to be seen directly. One can witness of it, but generally rumors are one can find. To separate threats from bluffs, one can evaluate the resources of each actor. Resources are the backing of a threat. Resources are material or immaterial goods, among which money, military might, intelligence, strategic positions, and knowledge being the most important. These resources put the potentate in the position to carry out his intentions. Knowing the resources, one can estimate the credibility of a threat.

2.2.2 Incentives

- **Definition**

Incentives are financial or non-financial factors that alternate a subordinate's behavior by motivation.[3] Motivation is the initiation of goal-orientated attitude. It is the expectation of benefits that encourages people to change their behavior. To the subordinate, a behavior according to the potentate's incentives produces more benefits than a pursuit of his former self-interests. In a way, the potentate remunerates the subordinate's abandonment of his preferences. Therefore, incentives are a form of trade-off. Facing a strong incentive structure, even a well

[3] As far as technical support changes the behavior of the subordinate (through motivation) it is part of a power process. But if it enables only to do something it is not part of a power process.

informed subordinate is driven towards the goals of the potentate. The subordinate's old interest is replaced by a new interest, and this process was triggered by the potentate's incentives. Here, information on the side of the subordinate is not a key factor. It can only drive up the price by elevating the trigger point. Fully aware of long distance consequences, a subordinate may feel demotivated and discouraged. He may lose trust and become pessimistic. But this can be balanced easily by raised incentives.

The study of incentive structures is central to economic research activity. This includes individual decision-making and co-operation and competition within larger organizations. Economic analysis claims an extremely high relevance to incentive structures, even explaining the differences between societies and organizations within a society largely depending on the differences in incentive structures faced by individuals involved in these collective efforts. From an economical point of view, incentive structures build on the principal-agent-theory. This theory's basic is the opportunistic behavior of humans, which can only be altered by incentives and sanctions.

- **Instruments – material and moral benefits and rewards**

The instruments with which a potentate can set out incentives are material and moral benefits and rewards. Benefits and rewards motivate a subordinate to act in the potentate's desired way. Material incentives exist, where a subordinate can expect some form of physical reward in exchange for acting in a particular way – especially money and luxury goods. Moral incentives exist, where a particular choice is commonly regarded as the right thing to do, or as particularly admirable. The other way round a moral incentive exists, where a failure to act in a certain way is condemned as indecent. A subordinate acting on a moral incentive can expect a sense of self-esteem, and approval or even admiration from his potentate. A subordinate acting against a moral incentive has to face a sense of guilt, and condemnation or even ostracism.

- **Empirical finding – rules of the game**

Rules of the game are publicly known. Material benefits are to be seen as representative status symbols. The receiver is usually proud and likely to show them. A typical empirical finding would be a form of monetary or material transfer between the potentate and the subordinate. Moral incentives are more problematic. They usually lie hidden under the surface of a society. Rules, manners, forms of personal conduct, rites, customs, and traditions are neither easily understood by a foreigner, nor by an empiric researcher. Therefore moral incentives are hard to be seen directly. One has to look on discourses and means of discipline within a given society, thus discovering moral incentives like brickbats and bouquets, praise and reprimands.

2.2.3 Trust

- **Definition**

Trust is a power element through which the subordinate changes his behavior by accepting the potentate's information. It is the subordinate's confidence to the potentate's good will that makes him behave accordingly. Trust occurs when the subordinate has the reasonable expectation that a cooperative behavior will be beneficial to him. Therefore, trust can be seen as a bet on the future. Once the trust is granted, the subordinate suspends his disbelief, and the possibility of a negative outcome is not considered any more. This means for the subordinate the risk to be vulnerable to the actions of the potentate. But he is in no position to control the situation. To the subordinate, trust reduces the number of contingent possibilities in the future, which means it reduces social complexity. It can be seen as a bottom-up approach of social behavior. Trust is also applicable to relationships between and within social groups such as families, friends, communities, companies, or nations. It is a popular approach to frame the dynamics of inter-group and intra-group interactions (Hardin 2002). But trust is not only a subordinate's possible way of behavior. A potentate can also display trustfulness thus gaining an attractive alternative to control (Möllering 2005).

Since the early eighties, sociologists (of Luhmann 1979, Barber 1983, Giddens 1984, Sztompka 1999) have increasingly been interested with the position and the role of trust in social systems. This has been stimulated by the on-going changes in the society, characterized as late modernity and post-modernity. Sociology tends have two distinct perspectives: *the macro view on social systems*, and *the micro view on individual actors*. All sociological views on trust appear to follow this dichotomy. The systemic role of trust has been discussed, with certain disregard to the psychological complexity of individual trust. Here, a behavioral approach to trust is usually assumed (Coleman 1990). Trust becomes measurable. These systemic approaches have been contrasted (Castelfranchi and Falcone 2000) with micro level studies on social actors and their decision -making process. Here, they could contribute to the understanding of the emergence of trust.

Economics view trust as an explanation for a difference between actual human behavior and the one that can be explained by the individual desire to maximize one's utility. In economic terms, trust can provide an explanation of a difference between Nash equilibrium and Pareto optimum. Such an approach can be applied to individuals and well as societies. Economic theory has demonstrated that the optimum level of trust that a rational economic agent should exhibit in transactions is equal to trustworthiness of the other party. Such a level of trust leads to efficient markets (Zak and Knack 2001). Trusting less lead to the loss of economic opportunities, trusting more leads to unnecessary vulnerabilities and potential exploitation. Here, trusting means relying in transactions. Therefore, trust can be seen as an economic lubricant. It reduces the costs of transactions,

and enables new forms of cooperation. Economists assume that trust generally furthers business activities, and contributes to prosperity of a society (Fukuyama 1996). This observation led to the idea of trust as a form of social capital. Among economists it is widely accepted that trust benefits the economy and that a low level of trust inhibits economic growth (Zak and Knack 2001).

- **Instruments – persuasion, prestige, and reputation**

The instruments with which a potentate can gain trust are persuasion, prestige, and reputation. Persuasion is the force of his actual arguments. A subordinate is usually persuaded by a logic argumentation that is based on shared believes. Prestige is the credibility of a potentate's appearance and reputation is sum of the experiences with the same actor in the past. In classical ages, a prestigious potentate has usually been a war hero. In our post-heroic times, this has been replaced by a problem-solving attitude. A reputated potentate has been positively evaluated by the social entity of subordinates. To them, he/ she has a "good" image, which makes reputation a component of his identity. Based on the subordinates' good experience with the potentate in the past, the potentate seems to be reliable for future interaction. The potentate and his actions seem predictable to the subordinates. Here, reputation is an efficient instrument within social relationships, because a simple addition of experiences renders a complex evaluation/check of possible alternatives in present times unnecessary. It is worthy to note, that this is not directly an unconditional surrender of the subordinate to the potentate. In most cases, a thorough check is just too complex, time-consuming, and expensive and therefore inefficient to the subordinate, so he relies on his and other's experiences.

- **Empirical finding – information, checks, and experiences in the past**

Persuasion can be assumed when on the side of the subordinate information is lacking, the search for information has never been started or abandoned early, and any check of the potentate's will has been omitted. Trust is indicated when a subordinate does not check or is not able to check the potentate's information. If he/ she checks the information and does agree to it, it is no power process because here, both parties have the same interests. The subordinate's experience of the potentate's behavior in the past can be found in the form of press reports, gossip, rumor, or other forms of (unofficial) media. But experiences can also be hidden in memories of subordinates, from where they can be revealed by interviews. Because in economics trust is often conceptualized as reliability in transactions, a high frequency of interaction is a sure sign for trust between the stakeholders. Here, under voluntary conditions, repeated interactions only occur when both parties can rely on each other.

2.2.4 A summary on the power elements

Based on the explanations provided above, we summarize the elements of power, their possible instruments and empirical findings in **Table-2.1.** This table will guide the empirical parts of the research, particularly for **Chapter 5** on the explanation on the power features of the powerful actors in the community forestry networks.

Table 2. 1 Summary of power elements

Power elements	Instruments	Empirical finding
Coercion	Violence, threat	Acts of violence, resources
Incentives	Material benefits	Rules of the game, transfers
	Moral benefits	Discourses, traditions, customs, rules of the game
Trust	Persuasion, prestige, reputation	Information, checks, frequency of interaction, reports, gossip, rumor, experience

2.2.5 Further observations and matters of interest

Our power elements of coercion, incentives and trust can occur simultaneously, thus separation between them is sometimes empirically difficult. We notice and draw this as another focus of interest. Economic coercion arises when a controller of a vital resource uses his advantage to compel a person to do something he would not do if this resource were not monopolized. E.g. the owner of the monopoly water supply can compel a thirsty person to pay an exorbitant price for that water. Wood (2005) argued that with the economic globalization, economic coercion has replaced other forms of coercion such as coercion by military force. Incentives and trust are overlapping, where a trust game is played repeatedly. Here, economic theory has proved that trust is rewarded by mutual trust which would lead to an efficient market and higher transaction rates. Therefore, in a long lasting relationship like in a repetitive game, there is a drive to trust. Further, there might be degrees on how the power elements are effective. "Trust is good, control better" states a well-known dictum attributed to Lenin. Power, no matter on which element it is actually based on, needs a minimum of control. The need for control is minimal in the case of (mutual) trust. The need for control is enhanced in the case incentives or even coercion become modus operandi.

Chapter 3: Research Setting and Methodologies

This research employed a mixture of quantitative and qualitative approaches. The results of the combined use of these two approaches were mutually reinforcing (Bryman 2001:447). Case study approach was used for investigation at the field level. It can be effective in delivering in-depth knowledge of specific inferences (Ragin 1994). Through case study approach, researcher has attempted to learn interactions of community forestry stakeholders through direct field observation from micro to macro-levels and in the course of formal and informal interviews with network stakeholders of selected community forests for this study. The research is mainly based on interviews and secondary information. The primary field data was drawn from interviews, discussions and other information from network partners of each community forest network. The interviews have been complemented by additional records, informal interviews and direct field observations.

Data was formally collected in two stages of a total of six months. The first stage of the research (September-December 2008) focused on the selection of the forest user groups and the application of quantitative power prognosis (details later in this chapter), which rests on the identification of the powerful group of actors in each community forest network. Interviews with the powerful actors were to follow once they were identified through the power prognosis. The following stage (October 2009-December 2009) was conducted in response to fill 'data gaps', which were identified after numerous discussions within the research group as well as external seminars, from which the research concept drew comments and suggestions for further improvement for the operationalization.

3.1 Selection of Community Forest User Groups

As earlier mentioned, the research opted to choose community forestry in Java as the focus given the appropriateness. Still, there are array of cases to select from. Therefore, we needed to ensure that the cases selected represent the variety by which the research can draw more general pictures and stories of community forestry in the island.

3.1.1 Major community forestry models in Java

There no single community forestry models in Java, as the state forests in the island are administered by different forest authorities (**Box-3.1**), each of whom has different interpretations on how to involve forest users in forest activities. This became a major consideration in selecting the research cases.

Box 3. 1 Forest administration in Java, Indonesia

Swiftly after the country's independence, the National Forest Service/ *Djawatan Kehutanan* (the then Ministry of Forestry) was established to administer the forests. This service initially focused on the forest of Java that had been effectively demarcated for timber production by the colonial forest service (Barr et al. 2006). The forest service later handed over the authority over most Java's forests –approximately of three million hectares- to *Perum Perhutani*, a parastatal company. Different from most forest companies in the country, Perhutani is autonomous. It directly controls and uses the forest resources (Campbell 2002a). It can make decisions on forest management, exploitation, marketing as well as protection. One of the main features of such a status is that it can self-approve its management plans including setting the annual cuts. It can also use the profits to support its own functioning, although it has to submit some portion of the profits to the national budgets (Adi et al. 2004).

Its management structure and hierarchy is led by the Board of Directors, who provides the policy directions. The three province-level forest regions, called Unit, are respectively led by a Unit Chief (*Kepala Unit*). While central (and sometimes Unit) offices set policy directions and provide management guidance, forest district administrators *(Administratur*) also play important roles in decision making and day-to-day management tasks at the district level (*Kesatuan Pemangkuan Hutan*/ KPH). To support such roles, the forest district offices are also equipped with a range of forestry specialists and forest police (Peluso 1992, Adi et al. 2004).

A small fraction of Java's forests is nonetheless beyond the management of the company. In 1950, due the establishment of Special Region of Yogyakarta as an autonomous province pursuant to the Act (*Undang-Undang*) No. 3/ 1950, the forest service handed over the authority and management of approximately sixteen thousand hectares of state forestland within the province to the provincial government (the Provincial Forest Service). Forest Services were also established in other regions, at province and district levels, to be accountable to Provincial Governors and district Majors respectively. Unlike the Provincial Forest Service of Yogyakarta which maintains controls over the forests within the province; those in the rest of Java are seconded to Perum Perhutani. Their activities are generally limited forestry issues outside the forest estate which remained wholly under Perum Perhutani's control. The 2001 decentralization law appears to provide them with more influential roles, but in practice their power over forest estate remains limited.

The community forestry models selected in this research are:

- ***Pengelolaan Hutan Bersama Masyarakat/* PHBM community forestry**: It was launched in 2001 as a generic model for the whole forests under the administration of Perum Perhutani. According to the scheme, the company retains the management rights, while seeking partners with forest user groups to manage the forests. Approximately six thousand forest user groups are estimated to have been established (Purba 2008) to implement PHBM community forestry.

- ***Hutan Kemasyarakatan*/ HKm community forest**: It was launched in 1995 to encourage the involvement of forest dwellers in the management of state managed forest land, such as the national parks and other non-gazetted state forestlands (non Perhutani forests), including production areas. Series of ministerial decrees and regulations have been promulgated culminated in the Ministerial Regulation No. P.37/ Menhut-II/ 2007 stipulating the granting of HKm licenses to user groups. Unlike in PHBM, the management rights HKm community foresstry are directly granted to the forest user groups; 42 user groups have been awarded with the management rights/ licenses.

3.1.2 Criteria on case selection

From the different community forestry models and the existing user groups, we further select the cases accordingly to development phases of forest user groups and the values of the community forests. It is observed that the existing forest users groups are at different phases of development. Some have long secured the formal agreement, while some others have been recently established and/or in the process of formal registration. Values of community forestry area are determined by both the potential for production and demands on the forests. Using the short time value only (5 years), we distinguish "poor forest area" and "rich forest area", accordingly to the production potentials and the demands place upon. We consider a community forest as rich if it low short time production potential or has high production potential but low demand, whereas rich community forests on the other hand refer to those having high short time production potential and high demand.

- **Development status:** The initial stage refers to those community forests which have been registered as community forests but not handed over formally to the forest user groups, and the advanced stage refers to those community forests which were formally handed over to the forest user groups at least five years before this study took place.
- **Production potential of outcomes:** Every community forest has either economical, ecological and social outcome potential or a combination of all. The production potential refers to the potential of community forests to produce economic, ecological and social outcomes due to site conditions. Recent forest state conditions (rich or poor) and total forest areas (absolute and relative) are short-term, and soil productivity is a long term indicator used to assess high (rich) and low (poor) production potentials of particular community forests.

We used those as generic criteria for the research group. Nonetheless, we observed that in the management of Java's forests, particularly those allocated for production, focuses on different products that are further elaborated in selecting the research cases.

Table 3. 1 Selected research sites

Forest user group	Village	Forest District (KPH/ Dinas)	Main forest product	Group development	Forest Value
1. PHBM Model					
Wana Bersemi	Gempol	Randublatung	Teak timber	Advanced	High
Wana Jati Wasesa	Gembyungan	Randublatung	Teak timber	Initial	Low
Wana Tani	Temulus	Randublatung	Teak timber	Initial	Low
Karya Lestari	Glandang	Pemalang	Teak timber	Advanced	Low
Rimba Lestari	Burat	Kedu Selatan	Pine resin & timber	Advanced	High
Lestari	Mayungsari	Kedu Selatan	Pine resin & timber	Advanced	Low
Sedyo Rahayu	Sedayu	Kedu Selatan	Pine resin & timber	Initial	High
Bumi Sari Makmur	Benowo	Kedu Selatan	Pine resin & timber	Advanced	High
2. HKm Model					
Sedyo Rukun	Banyusoco	Gunungkidul	Teak timber	Advanced	Low
Sedyo Lestari	Karangasem	Gunungkidul	Teak timber	Advanced	Low

3.2 Power Prognosis – Identification of the most powerful actors

The research group developed a quantitative framework on power prognosis which allowed the research to get the first tastes on the most powerful actors within the networks of the selected research cases. The framework benefits us to the extent that it allows us to focus further exploration on the power features through qualitative assessment on only the powerful actors, which we believe are those influencing the processes and the outcomes of the community forests.

3.2.1 A complete network survey

To identify, the actors within particular community forests, a complete network survey was conducted. For the initial stage, we visited the selected user groups and intervieweed the groups' committee leaders, chairpersons and secretaries or any of these representatives who were available in the site by organized meetings. The first interviews focused on the organizational structure of the groups, general information of their forests and respective tasks of the committee.

Photo 3. 1 Interviews with a group-committee in the forest

Additional to this, they were also intervieweed on their partners from whom they have received information and support. Such allowed us to identify other actors in the networks of the community forests. They were further asked about their evaluations on the power elements of each identified actors. Contacts to the mentioned actors were then made, and similar procedures of interviews were conducted. In this way, through successive refereeing and contacting (snowball effects), we were able to explore the complete networks of each community forest. The process of identifying network partners was supposed to be completed when new partners were no longer mentioned. The aim of a complete network survey was to use the knowledge of the specific actor on others and their power elements.

3.2.2 Power elements

As has been theoretically analysed in Chapter 2, we used three power elements: coercion, trust and incentives as power indicators to identify the group of the most powerful actors in a specific community forestry network. During the complete network survey with each stakeholder, the interviews- started by asking

the actor- on the perception and reasoning the level of trustworthiness toward other network partners. By using, a four-point ordinal scale, each stakeholder was asked to label the degrees of trust towards other network partners, with a score of ***"3" indicating complete trust*** and ***"0" indicating no trust at all***.

Likewise, by using **Yes (1) - No (0)** each of them was also asked that which of the network actor (s) was necessary in securing community forestry activities in order to finally approve some activities or whether giving permissions or directives to carry out in community forestry activities. The aim was to measure the coercive capacity of the network stakeholders in community forestry which were further enriched by using qualitative information. Hence, measuring 'coercion' by quantitative figures was just an indication of actors' coercive capacity in community forestry and mostly depends upon the forest condition and prevailing regulatory framework. A follow-up open-ended question tried to explored actors' reasons for their coerciveness toward other actors.

To measure the contribution of incentives (cash, material and technical support) of the particular actors to their own programs was not an easy task, so we measured incentives only by using a two-point scale, where a value of zero indicated particular stakeholders who did not receive any incentives at all and a value of 1 indicated that incentives that were received from a specified network actor(s). Follow-up questions were asked about the types and extent of incentives received from network partners. The results of power elements through complete network survey were used to identify the powerful group of stakeholders in each network of community forests.

3.2.3 Identifying the powerful actors

After accomplishing the complete network survey, we used the calculation of "individual concentration value-Xi" and "dominance degree-Di" (Jonas and Pfisterer 2010) to identify the powerful group of stakeholders in each network of community forests (The detailed procedures for the calculation presented in **Appendix 4**). The procedures allowed us to distinguish those powerful from the rests.

3.2.4 Strengths and limitations of network analysis

The most important advantage of complete network survey is the mutual verification of the stakeholders in each network of community forestry. In complete network survey, each stakeholder can get equal opportunity to assess the strength and weakness of other stakeholders which determines the power position in the network. Furthermore, the snowball effects of survey were close to reality and not arbitrary or dependent on the personal feeling or observation of each stakeholder (Hasanagas 2004).

Like other research, this study is also not free from weakness. Firstly, the identification of network actors in the first phase of research was totally based on

the decision of individual of specific actor group. Hidden and boundary actors those who could potentially influence community forestry processes informally, but were not mentioned during survey were not included in quantitative power networks. Secondly, the power position of each actor in the network was calculated by the evaluation of power elements by partner actors, however, those stakeholders who have limited contact (suppose only with one or two actors), but in reality they are powerful, can get few measurements which possibly make their position "weak" in the network. In other words, quantitative power analysis was possible only for the actors that were included in the survey and not for hidden and boundary actors.

To overcome problems outlined above, we tried to include hidden and boundary actors in the second stage of the field research (qualitative approach). The quantitative power elements were further checked by qualitative means through interviews and supportive evidences. Triangulation of power position due to specific power elements through quantitative and qualitative approach enhanced the validity of this study. Finally by using quantitative and qualitative information and knowledge of the researcher, a robust model of improved power network of community forestry was developed as a final output of this study. This model was used to examine how interests of the powerful actors determine community forestry outcomes in practice.

3.2.5 Qualitative assessments and further data collection

Interviews by using semi-structured questionnaire to collect information about their sources of power such as: their interaction with group committees and other actors in the network, financial and human resources, as well as legal mandates. At the district levels, the engagement of the forest officials with each other and the communication with the group committees who came at their offices for various reasons, as for example taking permits in their community forests and some other coordination procedures were also under our observation.The interviews addressed to the following: the roles and activities of each actor in a particular community forest, and how they interact, the resources obtained and dedicated and constraints they face in the implementation of the community forest. At the final stage, publications, documents and reports associated with the community forests, e.g. forestry legislation, letters, circulars, orders and policy decisions, work plans and correspondence with other actors are collected. Such documents were later important to explain how the powerful actors build power over the others.

3.2.6 Data Triangulation

Triangulation is used in this study to verify the responses and to reduce the distortion of information from its originality. In social science, triangulation is defined as the cross-checking of various types of data or methods so that diverse viewpoints or standpoints cast light upon a topic (Olsen 2004). Neumann (2002)

stresses that it is important to crosscheck what people say and what they really do. The collected data for the research can be affected by many sources of error during data collection for example socio-political context of the study area, and researchers" own capacity to obtain the information. For example, in the context of this research, it implies that the results from quantitative power network were cross-checked through qualitative power assessment. During field visits, actors were asked about their views on other actors' use of the resource, and how he or she interacts with other stakeholders over the use and management of community forests. Such approaches may be particularly important for certain topics, e.g. a group might not mention their own involvement in illegal activities, but may be willing to talk about the illegal activities of other groups. Likewise, Forest Administration might not expose their involvement in rent seeking from community forests but users' committee leaders and wood contractors can mention the behavior of foresters. So, collected data from primary as well as secondary sources in this study were cross-checked through: formal and informal interviews, direct field observations, and also through the published/unpublished field records and policy documents.

3.3 Evaluation on the outcomes of community forestry

Why evaluating the outcomes of community forestry? For years, the program has been promoted as an innovative and potential approach to improved forest management and conservation strategies with a comprehensive blend of environmental and socioeconomic as well as political objectives. Nonetheless, as we have earlier outline, scholars are increasingly aware that different forms and models interpreting the program are yet to realize its potentials (see Wollenberg et al. 2008). Even when positive outcomes are there, the blend of sustainable goals is rarely materialized since the implementation of the programs often emphasizes particular goals over the others. For instance, expectations on improving the forest condition often lead to trivial concerns on the objectives of providing economic benefits to forest users (Brendler and Carey 1998, Chakraborty 2001, Dev et al. 2003, Malla et al. 2003, Thoms 2006). Also, outcomes of particular objectives are often equivocal accordingly to different localities. The contribution of community forestry to efforts on poverty alleviation is well-shown in some community forests (see Chakraborty 2001, Springate-Baginski and Blaikie 2007), while such is rather inconclusive in other forests (Thoms 2006). Such suggest us to also assess the outcomes of the program, with the focus on community forestry models from Indonesia, aiming to enrich the pool of existing knowledge.

3.3.1 Defining outcomes

In the light of various outcomes community forestry produces for different stakeholders, one might attempt to develop comprehensive methodologies, with which the various outcomes can be covered. For instance, Ritchie et al. (2000) apparently follow such an approach. Nonetheless, evaluations on the outcomes of the program should look back at the idea of community forestry which rests on linking forest resources and the people living in their vicinity. Therefore, the evaluations should ideally be focused on the two components: the people and the forests. For this purpose, we rather sense the logic of Krott and Stefanov (2008) in seeing the importance of limiting the focuses accordingly to the core policy objectives. Here, we focus on the outcomes which are relevant for the analysis based on theory, particularly on those in clear relation to the objectives of community forestry policy covering economic, social and ecological dimensions. In fact, community forestry is very much connected to the following three objectives of: 1) alleviating the poverty of forest users, 2) empowering them, and 3) improving the condition of the forests (among others see Wiersum 1984, Bhattacharya and Basnyat 2003, Charnley and Poe 2007, Karmacharya et al. 2008). The first two objectives are closely linked with the people, while the last is connected to the forest resources.

Before going further, it is important to distinguish between outputs and outcomes. We mean outputs as the activities of community forestry comprising technical, economic and social means, while outcomes we define as the effects of the outputs on the forest and direct forest users on ecological, economic and social dimension. The outcomes are influenced by the decision making of the internal and external stakeholders. In doing the assessment, instead of doing comprehensively, the research focuses on the relevance for sustainability and on the relevance for forest users and stakeholders.

3.3.2 Social outcomes - empowerment of direct forest users

The enthusiasm about community forestry has been linked mainly with the premises that 'forest communities' are closely attached to the surrounding forests, not only for their daily livelihood but also for cultural and even religious lives. So it is believed that their meaningful involvement will provide a sound platform for better forest activities, from which the people should benefit more. In the program, direct forest users are expected play an important role in the common decision making procedures and implementation of forestry activities. To be able to doing so, empowerment of direct forest users is said as the key; in fact the empowerment is one of the core community forestry objectives (see Wiersum 1984, Bhattacharya and Basnyat 2003, Charnley and Poe 2007).

While scholars are generally conclusive on the importance of empowerment in a development intervention, their understanding on empowerment spectrally diverges. Empowerment is often equated with participation and the involvement

of local forest users in forestry activities. Scholars argue that the lack of participation exclude disadvantages groups from decision-making in product distribution (see Brown et al. 2002, Maskey et al. 2007). The definition warrants for support to some extent, particularly looking at the top-down approach had long prevailed, that effectively preventing local participation. Nonetheless, even when the forest users are participating in forestry activities, such does not necessarily mean that they are empowered. In fact, the participatory approach in forest management is often modelled for disempowering some forest users (Agrawal 2001, Sarin 2001). Experiences are widespread pointing out how forest users are only involved in pre-defined activities.

Such suggests that participation approaches alone might be insufficient to empower the disadvantages groups. Bryant and Bailey (1997) give more emphasis on the context of existing socio-political power structure and argue that with imbalance accumulation of power of the stakeholders, empowerment of rural poor is unlikely to be achieved. The idea of forest decentralization of the transfer of powers from central government to lower levels in a political–administrative and territorial hierarchy (Agrawal & Ribot 1999) can be nicely slated in the context of the empowerment of forest users. Timsina (2002) similarly argues that empowerment means the disadvantaged groups gain some power. He notices that the control by vulnerable sections of the society such as poor, women and lower caste groups on the institution and resources is still minimal, and proposes the importance of restructuring power relationship within groups with more representation of the groups in the committee. Knox and Meinzen-Dick (2001) similarly argue that all members of the community group need to have equal participation in management in order for economically disadvantaged groups to receive benefits. Their argument is all of merit, but looking at the various stakeholders involved community forestry, the idea of power relationships should be broadened beyond internal actors but to include with other external actors. Sarin (2001) points out from the case of the village forests joint management in India how those who are seen as powerful in the internal circles are to lose out when facing the Forest Department.

Empowerment is manifested as control over access to the resources (Bryant and Bailey 1997), meaning real empowerment should enable a direct forest user to influence the forest and forest use. Edmunds et al. (2003: 3) remind us that the key rationale for such devolution policies as community forestry is to provide the poor forest users with "better access to forest resources and more self-determination in decisions about local resources". Although some other scholars (e.g. Alden Wily 2001) do not see increased access of users to the forest resources as a determinant for empowerment, looking at numerous forest conflicts -which usually stem from struggles over the access to the resources in that less empowered groups secure limited access to the forest resources-, control over access should be placed at the

prominence of discussing empowerment of forest users. Further, access and control over forest resources are often linked with the extent to which forest users can benefit from the resources (Edmunds et al. 2003, Lachapelle et al. 2004, Mahanty et al. 2006, Larson et al. 2007). Changes in access to the forests are thought to profoundly affect the livelihood of the people (Chomitz 2007). Therefore, secure access and control is seen here as the principal key of empowerment.

Access and control nonetheless come with prerequisites. Larson et al. (2007) argue that tenurial rights are to affect forest access and the security of the access. Having effective property rights over forests, the users exclude others, exploit the resource and allocate access (Ribot 2009). McDermott and Schreckenberg (2009) also focus on the access land and forest products so that community forestry is to bring benefits to the users. Edmunds et al. (2003) emphasize on access and control over decision-making processes, economic assets and livelihood as well as the forest quality. McDermott and Schreckenberg (2009: 160) similarly argue that community forestry needs to expand decision-making space, through which users can gain the desired benefits.

Summarizing their indicators/ variables on access and control, the social outcomes in our study rest on the empowerment of direct forest users, and are measured by the extent they can: 1) access to information on forests, 2) access (inclusion and exclusion) decision making, and 3) access and ownership rights over forest land and resources and to exclude others for using them (**details in Appendix 3**). Such depends on knowledge, information, legal restrictions, technical materials, money and informal access to the forest. In the assessment, we also need to distinguish the empowerment of the individual forest users from the empowerment of their group as they can compete in many ways.

3.3.3 Economic outcomes – poverty alleviation of direct forest users

One of the core goals of community forestry is poverty alleviation of direct forest users (Gilmour et al. 2004). Poverty is pervasive in rural areas in the forest vicinity; forest activities by external stakeholders are seen to have limitedly contributed to improving their livelihood. This is trenchantly criticized by Westoby (1987: 291) that 'its contribution to improving the quality of rural life and raising the welfare of the rural masses has been negligible.' While the problems of the poverty of forest dwellers have been long raised, they persist. Hobley (2007: 4) rhetorically asks "why, if this was so clearly the case 30 years ago, we are still repeating the same mistakes with the same consequences". This suggests us to remain focused on the poverty alleviation in our evaluation on the economic outcomes of community forestry.

It is here not to argue that the evaluations on the linkage between community forestry and poverty alleviation are not there. There has been in fact bulk of literatures on the assessment of economic outcomes of community

forestry. However many of them are not directly related to the evaluation on the roles of community forestry in poverty alleviation while the focus of some others is broaden to include such other aspects as the financial profitability of community forestry. Glasmeier and Farrigan (2005) for instance conclude following their review of 250 cases of community forestry that few reported cases have made a more critical evaluation of poverty. Pangdee et al. (2006) indicate in their similar review many have attempted to focus on economic efficiency, instead of poverty alleviation per se. This is particular when particular community forest institutions attempt to create market-oriented enterprises. The general concern is the exercises on the benefits and the costs of the collective actions by the community-based enterprises (see Mburu and Birner 2002, Sakurai et al. 2004). Antinori and Bray (2005: 1537) further point out how some Mexican community forest enterprises are on the brink of collapse due mismanagement, high costs and inefficient industries. In such circumstances, the roles of community forestry in alleviating the poverty of the forest communities are therefore questioned as efficiency has at the end strong linkages with equity and poverty alleviation (Bardhan 1996). Even there are direct evaluations on poverty; Schreckenberg and Luttrell (2009) argue that they are weak on proving causality. It is particularly true when there are no references on the livelihood status of the people prior the implementation of the community forestry.

It is therefore important to emphasize on poverty alleviation in our evaluation on the economic outcomes of community forestry program. Still, there is spectrum of theories on poverty alleviation in regard to the implementation of community forestry program. At one point poverty alleviation is barely meant to serve a safety-net function (Sunderlin 2006), meeting the meet basic needs of forest users (see Acharya 2002). Dev et al. (2003) also emphasize on the access of poorer households to essential forest products for their subsistence. In fact, in most developing countries, desires on community forestry are markedly linked to meeting basic needs and serving subsistence purposes, and therefore the benefits to the community are achieved by extracting them directly from the forest (Glasmeier and Farrigan 2005). Similarly, attempts to define whether community forestry program has been successful in alleviating the poverty of local people often rest on the definitions of acceptable standard of living (for example see Shackleton et al. 2007). However, this does not necessarily mean the improvement of human well-being. Numerous other scholars equate poverty alleviation with livelihood improvement (see Pandit et al. 2008). Looking at the various products a community forest can produce Oyono (2005) stresses on the wealth and human well-being in the evaluation of economic outcomes. Sunderlin (2006) also refers poverty alleviation to the accumulation of wealth as the uses of forests as source of savings and asset building for permanent increases in income.

Referring to the two extreme, Glasmeier and Farrigan (2005) argue that forest resource uses can embrace conditions ranging from meeting basic needs to full-scale economic development and everything in between. Angelsen and Wunder (2003) summarize that poverty alleviation refer to both poverty reduction (people become better off, in absolute and relative terms) that being lifted out from poverty, and poverty prevention. In this evaluation, we also adopt the two extremes in defining poverty alleviation and refer poverty alleviation as the enhancement of human well-beings of the direct forest users. An optimal result would be lifting direct forest users into a better economic stage.

It is important to define the focus in assessing whether community forestry program has contributed in the efforts of poverty alleviation. Several scholars (e.g. Glasmerier and Farrigan 2005 and Maharjan et al. 2009) argue that community forestry should produce economic benefits for both the society of particular community forest at large and individual users. In their review of numerous community forestry articles, encompassing nearly 70 case studies across the globe, Pangdee et al. (2006) also found that assessment on the economic outcomes appear to cover both.

However, the focus on both society and individual forest users fails to notice that many of society members are not directly connected to the community forests as they do not participate in the forest activities. This means that if they enjoy the economic benefits from the community forests, it is at the expense of direct forest users. For instance, Oyono (2005) finds the money splashed for groups of community forestry in Cameroon never reach the individual users. Similar experiences on the captures of the economic benefits by few elites are widespread (see Dhungana et al. 2007). Bourguignon (2005 in Pandit et al. 2008) further emphasizes that increases in economic benefits should not be confined to few people within the group, instead to include the poorest members of the community. Recently, McDermott and Schreckenberg (2009) insist on community forestry that targeting the poor and the marginalized segments of the community. This all suggests that the focus of poverty alleviation on the community or group levels might not be appropriate for evaluating the contribution of community forestry to efforts on poverty alleviation. This study instead adopts individual user-based approach.

Further, the economic outcomes are here defined as the products and services the household of a direct forest user obtains from the community forest. Mahanty and Guernier (2008) point out how focusing on pure financial benefits might create an incomplete picture on the way community forestry contribute in poverty agenda. Therefore, the economic outcomes will be qualitative analyzed and partly measured in natural units and/or partly in money. The outcomes include forest products (including land-based products of agroforestry), money and community development/ services (**details in Appendix 3**). It is important to

stress that benefits must be evaluated whether they are directly enjoyed by direct forest users. If benefits enjoyed not in their roles as direct forest users, they are not taken into consideration. Any benefits are included in the analysis as long as they are enjoyed and used for the improvement of the well-being of direct forest users.

3.3.4 Ecological outcomes – improved forest condition

Bulk of scientific studies has attempted to define what ecological sustainability is meant, with the focus to the development of the criteria and indicators. There are currently numerous complex sets of indicators on ecological outcomes. Hagan and Whitman (2006) point out the complexity that they say can hinder the process of measuring or monitoring. Further, they argue that the complex indicators might not be very useful to decision making processes. In fact, managers might not see the importance to measure everything of potential interest within an ecosystem of forests (Carignan and Villard 2002). In light of the complexity, many highlight the importance of selecting critical and relevant indicators for the goals of assessments (Carignan and Villard 2002, Failing and Gregory 2003, Hagan and Whitman 2006). Failing and Gregory (2003) further argue that if the fundamental objective is to preserve ecological services and resilience, then appropriate indicators may be related to primary productivity, or to landscape or ecosystem diversity, and so. For operationalization, they argue that one of valuable characteristics of indicators is cost-effective to measure and can be accurately estimated by all personnel (even non specialists) involved in the monitoring.

As previously said, the implementation of community forestry is largely driven by desires to improve the forest condition. Before evaluating whether the program improves the forest conditions, we need to define what we mean with ecological outcomes, which are natural conditions of the community forest. We further specify that the natural conditions are natural requirements for forest growth and biodiversity of the forest. As Rutters et al. (1992) has recommended, forest growth proves as an important indicator to detect changes in forest conditions. Likewise, biodiversity has become a key objective in managing forests (Failing and Gregory 2003).

Nonetheless, it becomes increasingly apparent that both indicators are spectrally interpreted by different actors accordingly to their respective social and political preferences. Sarkar and Margules (2002: 300) point out how *"[t]he biological realm – patterns and processes – is marked by variability and complexity at every level of organization*" so that difficult to pin down a precise sense for policy-making. Therefore, in this evaluation, we are rather interested on the different interpretations on forest growth and biodiversity of community forests. Such suggests us not to directly evaluate or measure the indicators, but to rely on the existing knowledge on biodiversity directly or indirectly measured by different stakeholders. The most important is the knowledge of powerful stakeholders. The

factual measurement of ecological outcomes is an indicator for their importance for a special stakeholder. This means the reliance on the existing studies conducted by any (strong) actors within the respective selected community forests, if any.

Table 3. 2 Assessment procedures on ecological outcomes

Assessment level	Indices
▪ Community-ecosystem (stand) ▪ Population-species	▪ Composition ▪ Structure ▪ Function
	▪ Setting the baseline ▪ Monitoring the changes

Before assessing the ecological outcomes, the research saw the importance of defining the assessment level of particular forests, as Noss (1990) points out, can be done at: regional landscape, community-ecosystem (stand level), population-species, and genetic. In this research, the assessment was conducted at stand-level and at population-species level. The assessment on the respective levels was then conformed to the following indices: composition, structure and function (Franklin et al. 1981 in Noss 1990). In doing the assessment, it is important to determine a particular baseline and to monitor the changes. The research further focuses on: 1) changes in the landscape vegetation coverage, and 2) changes in forest species composition, both of flora and fauna.

Noss (1990) mentions numerous tools for assessing the ecological dimensions of forests, including: aerial photographs/ remote sensing, time-series analysis, physical habitat measures and resource inventories, habitat suitability indices, observations and censuses. We use and compile those as a checklist, which is used to identify any ecological assessments being conducted (**details see Appendix 3**), particularly by any strong actors within the respective selected community forests. While such studies and data might not be sufficiently available, we observe the importance of getting 'first taste' of doing field observations on the respective community forest cases. The forest visuals might help in assessing the forest conditions. Zarnoch et al. (2004) suggest the use of tree crowns as indicators of the health and vigor of forest trees, because they directly affect the composition, processes, and vigor of the understory floral and faunal components of the forest.

Chapter 4 – Community Forestry at Formal Contexts

4.1 Community forestry: concepts and definitions

At global level, many forms of community forestry exist; they are viewed as effective mechanisms for forest management by mobilizing local people through democratic processes of program formulation and decision making. The popularity of community forestry was boosted from the global debate on how to tackle degradation, environmental crisis and rural poverty in one combined approach after 1970s. The concept of community forestry emerged in response partly to the failure of the forest industries development model to lead socio-economic development, and partly to increase the rate of deforestation and forestland degradation in the Third World (Gilmour and Fisher 1991:6). The concept was crystallized in the late 70s with the release of the landmark FAO publication 'Forestry for Local Community Development' (FAO 1978). In the late 70s when international attention began to focus on basic needs and the problem of rural development in the Third World, it was recognized that, in addition to its industrial role, forestry had two important roles to play: i) to provide forest products and trees for rural people who no longer had access to them, and ii) to find ways to increase the benefits of forest resources to local people who lived in or near forests (Gilmour and Fisher 1991:6). The legitimatization of the concept was also boosted by the adoption of 'Forestry for People' as the theme for the Eighth World Forestry Congress in Jakarta in 1978 under Westoby's personal prompt (Leslie 1987).

Similar to the industrial forestry model, the concept of community forestry spread rapidly and gained easy acceptance (Pulhin 1996:20). This was partly due to the realization of policies promoting industrialization (e.g. Indonesia) and privatization (e.g. in Nepal) were not effectively attacking the problems of rural poverty and forest degradation (Kirchhofer and Mercer 1984). The concept also fitted with political considerations of the time. It matched almost perfectly with the political rhetoric on redistributive justice and poverty alleviation, which were advanced by development institutions like World Bank. Moreover, community forestry supported people-centered or community-centered ideologies that became fashionable in developing countries in 1980s (Pulhin 1996:20). By the 1980s, the concept of community forestry became firmly entrenched with forest policy of many developing countries (Gilmour and Fisher 1991:8). Studies reveal that a growing number of communities in several developing and developed countries are attempting to gain greater control over their forest resources. To address this issue, national policies are being developed worldwide to re-engage communities in forest management decision-making (Roberts and Gautam 2003). One of the most compelling reasons for states to foster participatory management approaches

is that they have not been able to police forest effectively (Klooster 2000). As a result, nowadays nearly every country around the globe applies its interpretations of community forestry (McCarthey 2004).

The growing interests on community forestry stem from the beliefs of the intimate synergies between local people and their environment (Stevens 1997). The concept of community forestry is founded on the recognition of interdependency between rural people and forests. The basic premise is that people's meaningful role in decisions affecting surrounding forests, can achieve improved socio-economic well-being and ecological sustainability (Shrestha 2005). Since its inception the concept has been participatory and directed towards rural needs, in particular- the needs of the poor (Arnold 2001). The participatory approach of community forestry is considered to produce increasing benefits for the local community, to make use of local knowledge, to encourage voluntary compliance, to trigger innovation and to contribute to sustainable forestry comprising economic, social and ecological benefits (Kellert et al. 2000). The distinguishing feature of the concept is its attempt to build active participation of the population, with the external involvement having a supportive rather than management nature (Arnold 1991). It is also assumed that the democratic process of decision making gives local forest users a sense of ownership concerning the protection and utilization of the forest (Agrawal 2002).

An increasing number of studies, highlighted that devolved model of forest management to local communities could be an alternative model of 'centralized control' or 'privatization' for overcoming the tragedy of the commons (Ostrom 1990, Baland and Platteau 1996, Agrawal 2002, Kumar and Kant 2005, Adhikari et al. 2007, Pagdee et al. 2006) and concluded that forest management by local people is possible. Over the years, together with the discourse of emphasizing local people's 'rights' of access to resources and to the forest benefits for their subsistence, this right-based participation approach has supported the promotion of participatory forestry (Nomura 2008:167) and participatory approach in forestry has been a near-universal conclusion of international forest policy initiatives (Brown et al. 2002). Recently, the community forestry debate is noticed to have significantly broadened its agenda. Community forestry stakeholders now focus their attention on the reform of the national and international policy frameworks that constrain or make possible community forestry to deliver ideas, resources, and practical advice to foresters and communities (Colchester et al. 2003).

4.1.1 Defining community forestry

Community forestry, as a representation of different forms and practices in forestry issues, still notice that debates continue over what defines community forestry (e.g. Brendler and Carey 1998). It is described by using similar terms such as participatory forestry, social forestry, urban forestry, model forestry, collaborative forestry and joint forest management. Definitions and terms for

community forestry abound in the literature, and the forms it takes on the ground vary widely (Charnley and Poe 2007:303). There is nothing wrong with diversity as a concept more or less it is the same across the world. However, a lack of consensus on what we mean by community forestry causes confusion, which often emerges because there is significant misunderstanding of the basic elements: the community, forest and forestry (Shrestha 2005).

Over the years, community forestry has been explained both in scientific and practical discourses. Significant scholars assess community forestry worldwide (e.g. Shackleton et al. 2002, Pagdee et al. 2006, Thompson et al. 2005, Wily 2005, Poffenberger 2006, McDermott and Schrekenberg 2009), review concepts and definitions, and even relate community forestry to broader discourses such as neo-liberalism (McCarthy 2006). Looking back on the history of community forestry development, at the time of the World Forestry Congress in Jakarta in 1978 it was seen very broadly as 'any situation that intimately involves local people in forestry activity' (FAO 1978). Although, this definition clearly distinguishes community forestry from 'centralized management', it fails to speak clearly to three issues: 1) how that 'intimate involvement' is or can be structured - who has ultimate decision-making authority; 2) representation - who is involved locally and how are they selected; and 3) equity - who pays and who benefits (Duinker et al. 1994).

Later in 1985, Shepherd (p.317) defined community forestry as "any form of forestry activity undertaken specifically and principally to provide communal benefits to the people living in villages or small communities in the vicinity of the forest area which involves them directly in its management". As the issue of control connects community forestry with the political processes by which the local forest users are empowered to control the use and management of forests on which they depend, during 90s, Gilmour and Fisher tried to shift the focus of community forestry solely from participatory to livelihoods based forestry and linked it as an integral part of rural farming system, where they defined community forestry as "…*the control and management of forest resources by the rural people who use them especially for domestic purposes and as an integral part of their farming systems*" (Gilmour and Fisher 1991). Further elaboration of community forestry was done by Brendler and Carey (1998), they termed community forestry as 'another brand of forestry' which intended to benefit local communities through managing forests. Subsequently in 1996, Marry Hobley's definition on community forestry highlighted as a 'partnership' approach with the government, and in a similar line, Krogman and Beckley (2002) infer community forestry as an entity that has an explicit mandate and legal decision-making authority to manage a given forest for the benefits of the community.

Box 4. 1 Three attributes of community forestry

Residents have access to the land and its resources: Community forestry is deeply concerned with how benefits from forest resources, including timber and non-timber products, jobs and opportunities for value-added processing, are distributed. Community forestry seeks to ensure that local people have access to a portion of the benefits flowing from nearby forests.

Residents participate in decisions concerning the forest: Recognizing that neighboring communities stand to suffer most from resource degradation, community forestry aims to provide local people with the meaningful role in forest decision making.

The community begins by protecting and restoring the forest: In the developing world, community forestry programs have focused on areas where the balance between subsistence cultures and the surrounding forests has been upset by resource depletion and resulting social decline; in such places, the first job is conservation and restoration.

Source: Brendler and Carey (1996)

Community forestry is not merely only about trees and its silvicultural operation, it is also about people and their access to and benefits derived from the forests. Thus, community forestry, as its name implies, is basically where 'community' and 'forestry related activities' are combined and where communities take charge for themselves (Pokharel 1997:62). Advocates of the community forestry often assert that the stabilities of 'local' ecosystems, communities, and economies are inextricably linked and mutually reinforcing (McCarthy 2006). Thus, a community forest might represent a new kind of forest, wherein not only scientific management goals are central (Davis 2008). In a recent paper, McDermott and Schrekenberg (2009:158) have elaborated community forestry as the exercise by local people of power to influence decisions regarding management of forests, including the rules of access and the disposition of products. This definition entails community forestry as 'power shift' from the state to the local communities and opens a question of power sharing in order to deliver its objectives into practice.

Charnley and Poe (2007:303) highlight three characteristics of community forestry, shared by most of the definitions mentioned above. Firstly, in community forestry, the degree of responsibility and authority for forest management is formally vested by the state to the local communities. Secondly, a central objective of forest management is to provide local communities with social and economic benefits from the forest. And thirdly, ecologically sustainable forest use is a central

management goal, with forest communities taking some responsibility for maintaining and restoring forest health. However, despite generalization: three attributes: i) who decides; ii) who benefits, and iii) how broad-ranging are the management objectives; are the traits of a community forest which set it apart from other types of forests (Duinker et al.1994: 717).

It must be remembered that the above mentioned definitions often give what community forestry should be, rather than what community forestry actually is. There is a need for defining and understanding community forestry in relation to specific contexts and with a realization of gaps between actual and ideal versions (Shrestha 2005). Therefore, in our study, we define community forestry as: "***Forestry practices which directly involve local forest users in common decision making processes and implementation of forestry activities***". We argue that meaningful 'community forestry practices' require decision-making autonomy to the direct forest users in setting objectives, local control in forest management and utilization, and ownership of the benefits of the forest.

4.2 Scope and goals of community forestry

4.2.1 Scope

Community forestry initiatives have attempted to institutionalize a more postmodern approach to forest policy (Lee and Field 2005:299). The scope of the newly emerged community forestry 'paradigm'[4] (Kuhn 1970 and Foster-Carter 1976 in Pokharel 1997:63) has been interpreted by numerous authors in different ways. Arnold (1991) interprets community forestry as one dimension of various disciplines such as forestry, agriculture, rural energy and other components of rural development. Van Den Breemer and Venema (1995) describe community forestry as a new meeting point for the natural and social sciences. In this sense, there are various stakeholders from different backgrounds with different knowledge, from different institutional contexts and with different objectives. They constitute many elements from both the classic and populist approaches. The elements of central management authority, top-down centralized decision making, reliance on science and experts, as well as the transfer of technology model of extension, are inherited from the classic approach. Whereas, the elements of bottom-up participation, collective action, equitable distribution of

[4] Source: Pokharel, 1999- Kuhn (1970) has used the concept of 'paradigm' in two main senses: „on the one hand, it stands for the entire constellation of beliefs, values, and techniques shared by the members of a given community. On the other, it denotes one sort of element in that constellation, the concrete puzzle-solutions which, employed as models or examples, can replace explicit rules as a basis for the solution of the remaining puzzles of normal science" (ibid:175). Foster-Carter (1976) has applied Kuhn's concept of paradigm to elucidate the theory of development and underdevelopment (ibid: 167).

benefits, indigenous knowledge are derived from the populist approach. Community forestry is therefore a model in which the strong elements of classic and populist approaches continue to exist side-by-side, resulting in contradictions in many occasions (Pokharel 1997:63). Brown (1999 in Brown 2000) summarizes ten reasons for implementing community forestry (**Box-4.2**).

Box 4. 2 The Rationale of community forestry

Community involvement in forest management has been justified on grounds such as the following:

- Proximity to the resource: those in closest contact with the forest are best-placed to ensure its effective husbandry.
- Impact: those whose livelihoods impact most on the forest should be involved in its management.
- Equity: forests should be managed so as to ensure adequate resource flows to rural populations.
- Livelihoods: single-purpose industrial management may be incompatible with the livelihood needs of rural populations.
- Capacity: forest-dwelling communities may be better forest managers than governments.
- Biodiversity: multiple purpose management of forests by communities is likely to lead to better conservation of biodiversity than industrial management.
- Cost-effectiveness: local involvement in management may be an important way of cutting costs to the state.
- Adaptability: Community forestry is flexible and adaptable to enhancing cultural and livelihood contexts. This cannot be delivered by the centrally managed forestry.
- Governance: community involvement introduces important checks and balances in relation to state services, which tend to be mismanaged.
- Development philosophy: local participation decentralization and subsidiarity may all, in themselves, be considered as important ends of development.

Source: Brown (1999 in Brown 2000)

The "paradigm" of community forestry represents an attempt to devolve management of forest resources through the direct involvement of local forest users in decision making and benefit sharing. In practice, this refers, local forest users without expert training, can decide how to resolve issues regarding forests. Most efforts to analyze the participation of locals in community forest management have been based on theories of common property management regimes (Benneker 2008). In her theory of common-property regimes (Governing

the Commons), Ostrom (1990) advocates on the creation of local institutional arrangements to enable the "commons" success. She has dedicated substantial effort in to identifying the conditions that enable resource users to design such institutional arrangements. She identified four enabling factors: attributes of the resources, attributes of the users, institutional arrangements and external environment, as the most relevant features (Benneker 2008). Numerous studies mention that forest condition and user characteristics may be more conducive to the emergence of self-governance in community forestry.

More recently, Ostrom's eight design principles have been recognized as necessary to the success of community-based resource management. Numerous researchers in community forestry have applied her design principles (e.g. McKean 2000, Sekher 2001, Varughese and Ostrom 2001, Agrawal 2002, Gautam and Shivakoti 2005) and concluded that forest management by local forest users is possible. Most of these studies also argue that the condition of the forest has improved since local people took responsibility for its management. The applicability of the design principles prove that under certain circumstances (i.e., design principles), self governance in community forestry is possible. Hence, our definition on community forestry of 'direct involvement of local forest users in common decision making and implementation processes' is convincing for the analysis.

4.2.2 Issues, goals and formal objectives of community forestry

The rationale model of forestry program developed by Krott (2005) provides theoretical foundations how to analyze the formal program objective of community forestry. He defines four elements of rationale program model: specific issues which need to be dealt with, goals which are the objects of the program, impact and realization stage of the program, and the implementation stage refers to the task of different stakeholders in forestry programs. In this section, the former two elements appear relevant to be discussed. The other later two elements are more related to the processes of community forestry which will be discussed later in empirical findings.

- **Issue of community forestry**

Livelihood of rural people, empowerment and forest protection are the specific formal issues which always serve as a logical point of departure for community forestry program. These issues are adequately defined in the literature by using facts (Hobley 2007, McDermott and Schrekenberg 2009). These issues are widely used to define community forestry problems and designing goals of community forestry (Lindayati 2000, Poffenberger 2006).

- **Goals of community forestry programs**

Policy goals of community forestry broadened from forest management efficiency and sustainability to include equity, social justice, and decentralized decision making authority. Policy assumptions evolved accordingly, from viewing community forestry practices as a threat to an alternative solution to forest sustainability. The policy goal of community forestry is: sustainable timber production and ecological conservation - but now included (at least rhetorically) a new dimension of distributional benefits to local people (Lindayati 2000). Furthermore, community forestry programs have been diversified to include various forms of land uses and tenurial arrangements (ibid). For example, Poffenberger (2006:63) mentions two types of forest policy strategies that are emerging in forest management in the context of Southeast Asia which support community involvement. First, the formulation and implementation of laws and policies that articulates community rights and responsibilities on lands that have historically been claimed by the state and managed by its agencies or private sector leases. Second, policies that support devolution and decentralisation, inorder to ensure the authority of local institutions. Both policy strategies focus on 'participatory approch' of forest management.

At the inception of community forestry, the protection and rehabilitation of degraded forests and the establishment of new forest resources was the main policy and practical objective of community forestry program (Gilmour et al. 2004). Hence, there is a long list of community forestry initiatives in developing countries during the past two decades (Carter 2005). Consequently, this approach emphasized three major functions of forestry in rural development in addition to the industrial role (Pulhin 1996:19).

i. The social equity function- to provide tree and other forest products to rural people, who no longer had access to them (Gilmour and Fisher 1991:6).
ii. The poverty alleviation function- to find ways of increasing forest benefits to the local people who lived within or adjacent to the forests (Gilmour and Fisher 1991:6)
iii. The resource sustainability function- to address the perceived fuel wood crisis (Eckholm 1976) and the increasing rate of deforestation and land degradation in developing countries (Mayers 1980).

Although a central objective of community forestry is to provide local communities with social and economic benefits from forests, McDermott and Schreckenberg (2009:168) argue that forest conservation objective is much stronger in the developing countries where local people are often seen as the chief agents of degradation. Similarly, Charnley and Poe (2007:303) mention that ecologically sustainable forest use is the central goal of community forestry. There is, however, a large potential for community forestry to deliver poverty-related

outcomes to scale-up these approaches and therefore a broad scope for community forestry to contribute to the Millennium Development Goal of halving extreme poverty by 2015 (Nurse and Malla 2005).

4.3 Stakeholders in community forestry

Community forestry is characterized by the involvement of many stakeholders due to the economic, ecological and social functions and values that forests provide. Beyond the communities themselves, other groups at regional, national and international levels also have an impact on local people's access to forests and trees (Peluso et al. 1994). Conceptually, four broad stakeholders involved in forestry include: the state, the civil society, the private sector and the donors (Hobley 2004, Dahal 1996, Sharma and Acharya 2004). All four strands are critical for sustaining community forest management. Barrow et al. (2002: 24) argue that the state has a strong, dominant role in forest management, permitting, or not, various forms of use to different groups, at different times, and sometimes without due consideration of the impacts on other groups. However, structural adjustment and retrenchment are changing this, as states are no longer able to properly manage forests, but need to enlist the support of both communities and the private sector.

We define stakeholders as an 'individualistic or collective organizations that have interests in the community forestry and also have the potential to influence the community forestry process. They form the network in community forestry processes'. The term 'stakeholder' refers to resource users as well as policy shapers and service providers (including education and research), who undertake or facilitate community forestry processes. Broadly, stakeholders can be divided into two groups: internal and external stakeholders. Internal stakeholders are organizations of the network, which form the specific community forestry. Internal stakeholders can play the role of direct forest users, the committee and forest user group and sub-committees. External stakeholders are organizations of the network, which lay outside of the community forestry, such as: government forest agencies, users' networks, non-governmental organizations (NGOs), donors and wood industries. However, the most fundamental division between stakeholders is likely to be between those who affect (determine) a decision or action and those who are affected (whether positively or negatively) (Grimble 1998:1).

According to Krott (2005), forest management in practice is only possible with the cooperation of all stakeholders and implementation of the various regulatory instruments. Politicians and administrative bodies on one hand, as well as associations and individual citizens on the other hand, are directly involved in forest management goal formulation. Krott (2005) gives a prominent role to forest administration, based on its forest policy mandate. Forest administration aims at

realizing the public goals of forest policy, both through managing state forests, as well as by enforcing forestry programs. Such enforcement in practice is formulated by politicians in government, special administration and relevant associations. Forest users, primarily forest owners, are targeted by the regulatory functions. In addition, this would include those wanting to recreate, environmentalists, as well as wood-processing industries. A whole range of other users, direct or indirect, and those people/organizations whose actions have a direct or indirect influence on forests also play a role. Both, state (governmental) and other (non-governmental) groups of stakeholders have the potential to influence the community forestry processes. The classification of stakeholders and their roles is given in **Table-4.1**.

Table 4. 1 Stakeholders and their roles in community forestry

Stakeholder types	**Examples**	**Roles**
1. State	**Governmental:** Parliamentary committee; Ministry of Forestry and its line agencies	- Development of policies - Provision of information and capital - Technical and advisory services
	Local government: District Governments with its forest services, Village administrations	- Coordination and networking - Infrastructure development - Advocacy and extension service
2. Users, user groups, committees & federations	- Forest users - Forest user groups - Forest user groups' committees	- Participation and labor providers - Holders of local knowledge - Land and forest management - Community development
	Federations or networks of the forest user groups	Advocacy and lobbying
3. Associations (e.g. NGOs)	Association of Foresters	- Service provider - Negotiation with stakeholders - Public relations - Advisory and extension services - Lobbying - Capacity building
	- International NGOs - National NGOs - Local NGOs	- Provision of information - Capacity building - Legal and political advocacy for communities - Source of funding - Advocacy for institutional reforms - Research and education

4. Donors	Different multilateral and bilateral funding agencies	- Provision of information - Source of funding - Support for legal and technical reforms - Capacity building - Research and education
5. Forest based enterprises & industries	Wood Industries, Saw Mills, Wood Contractors	- Markets for timber products - Provision of information - Employment
6. Political parties	Different political parties	- Lobbying - Creation of legitimization
7. University and Research Institutions		- Analysis of programs - Provision of information of programs through research - Capacity building and production of trained manpower
8. Media	Radio, TV, Newspaper	- Public attention and awareness
9. Consultants	Consultants involved in community forestry	- Publication and documentations - Capacity building

4.3.1 The State

The 'state' represents the government institutions that are involved in the forestry development and policy formulation. The governmental stakeholders comprise all institutions at different levels of the state. The state is the highest authority which presides over society and the business sector and is responsible for making binding decisions in order to define and implement common welfare (Grimm 1994 in Krott 2005). Migdal (1988:19) defines the state as an organization with the ability or authority to make binding rules for society and the ability to enforce its rule. His definition of the state links clearly to the concept of capabilities. He defines state strength or capabilities as 'the ability of state leaders to use the agencies of the state to get people in the society to do what they want them to do' (1998: XIII). He emphasizes four main capabilities as state's strengths: i) capacity to penetrate society; ii) capacity to regulate social relationships; iii) capacity to extract resources; and iv) capacity to appropriate or use resources in determined ways. The states, which have these four strengths, are strong states; others are weak states.

Drawing on the ideas of Max Weber, many consider territorial integrity, rule making on how people should behave and the claim of legitimacy in the exercise of coercion, as defining characteristics of the modern state (Migdal 1988 and 1994, Barber 1989). The state includes institutions such as; the government, the civil service, the judiciary, Parliament and local government (Smith 1993:2). In this

research state refers to 'the formal governmental agencies, which deal with forest policy tasks and management of state's forestlands in the form of community forestry'.

- **Forest administration**

State Forest Administration remains a powerful governmental stakeholder in community forestry. The main Forest Administration bodies are the central ministry of forestry and regional and local forest administration, as well as state-owned forest corporations. According to Krott (2005:125), Forest Administration takes on the executive tasks in the state, i.e. it implements political programs in the form of concrete measures. He further mentions that in practice they developed a large number of diverse institutions which span everything in the forest sector from special forestry offices to the general forest administration.

Krott (2005:126) distinguished Forest Administrative machinery into two dimensions: tasks and structure. The tasks in the form of legal stipulations define the framework in which forest administration takes action, as well as its orientation. Advisory and extension services as well as overall forest management of the country are the discrete tasks of Forest Administration. To conduct these tasks, Forest Administration has built up a distinct structure which has local, district, provincial and state offices, involving expert staff and certain routine procedures.

- **Local government**

Most developing countries have been implementing decentralization in order to coordinate and manage local development in an effective ways. Local government, hence, considered as a decentralized agent of the central government (smaller area compared to the national one) by locally elected politicians. They provide a legislative platform to strengthen decentralized forest governance in the country, to allow local self-determination, and to facilitate the use of local knowledge to treat local problems and issues. Political parties are the key players and decision makers in local government bodies.

4.3.2 Users, user groups, user group committees and federation

Forest users are the producers and immediate users of the forest. In community forestry, forest users refer to individual direct forest users who have legally based rights to be directly involved in forest access and decision making process. Forest users are inhomogeneous group interested in forest, such as: wood-fuel wood-other forest products collectors, hunters, encroachers, livestock herders and black smiths. The group of direct forest users, who have mutually recognized rights to use a particular forest, is known as forest user group. They are either formal or informal (e.g. traditional authorities) organizations of the local forest users,

authorized to manage local forests in a sustainable manner. Conservation, management and utilization of the forest are the major concerns of the forest user groups. Group's committee is the executive body of the user group. The committee coordinates and negotiates with the governmental and other external stakeholders, and over-look forestry and organizational duties. Federations are the umbrella organizations or the network of the forest user groups. A federation is a more formalized agreement making possible to work together. Advocacy, lobbying and networking are the major interests of federations in community forestry.

4.3.3 Associations

Krott (2005:69) defines associations 'as organizations which articulate the interests of the groups they represent, and attempt to implement them by lobbying politicians'. Associations gear three major tasks: representing the interests of the forest sector, the employer"s interests and the employees" interests (Nembach 1993 in Krott 2005:70). They attempt to exert significant influence over forest management policy through lobbying, initiation of lawsuits, and other means (Kearney and Bradley 1998:8). Non-governmental organizations are the examples of association.

Non-governmental organizations (NGOs) are formal (professionalized) independent societal organizations, whose primary aim is to promote common goals at the national or the international level (Martens 2002:282). NGOs claimed to be non-state, independent, professional and formal organizations, which deliver services in forestry field. NGOs played an important facilitator and capacity building role in many of the cases, helping to bridge divergent views between local people and governmental agencies and manage conflict within or among communities. In some countries, governmental departments used NGOs as project implementers (Shackleton et al. 2002). They were also significant in shaping the community forestry policies together with governmental stakeholders. Based on their level of operation, NGOs are local, national or international.

International NGOs are the lobby groups of countries or international organizations, which exercise their activities in more than one country. Their policy mandate and budgetary allocations are defined by foreigners. They may act as project implementing agencies, as funding agencies, or both. In most countries, international NGOs together with national and local NGOs have been instrumental in driving the community forestry concept into practice. Sustainable management of forests, poverty alleviation and research, are the major interests of international NGOs. National NGOs have the capacity to operate at the national level. These NGOs will either lobby the politicians, or even execute tasks on behalf of their government. Local NGOs are functioning at district and village levels. Being local, they are small by definition and have well defined objectives.

These NGOs work either on behalf of national and international NGOs, or independently, as well as they also work as partners with the government.

4.3.4 Donors

Hobley (2004:33) mentions that the donor agencies cannot be considered as a homogenous group similar to other players. In many countries, external assistance is still a major source of financial support for activities by the state and civil society organizations and therefore the objectives and political agendas of donor agencies are of fundamental importance in terms of shaping the evolution of the sector.

Two main types of donors are:

- international financial institutions
- bilateral donors

According to Hobley, both these sets of donor institutions have sustainable development goals linked to poverty reduction, as established through the Millennium Development Goals. The approaches and tools they use to influence change in the forestry sector are diverse and vary from the use of conditionality to a more engaged supportive role building capacity and understanding the change within the public sector and civil society.

4.3.5 Forest based enterprises and industries

The private sector plays a key role in forestry business and they all are motivated by profit. Private operators in forestry have the capacity to assist forest communities greatly in terms of technical expertise, providing capital plus market access. Big concessionaires, timber industries, furniture industries, saw mills, contractors and loggers, small scale fellers are examples of private sector stakeholders in forestry. It is the role of state Forest Administration to facilitate linkages between forest user groups and timber operators. However, in most of the cases, these powerful stakeholders tended to ignore local regulations and controls, undermining the authority of community institutions and appropriating the resource base at the expense of local community members (Shackleton et al. 2002).

4.3.6 Political parties

Political parties are organizations, which have evolved on a voluntary basis by independently accumulating votes in competition with other parties, and whose goal is to have their party representatives elected to political offices (Krott 2005:111). Their interests in community forestry can be learnt from: lobbying their positions in policymaking and trade-off forestry issues to get votes from the citizens and recruiting political elites in the CF programs.

4.3.7 University and research institutions

Universities are institutions of higher education where forestry related subjects are studied, researched in depth are provided, and degrees are offered. Education and research are their foremost interests. Through formal forestry education, forestry professionals could acquire the basic competencies (knowledge, attitudes, values and skills) required for forest management (Rebugio and Camacho 2003). Universities and research institutions could play three types of role to promote community forest management: advocacy, information/knowledge generation, and capability building or human resource development. Research institutions also help to generate knowledge in community forestry. Their roles have been to train forestry professionals in community forestry practices, provide technical support to stakeholders, carry out field-based research on different modalities of participatory forestry, and act as advocates for the development of community forestry.

4.3.8 Media

Media refers to various means of communication mechanisms involved in disseminating community forestry information. For example: television, radio, and the newspaper. Having public attention and awareness as interests in forest, the media is a product of either a state-owned or a private enterprise. The media as a product (for example, in the form of newspaper or television) has to be oriented towards market by fulfilling the demands of recipients and advertising customers (Kleinschmit and Krott 2008:127).

4.3.9 Consultants

Consultants are individual or private organization in forestry providing „forest advisory services". Krott (2005:153) mentions that consulting provides information to support the client in resolving his own problems. Most consulting issues refer to research, technical procedures (e.g. use of equipment), capacity development (training), marketing (e.g. business management) and financial promotion (entrepreneurship development). Service delivery, employment and profit making are the interests of consultants in forestry.

Chapter 5 – Shaping the Community Forests

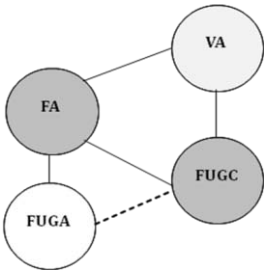
Explaining the powerful stakeholders and their power features

In this chapter we briefly deal with the power diagnosis and outline the results of the quantitative analysis, indicating the powerful stakeholders in the community forestry cases. We then focus on explaining why the particular stakeholders are powerful with the analysis on their power features.

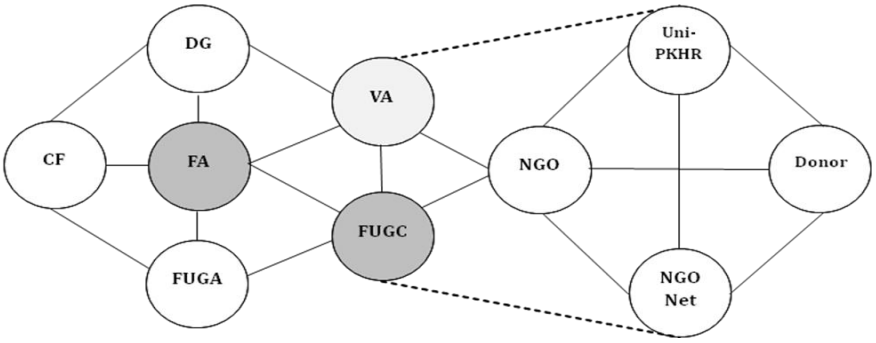
5.1 Network patterns and the powerful stakeholders

We have identified two general patterns of networks, as shown in Figure 5.1. Inevitably, it is the forest administration (FA) and the forest user group committees (FUGC) who are the core ingredients of the community forestry networks. While the former holds the authority and takes on the executing tasks on the management of the forest (Krott 2005), to the latter -which acting itself to represent the forest users- according to the concepts of community forestry the power is supposedly to be delegated (**Figure 5.1a**).

Figure 5. 1 Patterns of networks



(a) Wana Jati Wasesa community forest



(b) Bumi Sari Makmur community forest

Village administration (VA) also appears to get involved in the community forestry cases, principally in the PHBM community forestry model as it generally observes the user group as a subsidiary in the village's political constellations. In fact, the group committees are composed by those from the respective village administration and most of the chairpersons are the village administrator/ Village Chief (locally referred to as *Kepala Desa*) him/herself[5]. The 'simple bilateral model' of forest administration and the group committees (**Figure 5.1a**) enlarges itself once other external stakeholders successfully approached the group committee to work with, as the new stakeholders appear to bring own networks into the particular community forests as **Figure 5.1b** shows. The extention of networks is an important strategy, particularly for 'low-power' stakeholders, for 'balancing operations' (Thye 2000). When the new stakeholders and their alliances show the potentials to influence the processes in the community forest, the forest administration eventually consolidates by borrowing more support from other stakeholders, principally from the district government (DG) which possesses authority over the village administration and consequently the group committees, as strategic responses.

In many instances, the forest administration shows strong preferences on the simple pattern of stakeholder's networks. Our analysis will later reveal how the administration has tried to keep those which observed to potentially oppose and dent its aspirations beyond the pheriperies of the particular community forests. In two cases, Wana Tani and Bumi Sari Makmur community forests, the respective forest administration ousted the NGOs involved, while we have also observed (suggested by Interviewee No. 6, 10, 33) how they have successfully persuaded several group committees to not collaborating with any NGO. The drive to keep small and simple network can apparently be explained by the lower transactional costs of controlling the networks.

Further, our quantitative analysis of power diagnosis in the research cases identified the stakeholders involved in the networks of the community forestry cases and eventually observed those who are deemed to be the most powerful (see Table 5.1 for the summary, Appendix 5 and 6 for the complete analysis). The power diagnosis provides the foundation for the qualitative analysis, which focuses on how the diagnosed powerful stakeholders build and accumulate their power.

[5] The village leaders are in particular very influential, since they often possess veto rights (Bebbington et al. 2004). The government of Indonesia has long introduced a uniform structure of village administration under the control of a village leader (*Kepala Desa*), who is vertically accountable to district administration, not to the people (Bebbington et al. 2004). Village leaders also chair or at least act within advisory board of other village social organizations (such cases as forest user groups' committee).

Table 5. 1 Summary of power diagnosis

Type	Stakeholder	No. cases of involvement	No. cases stakeholder diagnosed as powerful accordingly to the power element		
			Trust	Incentive	Coercion
Governmental	1. Forest Administration*	10 (all)	5	10	10
	2. District government**	10 (all)	2	3	0
	3. Provincial Forest Resource Conservation Agency	2 HKm cases	0	0	0
	4. Provincial Forest Planning Agency	2 HKm cases	0	0	0
	5. Community Forestry Forum	8 PHBM cases	0	0	0
Non-governmental	1. Group committees	10 (all)	7	1	0
	2. Village Administration	8 PHBM cases	3	0	0
	3. Forest User Group Federation	8 PHBM cases	0	0	0
	4. Social NGO***	2 HKm, 2 PHBM	4	4	0
	5. NGO Network	2 HKm, 2 PHBM	0	1	0
	6. University****	2 HKm, 3 PHBM	4	5	0
	7. CIFOR	2 PHBM cases	0	1	0
	8. Donor	2 HKm, 3 PHBM	0	1	0

* Perhutani in PHBM cases, the Provincial Forest Service in HKm cases
** Through different agencies, e.g. District Forest (and Agiculture) Service, District Veterinary Service etc.
*** Shorea Foundation in HKm cases, YBL Masta in Bumi Sari Makmur forest, ARuPa in Wana Tani forest
**** Universitas Gadjah Mada through Pusat Kajian Hutan Rakyat (PKHR)

Table 5.1 above also indicates how forest administration remains one of the most powerful actors, not only due coercion strategies (in 10 cases) –with which they are according to our initial interviews seen as 'necessary' for the implementation of the respective community forests-, but also provides incentives to different actors (in 10 cases) as well as being trusted in the networks (5 cases). Group committees are also indicated to have a certain degree of power, although our power diagnosis suggests that their power appears to have been limited to the account of trust placed by the other actors in their networks. We also have strong signals on the strong influence of social NGOs, university and research instutions. Although they might not be involved in all cases; whenever they get involved they

seem to be able to influence the social processes in the community forests. Their power appears to have been built based upon trust placed by the other actors as well as incentives they provide that further convince and/ persuade the other stakeholders to follow their aspirations.

The rest of the actors in the networks of the respective community forests seem to play 'second fiddle' to the powerful ones since our power diagnosis indicates that they are not powerful. The notable example is the roles of community forestry forums[6] and the federation of user groups. Although they were mentioned by the other stakeholders in each of the networks of the cases, they appear to have limited knowledge on the processes and activities in the respective community forests. Such also applies to district governments, despite their sporadic involvements on the particular community forests through their subsidiary agencies -such as forestry, agriculture, livestocks and veterinary services- they appear to have been distanced from the meaningful influence in the community forests, to avoid conflicts with the forest administration (Interviewees 1, 2, 3 and 4). The rest of this chapter will then be devoted to explaining the power features, through which the powerful actors shape the community forestry.

5.2 Coercion as a top-down form of power

Chapter 2 has laid the theoretical foundation on the reproduction of power and domination in the asymmetrical social relationships of community forestry where the power subject is compelled to obey a set of values stipulated by the superior despite resistance. This part is dedicated to explore ways and modes employed by the stronger actors to shape how the community forestry looks like, principally how they ensure things get done by the power subordinates, including the use of authority with physical and moral of conducts, involving influence as well as manipulation of expectation of the power subordinates. In our community forest cases, we have seen intensive uses of coercive power, by different actors through numerous strategies, not only the uses physical threats and regulatory instruments involving sanctions, but also modes of information through manipulation and monopoly, with the final goal of adherence by the power subjects.

5.2.1 Forest administration using physical and psychological threats

Threat and intimidation of the actual or threatened use of physical sanctions are often utilized with intention to force another to act, or keep another from acting. We have also seen in our community forestry cases some actors capitalize from the uses of such modes so that their dominations over the others are well created.

[6] These forums were created and structured at various administrative levels - provincial, district, sub-district and village- through a provincial governor regulation. They are composed by governmental officials and various societal elements, and are responsible to the respective local governments, at which they are established.

The strategies are commonly -but not necessarily- used by state forest apparatus in ensuring forest regulations to control the uses of the forests by other actors than themselves. The use of repression, threat and intimidation against those violating forest regulation and rules are common (Lucas 1992, Kaimowitz 2003, Yasmi 2007). In regard to the management of Java's forests, Peluso (1992) carefully describes how the state forest corporation of Perhutani resorted to such modes of coercion in dealing with illegal activities, community oppositions, forest conflicts and disputes with such modes of coercion. Equipped with armed forest police and fondly allied to local governments and their apparatus -including military and police personnel, the forest administration was in nearly absolute control over the forest resources, preventing activities deemed unauthorized. Even when the illegal uses have occurred, the way the forest administration deals with has to some extent proved to generate psychological impacts on future illegal users.

In the implementation of community forestry, the strategy remains an important element of ensuring forest orders despite the shortage of personnel (Swisher 1999) and the caution on risks of external surveillance[7], which all eventually persuade the forest administration to blend the strategy with more persuasive approaches through the optimal uses of the group committees. The extent to which the company's forest polices organize routine forest patrols -often with user group committees- to crack down illegal activities in the forests is to suggest the people not to doing so. Wrong (2004:41) argues that the user of the physical threats must be able to convince targeted actors of its capability and willingness to use force against them, with the display of means and instruments of force of controls; such is what the forest administration attempts.

> "*We organize forest patrols, either independently or collaborating with the committee of user groups, with two main objectives. First, it is indeed to detect any illegal activities in the forests, mainly timber thefts, and drag the actors to the police to be proceeded further to the court. We expect this to generate some kind of psychological impacts on those who might wish doing so. Secondly, even if we do not find any illegal activities–as of expectation-, the routine patrols remain important as the 'show of forces' to deny any wishful thinking of 'us being slept' and to hint our capability in dealing with the illegal activities."* (Interviewee 49)

[7] In 1990s Perhutani was awarded forest certification certificate by SmartWood. However, the certificate was later suspended due to the „noncompliance of the certification conditions based on the FSC principles and criteria as well as the Smartwood standards", due to, one of which, the persistent conflict with local people

Not only to the forest users, threats and intimidations were also employed by forest administration in ousting other external actors perceived to detriment its interests in implementing its model of community forestry. Of the cases, the power feature is well shown in the community forest in Temulus and Benowo villages where the locals having fondly tied a locally-based social NGO appear not to cooperate with the forest office. In Temulus, the resistance of a group of local people to the community forestry modelled by the forest office has been well-documented (e.g. ARuPa 1999, Fuad 2000a, Wulan et al. 2004); remains one of the sourest social conflicts in the management of the state forest in Java. With the use of threat and intimidation to both the people and the NGO, the forest office was successful in imposing its model of community forestry (see **Box 5.1**).

Box 5. 1 The use of threat and intimidation in the initiation of community forestry in Temulus Village

Around the end of 1990s an NGO called *Aliansi Relawan untuk Penyelamatan Alam*/ ARuPA came to back up the people of Temulus, who -triggered by the shooting of two forest users- embroiled in rebels against the district forest office. PHBM community forestry was timely introduced in 2001, and the district forest office was desperate to implement it in the village to lessen the conflicts. Backed by the NGO, a group of local people continued to reject the community forestry model as they perceived the program to not promoting fairness and justice since the forest company will continue to obtain more benefits from the forests (see Wulan et al. 2004).

As such, the district forest office saw the importance of support from local governments and their apparatus, including police and military personnel, to oust the NGO activists from the region. It claimed the NGO's activities were illegal as yet to being approved by the local governments. The conflicts turned into decisive circumstances when the district forest office recruited one of the local activists as a forest officer. This psychologically split the local activists and affected them whether to continue the fights. Simultaneously, the forest office persuaded and threatened the people for not to continue their rebels and to accept its community forestry model. An interviewee from the forest office (No.37) suggested that during a meeting with the people, a police took a rifle and put on the head of one activist as the latter continued to argue against the forest authority. Around the mid of 2000s the district forest office was successful in ousting the NGO that paved ways for the forest office to seize controls over the group, despite sporadic resistance from the local activists. The resistance of the 'rebels' proved costly as the forest office turn away from them, and opted to collaborate with another group, which swiftly established a formal user group and eventually inked a formal agreement with the office.

The similar extent of the uses of threats occurred in Bumi Sari Makmur community forest in Benowo village. This was started when the people and the village administration worked with a local NGO called YBL Masta. Learning that Perhutani is to implement its PHBM community forestry, a local NGO called

YBL Masta bypassed the district forest office to approach the people. The NGO facilitated the establishment of the village forest user group. While the group committees accepted the PHBM community forest, with support from the NGO they sought ways to implement own models. They later accused the district forest office to have appropriated their ancestors' private land, locally called *Tanah Simpen* (see **Box 5.2**). In addition, they saw the pine forests cause the water shortages they have experienced over the past few years (YBL Masta 2006).

Box 5. 2 Conflicts on *Tanah Simpen*

The story on *Tanah Simpen* fast backward to the colonial time, when the Dutch colonial aimed to reforest the degraded Menoreh Hills. While, some portions of the hills were privately owned, the colonial government approached the owners with either bought the land or forced them to migrate to other islands. While the reforestation efforts were successful, the multi forest was kept intact and un-disturbed (*simpen*) to regulate water flows which were important for supporting farming activities of the people. During the early independence of the nation, the forest was kept as it was once. Around 1970s, the state forests in Java was handed over to Perhutani, which eventually replaced the forest with monoculture pine forests aiming for timber and resin productions, instead of protection. Such has since provoked people's annoyance. Nonetheless, the company was able manage the people, facilitated by the dictatorial New Order regime. The downfall of the regime has reignited enthusiasms from the people to seek control over the forestland.

Source: YBL Masta 2006

On the other hand, the forest office observed the NGO only aimed to make 'a meal' by assisting the people.

> *They made a theatre of their own on how local people are harassed by our forest rangers and simply sold the pictures to donors for their own benefits. They vilified us, I know their tricks. It left us with no option but to oust them from our territory. We synchronized this with the district office and the apparatuses.* (Interviewee 1)

As of Temulus case, the district forest office ousted the NGO from the village with huge assistance from hired polices. Tensions later escalated in 2006 when participants of the Workshop on Forest Governance and Decentralization visited the village to observe the implementation of the community forest[8]. The forest office felt to have been left uninformed, and promptly accused the NGO and the group committees of reopening the 'war', by trying to gain support from external parties for their activities. Interviewees from both the forest office and the group

[8] See Colfer et al. 2008, Annex by Dahal and Tarigan

committees (No.1 & 15) suggested during the fieldwork that pelotons of forest rangers and polices were in place to anticipate 'unexpected circumstances'.

Overall, from the above cases, we jump to augment the political scholarly on the use of threats and intimidation as a coercive mode to force actors both to and not to act leading to the accumulation of power. Such nonetheless, as our careful analysis above has revealed that whether the power feature is of optimal uses, it is combined with other forms of power, notably the authority, discussed later in this chapter. Our cases clearly reveal how the forest administration, with the authority to manage the forest, backed with other state's apparatuses, as well as the capability and the willingness to impose on those signalling confrontation with its aspiration proves to make full use of the threats and intimidations to build power over them.

5.2.2 Forest administration with authority and regulatory procedures

The political thinking of inseparable relationships between authority-principally through the creation of regulatory procedures by administration bureau-, and coercion has been well developed. Giddens (1993) for instance links capacity to the mobilization to demand obedience and the possession of authority or the tools of force; with legal authority, decision makers can impose their power despite resistance (Krott 2005). In fact, regulatory procedures are one of the earliest modes of ensuring the adoption of environmental strategies. They comprise political interventions through binding regulation (Krott 2005: 219) and usually involve government bodies taking a role to permit, prescribe or prohibit private actors' behaviour (Potoski and Prakash 2005). Legislations are set to authorize the body to promulgation regulations and enforce them through a form of coercive power; laws and other legal means then become the core component. Edmunds and Wollenberg (2001: 231) further point out "powerful actors take the upper hand using legal and extra-legal means available to them". In regard to the community forestry program, there have been shifts toward the formalization on the practices of the involvement of forest dwellers in management of the state's forests (see **Table 5.2**).

Table 5. 2 Milestones of formalization of community forestry practices

Years	Formal community forestry policy
Prior 1990s	Process of initiations and explorations of community forestry models
1990s	- Forest minister decrees No. 622/ Kpts-II/ 1995 and No. 667/ Kpts-II/ 1997 on community forestry in non-titled* state forests (HKm community forestry) - Ministerial Decree No. 49/ 1998 on Forest with Special Purposes (*Kawasan dengan Tujuan Istimewa*, KdTI), partial recognition an indigenous group in forest management - New Forest Law No. 41/ 1999 with emerging nuances on the involvement of forest dwellers in forest management, obliging those granted with management rights over the state forest to involve the people
2001	- Introduction of PHBM community forestry by the state forest company of Perhutani through the Decision of its Board of Directors No. 136/KPTS/DIR/2001, followed with formal agreements with user groups - Regulation No No. 31/Kpts-II/2001 that allows local government authorities to grant community forestry licenses
2004-2006	- Amendments on the policy on HKm community forestry - Temporary HKm licenses by local/ district governments to HKm user groups
2007	- The Ministerial Regulation No. P.37/ Menhut-II/ 2007 stipulating HKm community forestry - The formal granting of HKm licenses to user groups in several districts

* refers to the state forest which has not been handed over to either state or private bodies

On the ground, our community forestry cases have shown enormous uses of regulatory pressures, representing the extent to which governmental forest agencies threaten to or impede other actors' operations in the forests, complemented with modes of ensuring the compliance, detailed below.

- **Formal screening and approval of the user groups**

To ensure the control over community forestry practices, from the outset the state sets up necessary regulatory frameworks and conditionality, by which it is able to force other actors interested to engage in particular community practices to act accordingly what it desires. Looking at the handing-over processes, users groups are forced to organize themselves into a formally-registered group to qualify for community forestry. Failing to meet the requirements, the consequence is clear that the community forestry would have been non-existence. With the authority as explained above, the forest administration has the veto whether to approve the application (**Box 5.3**).

Box 5. 3 Veto rights in handing over processes

Article 5 (1-b) of the Decision of Monitoring Board of Perum Perhutani No: 136/KPTS/DIR/2001 on PHBM community forestry reads:

The user groups to collaborate in the management of the forest are ***prioritized to those been formally registered****, and* ***recommended/ proposed*** *by the village administration through* ***formal application to Perhutani.***

Article 21/2 of the Ministerial regulation No. P.37/ 2007 on HKm community forestry reads: ***Upon the application****, the [Forest] Minister can either* ***approve or reject***

A clear example of the coercion nature the regulatory procedure on the formal user group is provided by the implementation of community forestry in Temulus village. Aspirations for the community forestry have been strongly shown toward the end of the 1990s, but the community forest was formally implemented in 2009, after the establishment of a formal user group (see back **Box 5.1**). In the process, the district forest office also used regulatory procedures in favoring a particular group over another to implement its community forestry model.

The formally-registered group is supposedly to act on the behalf of forest users as a legal partner for the forest administration in managing the forest. Such effectively denies other forms of user groups such as informal user groups, including forest farmer groups, which used to exist prior to the implementation of the current models of community forestry. Campbell (2002a) points out the preference of Indonesian forest authorities on the formal over informal and/ or customary groups. The cited foundations for the preference include that this model will assure clear and coordinated rights and responsibilities between the parties (Djajanti 2006). It is also said that the formal model can improve communication between the forest office and the people, which is claimed to have lacked the previous schemes of community involvement in the forest management (Djajanti 2006).

Another account nonetheless suggests that the establishment of formally-registered forest user groups seems to function as control and monitoring tools over the forest users and the groups (see Amanor 2005, Rosyadi et al. 2005). Given the apparent inability of the forest authorities in controlling forest uses prior to community forestry –said as one of the main drivers of the program- the motives of control is well validated. In fact, they are saliently fetched in the regulatory frameworks and are masked with the conditionality for the handing over processes that is effectively coerced to the forest users.

- **Formal permit systems**

Permits systems inhibit a clear contestation of dominant narratives that favour the state control on the forest resources and the management. They institutionalize specific requirements in the forest practices. Forest administration is in charge of issuing permits to show their hegemony. The permit systems usually include the stipulation of forest uses, the degree of the power subjects are allowed to use the forests. The forest administration specifies options are technically possible and assigns them a priority corresponding to its own aspiration in regard to the uses of the resource. We have seen in our community forestry cases, two layers of the permit system imposed, i.e. those to the groups and the forest users (**Figure 5.2**). Through community forestry, the administration imposes the system to the groups (committees), which further create similar permit systems to be imposed on the users in order to meet the requirement from the forest offices.

Figure 5. 2 A two-tier permit system in community forestry

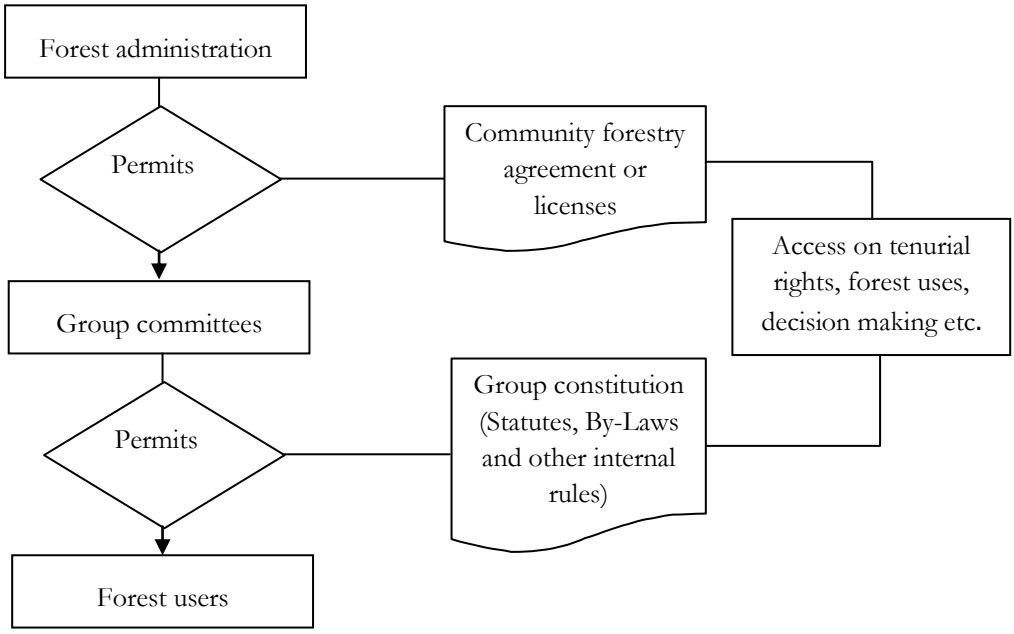


Table 5. 3 Formal processes on the gazettement of the state forestland for HKm community forestry in Gunungkidul District

No	**:728/ Menhut-IV/ 2001**
Date	:Jakarta, 21 May 2001
From	:Forest Minister of the Republic of Indonesia (Marzuki Usman)
To	:Governors and District Majors in Indonesia
Reference	:Guidance/ Guidelines on the implementation of HKm community forestry (Licenses awarded after the facilitation on the locals)
No	**:522.11/2032**
Date	:Yogyakarta, 13 December 2001
From	:Chief of Forest and Estate Agency of the Province of Daerah Istimewa Yogyakarta/ DIY (Sunardi)
To	:Governor of DIY Province
Reference	HKm Licences: The implementation of only agricultural cropping during the wait on the formal gazettement of the forest by the forest minister; Roles, rights and responsibilities of the Minister, Governor and District Majors in the activities
No	**:522.11/ 2033**
Date	:Yogyakarta, 13 December 2001
From	:The Chief of Forest and Estate Agency of the Province of Daerah Istimewa Yogyakarta/ DIY (Sunardi)
To	:General Directorate of Land Rehabilitation and Social Forestry of the Forest Ministry
Reference	:The proposal on the gazettement of forest area for HKm community forestry in DIY
No	**:1004/ BRLKT-OPS 2.1/ 2001**
Date	: Yogyakarta, 24 December 2001
From	: BRLKT OPS (Ir. Bambang Soepijanto, MM)
To	:Chief of Forest and Estate Agency of DIY Province
Reference	- The proposal on the gazettement of forest area for HKm community forestry in DIY Province - From forest inventory and identification, 4,186 hectares of state forest allocated for Gunungkidul District - Initial licenses to 3 forest user groups - The allocation of the forests further processed for formal gazzetement by the Ministry's Forest Planning Bureau
No	**:252/ Menhut-V/ 2002**
Date	:Jakarta, 25 February 2002
From	:The Forest Minister of the Republic of Indonesia (Muhammad Prakoso)
To	:The Governor of DIY Province
Reference	: HKm community forestry licenses in DIY Province; District Majors allowed to grant temporary licenses upon the recommendation from the Governor, c.q. the Provincial Forest and Estate Agency

No	**:522/ 0647**
Date	:Yogyakarta, 7 March 2002
From	:The Governor of DIY Province (Sri Sultan Hamengkubuwono X)
To	:The Major of Gunungkidul District
Reference	- HKm licenses in DIY Province - The proposal on the gazettement is for further improvement - Preparation and the process on the temporary HKm licenses in Gunungkidul District
No	**:522/ 3648**
Date	:Yogyakarta, 18 December 2002
From	:The Chief of Forest and Estate Agency of the Province of Daerah Istimewa Yogyakarta/ DIY (Sunardi)
To	:The Major of Gunungkidul District
Reference	- Recommendation on the application on HKm licenses in Gunungkidul District - Recommendation on the temporary HKm licenses to be awarded to 12 forest user groups
No	**:522/ 0368**
Date	:Yogyakarta, 01 march 2003
From	:The Chief of Forest and Estate Agency of the Province of Daerah Istimewa Yogyakarta/ DIY (Sunardi)
To	:The Major of Gunungkidul District
Reference	- Recommendation on the application on HKm licenses in Gunungkidul District - Recommendation on the temporary HKm licenses to be awarded to 23 forest user groups
No	**:213/ Kpts/ 2003**
Date	:Wonosari, 14 June 2003
From	: The Major of Gunungkidul District
Reference	:The decision by the District Major on the implementation of HKm community forest

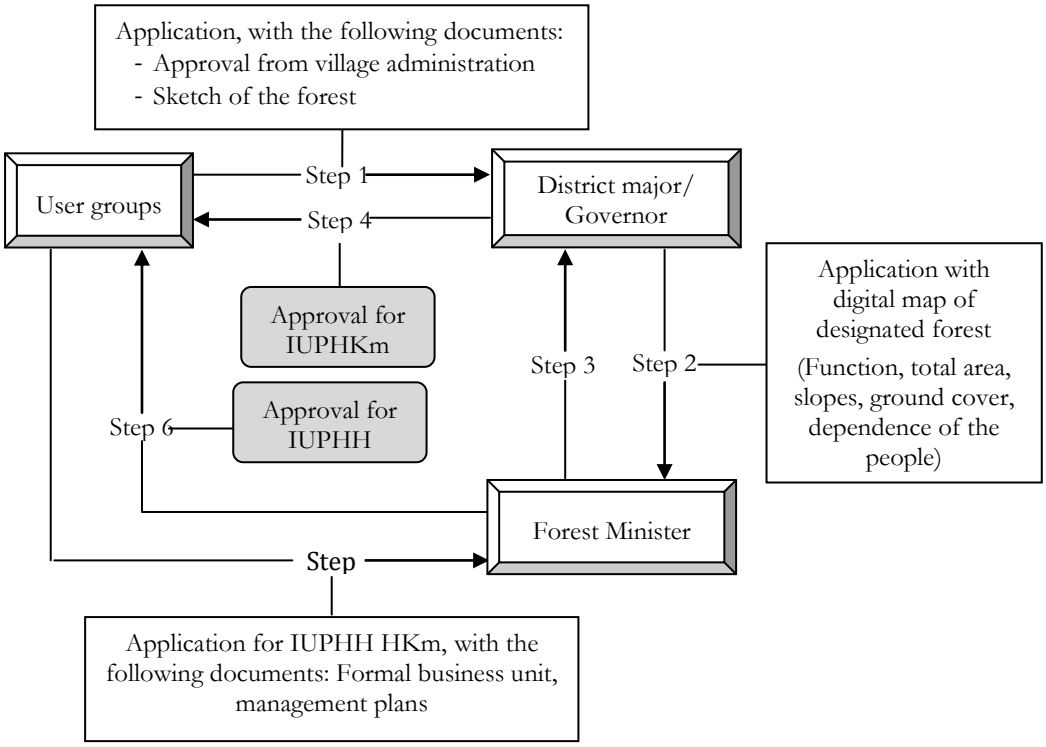
Source: KPHKm Gunungkidul (in Fuadi and Rahman 2004)

HKm community forest, as of Sedyo Rukun and Sedyo Lestari, is principally a leasing system, through which the state regulates the management of the forestland by the direct users and their groups, including the level of forest access, including their rights and responsibilities accordingly. The Ministerial Regulation No. P.37/ Menhut-II/ 2007 stipulates that the community forest model rests on two types of licenses granted to the forest users and the groups:

1. License on the Utilization of Community Forestry (*Ijin Usaha Pemanfaatan Hutan Kemasyarakatan*, IUPHKm)
2. License on the Utilization of Timber Forest Products of the Community Forestry (*Ijin Usaha Pemanfaatan Hasil Hutan Kayu Hutan Kemasyarakatan*, IUPHHK HKm).

Prior to the formal application on the two licenses, there were long processes on the gazzetement of the state forestland for HKm community forestry. Unlike the management of most of the state's forests, which rests on the licenses to other parties (usually state and private companies), the forest was directly managed by the ministry, meaning that the forest users can observed the mandate to manage the forests. However, the state was not in the mood to allocate the forest for the management by the locals (see **Table 5.3** for the process on the gazettement). The temporary licences awarded (outlined in Table 5.3) needs further formal approval from the ministry. The routes the forest users and the groups have been pursuing the licenses until 2007 portray the coercion measures imposed on the people (see **Flowchart 5.1**).

Figure 5. 3 Procedures of HKm licenses



Source: Adapted from Wiyono and Santoso (2009)

The lengthy processes were in part down to the examination on whether the groups are of the competences for managing the forests and the state's reluctance to relinquish its control on the forests prior discovering other modes of surveillance on the resources. As a result, the people experienced with a number of different related regulations prior to the above ministerial regulation. Even so, the permit procedures have forced the users to compromise their initial wishes. In our two HKm community forest cases, the users are forced to accept the utilization rights, instead of the ownership titles on the forestland as they initially wished for. Such is similar to our PHBM community forest cases, in which the users and the group of our eight PHBM cases are bound to acknowledge the state's ownership on the forestland and the resource within despite some sporadic resistance as the group committees were forced to put the signature in the PHBM agreement (This part is further discussed in the evaluation on the social outcomes of the community forestry, principally in the access on the ownerships rights).

As of other permit systems, our community forestry is formally set for both allowable and non-allowable regimes imposed to the forest users and their groups. The permit limits the freedom of the people to perform own will and decisions, therefore displaying the power of those creating the system. Permits are also well-placed in regulating forest uses as the forest administration has set the extent to which the people have access to use the forests, and our evaluation on the outcomes of the community forests will later suggest, that the permit systems have ensured the power of the forest administration over the other actors, principally forest users and their groups. One might argue that the forest administration might have insufficient formal control (e.g. forest officers) to prevent cuts in the forests, as experience prior to the community forest has suggested, but it has a number of procedures, including through informal scheme of the use of group committees as later our analysis will see, that all combining to ensure the permit systems work. Such suggests the clear coercive control of the forest administration over the uses of the forests through the permit systems.

While permit systems have clearly defined allowable and non-allowable regimes in regard to the management of the forests, the forest administration of our community forestry cases often uses approvals and signatures in imposing its control over the forest users and their groups, particularly in regards to activities yet to be defined in either the community forestry agreements or licenses. We identify sporadic examples on how the forest users and their groups are forced to obtain such approvals prior executing particular activities. For instance in Karya Lestari community forest, the forest office acts as a signatory party when the group committees collaborate with other parties (see **Box 5.4**).

Box 5. 4 Forest office in multi-partied agreements involving user groups in Karya Lestari community forest

In the attempts to optimize the use of the forestland, Karya Lestari community forestry group committees saw the importance to collaborate with other parties, apart from the forest office. While some of the forest compartments remained bare because reforestation was yet being planned, the committees collaborated with a sugar company to use the forestland for sugar cane plantations. The committees, in the context of the Leveling Playing Field Project of the Center for International Forestry Research (CIFOR) signed contracts on reforesting some forest compartments with a hotel company and the Center for Community Forestry Studies of Universitas Gadjah Mada. In all cases, the forest office, which is according to forest regulations mandated to manage the forests, acts and involves itself as a signatory in the agreements.

- **Management plans as informal control over forest uses**

As explained in the use of permit system, despite securing the management right, the users and the groups of two HKm community forests are still in cloud that they reap the benefits from their investments in the forests as they face the delay of the granting the harvest permit on the trees they have planted and nurtured. Interviews suggest that the people are desperate to secure such permit, but they have to deal with a number of requirements imposed on them particularly the establishment of a business unit, locally called as *Koperasi*, the preparation on several management plans (general, operational and work plans) for the formal application. Whether the application is successful is also upon the approval from the ministry (see both Box 5.1 and Flowchart 1). Without such approval, cuts from the forests are prohibited.

- **Control through reporting activities**

Across the community forestry cases, control of the respective forest administration is seen from the various reporting, monitoring and evaluation activities. For instance, the Randublatung Forest Office determines how the benefit sharing each forest user group has obtained from the office should be used and requires the committees to report the use to office (see also Box 5.5).

> *I observe misuses of the shares by the group committees. I can assume this from the delay of the submission of the report, if they have used the shares accordingly to the guidance, it would have not taken a long time to create the report. The delay is due the way they seek for the cover their fraudulent activities. (Interviewee 52)*

Control over the forest activities of HKm community forestry is manifested in the various management plans the groups to submit. To work effectively, the user groups are required to create three plans, i.e. General Plans, Operational

Plans for the management license and the Working Plans for IUPHHK HKm. According to a serial of the Practical Guidelines on Empowering Forest Dwellers on HKm policy and institutional mechanisms published by the Working Group on Empowerment of the Ministry of Forestry in 2009 (Wiyono and Santoso 2009: 15, translated), the plans are aimed "*for providing the guidelines of the licence holders in to execute the forest management activities and providing the mechanisms for controlling by for the (central) government, the province and the district*".

- **Imposing sanctions upon non-compliance**

As said, power is about ensuring to get things done, in the way that the power subject follows the order of the superior; and imposing sanctions remain one of the earliest forms of power, with which the power subject is threatened if he/ she is otherwise not to comply. As our cases will here show, an actor engaged in community forestry might be forced to obey rules and change their behavior accordingly by the fear of punishment from a superior actor. With an authority place upon, the state through the forest administrations foresees to take an action of employing sanctions so that its interests well served.

More importantly, as further explained in this section, the motivation to compliance to community forestry rules based on coercion system requires enforcement mechanisms to be devoted that are carefully assessed in this section. In the absence of effective enforcing capacity, the possession of authority and the support of legal means often mean marginal as activities on the ground cannot be effectively controlled. As said, the experience on the way the state forests were managed prior to the implementation of community forestry program in Indonesia has suggested that the authority of the respective forest administrations of the community forestry case models meant little in that the people remained 'ungoverned'. The forest authorities were less successful in ensuring compliance to the law in the form of ordering or forbidding things, regardless the extensive laws and regulations on the uses and access to the forests.

It is not to argue here of the absence of sanctions prior to the community forestry. Instead, the sanctions put in place were ineffective in giving the impression of risks on non-compliance. Combined with other power features, principally through creating alliance with the group committees, the forest administrations are able to monitor and to control behaviour of forest users and impose the sanctions accordingly over occurrence of non-compliance. Forest administration through community forestry expects orders in the forests by placing the responsibilities on the user groups' committees. Failures to ensure compliance to the defined rules are to result in an array of sanctions, depending on the magnitude of the failure is perceived by the forest administration.

(1) Sanction of replanting the forestland upon the failure to meet the survival rate of new plantations

The failure of the forest administration in restoring the forest condition into greeneries remains one of the major drivers of the implementation of community forestry in Indonesia. Through the community forests, the forest offices expect major contribution of the local people on the successful reforestation efforts. In PHBM community forestry, the forest authority through the binding contract with the group committees obliges the forest users to achieve 90%-survival benchmark of the planted seedlings; otherwise they have to replant the parcels.

Table 5. 4 Obligation to meet the minimum survival rates of new plantations

Examples of Legal documents	Sanctions
PHBM Agreement on Sedayu Community Forest No. 26 (16 October 2006) PHBM Agreement on Gempol Community Forest No 121 (30 December 2002)	Article 16: If the percentage of the successful planting of the main species until the second year below 90%, the group is responsible to do replanting the seedling provided by the district forest office

Due the combination of the fear of losing of fractions of the benefit sharing promised by the forest office and the aspirations of impressing the forest office with expectation of further (economic) benefits, the group committees play a pivotal role in this scheme as they also ensure that the forest users achieve the targets. They discover strategies of ensuring the survival rates of new plantations as prescribed.

> *We are always committed to support the programs of the district forest office. To achieve the defined survival rate of the young trees in the forests, we set a higher benchmark of 95% that we encourage the users to achieve that level. This is to provide allowance, if the users cannot meet our own benchmark, then we still expect them to at least satisfy the one of the forest office. Nonetheless, as far as I am concerned, the users usually ensure a 100% survival.* (Interviewee 6)

(2) Deferral and/or deduction of benefit sharing to the groups

As said, in PHBM community forestry, the group committees are promised with the splash of cash from the sales of main forest products, given the meaningful participation in forest management activities. To ensure its interests are best served, the forest office threats the group committees on the deferral or even deduction of the benefits when the latter is deemed not to act accordingly to what

the former has wished for. In all of our PHBM cases, the particular concern is the security of the forests, suggesting the forest office to impose sanctions upon the reduction of the forest potentials to producing timber. As shown in Table 5.5., failure in keeping the forest intact can result in the deduction of the shares the groups entitled for.

Table 5. 5 Regulations regarding deferral/ reduction of benefit sharing

Legal documents	Sanctions
Decision by the Chief of Unit I Central Java No. 2142/ KPTS/ I/ 2002 (13 December 2002) The Agreement of all 8 PHBM Community Forest cases	Article 6 (b.1.3): If the number of trees at silvicultural cuts or final cuts is below the normal standard due forest theft, the shares for the group is defined as follow: If the disparity between the actual and the normal number is more than 5%, the share is proportionally deducted
Decision by the Chief of Unit I Central Java No. 2142/ KPTS/ I/ 2002 (13 December 2002) PHBM Agreement of 4 pine forest cases (Benowo, Sedayu, Burat, Mayungsari)	Article 6 (b.2.3): If at the end of the year, the production of non-timber commodities (pine resin) below the target set by the respective district forest office, the sanction of deduction of share is applied with the following criteria: If the volume of production only 90%-94% from the target, user groups only entitled for 50% from the maximum share they entitled for If the volume of production below 90%, user groups only entitled for 25% from the maximum share they entitled for
PHBM Agreement on Sedayu Community Forest No. 26 (16/10/2006) PHBM Agreement on Gempol Community Forest No 121 (30/12/02)	Article 16: If the percentage of the successful planting of the main species until the second year below 90%, the group is responsible to do replanting the seedling provided by the district forest office

In addition, in four PHBM pine community forest the forest offices urge the committees to achieve the targets on the resin production. Across the cases how the group committees have been very successful in meeting the targets (**Table 5.6**).

Table 5. 6 Realization of resin production in the four PHBM community forests

Community forest	Percentage of realization to the annual targets of resin productions set by the forest office		
	2007	**2008**	**2009 (up to Sept.)**
Rimba Lestari	116	124	107
Lestari	110	115	102
Sedyo Rahayu	115	119	105
Bumi Sari Makmur	102	105	98

Source: Interview with the respective group committees

We have witnessed how the formal sanctions have been effective in ensuring the interests of the forest administration given the rare occurrence of actual sanctions to the groups (Interviewee 5, 10, 16, 36, 41, 55, 58). Nonetheless, we saw sporadic examples of such sanctions (see **Box 5.5**).

Box 5. 5 Deferral on splashing benefit sharing in Randublatung Forest District

During the second fieldwork conducted in October 2009, the chief of Randublatung Forest District suggested that in 2009 the office decided to defer the splash of benefit sharing to the user groups as the committees yet to submit the report on the uses of the cash splashed in the previous year. The office needed to convince itself that there is no wrong doings in the uses of the money. The forest chief added that the decision is taken as he observed that that the committees did not spend the benefit sharing accordingly to what the forest office has determined that suggested them to delay of the submission of the report.

(3) Suspension of activities and withdrawal/ revocation of community forest

The forest administration threats the forest users and their groups to sanction them with the moratorium of activities in the field by the licence holders when unable to meet the obligations and responsibilities have been set. When major non-compliances, e.g. the involvement of the group committees and the users in illegal cutting are to persist, the people is to experience with the withdrawal/ revocation of the HKm community forest licenses or the termination of PHBM community forestry agreements upon major non-compliance on the field (**Table 5.7**).

Table 5. 7 Threats with suspension of community forestry

Legal documents	Sanctions
PHBM Agreement on Gempol Community Forest No 121 (30 December 2002)	The agreement can be cancelled by the district forest office without any consent and any further summons from the group if the committee and the members: - unable to meet the responsibilities - involved in timber thefts, forest raids or so in the community forests leading to the loss in the forest stand and or the forest area
Ministerial Regulation No: P.37/ menhut-II/ 2007	Article 33 The management rights are revoked when: [e]. during the duration of the licence, the holders unable to meet the obligations and responsibilities [f]. The forest condition degraded, ecologically Article 38 Sanctions of moratorium of activities in the field by the licence holders when unable to meet the provision in Article 25 and Article 26 [on the obligations and responsibilities] Sanctions of the revocation of the licence when the holder found to violate the provision in Article 13 [in regard to the tenurial rights of the forests owned by the state]

5.3 Trust as a bottom-up source of power

The interplay between trust and power has been extensively drawn. Some theories view trust as an internal cognitive or psychological element that explains or motivates an agent's action. They suggest that people place trust on other agent(s) with the expectation concerning their future action (Gambetta, 1988; Sztompka, 1999) and such expectation has an influence upon the person who has the expectation (Gambetta, 1988). This theory is based on the estimation of trustworthiness of the trusted agent is perceived to possess. Due such antecedents as benevolence, integrity, ability (Mayer et al. 1995) or openness and honesty (Richard et al. 1995) an agent might have, "a person makes himself or herself vulnerable to the agent who is trusted in a way that would not exist had the person refrained from trusting" (Dumouchel, 2005: 425). This creates dependence, which Emerson (1962) argues to give the trustee some measure of power over the trustor. Our community forest cases have sporadically revealed the 'bottom-up' power, explained below.

5.3.1 Forest administration through restoring its legitimacy

It is important for forest administration to gain legitimacy on its policy making. For them, legitimacy matters because it lays the basis for rule by consent; it is in fact as Krott (2005) says one of the political instruments of power. With legitimacy, the forest administration can expect support on its political decisions. The past decade has witnessed the declining legitimacy of the central state, i.e. inability of forest administration in imposing forest political decisions, stemming mainly from the change of the national polity[9]. At the political contexts, some actors including government bodies at the lower level questioned the legitimacy of the centralistic approach in the management of the forests, due one of which the accumulation of most of forest benefits by the central state, leaving the lower governments with marginal fractions from the lucrative forest sector (Resosudarmo et al. 2006). In the forests, notwithstanding the regulations being put in place, the forest authorities appeared to have been toothless in ensuring the forest orders, manifested in the massive timber poaching from the forests. This is in a large account explained by the decline of political support toward their decisions (see Adi et al. 2004, Awang 2004).

Box 5. 6 Half-hearted decentralization policy

More than 30 years, the forest of Indonesia has been administered by the central state; it nonetheless changed radically after the change of the national polity mentioned above. In 1999, the government passed Decentralization Law No. 22/ 1999 on Regional Administration, which gives district governments greater autonomy to formulate their own policies, complemented with the Law 25/1999 on Fiscal balancing between central government and the regions. Forest decentralization was strengthened when national regulations and ministerial decrees devolved forestry functions to district governments. In January 1999, central government transferred the authority to issue forest concessions to district governments. Whilst the central administration retained authority to issue permits for large-scale concessions, districts were empowered to issue permits for small-scale forest concessions for an area of up to 100 ha to communities or cooperatives, valid for one year. The policy initially sparked enthusiasm of district governments, including of the Java Island. There have been several political struggles over the control over the state's forest of Java. For instance, as reported by Adi et al. (2004) and Nomura (2008) the district government of Wonosobo tried to dethrone the superiority of Perhutani by passing a district regulation, which attempted to obtain control over the forest the central government has mandated to Perhutani for the management. Nonetheless, the company was able to firmly deny efforts by the district government as the forest ministry later revoked the local regulation.

[9] The downfall of the New Order Regime in 1998

It is therefore important for the state forest apparatus to seek ways to restore their legitimacy and reclaim political support, further eyeing for restoring the authority that facilitates them to impose their power through the use of regulatory approaches that has been discussed before. As political scholars have enormously explored, legitimacy concerns on the type of argument required to justify a claim that a certain authority is legitimate. The forest administration attempts to win support by providing reasoning and justification on why it manages the forests. To win the support of institutions at high levels -mainly other governmental bodies that might foresee to capture the authority (**Box 5.6**)-, it observes the following strategies.

- **Legitimacy based-on the claims on the shifting paradigm**

In restoring the legitimacy on the administration of the forests, the forest administration adopts a combination of strategies, principally with the claim on the shift of paradigm with more nuances on community involvement in forest management as well as the company's contribution in local and national development. This strategy is particularly adopted by the state forest company of Perhutani, whose colonial-style state-centric forest management (for this part, see Peluso 1992) in managing most of the state forest of Java has sparked numerous criticisms. While it is mandated with dual task of contributing to the national economic development through generating as much as incomes while still providing public services, it has been widely perceived to overlook the objective on improving the welfare and economic well-being of local populations. That some local governments appeared to challenge its administration on the state forests (see back, **Box 5.6**) can be explained principally to that account.

Not only was at higher levels, the legitimacy of forest administration fell sharply at community levels. The coercion approaches in dealing with local people who have been deemed to illegally use the forests and the arrogance of the forest authority remain the main ground for explanation, while such other reasons as persistent conflicts and social envy on the prosperity of forest officers are also often cited (see Wulan et al. 2004). The low-level of trust on the forest authority and the officers can also be manifested in the response from the people who are tended not to obey them (Awang 2004). Whether the forest administration wins the support of the people also rests on the extent to which they can restore the trust and legitimacy in the view of the people, who are at the core of the implementation of the community forestry. Even the community forestry has already been on the way, trust and legitimacy of the forest administration are not automatically restored.

The implementation of its community forestry is in fact a political decision that falls into the purpose on restoring its legitimacy. Simultaneously, the state company changed its visions missions with more nuances on the community involvement in the forest management, from "*aspiring to becoming the best tropical*

forest company in the world", into *"striving for sustainable forest management for the greatest prosperity of the people"*. The company also intensively advertise the fact that it has splashed a significant amount of money as the part of the benefit sharing scheme. In doing so, it holds ceremonial events inviting local government apparatus to symbolically hand over the share from the sales of forest products to the user groups. Simultaneously, it also organizes similar ceremonial events on for instance '*grand harvests*' on agricultural crops in the forest floor, further saying to contribute to the national food security or so. For example, on 12 February 2009, the Governor of West Java Province attended a grand harvest of rice in the forest of Perhutani (reported by Pelita, 14 February 2009). Further, that Perhutani has contributed to the income generation for district government is boldly highlighted.

The strategies have started to yield in the support on the implementation of its community forests (**Box 5.7**). In addition, at the local levels, indications on growing acceptance of the state company and its community program, highlighted by a commentary from the committee's chief of one of our community forest cases:

> *Looking at the fact that no other state companies than Perhutani has been concerned to rural development indicates the company has changed from the poor impressions that people have perceived and seen.* (Interviewee 24)

The support, both at high and low levels, proves decisive as the governments usually urge the lower administrations until the village level to support the company's program including its community forestry model that, as our earlier analysis on the coercion section has seen, facilitates the company to impose its political decisions through the regulatory framework.

Box 5. 7 Political support on PHBM community forestry

Drawing on the objective on fostering local economic development, Perhutani has obtained support from local government in implementing its community forestry model (PHBM). On 26 September 2001, the Governor of Central Java Province for instance passed a Decision No. 24/ 2001 which praises the company for its willingness to collaborate with local communities and other interested parties in managing in the forest (Article 2/1). In the Article 7, the decision also urges that the community forestry model is not to change the status of the forests of under the authority of the company; such is also narrated in each agreement with the user groups. Further, the governments at different local levels from provincial, district to village administration urge the formation of a communication forum –also comprising governmental bodies and the company's representatives- at the respective levels to facilitate the implementation of the company's community forestry model.

- **Legitimacy based-on the claims on technical superiority**

The forest authorities, principally at the central level, simultaneously continue to enhance their 'bureaucratic administration' over the management of the forest with the use of so-called "technical superiority", with competencies and personnel resources (Krott 2005). Wrong (2004:58) argues "administrators present themselves as experts in management" so that they can claim the legitimacy, or perceived as legitimate. In our cases, Perhutani for instance often claim their competence in managing the forests due their educational credentials of the forest officers, technical knowledge and experiences leading to the constructs that they should consequently be in first place in dealing with the forests or are not so enthusiastic in the ability of the locals in managing the forests. A senior forest officer (Djajanti 2006: 69) also argues that "*Perhutani does have detailed forest resource planning capability*". Further, the state company claims in its website:

> "***being entrusted*** *to manage the forest of* ***Java it plays pivotal roles in ensuring the sustainability of the forests*** *to supporting the environment as well as the social and economic aspects of the people of the island*...[with a mission] *to develop a company* ***with modern, professional organizations and human resources, with high reliability and capability***" (Translation)

It is here not to argue that Perhutani does not possess the necessary resources to manage the forests. In fact, as Peluso (1992) has carefully described, the company has sophisticated structures of organization aiming on the ensuring 'scientific forestry' with the focus on timber production. It has nearly 30,000 employees, who as the company claims trained accordingly to "*performance and competence-based procedures*" (Perhutani 2010). The technical competence of the company is recognized at the community level, outlined:

> "*Every month, usually on the 26th we organize a gathering of forest users and group committees inviting forest officers, to discuss issues regarding the implementation of our community forest, including some briefings from the officers on how can we execute forest activities*" (Interviewee No 33)

Simultaneously, the technical competence is imposed to other actors, particularly the user groups, to nullify their ability to wisely manage the resources (**See Box 5.8**). Peabody (1962:470) argues "possession of experience and appropriate technical skills by the superior obviously greatly enhances the acceptance of his formal authority by his subordinates". It is the case that the technical superiority is enhanced by the bureaucratic, which rests on the legitimate power of command vested in an official position, which obligates subordinates to follow directives under the threat of coercive sanctions, making the increase of the effectiveness of the former. Such combination is effective for imposing coercive power over the other actors of the community forests.

Box 5. 8 Technical superiority of forest administration over user groups

PHBM community forestry (Case 1-8)
The company is to "facilitate the group in the planning processes, implementation of community forestry, as well as monitoring and evaluation" (see PHBM agreement of Wana Bersemi community forest Article 6/2).

HKm community forestry (Case 9-10)
The facilitation is aimed improve the capacity of the local communities in managing their group...and creating the working plans of the community forestry (Article 12/1 – Ministerial Regulation No. P.37/ Menhut-II/2007)

5.3.2 Forest administration monopolizing important knowledge

Knowledge is an important resource in power exercise (Few 2002). Edmunds and Wollenberg (2001: 239) similarly point out the "strategic value of control over information". Those possesses important information can make either uses or no uses to disadvantage the others who have limited access to the information, enhancing the power of the former over the latter. The respective forest administration of the community forest case models in particular, given the nature of forest control and monopoly over the years prior to the implementation of the community forestry, have accumulated forest information, which benefits them massively within their respective power networks. Facilitated with coercion, the power feature becomes more salient in creating the power.

Evidence is widespread across our cases. One account to come up in the equation is – as both community forestry model cases pledge for some fraction of the sales of forest products to user groups, the control on information on how the portion to the groups is determined as well as how the products are traded. Combined with the use of empty formula (Krott 2005) that the shares are defined accordingly to the proportion of inputs the collaborating parties have contributed in the forest management –this part discussed separately, as well as the coercive forces, the user group committees place 'trust' on the forest administration and accept the '25+5 mantra', that 25% and 5% respectively of the sales of timber and pine resin from their respective community forests (details see the evaluation on the outcomes of community forestry), through the agreement with the respective group committees. The lack of information on how the share is calculated has led to some confusion and disputes (see **Box 5.9**).

Box 5. 9 Disputes on benefit sharing

The committees of Bumi Sari Makmur suggested that in 2009 they received less shares compared to the previous year, despite the more resin production in their community forests. They assumed that is due the unresolved conflicts on forest borders that some of parts of their forests are claimed by the neighbouring community forest of Sedyo Rahayu. They assumed that the resin from the disputed compartments is not considered as their production, but of their neighbour. Nonetheless, while the committee of Sedyo Rahayu still believe that the disputed forest is of their community forests, they suggested that they received less-share than it should have been if the resin from the forest is deemed from their forest. While the explanation from the forest office is inconclusive, both committees opted to accept the share as it defined.

There is no document available nor is conclusive interview shedding the light. All is made confidential and has been defined by the central office in Jakarta. Hints are there, nonetheless.

> *"We are at the district level poorly informed on how the shares were defined, but rumours develop -and I personally believe due my experience on the ground suggest so- that 25% share for the forest user groups assumes the average losses of trees in the forests due the natural circumstances"*
> (Interviewee 36)

Assuming such is correct, the forest administration will clearly benefit greatly from the implementation of its community forestry; it could have experienced more massive losses bearing in mind its apparent inability to control the forests. The committees might have accepted the rules as it is, but they have initially expected the full portions without further deductions. In fact, combined with the use of formal language that is poorly understood by the committees, the forest office is able to trick the committees. First, the shares are discounted accordingly to the share is corrected with a coefficient of rotation of harvested compartment divided by the running year of the agreement[10]. Secondly, the value of share is further subtracted with the harvesting and marketing costs, which are made non-available for the committee. More importantly, the trade of the timber is monopolized.

[10] For example, if an 80 year old compartment is harvested in the 5th year of the agreement, the share received amount to = (5: 80) x the proportion (25% or 5%) of the sales of timber and resin respectively

Likewise, prices of pine resin are hardly available as the trade is monopolized by the company; the resin is in fact exclusive to supply own factories. Few competitor factories depend heavily on the supply from the state company, and an interview with a forest officer suggested that the company in the last few years has tended not to supply the other processing companies. User groups and other stakeholders remain uninformed on the prices to set the share. Experiences from Indonesia, prices of raw material to support own industry often set lower than market prices in order to keep the competitiveness of the industries in the markets. If it is true than the price used is lower than it should have been.

5.3.3 Forest administration intervening internal affairs of user groups

Power of one actor over another can be well-built when the former is able to intervene the internal affairs to the extent the real subordination of the latter is created. The intervention and domination are lucidly revealed across our community forest cases, particularly over the local bodies of user groups. Looking at the institutions of community forest users, a bold case can be made on the existence of coercive power imposed on them, principally from the forest authorities. Looking back at the conditionality of formally-registered groups as the qualified institution for community forestry is a start to make claims.

- **Community forestry as a alliance building with group committees**

In community forestry, local institutions of forest users are the core in that external actors attempt to win their support to gain the foothold for their power in defining how the community forests should look like. Such is all of evidence how the forest administrations in the respective community forestry case models are keen on teaming-up with them, particularly the committees of forest user groups, through whom the forest administrations can regain their control over the forests they have lost for some time. Looking at how the forest administrations enjoyed the apparently absolute control over the forest resources (see Peluso 1992), they might have expected to maintain the sole control over the resources as it once was, instead of creating alliances with the local institutions. However the costs of not building the alliance with the locals have been salient; the 'legal muscles' proved to having little assists, manifested in the persistent forest encroachments and timber raids.

By building alliance with the committees, forest administrations expect to reinstate their control over the forest users through the committees. This model of alliance is the foundation of the community forestry models of our all cases. Notwithstanding their important position in the connection to the people that in some way forces the forest administrations to tie with them, it is by no means that group committees have the upper hand in the alliance. Instead, it is the other way that the alliance was imposed to the group committees and the people, and they

simply cannot resist for not doing so as they are required by the regulatory approach previously mentioned, particularly in PHBM community forestry in the form of PHBM agreements. The way that some groups (e.g. of Wana Tani and Bumi Sari Makmur community forests) that initially appeared not to support the forest office but remain in the collaboration indicates the coercion nature of the alliance.

- **Influence on the group constitution and internal rules**

The domination of the forest authorities over the groups is further shown in how the former is able to intervene the internal procedures of the latter, including in the creation of their constitutions (e.g. statutes and By-Laws) and the committee's structures. There is indeed no formal hierarchical relationship between the two that allows formal control, but informal subordinate-mastery connection is developed (**Box 5.10**). It might be absurd to question forest authorities' intention to influence the internal process of forest user groups, as controlling the groups does mean the likeliness of their interests being well-placed in the trajectories of the community forests. In fact, the actors observe the development of forest user groups as a crucial step and make it for providing sound platforms to exercise their power and to exert influence on community forestry processes and indeed the outcomes.

Box 5. 10 Examples on informal subordination

"*The nurture of the group Rimba Lestari rests upon Perum Perhutani and other related [governmental] agencies and institutions interested in [the group]*" (The Statute of Rimba Lestari group: Article 16)

"*The nurture of the group Wana Bersemi is done by the government, Perum Perhutani KPH Randublatung and other interested stakeholders upon the group decision*" (The Statute of Wana Bersemi group: Article 17)

"In executing the responsibility, [the committees] of *the group is obliged to coordinate and synchronize* both horizontally within the group and *vertically* to other [governmental] agencies and institutions, *principally to Perhutani.* (The Statute of Karya Lestari group: Article 17)

The groups' constitutions and internal rules are further guided and fetched with the interests of the externals. As the time of the research we have found some groups, i.e. Wana Tani and Wana Jati Wasesa, which are yet to create the constitutions (e.g. statutes, by-laws) and simply use the agreement to regulate the group and the members. The nature of the agreement that has been carefully narrated by the respective forest offices -indicated the similar use of languages and contents across the cases-, suggests the domination of the forest administration

over the groups. Even when the groups have created, the notion of domination of the forest authority is well-shown. In addition, the aims of the groups of under jurisdiction of same forest office appear to have been made verbatim (e.g. Sedyo Rahayu and Lestari community forests), indicating that the constitutions were to some extent dictated by the office.

Box 5. 11 Notions of external influence in group constitutions and internal rules

Sedyo Rahayu (Sedayu):
The group aims *to sustain and optimize the function and the benefits from the forests as a whole ecosystem* through fair and democratic to foster the prosperity of the people and the income of the country *accordingly to the national development* (Statute - Article 3)

The objective of the group *is to safeguard the forest*, the aim is to foster the prosperity of the people (By-Law: Article 6)

Lestari (Mayungsari):
The group aims *to sustain and optimize the function and the benefits* from the forests as *a whole ecosystem* through fair and democratic to foster the prosperity of the people and *the income of the country accordingly to the national development contexts* (Statute - Article 3)

Karya Lestari (Glandang):
The group aim *to improve, rehabilitate and nurture the forest and the forestland for sustaining the optimum function and stead of the forests*. It also aims *to safeguard the forest from dangers and hazards* stemmed from thefts, fires and others caused by irresponsible people (Formal registration document- Article 7)

Wana Bersemi (Glandang):
The group aims *to realize fair, democratic and sustainable forest management* to *greatest benefits and the prosperity* of the people and *of the company* (Perum Perhutani)

Rimba Lestari (Burat):
The group purports *to safeguard the forest from all interference and perturbation* (By-Law: Article 6-1)

- **Attachment of a forest office in the structure of group committees**

In regard to the small body within the user groups in the form of committees- who are expected to carry the interests of the forest users (group members) and to represent them in dealing with external actors of the community forestry – the influence of the forest administration in placing the preferred individuals is also evident. There is a bulk of studies (e.g. Varughese and Ostrom 2001, Dasgupta and Beard 2007, Thoms 2008) which shed lights on the dominance of local elites

in the committees; evidences from the cases are also at that side of the coin. They have shown some of the local elites are those intimately connected to the forest office (**Box 5.12**).

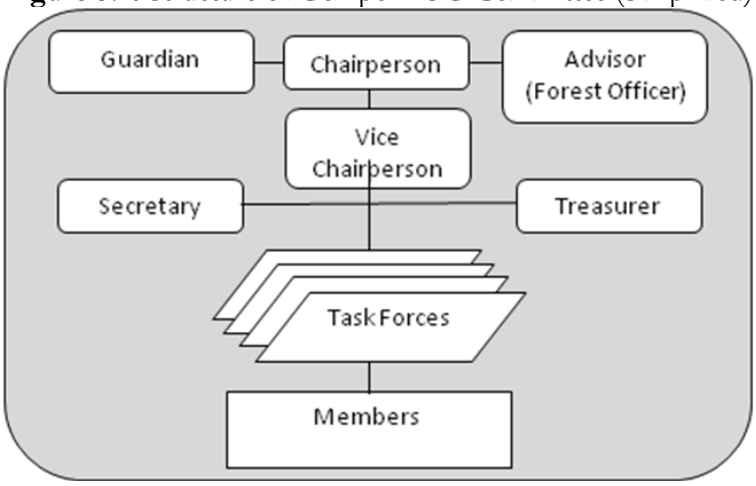
Box 5. 12 Influence of forest offices in setting the committees' structures

There are examples of influences from the forest administration on the user groups, particularly in placing the preferred individuals who are seen to serve the best of its interests. The extent to which the committees of Wana Tani were created makes a bold claim. As previously discussed, Wana Tani community forest was preceded with tedious initiation processes in which a group of local people continued to oppose the community forest model offered by the forest office. The decade-long processes have been finalized when the forest office opted to turn away from them and created a different committee, chaired by its former employee resides in the village.

The influence is less obvious in other cases although sporadic indications are there that the committees at least have approved by the forest offices. In Rimba Lestari and Lestari community forests, the group leader has cordial relationships with forest officers, particularly those at operational levels. In Gempol village, PHBM community forestry initially did not interest the people. While the forest office was in expansion of the community forestry, it chose the leader and committee members, mainly chosen from the few attended PHBM' presentations.

The control of the forest office is further augmented by attaching a forest officer in the structure of the group committees, as of our eight PHBM community forest cases (an example of Wana Bersemi case in **Figure 5.3**). The officer is usually the lowest forest officer in the company's management structure (locally called as *Mandor*), who usually also dwells closely to the people. The district forest offices have also promoted a local as Mandor PHBM, to deal with the implementation of the community forestry. Likewise, the officers are directly/ indirectly attached in the group committee's structures.

Figure 5. 4 Structure of Gempol FUG Committee (Simplified)



The explanations on placing the officers often rest on the channelling and coordination functions between the committee and the district forest office. Nonetheless, in the asymmetric social relationships, as of between the forest office and forest user groups, coordination can be equated with control. Cray (1984:88) argues that "the pattern of coordination can be imposed through an act of control"; our cases reveal that the forest officers are put to control over the groups and ensure 'rules of the games' in the field. Honadle and Cooper (1989:1534) add that coordination can be "viewed as a one-way street with the benefits flowing toward the one demanding the coordination and the costs accruing to the one providing it". This is proved in the attachment of the forest officers, since they convey any management decisions of the forest district office to be implemented by the group. During the fieldwork in Sedyo Rahayu and Rimba Lestari community forests, forest officers were enquiring any forest infringements, such as timber thefts, and simultaneously coordinate the necessary action plans to prevent further infringements.

5.3.4 Forest administration facilitating groups' activities

As previously said, our community forestry cases are framed within the contexts of regulatory approaches to which the users and their groups have to adhere. To ensure that the people follow what it takes to the community forest, the forest administration has put facilitation as an approach to guide the people. The facilitation is by design placed as community policing and surveillance. Even the notion support and helps are there, Kaplan (1985) argues that the notion of coercion is well embedded. He (1985: 467) notes "facilitation is a helping

profession...help is a strong form of social influence and sometimes coercive social pressure".

In HKm community forestry, the Article 12 (1) of the Ministerial regulation No. P.37/ 2007 reads *"the facilitation aims to guide the people in the application process of the license accordingly to the pertaining rules and regulation*". To further assure that the process and activities in the community forests are not 'polluted' by other external influences, the state has placed screening procedures. The Article 15 (5) of the Ministerial regulation further reads "*other stakeholders…can execute the facilitation as long as having consent from the people and coordinating with the municipal/ district government*". In PHBM community forestry, although such clauses are non-existence, consultation with the forest office is seen necessary before the group committees collaborate with other external actors. Such allows the forest administration to control the activities of the users and the groups, and to limit opportunities for self expression and freedom of the users in the use and management of the forests.

Box 5. 13 Prevention of external actors from being involved in community forestry

The committees of Rimba Lestari and Sedyo Rahayu advised that they have respectively been approached by a local NGO with an offer of facilitation of the processes of the community forests. They nonetheless consulted with the forest office and decided not to accept the offer.

> *"We were cautious when an NGO knocked our door and offered us to work with. We knew that this NGO has been working with our neighboring villages; their work at our understanding appeared to be against the forest company. We therefore decided to go to the forest office to know the real circumstances. We finally to intimately work with the forest office, instead with the NGO"* (Interviewee 31)

In other cases where external actors are involved in facilitating the community forests, they have at least have been 'screened' by the forest administration. In our HKm cases, the Center for Community Forestry Studies (Pusat Kajian Hutan Rakyat, PKHR) of Universitas Gadjah Mada and a local NGO called Yayasan SHOREA are all in cordial relationships with the forest administration and other governmental agencies, as they are particularly the members of HKm Consortium, which was created by the forest administration to foster the implementation of HKm community forestry in the region. Similarly, the implementation of the Levelling Playing Field Project of the Center for International Forestry Research (CIFOR) in two community forests of Karya Lestari and Wana Bersemi appeared to have been approved by the respective forest offices as the project executed by PKHR.

The consequences are immense. We have witnessed in some of our cases how some external actors were prevented to being involved in particular community forestry (see **Box 5.13**). The main explanations were that the actors were deemed 'would have undermined' the processes of the community forests. With the use of facilitation to the community forestry groups, the forest administration has clearly the upper hand as it can control both the activities of the community forests and the actors which it sees as not supporting its interests.

5.3.5 Forest administration with other informational instruments

- **The uses of generalized terms and empty formulas**

Political scholars (e.g. Krott 2005) point out how power is often built with the uses of generalized terms and empty formulas; such a power feature is exposed across our community forestry cases. Quite often, generalized terms and empty formulas are framed within legal contexts so that the 'power recipients' are coerced to doing things that they cannot escape from. This is particularly employed by the respective forest administrations of the community forestry models in abusing the poor forest users and their groups, who are generally illiterate in terms of legal contexts. Through contractual frameworks, the more powerful actors, i.e. the forest offices, intentionally create applicable rules that favor their interests, principally through the use of what Waldron (1994) calls as 'void-for-vagueness' or "indeterminacy" clauses, creating ambiguities, which later are for use to serve their interests and aspirations at best. Byers (2003: 176) similarly argues that "*the rule might be made intentionally ambiguous, so as to enable the powerful to argue that they are entitled when they wish to act, while arguing that weaker [actors] are not so entitled when they wish to act*".

What is manifested in our community forestry cases clearly suggest us that the use of generalized terms in community forestry agreements proves an effective strategy to maintain power over other actors and to control the forest resource. PHBM agreements and HKm licenses are worded with power-laden language which can disadvantage "those who have a low proficiency in the language of the legal process" (Gibbons 1999: 160). Gibbons (1999: 161) adds "technical language constructs the world in different way from everyday language: It can be useful to define a particular term and then use it. Problems are more likely to arise when technical terms are used without definition to an audience that is unaware of them". Krott (2005: 33) argues that unresolved issues are described in such general terms that neither party of interest can find anything disapproving. In legal programs, there are so-called "gray concepts which require interpretation in each individual case (Krott 2005).

In PHBM community forestry model for instance, there are numerous grey-areas, which prove complicated to define later in the implementation. The setting of this model rests on the vague ideology on '*share responsibilities, share benefits*'. The

ideology is often defined with the contribution of productions factors that is rarely understood by the forest users and their groups. Such leads to different interpretations between the parties (see **Box 5.14**).

Box 5. 14 Different interpretations on the ideology on 'share responsibilities, share benefits'

Randublatung district forest office for instance, as of other forest districts, expects the user groups in its territory to actively participate in forest patrols, as tree thefts remain one of the district's major forest problems. However, not all groups have adequate resource to doing so. Our interviewees from Wana Jati Wasesa community forest (42, 43) nonetheless suggested that they cannot be expected to also be actively involved in forest patrols for the following reasons. First, the benefit shares might not even be sufficient to pay the patrols. Secondly, they do not want to be involved in clashes with illegal loggers. Experience in previous years suggests that illegal loggers outnumbered them.

Users of Benowo community forests experience with the share the forest districts expect from their own trees planted in between the forest species. According to the agreement, forest users and their groups are allowed to plant other timber species in between the main company-prescribed species as well as other commercial commodities. The agreement reads that on such cases, how the benefits are to be distributed to be agreed on separates agreement. This is quite open-ended article and can become traps for the forest users and the groups. Interviews with some FUG leaders reveal that they find quite difficult to deal with the company on how much portions to be allocated for them. In Benowo community forest, some the FUG committee suggested that they have not yet reached conclusions on the problem, but on the other hand said, the FUG and the forest users might have found ways in case agreement becomes elusive. They might cut the trees one by one so that forest rangers cannot detect the harvests.

The ideology of the share of the benefits derived from the forests also proved to disadvantage forest users as they have to share the economic benefits they have thought all for their capture. In fact, it is often manipulated in regard how the forest administration also seeks to obtain some benefits that officially are entitled for forest users and the groups. As our evaluation on the outcomes will follow, the forest administration is also to ask for non-timber forest products including some portions of agricultural products, which are according to the agreement are all for forest users. Further, there are prevalent uses of generalized terms of empty formula in the uses of the forests and their resources, particularly how forest users are prohibited from cultivating particular agricultural commodities (see **Box 5.15**).

Box 5. 15 Empty formula on the use of forest floor

Across all of our PHBM cases, there are no formal restrictions on the uses of forestfloor for agricultural practices. Any agricultural crops are allowed so long as they are not interfering nor competing with the forest species. This is such a quite general term so that the group committees might not have digested well. At glance, the article seems to provide more 'space' for forest users to utilize forest floor to improve their livelihood. Prior to PHBM, users found extremely difficult as the forest authorities often vetoed agricultural species they preferred (see Peluso 1992). Nonetheless, previous practices on the prohibition remain. Cases show users find that many agricultural crops they prefer are prohibited. Cassava is the notably prohibited species. Supported by unchecked information, the forest administration prohibits the planting of this species as is perceived to consume more forest nutrients. How this prohibition is made effective is in part due the trust on the assertion of nutrient-absorbers, as well as some forms of coercion both forest rangers and group committees.

- **Mental manipulation to encourage participation in forest activities**

Mental manipulation involves "incomplete or lack of relevant knowledge – so that no counter-arguments can be formulated against false, incomplete or biased assertions" (Van Dijk 2006: 375) "by omitting very important information, by lying or distorting facts" (Van Dijk 2006: 364). Not only manipulation of physical information, the forest administration also attempts to manipulate the mental values of other actors through the use of blurring facts or opinions. Theories have extensively showed us how actors can build power through the manipulating use of information. Foulcault (1980 in Edmunds and Wollenberg 2001: 238) sees language and information to carry power and politics with them, the manipulation of language and information enhances the power of their users and strengthen the control over other actors, who are consequently forced to "believe or do things that are in interest of [theirs], and against the best interests of the manipulated' (Van Dijk 2006: 360). It is here not always to say that actors use false information and science, but they select, distort and manipulate them accordingly to their particular interests (Few 2002). If actors are able to convince others with false information, the consequence is ever greater.

Across our community forestry cases, we have witnessed intense power abuses through uses of language, selection of science and information. A number of external actors, not necessarily the forest authorities, but also those who claim to advocate the interests of local communities intensely select the best languages and information to encourage the latter's participation forest management activities, particularly in restoring the degraded forestlands and patrolling the

valuable resources. The provision of people's participation is usually dressed with impressive sustainability ideologies, dogmas and slogans, to the impression of the people to control the otherwise thinkings (Van Dijk 2006). In many ways, a bulk of regulations, official documents and speeches on community forestry are in clear provision on raising the awareness on the importance of forest resources for the current and future generations that should consequently managed wisely and sustainably.

Photo 5.1 and 5.2. Examples on slogans raising participation of people in nurturing the forests

"Hutan adalah emas hijau, titipan anak cucu" (Forest is a green gold, the treasure of the future generations)

"Openono alas iki, najan ora nyugihi nanging nguripi" (Nurture the forest, even if it cannot create wealth, it sustains the life)

People are expected, as a high rank forest official, to *hangrungkebi* and *handarbeni* (Fattah 1999), both refer to senses of responsibility and the feeling of ownerships so that the people contribute in the forest-welfare. The sustainability dogmas prove to indoctrinate the people and to influence their mental attitudes toward the forests. At the micro level, such simple slogans as '*sustaining forests, sustaining our life*' are created in each user group (see **Photo 5.1 and 5.2).** At higher levels, e.g. at provincial level, Central Java Province uses a slogan of "*Hutan Lestari, Urip Mukti*", which means "sustainable forest, prosper life".

The uses of "more distinct, slower pronunciation, less complex syntax and the use of basic lexical items" (Van Dijk 2006: 366) prove very powerful for mental manipulation that the people as Van Dijk (2006: 361) describes "are unable to understand the real intensions or to see the full consequences of beliefs or actions advocated by the manipulator [because they] lack of specific knowledge that might be used to resist manipulation". Forest users are made aware of the

forests have been massively depleted and are raised their awareness on how such might impact their life, coinciding with cases of droughts, water shortages and storms that have sporadically occurred.

> *The climate has changed I noticed over the past few years. Our people have found it is now difficult to deal with as we generally rely on agricultural cropping for our daily life. The changing climate has impacted us in the way that we find now it is difficult to determine when we should start the planting. Also, few years ago cases of water shortages occurred. During my life, I had not such poor experience. I suppose that this is due the declining forest conditions. Therefore, I urge my people to plant trees on degraded areas. Our efforts on reforestation have been nationally acknowledged. In 2005, we were awarded with the 2nd best prize of the national reforestation movement. Also, I welcome and fully support the community forestry program of Perhutani and urge my people to also being supportive"* (Interviewee 24)

Across cases, each of the user group study cases has distinct, easy to digest and therefore powerful slogan for their community forests. Such slogans are found in many places including the group offices as well as several strategic points in the forests. Not only local communities, numerous official documents also emphasize on the responsibilities on restoring the degraded forestlands of the local governments. Local governments at provincial and district levels are all encouraged to meaningfully participating in the implementation of the community forest; they get involved in the communication forums at their respective territories.

> *"Responsibilities of restoring and protecting the forests are not only of us. Instead it is also the responsibilities of local government given the contribution we provide to the government in income generation. We intensively communicate with them on how activities can be coordinated, including those of the community forestry program."* (Interviewee 52)

Such has been swiftly responded by the local governments. For instance, in 2001 the provincial government of Central Java launched the Decision of the Governor of Central Java No.24/ 2001 on PHBM Program in Central Java. The pledge has huge consequences, in the way local governments back the company including how to deal with actors perceived to undermine the interests state company.

- **The use of religion-based rationales in regulating forest uses**

Forest administration often uses religious-based rationales in regulating the uses of the forests. In most of the research sites, although the people generally have low literacy levels, they tend to be 'militant' to their religions (principally Moslem) and usually follow the respected religious leaders (*Kyai/ Ulama*). The forest management officers, usually at the lower levels see this as an opportunity to

control the access on and the use of the forest resources. As suggested, they sporadically attend *pengajian* (lectures) by the religion leaders within the community and ask the leaders to regularly cite 'appropriate verses' within Koran and *Hadist* regarding the protection of the forests. The usually cited is that humans were created as *Khalifah* (leaders) on the Earth, having consequences to protect the planet and all resources therein from destruction. This implies that the forest dwellers are also responsible to keep the forest resources and to restore the resources when they are threatened or in poor conditions. Another forest officer also suggested that he once invited one of the most respected *Ulamas* in the country, who (based on the tips from him) asserted that those who 'illegally' cutting trees from the forests are right to be killed or shot dead. These religion-based rationales proved enormously effective for brainwashing. They, simultaneously with other efforts, prove to ease the pressure on the forests, to reduce the occurrence of illegal cuttings and to encourage the people to support in forest restoration.

5.3.6 Social NGOs and trust in the community forest networks

Our community forestry cases have seen the involvement of NGOs, principally with more social nuances. In the network, they have some degree of power mainly gained from the trust from the other actors, but rarely the forest offices, of in the respective networks.

- **Mediation on conflict resolutions to gain as a strategy on gaining trust from local people**

It has been discussed in the coercion part; the way the NGOs have attempted to get involved in the particular community forests was started by approaching the forest users and their group committees with the promises on promoting democratic and fair access on the forest resources and offering assistance to the people to achieving the objectives. Mediation for 'conflict resolution' is particularly offered in cases of forest conflicts. Physical conflicts in the forests of Java have been well documented and remain one of the sourest forest problems in the island (see **Table 5.8**).

Table 5. 8 Physical conflicts between Perhutani and local people 1998-2003

Victims	Types of impacts		
	Dead	**Injuries**	**Physical buildings**
Perhutani	0	6	47
Local people	8	17	2

Source: Suprapto 2008 (mainly based on media reports)

In Temulus, when conflicts between local people and the forest office were about to escalate, driven by the shoot on three locals, the local NGO of ARuPa swiftly jumped to boast the moral of the locals. It then initiated some mediation programs -including investigation and research. Facilitated with the political turmoil in the country that allows them with greater freedom, which was at its premium in the past years, the NGO later launched a program called *Pengelolaan Hutan Partisipatif Terintegrasi* (Integrated Participatory Forest Management), which focused on creating mechanisms on conflict resolution at local levels (Fuad 2000b).

While mediation usually involves neutrality (Yarborough and Wilmot 1995), the NGO then appeared to have been more aligned to the forest users. Given the obvious pressure from the forest office, the involvement of the NGO appeared to generate some kind of hopes from the people, who swiftly placed trust upon the NGO, while on the other hand created ill feeling amongst forest officers. Such trust is highlighted by the acceptance of the people on *Manajemen Rejim Mozaik*[11], offered by the NGO, instead of the forest office's PHBM community forestry-which as earlier said timely implemented to reduce the scale of the conflicts. In the meantime, the NGO and the people identified a local folklore of Samin Surosentiko[12] (see Fuad 2000b) as the symbol of further resistance toward the forest office. Such has enhanced the trust placed upon the NGO. Nonetheless, the trust gained was not sufficient for the NGO as it was later ousted from the region by the forest office, assisted by local government apparatuses, as earlier discussed.

- **The changing strategy from opposition to coalition persuading governmental actors to place trust upon NGOs**

Some of our community forest cases have early shed the light on how the persistent opposition to forest administration by some NGOs appear to not helping their causes in the community forests as the former had too much in its disposal, particular the coercive power that allowed it to expelled the latter from the networks. Such experience might have taught important lessons to others to

[11] This system was adapted based on the models developed by University Gadjah Mada (Prof. Hasanu Simon) based on the experiments executed in other forest districts. It allowed local people with more spaces, principally on the "50-50 share" between the forest office and the locals (see Wulan et al. 2004). This system was in fact approved by the forest office of Randublatung after intensive consultation involving the forest office, the people and the NGO (Wulan et al. 2004), an interviewee from the forest office during the fieldwork suggested that the forest office later vetoed the plan, and planted the agreed compartments for the Mozaik model, accordingly to its own model, preventing *the Mozaik model* for implementation.

[12] He was a local revolt to the collonial forest administration. His main taught was that forest is no owners so that people can freely used the resources.

change their appraisals that the political turmoil in the country -which has seen the rises of NGOs in the political equations including in forest's matters-, would serve as a solid platform to challenge the forest administration. Instead, the forest administration is still equipped with numerous power features, as particularly explained in the coercion part, with which it can stand firmly still, and force others to compromise their strategies to keep them in the networks.

Such is evident, the durable involvement of the alliance on social NGOs and lobby groups in HKm community forestry, including in our two HKm cases, is principally down to this account. There has been a growing admittance that the pursue for ownership rights on the state forests by forest users has hit stone walls (see Fuadi and Rahman 2004) that suggests them to compromise the expectation to helping the forest users to obtain management rights over the forest instead. A source from Yayasan Shorea, one of the 'longest serving actors' in the networks, suggested:

> *"Experiences from other fellow NGOs in some regions have driven us to use smarter strategies that can keep us in the equations of HKm community forestry. We need to slightly adapt our approach, indeed. This does not necessarily mean we have totally changed, but it is the resilience of the forest administration." (Interviewee 80)*

The twist of strategies was also facilitated by the signals on 'converging in somewhere the middle' in that the forest administration also appeared to finally cede some of the wishes from the NGOs, its alliances and the forest users (and their groups) of granting the management rights over the forests (see back **Table 5.2** on the process on the gazettement of HKm community forestry).

Axelrod and Keohane (1985) shed the light on the shift of strategies by the NGOs, saying that in a mixture of conflicting interests, cooperation between/ amongst actors can occur when the actors adjust their behavior to the anticipated preferences of others. The HKM cases reveal that the alliance of the NGOs pursued alliances with the forest authorities, due to the fact that the forest authority remains the agent that cannot be excluded from the networks due their authority, which is simultaneously coerced to the less-powerful actors, which simply cannot resist or whatsoever. The shift has facilitated the NGOs to stay in the networks; trusts from the forest administration and other governmental bodies are emerging. On 29 September 2005, the NGOs and the forest administration then formed an alliance of Working Group on Empowerment of Yogyakarta[13]

[13] The working group was established accordingly to a decision letter by the Governor of DIY province Nomor : 84/KEP/2009. It is allocated with an office, fetched in the Provincial Forest and Plantation Agency of DIY Province. The Group is composed by a variety of actors, seen from the structure of the group, including The Forest and Plantation Agency of the DIY Province and of the Districts in the Province and other

that facilitates the NGOs to work closely with the forest administration and other governmental bodies.

- **Facilitation by NGOs drawing trust from forest users and the committees**

In the earlier section, we have witnessed how facilitation is imposed to forest users and their groups, as modes of controls on their activities in the forests. In this part, we also observe facilitation is used by a number of NGOs to draw trust to be placed upon that facilitate themselves to influence the particular community forests. The departure of Suharto regime as earlier explained has facilitated (mainly social) NGOs in getting opportunities to influence how the forest should be managed and focused at the national level. Nonetheless, others also tried to get involved at the local by working directly with forest people. Some of our cases show how they were intensively involved in working with the locals. Even prior to the inception of the community forestry, particular social NGOs started to work with the people to gain the foothold for their influence over the forest; they offer so-called 'facilitation' to the people.

One of the most comprehensive examples is the facilitation of the HKm community forestry, including in our two HKm cases, in which a coalition of NGOs has devoted their support to the forest users from advocating the community forests around the end of the 1990s to the date when the groups are to prepare the management plans as the pre-requisites for securing the harvest licenses, after the management licenses have finally awarded to the users and their groups. The approximately 10-year facilitations have seen different (ever-changing) governmental policies, to which the NGOs are forced to adapt their strategies on the facilitations (see **Table 5.9**). In other the community forests where NGOs are involved, i.e. Bumi Sari Makmur, Wana Tani, we have also seen some forms of facilitation, albeit to the lesser extent, given the short duration of the involvement of the NGOs in the respective community forests.

Considering the time, resources and activities (further discussed in the Incentive section) that have all been devoted to facilitating the user groups to implement the community forests, the former is swiftly placed with trust by the latter. This is clearly said by the committees of the user groups. In a workshop on HKm community forestry held on 19-20 December 2003 (see Fuadi and Rahman 2004: 106), a committee member was full of praise to the NGOs, saying: "*I would like to thank to our brothers and sisters from KPHKM*[14] *that have facilitated us-who are mostly*

governmental bodies, the NGO Networks and Universitas Gadjah Mada. Shorea itself is allocated with a position of secretary in the working group

[14] It is an alliance of social NGOs created in 2003 to facilitate the implementation of HKm community forestry

illiterate- with principally various knowledge". Such a notion was well shown during the fieldwork.

Table 5. 9 Types of facilitations by a coalition of NGOs in HKm community forest

Timelines	**Aims**	**Types of facilitation**	
		External	**Internal**
End 1990s-early 2000	Formalization of HKm	- Lobbying, along with other societal organizations, on formal policy on community forestry, to district, provincial and central governments - Creating (social) alliance to the promotion of community forestry - Public hearings - Seminars & workshops on community forestry - Exhibitions on community forestry practices - Media outreach - Research and documentation on community forestry practices	Capacity building of group committees (organizational management &interpersonal and communication skills) Establishment of formally registered groups
Mid 2000s	Securing management licences		
End 2000s	Securing harvest licenses		Establishment of business unit Forest inventory Management plans

As has been said, trust involves unchecked appropriation to the trustee; in our cases we have seen how trust placed on the NGOs has blinded the users and their group committees in following their referrals, and has allowed the NGOs to define necessary activities for the respective community forests. In our HKm cases, we observe that the facilitation provided has persuaded the forest users and their groups to believe the changing expectation to a lesser degree on the management rights, instead of the ownership rights over the forests, is best for them. Looking at the circumstances – particularly the firm position of the forest administration, the argument is well-based. Nonetheless, the changing expectation is also for the benefits of the NGOs, as such keep themselves staying in the power equation to influencing the processes of the community forests. In addition, looking at the internal affairs of the groups were defined, the users and their group

committees are simply to follow what the NGOs observed best for them. One of the obvious examples is the appointment of a female user as the chairperson of Sedyo Rukun community forest. While she is as some of her fellow users note capable of doing the jobs, the appointment according to herself was of a political move from the NGOs to illustrate how women are also empowered in the group. Such highlight how trust placed by the users on the NGOs has makes the former vulnerable to the influence by the latter.

- **NGOs bridging the gaps between forest communities and funding agencies**

In the past few decades, visions on community forestry have been one of the most appealing international forest agendas, to which numerous donors are interested to involve themselves by providing funding for fostering the program on the ground. The donors nonetheless need partners who can create linkage and bridges between them and the locals, principally forest users and their groups. NGOs play pivotal roles in this context; through them the donors' aspirations on the implementation of community forestry are facilitated.

In Indonesia, the roles of NGOs as an element of civil society to partnering with donors, principally international ones, to lobby on the implementation of community forestry and to facilitate the locals so that they can swiftly execute the community forestry have been widely acknowledged (see Colchester 2002 and Colchester et al. 2003). The trust on NGOs by donors has seen numerous funding schemes have been splashed by the latter on the former **(see later on the incentive section)**. Clark (2003) points out that in Indonesia as of in other countries, donors "sought to use NGOs as implementers of their projects". The focus of donors on such issues on decentralization, building civil society and the alleviation of the poverty of rural people has facilitated the swift trust placed upon the NGOs, who usually claim to work accordingly to that context.

5.3.7 University accumulates trust in the community forest networks

The previous has already outlined the instrumental roles of Universitas Gadjah Mada (UGM) in community forestry program in Indonesia, from the experiments of community forestry schemes to lobbying and drafting on the policy. We also witness how the university have been heavily involved in shaping some of the selected community forest cases. We have identified the involvement of the university, particularly through its Center for Community Forestry Studies (*Pusat Kajian Hutan Rakyat*, PKHR) in the two HKm community forests and PHBM community forests of Wana Bersemi and Karya Lestari. Within the networks of the actors in the community forests, the university is largely placed with trust from a wide range of actors.

The downfall of the New Order regime said earlier has seen ad-hoc alignment of societal elements and political manoeuvres on striving for changes in new paradigms on the management of the state's forests that saw the instrumental roles of some of the university's professors (see Fay and Sirait 2002, Colchester 2002). The roles include political up-streaming with their social coalitions providing scientific foundations and the moral suasions to the new paradigm of 'social forestry', as well as direct facilitation on the locals to 'preparing' them to get ready once the community forestry is to be implemented. The two roles can be seen clearly in the policy formulation -including our two community forestry model cases, and the direct involvement in the four community forest cases mentioned above. The strong ideologies of the university on change toward more participatory approach has persuaded the social lobby groups found in the networks to place trust on the university. Jones and George (1998) argue that shared values are the primary vehicle through which people experience the highest form of trust.

At local levels, the swift acceptance to the university in the networks of the community forests where it is involved, principally by the locals (forest users and the group committees) is facilitated by its long reputation as a university with great concern on community development. In rural areas of Java island- and across the country in general-, such reputation is well acknowledged. A chairperson of a HKm community forests suggested:

> *UGM has long been recognized as a people's university, which without any doubt I observe their involvement from the very first is for the best of our people's benefits. In fact, our trust is paid off as my people and I witnessed how they were and are still going up [lobbying the government] and down [working with us] so that we have finally secured the management rights over the forestland. (Interviewee 76)*

Such comments reveal how the chairperson and the users have put the trust upon the university at the first instance without any prior good experiences. While trust as Sztompka (1999) involves a kind of bet, the degree of uncertainties the people might have experienced in the future –that the university will act contrary to what the people have observed, is eased by the university reputation. Swift (2001) points out that an organisation with a good reputation can be relied upon to behave in a manner consistent with reputation. Combined with numerous incentives to the group committees in the form of facilitation as well as the supply of information and technical staff (further explained in the section of incentives) generates trusts from the people (both the users and their group committees), facilitating the university to shape the community forests. In fact, the HKm groups, principally due their frailty to the forest offices, are 'off approval' on supporting the actions pursued by the university, and its lobbying networks.

Not only from the lobby groups and forest users' committees', when UGM is involved in particular community forests, it draws from government agencies, including the forest administration. Despite some sporadic distrusts- with an example of the case of Bumi Sari Makmur community forest, in which the university-particularly PKHR- has been perceived to encouraged the people to fights against the forest office (see back Coercion section), there has been a large extent of trust placed upon the university. The trust is basically derived from good experiences and cordial relationships with the university that have in fact been developed from some time. Such relationships are manifested in numerous collaboration projects, provided by the forest administration and executed by the university (see incentives section for details).

The trust drawn from different actors in the networks has allowed the university to play instrumental roles in shaping the community forestry processes and outcomes. In cases where interests on the forests appear to not resonate -as the initial stages of HKm when the users and the NGOs appear to frontally have a go at the forest administration- the university acted of mediating the conflicting interests, validated in the creation of a coalition amongst different actors, to seek 'win-win solutions'. On the other hand, when circumstances are 'less hostile', the trust from the actors in the networks facilitate the university to implement its 'community forestry models'. As of two LPF project sites, it was of the influence in creating the group constitutions, the level of access on the forests that is framed within the context of forest sustainability as well as influencing the distribution of benefits between the company and the groups, as well as the use of the benefits within the groups.

5.4 Incentives as an inducement-based power

We have laid the theoretical foundation on incentives as an element of power. Incentives constitute both financial and non-financial offers to motivate a course of actions set by the providers, even such involves an exercise of 'trade-off" by the recipients, whose initially preferred goals and objectives then replace accordingly. In our community forestry cases, we have identified numerous power features through the use of incentives, discussed below.

5.4.1 Forest administration and incentives to different actors

- **Offering jobs to a local rebel to soften resistance**

While forest administration as our evaluation on coercive power has the capacity of enforcing the rules on community forestry despite resistance, it has much economic incentives at its disposal that can induce other actors to rely on and support its policy. We have earlier seen how a group of people of Temulus village rejected the offer to implement the community forestry model of the forest authority, and continued their resistance to the forest office, despite their apparent

need on the forests and the resources within. The main argument was that the model is deemed of exploiting them as they saw that the forest office would gained the much of the benefits if they were to collaborate with (see Wulan et al. 2004).

While a number of strategies including persuasive and coercive approaches have been made in place, the forest office sensationally tested the resilience of the group by offering one of the group leaders with an offer of a formal job in the forest office. The offer quickly rocked his initial stance; it was an attractive since being an officer of Perhutani, regardless the poor impression toward the company at the time, and inevitably proved hard to miss (see **Box 5.16**). He turned his back on his fellow activists eventually. The switch of the then activist has evidently sent a shudder to his fellow, and their struggle to have better access to the forests that has since limped out. Through the strategy of offering the incentives –combined with the others as previously explained, particularly the coercion strategies- the forest office was able to seize the control over the people and swiftly implement the community forestry.

Box 5. 16 A former rebel becoming a forest office

Karjan is currently a forest office of Randublatung Forest District, responsible on community forestry tasks dealing with the user groups within the District. Around the end of the 1990s, when economic (and later political) hard hit the country, he found difficult to find a job with only the completion of secondary senior high school (Class 12). As of other youth in the village, he went to Jakarta, the capital city, to find casual jobs, but later decided to return to the village as the life in the city was not as he has was expecting for. He then worked in the forest, using the forest floor to cultivate agricultural crops. He then chaired a group of farmers in advocating more spaces allocated to the people. Such is timely when the NGO ARuPa came to village to provide community facilitation. With other fellows, he was trained how to deal to the forest office and so; he has since become a militant. Nonetheless, his mind was teased by the offer of job in the forest office. It is a prestigious position as most rural people observed as being an officer in Perhutani is often associated with prosperity or so. Without second though, he jumped to the offer, notwithstanding with hatred from the people of Temulus that suggested him to evacuate his family from the village.

- **Creating 'economic wishes' from group committees to obtain their support**

In our PHBM community forest cases, supports from the group committees and other local elites (including the village administrators) mainly stem from their wishful thinking of obtaining economic benefits from the collaboration with the rich forest company. As our evaluation on the economic outcomes in the next chapter follows, there is no doubt that these people have interests on the expected benefit sharing from the forests. The promises on some portions from the sales of forest products prove to induce group committees to team up with the forest office. The expectation is met by the forest administration, particularly when the committees show militant support for the community forestry. Even when the community forests have yet to give the benefits in the form of the shares from the sales of forest products, the administration offers some other financial stimulus to the committees, for example contracts in forest activities (see **Box 5.17**).

Box 5. 17 Contracts of the committee of Sedyo Rahayu from the forest office

The committees of Sedyo Rahayu group remains one of the militant supporters for Kedu Selatan Forest Office in implementing its PHBM community forestry, as earlier indicated how they -as advised by the forest office - prohibited the involvement of a local NGO in the community forest, explained earlier in the coercion section. In addition, the committees have taken necessary strategies to foster the swift implementation of the community forests in village. Such supports have yielded in numerous economic incentives, of which several formal contracts on forest activities with the forest office. According to the monitoring board of the group at the time of the second fieldwork, in 2007 the committees secured several contracts from the forest office, including tree felling, timber and resin transportation, supplying a large number pine seedling to the office.

Looking at the lists of the documents submitted for the applications to the contracts, (e.g. Letter No. 08/ LMDH/ II/ 2007 on 10 February 2007), there are indications that the contracts are of the more benefits for few individuals, instead of the whole user groups. In the application, several personal documents -including the Business Permit (*Surat Ijin Usaha*), the Tax Paper (*Pengusaha Kena Pajak*) – were submitted along with a copy of the PHBM agreement and legal document of the group. Such gives glimpses on 'personal perks' from the contracts.

Given the support from the committees, the forest offices are also instrumental in creating other economic opportunities for them. Quite often, the offices recommend other (usually governmental) agencies to splash aids to 'selected' groups[15]. Acting as a channel between the external agencies and the users, as our evaluation on the outcomes of the community forestry in the next chapter will see, provide the platform for the committees to accrue the most from the aids. The temptation of economic/ financial temptations are further drawn as the forest offices also several schemes on so-called "productive business", both "forest-based" and "non-forest based", from which the committees and the groups can expect financial benefits (**Table 5.10**).

Table 5. 10 Examples on productive business in Kedu Selatan Forest District 2009

Sector	Types	Number of user groups having the business
Livestock	Sheep raising	22
	Cow raising	2
Home industry	Food products	5
	Traditional clothing (*Batik*)	1
	Bamboo handicrafts	1
	Palm sugar	17
Plantations	Snake fruit	5
	Ginger	1
	Coffee	10
	Fodder production (*Kaliandra*)	22
	Cardamon	150
	Cloves	1
Agriculture	Forest nurseries	3
Fishery	Freshwater fish	15

Source: Adapted from an internal report PHBM-9A

This is clearly highlighted in the PHBM regulations, including the agreements with the respective committees. The business is principally of site-specific, accordingly to the potential of the respective community forests, but its creation and further expansions are of influence of the forest office as it is regarded as having resources and networks that can support the business. When

[15] *LMDH Sedyo Rahayu Banjir bantuan* [Sedyo Rahayu user group flooded with aids] http://www.purworejokab.go.id/index.php?option=com_content&view=article&id=707&catid=15&Itemid=140 (Access on 19 October 2010)

the businesses are in a good run, they are -as several sources from forest offices suggested- expected to ease the pressure on the forest and to persuade the committees and their group members to back the forest office's decision upon the forests.

- **Offering research platforms to university**

Community forestry in Indonesia has witnessed some changing political alignments between actors. Over years, political alignments of forest administration-forest universities have been well-developed in Indonesia due the mutual needs. On one hand the former sees the latter as technocratic experts and policy advice-giving institutions, providing advices for the basis of the decision strategies for the managerial tasks. In addition, the forest administration usually benefits from the educational institutions, as the nurturing-institutions for forest professionals for its technocratic posts. On the other hand, the educational institutions receive support from forest administration institutions.

The idea on community forestry has to a certain degree shaken the fond alliance between the two since some university scholars – as has been outlined in Chapter 4- have been instrumental in lobbying on the implementation of community forestry-which have to extent been perceived by some high-profiles in the forest administration to have challenged their authority in managing the state's forests (for this part, a decent analysis is by Nomura 2008). Nonetheless, the alliance between the two is worth to sacrifice as forest administration appears to reclaim the support from forest universities. From our community forestry cases, we have sporadically identified some strategies employed by forest administration, including the offer of research collaboration on community forestry (see **Box 5.18**).

For the forest administration, offering sites for the implementation of the community forestry research proves a strategic move – while they need to compromise in some ways by accepting some ideas from the research institutions, as such can persuade those who were in the opposition toward its community forestry program to work within its corridors, particularly concerns on the forest sustainability. The research collaboration, although aims to empower the forest users and their groups, appears to serve the best interests of the forest administration as it guides the users and their groups to more meaningfully participate in the forest activities –e.g. reforestation and forest patrol- but with the benefits for them –as our evaluation on the outcomes later will see - remain as they were.

Box 5. 18 Research collaboration on community forestry involving forest administration and universities

In the early phase, one of the leading forest universities in the country, University of Gadjah Mada, has partnered with forest administration, principally Perhutani, in designing models of forest management with more 'social tastes', given the widespread poverty particularly in the forest margins. However, some in forest administration appeared to have been disappointed with the move of the university –or some of the professors- when the latter to have adopted 'more radical approach' in promoting community forestry that local people should be at the centre of the forest management. The critical thinking proved to discomfort the forest administration, who later decided to not to collaborate with the university (see Awang 2004). Through the establishment of the Centre for Community Forestry Studies (*Pusat Kajian Hutan Rakya*t, PKHR), the university continued to offer the 'ideals' of community forestry, and later opted to join lobby groups in promoting community forestry program (see Fay and Sirait 2002). Such further discomforted the forest administration, which later instead saw the research center as an 'enemy'.

The continuous criticism proves very costly for PKHR as distancing itself from the forest authority means that it has mounting tasks to bring its ideas on community forestry to the ground implementation. Such, coupled by the strong regulatory framework at the disposal of the forest administration as well as the emerging signals on change provided by some middle-level Perhutani's forest officers (Nomura 2008) has encouraged the research center to regain its collaboration with forest administration in formulating community forestry practices on the ground. We have seen such in the execution of Levelling Playing Field project of the Centre de *Coopération Internationale en Recherche Agronomique pour le Développement* (CIRAD) and the Center for International Forestry Research (CIFOR) by PKHR in Wana Bersemi and Karya Lestari community forests. In executing the project, the research center is coordinating with the respective forest offices.

5.4.2 NGOs and universities with technical assistances to group committees

Along the facilitation provided to the users groups, the NGOs provided them with various technical assistances to user group committees in dealing with the practices of the respective community forestry. Technical assistance is always referring as effective means of knowledge transfer and capacity building of the recipients (Byron 1997). Some of our cases have clearly suggested that the assistances have proved prominent in helping the former to persuade the latter to act accordingly to the expected conducts. NGOs and their alliance offer packages of technical assistance to users groups to 'hit the ground running' for the community forests. Our research has witnessed a wide range of capacity building

programs organized by NGOs and their alliance for user group committee and the members (see **Table 5.11**). In general, the technical assistance includes technical support in the process of handing over the management of the forest to the groups, forest management activities (forest survey and boundary mapping, forest inventory, management and work plans' preparation), capacity development of the users and their groups, networking, and income generation activities.

The external actors also encourage the dissemination of information to the respective groups with the supply of various magazines, journals, books, brochures and leaflets as well as government regulations regarding to community forestry practices. Such is a huge assist to the group committees and members, who are generally constrained with access to important information to support their respective community forestry. The NGOs and their alliances even publish own journals and bulletins, distributed to the respective community forests and wider readers. More importantly, the information is made 'ready' for such audience with limited knowledge as forest users, with the use of simple and even local languages.

Table 5. 11 Technical assistance provided by NGOs and their alliance in the selected community forests

YBL Masta on Bumi Sari Makmur Community Forest	**Shorea Foundation on Sedyo Rahayu and Sedyo Rukun community forests:**	**ARuPA on Wana Tani community forest:**
- Forest planning - Community planning - Participatory forest planning - Group empowerment: - Creation of a formal user groups - Creation of inter-village learning and communication forums - Economic empowerment: - Analysis on village conditions and potentials - Participatory analysis on rural poverty - Income generation activities - Marketing of forest products	- Technically-sound forest management: - Participatory analysis on forest conditions - Forest delineation and inventories - Management and work plans - Trainings of forest activities - Cost-benefit analysis - Economic empowerment - Creation of business units - Group empowerment - Creation of internal rules - Gender-sensitive community forest - Training on book keeping and organizational management	- Participatory analysis on forest conditions - Trainings on organizational management - Gender-sensitive forest management

PKHR of UGM in Karya Lestari community forestry:	**PKHR of UGM in Wana Bersemi community forestry:**	**Java NGO-alliances involving the above community forests:**
- Creation of internal rules - Participatory forest inventories - Management and work plans - Creation of a business unit - Training on organizational management		- Inter-region learning programs for forest farmers - Community forestry festivals - Trainings for facilitators - Various study tours

Source: Interviews with the respective user group committees and NGOs

Therefore extension and training materials is often seen as a 'change agent' introducing workable ideas and innovation to the local forest users. It is intended that through extension programs the institutional capability of forest user groups and involved stakeholders will be strengthened in better managing the resources and yielding motivation of local people. In most instances, the technical assistances are framed within the broader objectives of ensuring forest sustainability, to create procedures in the forests guided with strong nuances of sustainable principles as required by the forest administration.

Chapter 6 – Evaluation on Community Forestry Outcomes

6.1 Social outcomes of community forestry

The social outcomes of community forestry in our research rest on the empowerment of direct forest users, and are measured by the extent they can: 1) access to information on forests, 2) access to decision making, and 3) access to forestland and resources, including the ability to exclude others for using the resources.

6.1.1 Access to ownership rights and uses of the forests

In the previous section we have already outlined the importance of securing access to the ownerships of the forests as the principal foundation of secured forest access with further views on genuine empowerment of direct forest users. Looking at the circumstances in Indonesia in that the sole state's control over the forestland and resources limits the access of the users (Lindayati 2000, Wrangham 2002) clearly validates how access to the ownerships to the resources is of fundamentally importance in community forestry program. Community forestry program initially instigated causes of optimisms of the revival on customary forest ownerships rights (Fay and de Foresta 1998, Sanchez 1999), which have been abolished through the context of 'forest nationalization' (McCarthy 2000, Wrangham 2002).

Instead, community forestry program is clearly set within the corridor and the contexts of strong disposition of the state control over the country forests -not only the resources but also the forestland. The tenurial-context of the program does not progress from the early forms (Large, 2005), if not discouraging efforts on the access to ownership rights by the forest users. The state's claims and control over the forest zones are augmented through various regulatory frameworks to prevent local communities for claiming the tenurial rights over the forestland. Regulations and other legal documents including community forestry licenses and agreements are assembled to deny tenurial claims by forest users and their groups (See **Table-6.1**).

Table 6. 1 Pertaining forest regulations on tenurial rights

Forest-related regulations	Contents
National Constitution 1945	Land and water and all natural resources therein are under the control of the government and exploited as much as possible for the greatest benefits of the people (Article 33)
Basic Forest Law 1999	All forests in the territory of the Republic Indonesia including all resources therein are controlled by the state for the greater good of the people *(Article 4/1)*
	The government entitled to designate certain areas as forest zones *(Article 4/ 2b)*
HKm model:	
Ministerial Regulation No: P.37/ Menhut-II/ 2007 on Community Forestry	Changes in the status and the functions of the state forests are prohibited in the implementation of community forestry *(Article 2a, applies for all HKm cases)*
PHBM model:	
Decision No. 136/ KPTS/ DIR/ 2001 on PHBM	PHBM is implemented without changing the status of the state forestland *(Article 6, applies for all PHBM cases)*
PHBM agreement	The tenurial ownership of the forestland is at the state, which has mandated the management of the forestland to Perhutani *(All PHBM cases)*

The state's sovereignty over the forests is enhanced by the implementation of community forestry program, through which user groups are bound to acknowledge the sovereignty. The formalization of the community forestry program in the country proves to nullify sporadic claims by the forest users on the ownerships of the forests (**Box 6.1**).

Box 6. 1 Unsuccessful efforts toward ownerships on the forests

Prior to community forestry program, some groups of users attempted to claim ownership rights over some parts of the forests. In PHBM community forestry, the users of Bumi Sari Makmur community forest for instance believe that some portions of the community forest were of their ancestors -locally referred to as *Lemah Simpen*-, which has been appropriated by the forest administration (*Suara Merdeka* 2006, *Wawasan* 2006, YBL Masta 2006). Similarly, through reviving the local folklore of *Saminism* -that the state had not created the wind, water, earth and wood so that it could not claim the resources at its own disposal-, some users of Wana Tani community forest also saw the forest as an open resource and challenged at the state's ownerships. Nevertheless, through PHBM community forest, their committees are forced to acknowledge and ensure the state's superiority among the users.

Similarly, the users of the two HKm forests initially pursued to foresee ownership rights over the forests (see Fuadi and Rahman 2004). There were uncertainties whether the efforts would be successful as the central state (Ministry of Forestry) appeared to 'toying' the people by delaying the legal permits to manage the forestland as it might have observed some risks of ownership claims (Sumarmata 2004). The risks of not getting anything have forced the people to instead accept the HKm license with the acknowledgement of state's ownership over the forestland (see Fuadi and Rahman 2004).

The swift enforcement of state's ownerships over the forests in the community forestry favours the respective forest administration to reclaiming the control over the forest resources, including defining the extent to which the forest users can utilize the resources. Formally, both prior and in the community forestry, forest uses across cases are made possible only on minor products and restrictive in regard to the valuable forest resources; the uses of the forests and the resources are exclusively allocated to the forest administration[16]. However, clear differences are there to the extent the users can actually use the forests (**Table 6.2**). As mentioned in previous chapters, the last decade has clearly witnessed how strong regulations favouring the state apparatus have become increasingly ineffective. Controls over activities in the forests have notably diminished and forest users use to access the forests with more 'freedoms' manifested in massive unauthorized timber raids and sporadic forestland acquisition, which are the main push for the forest administrations for implementing the community forestry (Djajanti 2006). In contrast, community forestry practices are signalling more forest orders that forest uses are more controlled. This scorches a clear decline on the actual access on forest uses in the community forestry.

16 See Peluso's (1992) *Rich Forests, Poor People: Resource Control and Resistance in Java*

Table 6. 2 Matrix of access on forest uses

Forest uses	Prior practices	Community forest practices			Changes of access
		Free access	Limited permit	Bans	
▪ Agro-forestry practices					
Planting seasonal food crops	Free access		*		(-)
Planting perennial food crops	Sporadic		*		(+/-)
Planting forest species	Sporadic		*		(+/-)
Selling of agro-forestry parcels	Widespread			*	(-)
▪ Access on non-timber products					
Wild fodders	Free access	*			(+/-)
Fuel-wood	Free access		*		(+/-)
Wild medicinal crops	Free access	*			(+/-)
Others	Free access		**		(+/-)
▪ Grazing	Widespread		*		(-)
▪ Hunting	Widespread			*	(+/-)
▪ Timber cuts					
Poles	Uncontrolled			*	(-)
Branches for fuel-wood	Uncontrolled			*	(-)

Notes: (-) means decrease, (+/-) means no significant change, (+) means increases

In the community forests, users clearly experience more restrictive regulations and procedures in using the forests, effectively imposed on them. Even on minor uses as agro-forestry practices, they have to deal with a number of permits and restrictions particularly in regard to the selection of seasonal agricultural commodities (see **Table 6.3**). Prior to the current community forestry, Peluso (1993: 149) also points out that the forest authority retained the veto power on the horticultural species.

Table 6. 3 Examples on prohibited agricultural commodities

Commodities	Remarks	Cases
Cassava	This commodity is popular among forest users as it can survive in the dry-poor forest soils and under the shades and it can grow well without intensive cares. However, cassava is believed to consume many nutrients from the forest soil that would compete with the forest species.	8 PHBM cases
Banana	The planting of banana is to give the impression privately-owned gardens.	3 community forest cases in Randublatung Forest District
Rice (when wet-cultivated)	Wet rice cultivation is ruled out as it depicts practices in privately-owned paddy fields.	

The level of legal forest uses is ensured through various regulations, both of the forest administrations and of the groups, as well as effective enforcement in the field (**Table 6.4**). Across cases, there are signals on effective implementation of the pre-defined forest uses, principally due the participation of the group committees in ensuring the regulations. They adopt a number of strategies appropriate to the local conditions (see **Box 6.2**).

Table 6. 4 Modes of ensuring the defined- forest uses

Community forest	Rules and regulations				Field inspections	
	Licences/ Agreement	Group contritutions	Group internal rules	Village regulations	Orgnaized patrols	Peer-controls
Wana Bersemi	*	*	*	*	*	*
Wana Jati Wasesa	*	*	*			*
Wana Tani	*					*
Karya Lestari	*	*	*		*	*
Rimba Lestari	*	*	*	*		*
Lestari	*	*	*			
Sedyo Rahayu	*	*	*	*		*
Bumi Sari Makmur	*	*		*		
Sedyo Rukun	*	*	*			*
Sedyo Lestari	*	*	*			*

Box 6. 2 Strategies of committees on forbidding the access on forest uses

A chairperson of Sedyo Rukun community forest suggested that a user was caught to have cut a tree from the forest. She was nonetheless able to persuasively convince a user not to continue cutting trees, by suggesting that the expectation of legal benefit sharing in the final harvest is more meaningful to give up since the forest administration might to revoke the community forestry license if illegal cuts are to continue. Such persuasive approach is also found across cases. Some group committees, e.g. of Sedyo Rahayu, Rimba Lestari and Lestari community forests, even use more stern strategies of using fines and even withdrawals of group membership, fetched in various group and/ or village regulations. Further, Sedyo Rahayu's committee for instance also uses so-called 'peer-controls' in that a forest user is promised with 30% of the fines from his/ her fellow users caught to infringe the regulations. Further in Sedayu community forest, cases of withdrawals of user memberships occurred due heavy/ regular infringements. According to the committee leader, such is to give some psychological impacts on the rest users.

While sources from the forest offices conclude on the 'forest order' that the directive activities are generally to crop up, infringements occur although they are not necessarily done by the users (**Table 6.5**). Major infringements, as of timber cuts, are usually done by people from other regions as the three teak community forests show.

Table 6. 5 Sporadic cases of infringements

Community forest	Planting of prohibited commodities	Tree cuts	Grazing in young forest	Hunting
Wana Bersemi		by external agents		
Wana Jati Wasesa	by direct users		by users	
Wana Tani				
Karya Lestari			by external agents	
Rimba Lestari	by direct users			
Lestari				
Sedyo Rahayu				
Bumi Sari Makmur		by direct users		by direct users
Sedyo Rukun	no commodities prohibited			
Sedyo Lestari				

The committees of Wana Tani community forest are in doubt whether they could single-handedly control illegal activities in the community forest, by further suggesting that the incentives of being the committee are limited compared to the tasks. This on the other hand implies when the incentives are there, they are prepared to intensify the controls over the users. In Wana Jati Wasesa community forest, notwithstanding the internal rules being set in place to prevent timber thefts, the committees suggest that the rules are less effective when dealing with non-members.

In Bumi Sari Makmur community forest, the group' committees are rather 'ignorant' on the direction from the forest office, given the tenurial conflicts between the two as previously mentioned. They rather let infringement as parts of their strategies to pressure the forest office. Cases of illegal activities are quite frequent. In addition, the users sporadically carry out illegal thinning and tending to allow sunlight reaches the forest floor to fostering the growth of agricultural commodities (**Photo 6.1**). Sources from the group suggest that the forest office will not be able to control the whole community forests. Even if they are caught of doing illegal activities, they are prepared to provide some 'bribes' to field forest rangers.

"We know that there is limited incentive for the forest rangers to patrol the whole forests. Even when they are doing so, 'a small tip' will do us the good." (Interviewee 15)

Photo 6. 1 Illegal thinning and tending

Overall, the cases strongly point out that although the current formal access appears to slightly improve than of prior community forestry, the actual access by direct users decline significantly. This in a large part is explained by the meaningful contribution of group committees, as said in the previous chapter to become a 'dysfunctional unit' for their members, but on the other hand a 'handful unit' to serve the interests of the forest administration.

6.1.2 Access to decision making

Community forestry conceptualizes participatory approaches in forest management, not only in forest activities, but also in decision making on the forests. It theoretically aims to create spaces for forest users to negotiating and elaborating their interests and needs on the management, from which they can expect the improvement of their living conditions. Looking at the formal/ legal contexts, some encouraging promises in regard to the involvement of the users in the decision making in our community forest cases are shown (see **Table 6.6**).

Table 6. 6 Involvement of users in decision making in the formal contexts in PHBM community forestry

Participatory planning refers to all activities related to the planning of the community forest by the company with the local communities, or both stakeholders with other interested parties based on participatory reviews and evaluations on the forest village and the condition of the forests and the environment (***translated from Article 1 (8) Regulation No. 136/ KPTS/ DIR/ 2001***)
Forest village communities together with the company [forest administration office] are entitled to create management plans and to execute monitoring and evaluation (***translated Article 22 (1) Regulation No. 136/ KPTS/ DIR/ 2001***)
The collaborative management involves activities on sustaining the function of and the benefits from the forests from planning, planting, tree nurturing, forest patrolling and harvesting (***translated from Article 3 (3) PHBM agreement with Wana Bersemi, as an example for other PHBM community forest cases***)

The challenge here lies on how the promises are to turn up that direct forest users can shape the decision-making on what the community forestry looks like. In fact, there is a big gap between what is promised in the formal contexts and actual implementation. The extent to which forest users are able to access to decision-making in the forests indeed varies to different degrees between the case-models, but there are strong suggestions that across the cases of both models, forest users barely have a meaningful say since the respective forest administrations interpret their participation in decision-making as a means to support the pre-defined forest activities (see **Table 6.7**).

Table 6. 7 The level of access to decision-making procedures

<table>
<tr><th>Community forest</th><th>Forest planning</th><th>Forest management</th><th>Forest uses</th><th>Marketing</th></tr>
<tr><td>Wana Bersemi</td><td rowspan="3">inaccessible by users</td><td rowspan="8">Encouraged only on activities of improving forest conditions (reforestation, forest nurture) and forest security</td><td>Defined by forest administration</td><td rowspan="3">inaccessible by users</td></tr>
<tr><td>Wana Jati Wasesa</td><td rowspan="2">users sporadically conduct non-prescribed activities</td></tr>
<tr><td>Wana Tani</td></tr>
<tr><td>Karya Lestari</td><td>Users consulted on contracted plantation</td><td rowspan="3">Defined by forest administration</td><td>users involved in negotiations on contracted plantation</td></tr>
<tr><td>Rimba Lestari</td><td rowspan="4">users consulted in regard to cultivation of seasonal agricultural commodities and the uses of forest floor</td><td rowspan="4">inaccessible by users</td></tr>
<tr><td>Lestari</td></tr>
<tr><td>Sedyo Rahayu</td></tr>
<tr><td>Bumi Sari Makmur</td><td>users sporadically conduct non-prescribed activities</td></tr>
<tr><td>Sedyo Rukun</td><td rowspan="2">users involved in preparing necessary data; plans prepared by NGOs, university, forest administration & other governmental agencies</td><td rowspan="2">users consulted in selection of forest species, schedules on thinning and final harvests</td><td rowspan="2">Defined by forest administration</td><td rowspan="2">negotiated on the form of sharing</td></tr>
<tr><td>Sedyo Lestari</td></tr>
</table>

Of the eight PHBM cases, users are formally encouraged to participate in decision-making over the forest management activities, including in the preparation of management plans. Such does not occur on the ground as the forest administration monopolizes and defines the activities, from forest delineation, compartments to be planted, nurtured and harvested, the choices of species and rotation cycles, are all defined by the forest administration[17]. No plans are specified for particular community forests. Indeed, some user groups initially pursued to have some access on the planning of the respective community forests, but the bottom-up proposals were firmly denied (see **Box 6.3**).

Box 6. 3 Unsuccessful access to forest planning

The users of Rimba Lestari and Bumi Sari Makmur failed in their attempt to propose silvicultural cuts, which *firstly* they see to allow more sunlight to reach the forest floor fostering the growth of their agricultural plants, *secondly* to provide them with some shares from the timber sales. The users of Bumi Sari Makmur further suggested how the Forest District Office has even altered its commitments to carry out such cuts on some other parts of the forests. Further, they experienced in failure when the proposed the planting of fast-growing species in the forest, instead of the pine monoculture. Similarly, the users of Wana Tani community forest also aspired wider spaces between the trees for the agroforestry practices. The wish-list was not entertained either. Of all cases, the arguments provided were that such proposals would involve lengthy processes as they must be approved by the Forest Resource Bureau at the provincial level.

Across the PHBM cases, forest users and their groups are indeed handed so-called 'participatory planning sheets' supposedly to capturing local aspirations. They contain queries on local potentials of the forests and forest management activities seen necessary to be conducted over the next few years, but at best provide some spaces for the users to propose minor forest planning such as diversification in agricultural cropping under the forests.

As of **Table 6.7**, in three community forests of Rimba Lestari, Lestari and Sedyo Rahayu, the users are consulted in the planting of agricultural commodities under mature forests. The fieldwork has witnessed the forest officers coordinated with the committees to execute the plans. The users of Karya Lestari community forestry enjoy slightly better access to forest planning in part due in part the plantation contract, which allows them to participate in the decision making processes over the plantations, albeit the monopoly by the forest administration on the important aspects (see **Box 6.4**).

[17] Regulated in regulated the Board of Directors' Decision No. 1639/Kpts/Dir/1995 on Planning System of Perum Perhutani.

Box 6. 4 Formal contracts on plantations in Karya Lestari community forest

Unlike most of PHBM community forests, which rest on 'forest land-labor deals', the users of Karya Lestari community forest and the group committee secured a formal agreement on creating plantations on two compartments with major investments (planting and nurturing the forests until the final harvests) from the users. This agreement was facilitated by the Leveling Playing Field project of the Center for International Forest Research implemented by Universitas Gadjah Mada. Through the scheme, the users were permitted to select their preferred fast-growing species and to propose the planting spaces. Nonetheless, the decisions on when silvicultural activities and the harvests as well as the marketing of the timber still rest upon the district forest office.

Overall, users of our eight PHBM community forests barely have access on the planning of their respective community forests. Unlike, the users of the two HKm community forests of Sedyo Rukun and Sedyo Lestari could have been more emancipated to influence the forest planning, but clearly endure heavy influences from a number of external stakeholders who define what it takes to create the plans (see **Box 6.5**).

Box 6. 5 Planning procedures in Sedyo Rukun and Sedyo Lestari HKm community forests

HKm community forestry rests on the granting of two different licenses to the users and their groups, i.e. the management license –which focuses on the management of the forests and the uses of the forestland-, and the utilization license for timber harvests. The users have only secured the former. According to the Ministerial Regulation No: P.37/ Menhut-II/ 2007, the users and their groups have to submit different working plans to the Ministry for securing both licenses. Nonetheless the necessary activities have been defined in the regulation such as forest delineation and inventory. In creating the plans, the users are assisted by the HKm consortium consisting of different stakeholders from NGOs and governmental agencies, which in reality to play more influential roles in the processes.

Our cases overall are yet to show that forest users have meaningful access to the planning processes. This in part also explains the eventually limited influence the forest management and the uses. As shown in **Table 6.7**, the cases consistently reveal how participation in forest management is distorted to only focus on activities on improving forest condition and the security, and to ensure the uses accordingly. As our evaluation on the economic outcomes will later see this eventually limits the benefits for the users.

The community forests indeed pledge some shares from the sales from the main forest products, and after all the users are obviously disadvantaged in the decision making on the proportion, the uses and the distribution (see **Table 6.8**).

The users are hardly to be involved in the decision-making. Looking at how the shares are defined and to be distributed, they experience multiple layers of decision making structures in that the proportion of shares are generally determined by the forest administration. Even in Sedyo Rukun and Sedyo Lestari committees facilitated by other external stakeholders in negotiating the shares, the likeliness of the shares being decided by the forest administration remains high (see Djamhuri 2008). Secondly, the users remain in the periphery in either the internal allocation of the funds. As the table shows, the group committees and some cases other external actors are heavily involved in the decision making.

Table 6. 8 Decision making on the uses of revenues from benefit sharing

Forest user group	Proportion of shares to user groups	Internal distribution
Wana Bersemi	Forest office	Forest office, UGM-CIFOR, committee
Wana Jati Wasesa		Forest office, committee
Wana Tani		Forest office, committee
Karya Lestari		Forest a office, UGM-CIFOR, committee
Rimba Lestari		Committee
Lestari		Committee
Sedyo Rahayu		Committee
Bumi Sari Makmur		Committee
Sedyo Rukun, Sedyo Lestari	In negotiation between forest administration, committees, university, and a consortium of NGOs	n.a.

6.1.3 Access to important information on forest

Possessing important information on the forests is an important feature of empowerment of forest users, who as the analysis to follow kept uninformed about important knowledge on the forests and the resources. Much of important knowledge on the forests is kept inaccessible by the users. Evidence is widespread across our cases. In regard to the shares from the main forest products that forest users entitled for, the forest administrations- principally of PHBM model- heavily

controls information from how the shares were defined to the marketing of the forest products.

Many accuse that the share of 25% and 5% respectively of timber and pine products is without solid foundation of input-output analysis (see Affianto et al. 2005). While the forest authority is formally reluctant to explaining the foundation, a middle rank forest officer in Pemalang district suggested that it is assumed from natural losses. This implies that giving 25% meaning nothing to the company as they could have lost more without the implementation of the community forest, suggested in the massive forest raids. With the limited knowledge on how much timber and pine resin harvested from the forests, how their prices are defined, and the users and their groups consequently have limited ideas on how much money should have been splashed to them, which are defined solely in the hand of the forest authority. In fact, the proportion is based on floor prices of the timber harvested, meaning the actual money splashed could have been higher as the actual sales suggest so.

Similarly in other forest districts, particularly in the mountainous land, Perhutani manages pine (*Pinus merkusii)* for resin tapping and roundwood production in the end of pre-defined rotation years. As of in teak forests, Perhutani monopolizes the species from planting, processing and marketing. In the island, rarely people plant this species for commercial purposes. Trades of pine resin is monopolized by the company as the product is exclusive to supply own factories. Few competitor factories depend heavily on the supply from the state company, and an interview with a forest officer suggested that the company in the last few years has tended not to supply the other processing companies. Whether the price is appropriately defined is hard to validate as data on the price of pine resin is a premium to obtain. This means that people rather less-knowledgeable on the economic values of the species. This also implies forest user groups will insufficiently know the exact values of the resin tapped from the forests, meaning it comes to the benefit sharing from the pine resin. In fact, benefit sharing from pine resin to forest user groups relatively low compared to from timber. Our cases show that even compared to group with only receive cross-subsidy from rich groups, the share received by pine-region groups are much lower, despite the fact the forests quite productive.

6.2 Economic outcomes of community forestry

As earlier explained, community forestry is mainly designed within the context of so-called pro-poor packages of poverty alleviation. The improvement of forest users' well-being through fostering local economic potentials is also the central lure and attractions of our community forestry cases.

6.2.1 Food crops from agro-forestry practices

The evaluation on the social outcomes of our community forest cases has clearly pointed out that the community forests rest on models of agro-forestry practices, through which cultivating agricultural commodities -mainly food crops-, in between the main forest species is made possible for the forest users. In fact, such models have been long experimented and implemented prior to the current community forests. Rather than aiming at alleviating rural poverty, the previous agro-forestry models were designed to harness cheap labour given the farmers were tasked to restore the forestland and nurture the young forests (Bratamihardja et al. 2005). This provides an early taste on the outcomes of the community forestry when the heavily-criticized scheme is being maintained. The idea on the agro-forestry itself was laid on the assumptions on rural people's need of more farmland, given the limited, often insufficient, possession of farmland for producing the basic needs to sustain their life (see Simon 2004, Djamhuri 2008). In the current form of community forestry, users are permitted to cultivate agricultural commodities, albeit the different access durations (see **Table 6.9**).

Table 6. 9 Legal access on forestland for agricultural cropping

Community forestry	Duration	Security of access
PHBM (case 1-8)	2 years (during forest establishment)	Access only provided on reforestation-planned compartments
HKm (Case 9-10)	35 years (during the whole period of HKm license)	Particularly forest parcels attached to particular farmers for the whole duration

In PHBM model, access on the forestland is formally allowed on post-harvest compartments, locally referred to as *bukaan*, meaning the compartments are opened for access by interested forest users. The term *bukaan* highlights the limited extent forest users can access the forests in that they are restricted to access the forest outside the defined 2 years, not only for the agricultural cropping but also other activities, not to mention obtaining the valuable forest products (timber). Once the clear harvest is done, the compartments are then parcelled out to interested users, who then collectively sign contracts with the forest authority, containing the right and responsibilities on the uses of the forestland. Given the short-term access, the benefits are indeed temporal. When the contract is concluded, the users have to leave the parcels, alternatively seek for new parcels and shift there for doing agricultural cropping.

Photo 6. 2 Agricultural cropping in pine PHBM forest of Burat, Kedu Selatan

Photo 6. 3 Agricultural cropping in teak HKm forest in Banyusoco, Gunungkidul

As of the earlier agro-forestry models, the access to forestland is provided to the forest users as return for their labour on reforesting the land and nurturing the young trees over the contract duration. When interests on the scheme are limited, the forest offices are to pay reforestation labours. They clearly demonstrate the preference on the former, which costs them none and leads to better survival rates of the young trees given the nurtures from the users. Through the binding contract, the forest authority obliges the forest users to achieve 90%-survival benchmark of the planted seedlings; otherwise they have to replant the parcels. Forest user groups' committees play a pivotal role in this scheme as they also ensure that the forest users achieve the targets.

Table 6. 10 Levels of interests on agricultural cropping in the forests

Community forest	Factor				Level of interests
	Forest soil	Distance to village	Other economic opportunities	Current availability	
Wana Bersemi	Less hospitable	Varies	Low	High	Low
Wana Jati Wasesa	Less hospitable	Varies	Low	High	Low
Wana Tani	Less hospitable	Varies	Low	High	Low
Karya Lestari	Less hospitable	Varies	Low	High	Low
Rimba Lestari	Hospitable	Close	Modest	Low	High
Lestari	Hospitable	Close	Modest	Low	High
Sedyo Rahayu	Hospitable	Close	Modest	Low	High
Bumi Sari Makmur	Hospitable	Close	Modest	Low	High
Sedyo Rukun	Less hospitable	Close	Low	Low	High
Sedyo Lestari	Less hospitable	Close	Low	Low	High

Source: interviews with the committees

Whether the users are benefiting from the agro-forestry scheme depends on whether they are engaged in the activities as under particular circumstances they might opt not to utilize the opportunities to use the forestland for cultivating agricultural crops. Across cases, interests of forest users on the scheme greatly vary, usually depending on the combination of factors inherently associated with reforested compartments, whether the forest soil is hospitable for agricultural crops and the accessibility/ distance of parcels from the village, as well as other external factors such as the availability of other earning sources (**Table 6.10**).

Generally, our cases from the pine forests suggest there are some competitions among direct forest users to obtain the forest parcels as the forest soil is quite fertile, combined with sufficient rainfalls in the regions, suggesting high expectations on the yields of agricultural farming. Nonetheless, the four teak community forest cases suggest otherwise in that despite having limited farmland, some of the people choose not to engage in agro-forestry practices. This is particularly due the poor forest soil. The forests are grown on dry lime-stoned soil, which is poor for agricultural crops. The low interests are more apparent given the time and costs devoted for clearing the shrubs and improving the quality of the soil in the first year are said not paying off. Some users indicated that they might have benefited more from the agro-forestry practices if they are allowed to stay in the forests longer as the efforts in later years are less than in the initial year. They suggest that during 'difficult time', they often continue using the forest-land despite the conclusion of their contract.

> *"Preparing the forestland ready for agricultural uses remains the main challenge for us. In the poor forestland,* Alang-Alang [Imperata spp] *is not uncommon. This species is difficult to deal with as it can easily come after being cleared. We devote a lot of time on doing this. In the following year, we can say that we start to enjoy the benefits, so if the concluded after the second use, we feel our efforts do not pay off. The forest office is clearly the main beneficiary as we improve the quality of land, therefore fostering the growth of the forest commodities"* (Interviewee No. 58)

In contrast to PHBM, access on forestland is secured in HKm model, which allows forest users to stay forest parcel doing agricultural cropping for the whole duration of the HKm license. This is hailed as one of the major advances of the community forestry model (Djamhuri 2008). The forest users are enthusiastic given previously they can only expect a short duration of forestland uses as of PHBM community forestry of usually two years. The close HKm locations to the village provide further attractions for the people, although the forest soil are not regarded as good for agricultural framing. Nonetheless, recently they start to realize that after a few years, the agricultural yields from their parcels decline as the forest canopies start to connect. Thinning of the forests is necessary to maintain

the outcomes of agricultural crops, but they are yet to be planned, which need approval from the forest authority.

Table 6. 11 Estimated production of main food crops

Forest user group	Production (ton/ Ha)		Averafe forest parcel (Ha)	Average production/ user (ton)	
	Dry-Rice	Corn		Dry-Rice	Corn
Wana Bersemi	-	2.50	0.25	-	0.63
Wana Jati Wasesa	-	2.00	0.30	-	0.60
Wana Tani	-	2.00	0.25	-	0.50
Karya Lestari	-	2.50	0.25	-	0.63
Rimba Lestari	2.50		0.40	1.00	1.20-2.00
Lestari	-	3.0-5.0*	0.25	-	0.75-1.25
Sedyo Rahayu	-		0.57	-	1.71-285
Bumi Sari Makmur	-		0.45	-	1.35-2.25
Sedyo Rukun	3.20	3.00	0.39	1.24	1.16
Sedyo Lestari	-	3.00	0.24	-	0.71

Source: Interviews, monitoring boards of user groups, reports on community forestry
* Average, Based on Report on agricultural commodities, Kedu Selatan Forest District October 2009

Given the different circumstances mentioned above, the yields from agro-forestry practices vary (**Table 6.11**). Nonetheless, the cases clearly point out that the food crops are by no means to satisfy the farmers' daily needs. Instead, they are seen as either complements to those yielded from their private farmland or additional earnings as some of the users sell the products. To satisfy the basic needs, users are to find other income sources (**Table 6.12**).

> *"Rice from the agro-forestry practices is usually kept for own-uses, but is insufficient to satisfy the daily needs of the users for the whole year. Corn is sold in the markets to provide additional incomes for the users'* (The report on Participatory Rural Appraisal (PRA) of Sedyo Rukun Group, 2003/ Page 11)

Table 6. 12 Income calendar of Sedyo Rukun forest users

Source of livelihood		Month											
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Rice	Own farmland & forestland	*											
Corn				*			*						
Peanuts				*			*						
Cassava								*	*				
Soya bean				*			*						
Coconut sugar tapping	Own farmland	*	*	*	*	*	*	*	*	*	*	*	*
Tobacco								*					
Livestock (selling)		on necessary needs											
Construction labour		sporadic across the year											
Fishfond (harvest)		few users having own fishpond											

Source: adapted from PRA report of Sedyo Rukun Group (2003: 17)

That people are not keen on cultivating the forestland indicates the scheme remains the last resort for the people, contradicts with the common assumption of 'land-hungry people', mentioned earlier. This suggests us to argue that those still engaged in the practice rather have limited economic opportunities, forcing them to see the forestland as a mean to lessen, not to lift them entirely, from their poverty. This is validated by the fact that only the relatively poor people interested in the agro-forestry practices. All reinforces the arguments that the practices are yet to contribute meaningfully in the efforts to lift the people from their poverty.

6.2.2 Non-timber forest products

Non timber forest products are free for collection by the forest users. However, given the nature of monoculture forest of the cases, the products are sporadic and limited, except in Benowo community forest (**Box 6.6**). The common products across cases include fodders and fuel-wood. Fodder is an important product forest users obtain from the forests, as they usually raise livestock such as cows and goats, seen as savings for emergency needs. Fodders in the forests are usually of abundance; therefore the needs of fodders are usually satisfied. Nonetheless, during severe dry seasons, fodders could hard to obtain, forcing the people to purchase in many ways (Djamhuri 2008). Therefore, planting fodders in the forests can reduce the cash expenditure of the farmers as well as ensuring the security of the supplies for their livestock.

Box 6. 6 A variety of non-timber forest products in Benowo community forest

Some parts of Benowo community forest have developed into mixed forests, composed by several species at different age stages –replacing the pine monoculture forest. This is due the planting of several perennial and seasonal agricultural commodities and such as coffee, cacao, cloves, vanilla, patchouli, *Parkia speciosa* and *Gnetum gnemon* done by the users, although such planting is deemed as illegal activities by the district forest office. As such, the forests have produced numerous products, which prove to provide significant earnings for the users.

Minimum yields to be charged the 20%- fee

Clove	: 10 kg
Coffee	: 10 kg
Vanilla	: 2 kg
Parkia speciosa	: 10 bundles
Gnetum gnemon	: 25 kg
Cacao	: 10 kg
Patchouli	: 100 kg

The users are to provide 20% of the yields for the group once the yield reach the minimum productions levels deemed to be the break-even points of the activities. Over years, the contribution of the users to the group is not minor. A group committee member suggested that annually, the group can collect at least a million rupiah from the users. This simultaneously indicates that the earnings by the users are quite significant. According to the committee, the significant earnings also suggest the forest office to earn some fraction from the yield.

Dead/ fallen branches are the main source of fuel-wood for the users. In eight PHBM community forest cases, the users use to obtain additional fuelwood from from trees' stumps after the completion of forest harvests, which are now increasingly limited due the commonly young forest stands. Efforts to commercialize the stumps, particularly from teak forests, for furniture industries further limit the chances of the users to obtain fuelwood from the forests. Some other non-timber products are there albeit their sporadic availability in the forests (**Table 6.13**).

Table 6. 13 Other non timber forest products

Cases	Products	Availability and access
1-10	Fodders	Usually sufficient
1-10	Fuelwood	Dead/ fallen branches; tree stumps after clear harvests
1-10	Medicinal crops	Sporadically available in the forests, usually for sales
1,2,3	Teak leaf cocoons	Harvest during wet seasons, for self-dietary or sales
1,2,3	Leaves	Uses for wrappings, only from mature stand

Forest users are entitled to claim all food crops cultivated in between forest species. Across cases, however, users are expected to provide some shares from the harvests either to user group committees or forest rangers. In some cases, this is even institutionalized as administration fees to the groups.

Table 6. 14 Fee collections from agricultural crops and other NTFPs

Community forests	Beneficiaries		
	Committees	Forest office	Forest ranger
Wana Bersemi	None	None	Sporadic occurrence across cases
Wana Jati Wasesa	No information	None	
Wana Tani	No information	None	
Karya Lestari	Membership& annual fees	None	
Rimba Lestari	Membership& annual fees	To be institutionalized	
Lestari	No information	To be institutionalized	
Sedyo Rahayu	Membership& annual fees	To be institutionalized	
Bumi Sari Makmur	20% on NTFPs	To be institutionalized, expected 25% of NTFPs	
Sedyo Rukun	Membership& annual fees	None	
Sedyo Lestari	Membership& annual fees + 1% of yield	None	

Source: Interviews, group constitutions and internal rules

Table 6.14 points out that most of the committees charge fees to their users through different schemes. Interestingly, the groups are relatively poor compared to of Wana Bersemi community forest, which is the analysis to follow the only group to have received massive cash-splashes from the district forest office from the scheme of benefit sharing of forest products' sales. This indicates in poor groups, fee collections from the users are one of the main sources of group earnings to run the groups, including providing incentives to the committees.

> *"Unlike of other villages, being village committee members is not rewarded with salaries or other incentives. Therefore, we see it is sensible to provide some incentives for them -due their commitments devoted to the group, from the community forest including from the fees collected from the users"* (Interviewee No.16)

Such also suggests the committees to put stiff control in collecting the fees from the users. The committees of Bumi Sari Makmur community forest observe the need to establish an investigation team to prevent any infringements and violations, replacing the initial scheme self-calculation by the users.

As previously explained, the users of four pine-PHBM community forests appear to have a slighter advantage in terms of economic benefits compared to their fellow in teak PHBM community forests. Nonetheless, the users are now to expect further deduction on the economic benefits, as Table 16 points out the forest office is exercising fees from NTFPs. In Rimba Lestari community forest for instance, in the lights of forest office's expectations on some share from the users, the committees 'prepare' the users to get accustomed to, by obtaining voluntary share from them. In one way, such indicates that the forest office appears not to allow the users to 'step over the lines'. This, along with the analysis on other economic benefits the users obtain from the community forest, strongly suggests how the community forestry is far from its formal objectives of poverty alleviation.

6.2.3 Wages from employment

Forest management activities occasionally conducted in some PHBM community forests offer casual employment opportunities for direct forest users, when interested then are said to be more prioritised than non-members. As earlier mentioned, when there are limited interests on agro-forestry schemes, the forest administration is to hire reforestation-labours. Some other forest activities to provide employment opportunities for the people include land preparation, nursery works, tending and thinning as well as logging. Such offers the users to get some incomes from the wages. Nonetheless, not all of the limited opportunities are for captures. Forest planting for instance is done during the same time as of farming activities, to which forest users are devoting their time since the latter, as has been said is their main source of living. In addition, the forest activities require technical skills the users rarely meet.

Table 6. 15 Employment in 3 group cases of Randublatung Forest District, 2008

Village	Number of man-day					Total
	Nursery	Planting	Tending &Thinning	Logging	Log stocking	
Gempol	-	804	115	160	-	1,079
Gembyungan	-	202	91	10	-	303
Temulus	-	-	-	-	-	-
Total 34 forest villages in Randublatung	**54**	**5,824**	**1,897**	**746**	**875**	**9,292**

Source: Draft Report of Social Assessment of Randublatung Forest District

More employment opportunities are available in the four pine PHBM community forests, particularly tapping and hauling the pine resin. They provide more secured and perpetual work for the tappers. The earnings are tempting (see Table 8.16), interests are high but not all satisfied.

Table 6. 16 Estimated earning for resin tapping employment

- Average production/ month/ tapper (kg)	500
- Average wages (Rp/ kg)	2,000
- Estimated earnings (Rp/ month/ tapper)	1,000,000

Usually, the pine community forests are parcelled to interested users, as of the scheme in forest parcels for agricultural cropping. In many ways, those obtaining particular parcels are entitled for both scheme, but in the high demand circumstances, as of Rimba Lestari community forest, group committees regulate the users to share the access, either on the forestland for agricultural cropping or resin tapping. The rules usually apply for 'new tapping-compartments'. Some users might have obtained the parcels prior the implementation of the community forestry. In this circumstance, they are usually allowed to keep the parcels. Once allotted with 'tapping parcels', users are entitled to the employment of resin tapping. The users prepare the necessary procedures from creating the resin channels and placing the tubes. They usually collect the resin every other day and haul the resin to the nearest depot, and receive their wage usually per week.

6.2.4 Shares from sales of forest products

The community forestry models also pledge to the users and their groups with schemes of benefit sharing, i.e. shares from the sales of main forest products. This is initially lauded as one of the major schemes of community forestry in Indonesia (Kusumanto and Sirait 2000, Lindayati 2000, Djamhuri 2008) -as there were no similar schemes as such-, and is expected to provide major boasts for efforts on alleviating the poverty of the users. Forest users and their groups were in enthusiastic mood, expecting major improvement of rural life qualities. In PHBM model, 25% and 5% from the sales of timber and pine resin respectively are splashed to the community forestry groups, which are then to allocate the money to fostering local economic development and improving the well-being of the people. Similarly, HKm model promises such shares -even directly to the forest users-, although the proportion of share is under negotiations (Djamhuri 2008).

Table 6. 17 The proportion of benefit sharing for forest users and their groups from the sales of main forest products

No	Forest products	Immediate beneficiary	Proportion from sale*
1	PHBM (Case 1-8) Timber from silvicultural & final cuts Fuelwood from 1st silvicultural cut Pine resin	Forest user group	 25 100 5
2	HKm (Case 9-10) Timber from silvicultural and final cuts	Forest user	negotiated

*: In PHBM model, the share is corrected with a coefficient of rotation of harvested compartment divided by the running year of the agreement. For example: an 80 year old compartment harvested in the 5th year of the agreement, the share received amount to = (5: 80) x the sales. While HKm model effectively starts from year 0, such a coefficient non-existent

While the promises give initial impression of major cash inflows from the forests, direct forest users are yet to enjoy the benefits as such. HKm model starts from effectively bare forestland, which means that the forest users have to wait when the forests are harvested. Some forest users understand they might not directly reap economic benefits from efforts to restoring the forests. They nonetheless observe the community forest model as their 'bank-account' since the shares are said can be transferred based on inheritance schemes. Still, they are alarmed given the promises of benefit sharing is yet formalized, suggesting their readiness to raid the forests when they are conned.

Table 6. 18 Shares from the sales of main forest products and the distribution

Forest user group		Rimba Lestari	Lestari	Sedyo Rahayu	Bumi Sari Makmur	Wana Bersemi	Wana Jati Wasesa	Wana Tani; Karya Lestari; Sedyo Rukun; Sedyo Lestari
Year		2006	2004-07	no record	No record, rules defined	2003-07	2007	No sharing, rules yet defined
Total sharing (in million rupiah)		24	17			2,122	10	
Distribution of sharing (%)	Direct users	-	-	-	-	3.4	-	
	Village development	30.0	100.0		10.0	15.6	10.0	
	Social activities	4.0	-		5.0	14.8	-	
	Group saving (Bussiness development fund)	35.0	-		50.0	29.6	42.5	
	Incentives for committee (or village chief)	13.5	-		20.0	12.7	20.5	
	Village Forum	2.5	-		-	3.2	2.0	
	Sub-district Forum	-	-		-	1.7	-	
	FUG Association	-	-		-	0.6	-	
	Subsidies to other groups	-	-		-	6.3	-	
	Office operational & monev	15.0	-		15.0	12.1	25.0	
	Total	**100.0**	**100.0**		**100.0**	**100.0**	**100.0**	

Note: 1 EUR equal to approximately 12,000 Rp (as of early 2010)

While such inheritance-scheme is non-existent in PHBM scheme, whether the forest users enjoy the share depends on the current potential of the forests and the allocation within the group, and the forest users find themselves of enjoying the marginal benefits. Across PHBM study-cases, community forest activities focus on rehabilitating the forests (reforesting the land) and improving the securing of the forests. Harvests are rare, if not non-existent, given the generally young forest structure, meaning limited money has been splashed out (**Table 6.18**). Limited inflow funds are usually used for constructing community forest related building and facilities such as group offices. The common explanation from the committees is that the limited fund would be meaningless to be distributed to the users. In some other groups, the limited shares were also dedicated to the committees, and none were for the users.

Wana Bersemi community forest of Gempol village is indeed an exceptional case in the way substantial amount of money has been dedicated to the group since the forest is one of the few backbones for timber production of the forest district given the forest structure of many old-aged classes. The massive inflow funds are yet to promote the improvement of the life quality of the forest users. As of Table 20, between 2004-2007 only a marginal fraction of less than 5% has been dedicated exclusively to the direct forest users. Indeed, it is not to say that direct forest users are not benefiting from the share, instead, much of them are enjoyed by such local elites as the committee members and village officers. The actual spending for this post is even slightly higher than what is written in the group constitution. Even those are external to the community forest also enjoy the benefit from the benefit sharing. This includes some 'kick-back payment' for forest officers for forest management activities, including forest patrols. Further, commitments to the federations of forest user groups at various levels from the village to district, as well as cross-subsidies to other forest user groups trim the received shares.

6.2.5 Village facilities and community services

Users indeed enjoy some fractions of the benefit sharing through for instance community development and social activities. Across cases, when funds are there, construction of public facilities is prioritised. Village development includes road stoning, *mushalas*/ mosques and group offices. In Gempol and Burat villages, some village roads have been stoned funded through the shares. This is expected to foster local economic development through improving the access other villages or markets. In Burat, a kindergarden was also built so that the village's kids are no more forced to walk long to other villages.

While some of these are enjoyed directly by users, many village development activities do not directly contribute in the effort to improve the livelihood of the users. For instance, although it might be preferred, the

construction of group offices and religion-related facilities has limited connection to poverty alleviation. From the shares, Gempol community forestry provided free vaccinations and health services, paid the land taxes of the whole village members, as well as donating some money for those conducting death ceremonies. Those are rather however rather enjoyed by the whole village members, instead of those contributing in forest activities. In addition, the funds allocated constitute a relatively small fraction of the total money.

In Gempol, a large portion of the benefit sharing is kept as group savings, allocated for fostering local business activities. As can be seen from Table 20, other groups, albeit yet to receive significant shares, also intend to create group business. The focus on creating local business often misses the targets of the users as the committees focus on the expectation to improve the capitals of the groups, instead of directly improving the livelihood of the people. In fact, the focus on creating local business is preferred by other external stakeholders, notably the forest authorities since such business is believed to divert the people to not depending on the forests, easing the pressure on the forests.

6.2.6 Others

Schemes of soft loans are also common across the cases, particularly when user groups have some savings, generated from the sales of forest products as well as some financial assistance from other institutions. Loans are made in the form of cash with lower interests compared to 'market rates'. It is common across cases that the implementation of community forestry is used to capture wider attentions from different agencies.

Table 6. 19 Grants received by community forest groups

Community forest	Forms of grants	Uses	Funding agencies
Sedyo Lestari	Money (Rp. 39,150,000)	Purchase of 6 cows as group property	Provincial Government
Sedyo Rukun	Money (Rp. 3,450,000)	Nurseries	KPHKm District Forest Office
	Money (Rp. 10,540,000)	Loans to users	
Rimba Lestari	20 sheeps	group property loaned to committees and users	District Veterinary Office
Sedyo Rahayu	55 sheeps	group property loaned to committees and users	Provincial Veterinary Office
Lestari	165 sheeps	group property loaned to committees and users	Provincial Veterinary Office

While in general the forests are thought have yet to provide meaningful economic benefits for forest users, some groups observe community forestry as a 'fishing net' to capture as many assistances as possible. Depending how the groups are perceived, whether they are seen to genuine engage in efforts for alleviating the poverty of the people, some governmental agencies are interested to provide assistances, particularly on local economic development, such micro-credits, loans and even grants. Some of the selected groups enjoy such benefits (**Table 6.19**).

As of the shares from the sales of forest products, the committees of some community forestry have decided to keep the aids as the group properties, but to loan them to the committee members and direct users. For instance, Lestari and Sedyo Rahayu groups create a 'rolling system' in regulating the loans. Nonetheless, it is the committee members who usually benefits most. As the aids are insufficient for equal distribution amongst the whole committees and the users, the committee members are given 'preferential treatments' of first captures before the users (see **Table 6.20**).

> *"Our members are acknowledging our work and dedication in securing the grants. Therefore, they allow us to capture the benefits first, allowing us to choose the best – big and healthy- ones"* (Interviewee 31)

Table 6. 20 Internal distribution of granted sheeps in Sedyo Rahayu group

Name	Position in the committee	Number of sheep loaned from the group
Kosim	General Chief	5
Subarkah	Chief 1	6
Samsudin	Treasurer	6
Warino	Security Taskforce	5
Siyo	Forest Restoration Taskforce	6
Panut	Working group	5
Suwarno	Working group	3
Sastro Wiyono	Local ulema	5
Total group sheep loaned by committee		**41**
Total group's sheep		**65**
% group's sheep loaned by committee		**63**

Source: Group's records

6.3 Ecological outcomes of community forestry

As previously outlines, the restoration of forest qualities of the forest are very much anticipated through the implementation of community forestry program. Across cases, such desire is in many respects driven by the unabated degradation of the forest condition, either the ample loss of trees in particular or the

degradation of forest ecology in general (see **Table 6.21**). The insistence on restoring the forest condition at first glance suggests one to expect to sparking efforts on improving the ecological qualities of the forests, but concerns on improving environment forest qualities are rather shifted to the extent that environmental efforts can enhance the forest potential to producing economic benefits, rather than to the broader environmental context of improved biodiversity or such. Such is primarily due to the focuses on commercial monoculture forests for principally timber production that relegates concerns on the broader ecological issues.

Table 6. 21 Forest conditions prior community forestry

Community forest	Forest condition and environmental issues prior community forestry	References
Wana Bersemi	Generally healthy forest, but some decline of forest resources, extinction of plant and animal species, Forest depletion during 1997-2001 due unauthorized cuts	1, 2
Wana Jati Wasesa	Massive forest clear-out, encroachment on forestland	1
Wana Tani	Massive forest clear-out	1,2
Karya Lestari	Forest clear out due massive-unauthorized cuts, extensive uses of forestland for agricultural cultivation, water shortage, changing climate and environment	1,4
Rimba Lestari	Depleted forests, soil erosion and landslides, water shortage	1,5
Lestari	Sporadic unauthorized cuts	1
Sedyo Rahayu	Sporadic unauthorized cuts	1
Bumi Sari Makmur	Concerns on water shortage due monoculture pine plantations, sporadic illegal cuts, unproductive forestland due multiple planting agricultural commodities	1
Sedyo Rukun	bare forestland dominated by Imperata grass, water springs to diminish	6,7
Sedyo Lestari	bare forestland dominated by Imperata grass visibly sporadic small trees	1

[1] interviews with group committees and forest officers
[2] Levelling Playing Field Annual Report (CIFOR 2006), [3] Wulan et al. (2004)
[4] User group profile, a flyer, Levelling Playing Field Project (CIFOR 2007)
[5] A report by Burat Village for the national reforestation and nature conservation contest (2008)
[6] Evaluation on the implementation of community forest (2006)
[7] Community Forestry Management Plan (25-30 January 2006)

6.3.1 Forest growth

In our both community forestry models, forest restoration is meant to planting (commercial) tree species, ensuring the survival of young trees and protecting the forest stands until the forests produce the economic benefits, mainly timber. Albeit the limited documentation dedicated exclusively to the respective community forests, observations across cases suggest that the implementation of the two models has unveiled some promising ecological outcomes in terms of healthy monoculture forests. The two cases of HKm community forestry are the notable achievement since most bare forestlands have been successfully transformed into greeneries (**Photo 6.4 & 6.5**); the forests have since been growing immensely.

Photo 6. 4 5-year Sedyo Rukun HKm forest

Photo 6. 5 Common conditions prior HKm

Photo by: Donawan Sepsiaji

The two community forests have been inventoried, as shown in the following table. They have improved the virtually bare forestland into more productive forest, displaying healthy stands.

Table 6. 22 Estimation on timber volume in two HKm community forests

		Sedyo Rukun		Sedyo Lestari	
		Teak	**Mahagony**	**Teak**	**Mahagony**
Total area	Ha	17		29.2	
Number of trees	-	8,723	390	18,725	720
Average diameter	Mtr	0.11	0.12	0.13	0.11
Average height	Mtr	5	6	5	5
Estimated volume/ tree	m3	0.04	0.05	0.05	0.04
Estimated total volume	m3	310.99	19.86	932.40	25.67

Likewise, other community forests focus on quick coverage of forestland with commercial timber species. In Karya Lestari community forest for instance, nearly a half of the forests was also categorized as bare forestland. Therefore, successful planting on the forestland is seen as pivotal to improving the forest conditions leading to more health forests for timber production (see **Table 6.23**).

Table 6. 23 Reforestation in Karya Lestari community forest

Forest condition		**Area (Ha)**
Total community forest		702.1
Prior community forest	Forested land prior community forest	365.9
	Bare forestland prior community forest	336.2
Planting	2005	6
	2006	175.1
	2007	96.6
	2008	58.5
Total planting		336.2

Source: Adapted from the Forest Development Plan of Karya Lestari 2005-2014

6.3.2 Forest biodiversity

There is limited signal to suggest whether the community forestry has generated a host of concern on biodiversity and other environment-related issues (Table 6.24). Across cases, intercropping forest and agricultural commodities remains the mere that frequently cited augment species richness of the forests. While that is true, the practice lasts short however; when forest canopies connect, forest stands are effectively monoculture. In addition, activities on land preparations, which include removal of shrubs and bushes, appear to deteriorate the biodiversity. Further, improved agricultural cropping which is apparently to better contribute forest biodiversity are less desired, if they are to undermine the growth of the main forest species as earlier described in the case of multi-storey mixed forests in some parts of Bumi Sari Makmur community forest. The practices rarely impress the forest office, which insists on replacing the ecologically-improved forestland with the monoculture pine forests. As shown in **Table 6.24** other concerns on environmental issues appear to be limited. Even, such activities jeopardizing forest biodiversity as hunting on rare, threatened and endangered (RTE) species occur sporadically.

Table 6. 24 Environment-related activities

Case	Fauna	Flora	Water springs	Riparian areas
Wana Bersemi	Sporadic occurrence of hunting on rare, threatened and endangered species	successful reforestation, enhancement of under-storey species, regular inventory on trees, under-storey vegetation and habitat suitability	-	-
Wana Jati Wasesa			-	-
Wana Tani			-	-
Karya Lestari			-	-
Rimba Lestari			recorded, enhanced with planting	Buffer zones protected and enhanced with planting
Lestari			-	-
Sedyo Rahayu			Recorded	Buffer zones protected and enhanced with planting
Bumi Sari Makmur		successful reforestation; blocks of multi storey forests, regular inventory on trees, under-storey vegetation and habitat suitability	recorded, enhanced with planting	
Sedyo Rukun	records on species and estimations on number available	forest species and agricultural commodities well recorded, shrubs also documented, tree inventory once done	recorded, plants on enrichment planting around, cares by users as they provide daily needs	Plantings along rivers with bamboos and *Gliricidia*
Sedyo Lestari	-	successful reforestation, enhancement of under-storey species, tree inventory once done	-	Plantings along rivers

Source: community forest documents, interviews

Rarely have forest evaluations and assessments, including on so-called environmental values, been conducted exclusively to the respective community forests beyond on the economic forest potentials. The common forest evaluation and assessment across cases is forest inventory focusing on the trees, although

additional information on under-storey vegetation, soil conditions and habitat suitability indices are also gathered. While clearly limited environmental assessment and management on the particular community forests, such evaluations are quite high on the agenda, done at a higher level. The assessments are instead done at district level, particularly by the forest administration of the PHBM community forest due their search of international recognition through forest certification[18].

The overall findings suggests us to confidently argue that despite the noble promises, ecological aspects remain unheralded in the order of importance in the selected community forestry case-models. The aspects appear not to interest the stakeholders involved, inexplicably those who claim being tasked with and/ or being concerned with such aspects. Explanations might be hard to obtain, but it becomes increasingly obvious that efforts on ecological aspects might be too expensive to afford while doing so is unlikely to offset the costs incurred. Such draws some learning point in that while ecological aspects are still viewed as exclusive issues, meaning more sensible and rational expectations might be more helpful in that such might encourage interested stakeholders to execute meaningful efforts on the ground.

[18] Randblatung Forest District has been awarded with a sustainable certificate of the Forest Stewardship Council (FSC). The forest administration has been viewed to have improved the forest management credentials including evaluation and the management of biodiversity as well as other ecological issues. The environmental assessments were done in collaboration with the *Tropical Forest Trust* (TFT), focusing on the identification *High Conservation Value Forest*, protected and conservation areas as well as the formulation of management plans on those areas.

Chapter 7 – Community Forestry Outcomes as a Function of Powerful Interests

As has been earlier said, community forestry program has widely been heralded as a way to achieve sustainable forestry with the promises of a comprehensive blend of positive economic, social and ecological outcomes. Our evaluation on the community forest cases in the previous chapter has found that the community forests have produced a mixture of outcomes. While positive signals on the improved forest conditions have been emerging, such promising signals are yet to materialize in regards to the direct forest users. We aim in this chapter to validate our thinking on the linkages between the mixture of the outcomes and the interests of the powerful stakeholders -who have been earlier proved through the selective or combinational uses of different power features, to influence the social processes in the networks of actors of the community forests.

7.1 The community forestry outcomes – A summary

Our research has witnessed different degree of empowerment -albeit marginally-, across cases (see **Table 7.1**), but the cases at the same time tell us that genuine strong empowerment remains rethoric in the community forestry. In our approach, empowering forest users means encouraging them to develop own strategies for improving their livelihood with the emphasis on the different access on the forest and the related resources including the important information on the forests. Our assessment in the previous chapter provides a strong signal for us to argue that the current practices prove to impoverish the ability of forest users to access the forests.

Table 7. 1 Summary of evaluation on social outcomes

	Wana Bersemi	Wana Jati Wasesa	Wana Tani	Karya Lestari	Rimba Lestari	Lestari	Sedyo Rahayu	Bumi Sari Makmur	Sedyo Rukun	Sedyo Lestari
Ownership rights	None							Pursued, but denied		
Forest uses	Low							Modest		
Decision making	Low								Modest	
Information	Low			Modest	Modest	Low	Modest	Low	Modest	

As the above table shows, claims to ownership rights over the forests are beyond the reach of the direct forest users; sporadic efforts to claim ownership rights over the forests were simply denied. Indeed, community forestry instigated causes of optimisms by forest users to make such claims (Fay and de Foresta 1998, Sanchez 1999), but through the program the state's ownership over the forests is further enhanced by the binding community forestry agreements and licenses, through which the users and their group are bound to acknowledge the tenurial rights of the state. Such is common across the globe nonetheless, as Agrawal and Ostrom (2008: 54-55) argue:

> *"[g]overnments are loath to relinquish control over natural resources when it comes to alienation rights…[a]s one proceeds from the ability to access and use a resource to the power to alienate it to others – it becomes less likely that local actors will gain the ability to make decisions".*

Some "bottom-up" schemes and wish-lists on how direct forest users can benefit more from the forests as we discussed earlier are rarely entertained. Indeed, the extent to which direct forest users can access forest planning and decision-making differs to some degree between the community forestry case-models – that some user groups might enjoy better access to decision making procedures than the others- but when it comes to the valuable forest products, the decisions remain monopolized by the forest administration. In addition, signals on improved access on the forest resources remain unconvincing. Across the study-cases, community forestry appears to become restrictive and punitive, due to mechanisms on effective enforcement of forest regulations. Being a member of the user groups further diminishes the users' ability, freedom, and autonomy to access the forests as they have to do so, otherwise they are heavily-surveilled by the forest administration-allied group committees. Looking at such circumstances, we are confident to argue that the forest users have found themselves profoundly disempowered.

In addition, as of numerous scholars (Edmunds et al. 2003; Lachapelle et al. 2004; Mahanty et al. 2006; Larson et al. 2007), we are eager to link the extent to which community forestry can contribute in the efforts on poverty alleviation of direct forest users with the degree their access to the forests, particularly the access on forest uses. Our theoretical assumption is that when direct users get meaningfully empowered shown in high degree on access to forest uses, the likeliness of they will get lifted from their poverty is high. Given the relatively limited access by direct forest users as explained above, one could then wonder on realization of the poverty allevation through the community forests. Therefore, the abilities of the forest users to successfully overcome their poverty-related problems remain in questions.

Table 7. 2 Summary of evaluation on economic outcomes

Benefits		Wana Bersemi	Wana Jati Wasesa	Wana Tani	Karya Lestari	Rimba Lestari	Lestari	Sedyo Rahayu	Bumi Sari Makmur	Sedyo Rukun	Sedyo Lestari
Forest product	Food crops	Relatively low, yet to satisfy daily needs									
	NTFPs	Limited, low varieties				Modest, some varieties				Limited, low varieties	
Cash	Wages	Low, limited opportunity is to give up				Modest, earning from resin tapping				None	
	Shares from sales	Low	None							Yet to receive	
Development and service		Modest	Low							None	
Others		Low									

The economic outcomes of the community forests in our cases are somewhat mixed (**Table 7.2**). We have seen in some cases -e.g. in Wana Tani and Wana Jati Wases community forests, the products and services obtained by the users are astonishingly limited. While the benefits from the forests rarely extend beyond the food crops from the agroforestry practices in the early stage of forest restoration, the relatively poor soil conditions cap the crop production. In the pine community forest cases, some positive signals on the improve outcomes from the foodcrops due better forest soil as well as the benefit from some other non-forest products and the opportunities to obtained some other incomes from resin tapping, that indeed provides assists to the users in satisfying their daily subsistent needs.

That the community forestry case-models pledge more benefits of splashing a portion from the sales of main forest products for fostering local economic development and community services –that some have initially lavished praise on the community forestry (Djamhuri 2008)-, might draw impressions on the improved economic outcomes for the forest users. But our cases clearly reveal that such benefits are still limited. Even when the benefits are there (e.g. Wana Bersemi case), group committees appear to bypass their distribution to the users. Such suggests us to argue that the community forestry has been set up only for the subsistent economy of the users, limited the commercial opportunities; and is yet to provide them with escape routes from their poverty-laden daily life.

The ecological outcomes are perhaps the most promising impacts of the implementation of the community forestry, although in terms of biodiversity the community forests rarely indicate a strong signal on improvement. We have observed clear improvements on forest conditions in terms of greeneries and survival of forest species, and the increasing forest stocks. We have also witnessed that community forestry proves a 'successful' approach in encouraging the participation of forest users in the forest restoration, while the economic benefits they obtain, as we have discussed, remain limited. This confirms the arguments of Larson and Ribot (2007) that community forestry provides a poor set of tools for protecting the forests with less emphasis on redressing the economic equalities experienced by the forest users.

7.2 The interests of powerful stakeholders

As Krott (2005) argues, interests are based on action-orientation, adhered to by individuals or groups, and they designate the benefits the individual or group can receive from a certain object. In public policy making, Easton (1965) distinguishes between the formally announced decisions & intended consequences, and the real effects the policy makers genuinely expect. Edelman (1985) argues on the difference of policy as formally pronounced and as actually implemented.

Table 7. 3 Features of formal and informal interests

Interest	Features
Formal	❑ Formally pronounced ❑ Normatively framed ❑ Concealing true motives
Informal	❑ True motives ❑ Hidden ❑ Reflected by course of actions

Campbell (2002b) further looks on the difficulties in extracting the true motives of policy makers from the 'frames' which contain formal pronouncement others want to hear from particular policy program. In the potentially high conflicting issues - as of community forestry-, Krott further argues that the stakeholders might pursue their interests through informal levels- which not the part of the formally defined level of the political processes, despite their possible denials (Krott 1990: 56, Krott 2010). Malla (2001) also emphasizes the importance of looking at "unstated objectives" in complementing the evaluation of statements of intent. The fruitful analysis on policy making, thus, as West (2004) argues, must integrate the normative and empirical concerns, covering the formal and informal interests of the powerful stakeholders.

7.2.1 Forest administration: Restoring control and ensuring profits

Somehow the forest administration endowed with the legal clouts to administer the country's forests, as Agrawal and Ostrom (2001: 486) hint, eager to relinquish the power to other stakeholders, principally to the institutions of forest users, in community forestry. It is beyond questions that through community forestry the forest administration formally aims to promote sustainable forestry with the emphasis on empowering the locals to manage the forests and lifting the for their poverty and to sustain the forest resources (see Rusli 2003, Wardojo 2003). Nonetheless, our analysis in the previous two chapters has led to a similar conclusion that the political decision of community forestry has been carefully calculated and is the best deal the forest administration. In fact, we have been able to float at least two principal hidden interests, i.e. restoring controls over the forests and ensuring the maximum profit from the forests.

Prior to the community forestry, the diminishing control over activities in the forests became salient, exemplified by the massive unauthorized timber raids and sporadic forestland acquisition, which all has pushed the forest administration to implement community forestry (Djajanti 2006). The legal muscles it possesses proved ineffectual in controlling the forest access. In the community forestry, we have analyzed that either by directly imposing regulatory procedures or indirectly through the group committees, we have earlier seen how the forest administration has regained the control that has lost for some time.

In addition, looking at how the the financial benefits from the community forests accumulated by the forest administration, principally from the low-cost forest restoration, increased production as well as the avoided losts of timber thefts, we are confident in making a case on the informal agenda on ensuring the maximum profits from the community forestry. Ribot et al. (2006: 1878-1879) enlighten us that the forest administration wants to use community forestry "*means to promote industrialization based on forest products at least as much as they wanted to empower local governments*". We have witnessed in most of our community forest cases, despite their well-espoused objectives on the poverty alleviation the forest administration appears not to let the users to create profitable opportunities through the community forests, but instead ensuring the restoration of the forestland into a healthy forest for mainly timber production and ensuring their security.

Given the nature of a corporate entity of the forest administration, surprise is left little that generating as much as income from the forest is still placed at the top of priorities of the forest administration of our PHBM community forest cases. Although being mandated to providing public services, –principally to fostering rural economic development as the part of the dual mandate (see Bratamihardja et al. 2005), the forest administration tends to be more inclined to "company's sustainability" (Peluso 1992). Similarly, the interests on maximizing

the profits from HKm community forestry are not hard to capture since forest administration firmly resists on allowing forest users to obtain a larger share from the expected timber sales (see Fuadi and Rahman 2004, Djamhuri 2008).

Our cases have enhanced the findings of other studies (e.g. Kusumanto and Sirait 2002, Djajanti 2006, Yonariza and Shivakoti 2008) that through community forestry, the forest administration can expect the maximum financial gains exemplified by the the combination of the improved forest stocks for timber productions, the secured and well-patrolled forests and thus the less occurrence of unauthorized cutting by forest users, as well as the effective efforcement on the prohibitive regulations in the community forests. Prior to the community forestry, the respective forest administration endured massive problems on the increasing portion of barren forestland and therefore the depleting forest stocks (for instance see Peluso 1992, Laburthe and Fauveau 2002).

Through the participation of forest users, principally mobilized the group committees, we have seen the barren forestland has been quickly restored into greeneries and the security of the more mature forests. For the forest administration, empowerment of the users is not on the high order of their priorities. This can be nicely summarized by a high forest officer (Interviewee 83), suggesting: "*We see empowerment of forest users and their groups as of nurturing a baby tiger, which we observe can bite us when they get mature. Instead we expect them to participate in our activities and to get the benefits accordingly* ". We can see here how the forest administration instead aspires to ensure Hobley's functional participation which sees the people as the medium for executing pre-determined objectives and decisions (Hobley 1996). Such has augmented similar practices as Scherr (2000) also sheds the lights on the disempowerment of the poor by arguing that rural development processes tend to view the poor as a subject of "benevolent policies formulated and delivered by others". The users are expected to participate in rejuvenating the degraded forestland, nurturing the the young forests and patrolling the forests from illegal activities such as grazing and particularly cutting.

Looking at the interests of the forest administration, we have clearly seen the divergence between the formally pronounced and the actually implemented interests (**Table 7.4**). The particular case is in terms of economic and social objectives of community forestry; while ecologically, the formal and informal interests are reinforcing.

Table 7. 4 Formal and informal interests of forest administration

Interests	Economic	Social	Ecological
Formal	Poverty alleviation, the improvement of the livelihood of local people	Empowerment of forest users	Improved forest condition and secured forests
Informal	Restoring control over forestland, the resources and activities within		
	Creating well-stocked forests, ensuring profits through low-cost forest activities, encouraging production	Functional participation of forest users in pre-defined forest activities, particularly in rejuvenating and guarding the forests	Improved forest condition and secured forests
Degree of divergence between formal and informal	High	High	Apparently none
Likelihood of positive community forestry outcomes due informal interests	Low	Low	High

7.2.2 Group committees: Personal perks on economic benefits

It is the group committees who carry the aspiration of their people (forest users) in dealing with external stakeholders, with the view of the better economic benefits and services for the users and community development. Almost inevitably, the local elites –principally those in the village administration body- dominate the structure of the user group committees, through either self-appointing procedures or so-called 'democratic elections'. Such domination is facilitated by the "cultural forces" (Wade 1987), principally the patron-client relationship within the user groups and the traditional domination, which Mansuri and Rao (2004) see as inevitable as the local elites embody moral and political authority over the forest users as the formers are endowed with better communication skills to the external stakeholders as well as being perceived to possess necessary management skills required to deal with the community forestry. While there is little doubt on their representation tasks, there is a great deal of sporadic evidence that they could fail to deliver the tasks due their personal

interests and ambitions, to obtain economic benefits as well social and political positions. Edmunds and Wollenberg (2001: 241) argue that "*personal perks can tempt representatives of groups to maintain their personal position in negotiations, even at the cost of failing to achieve benefits for their constituents*".

Across cases, the personal interests of the group committees are not hard to capture, albeit at different degree depending on the economic opportunities, either short-term or long-term or both, the committees observe. We have witnessed some group committees directly appropriate the benefits for the public and the forest users. When the economic benefits are clearly visible- as the case of Wana Bersemi, they become increasingly active to occupy the important positions in the group committees. Iversen et al. (2006) identify two forms of hidden economy local elites in the group committee can obtain from a user group: i.e. hidden transactions and hidden subsidies. We have also seen some group committees 'legalize the illegal uses' of the group's funds. This includes self-defined salaries for the committee members, and the mal-distribution of other economic benefits, which are supposedly splashed to the direct users. In addition, some committees impose different forms of fees on the users for group revenues –which are used for operational and management costs of the groups as well as their salaries.

Even when such direct economic benefits are less-visualized, being group committees also prove to create prestiges, being connected with high ranks in the forest administration and also in the local government. This as they observe enhances their political positions as well as provides opportunities to seek 'non-user bound economic benefits'. We have observed some group-committees secure formal contracts from the forest office as well as informal incentives from forest officers have persuaded the group committees to impress the forest offices by mobilizing their people to foster their interests, particularly the participation in forest restoration and forest watch activities (**Table 7.5**). Their performance appears to be upwardly accountable to forest officials instead of the users, as they continue to monitor the forests and sanction offences. They also act as gatekeepers for the users to access to forests by creating prohibitive regulations to ensure so-called 'forest sustainability', which eventually disadvantages their users, as Sedyo Rahayu, Lestari and Rimba Lestari community forests notably reveal.

Indeed, we observed an exceptional case in Bumi Sari Makmur, whose group committees appear to 'get cold' to the forest office, given the tense relationship between two due the tenurial conflicts we have earlier discussed. Apparently, as a part of their strategies on resisting the forest office, the committees tolerate, if not encourage, illegal access to the forests. The more 'neutral' cases occur in Wana Jati Wasesa and Wana Tani community forests, given the limited (short-term) benefits the committees and the users can observe from the shares, the community forests appear to be a formality. Nonetheless, from most cases we argue that the group committees have become a 'dysfunctional

unit', failing to advocate the interests of their users; and due their personal interests, they often 'sacrifice' their users to being more inclined to the forest office.

Table 7. 5 Degree of support by group committees to forest office due personal (informal) interests

Community forest	Personal (informal) interests	Degree of support to interest of forest office	Validating actions
Wana Bersemi	Capturing the existing large share from timber sales	(++)	Ensuring participation of users in forest regeneration and forest patrols
Wana Jati Wasesa Wana Tani	Unobserved	(+)	Unobserved
Karya Lestari	Long-term financial gains from improved forest condition	(+++)	Ensuring participation of users in forest regeneration
Rimba Lestari Lestari Sedyo Rahayu	- Securing contracts from forest office - Informal incentives from forest office - Long-term economic gains - Creating prestiges - Enhancing political position in the village	(+++)	- Ensuring participation of users in forest regeneration - Controlling access of users to forests - Ensuring high production of resin
Bumi Sari Makmur	- Resistance on forest office	(-)	Tolerating illegal access by users
Sedyo Rukun Sedyo Lestari	Long-term financial gains from improved forest condition	(+++)	Ensuring participation of users in forest regeneration and forest patrols

7.2.3 Social NGOs: Economic motives through community facilitation

We have identified in our cases two principal focuses of the NGOs in the community forestry, i.e. advocacy and service delivery. In general, the promotion on "closer-to people' approach in our cases was principally down two main issues: *1)* the illustration of the widespread forest degradation as indications of the failure

of state-centred forest administration, *and 2)* the identification and eventually the promotion of 'best practices' of community forestry across the country. As earlier outlined, facilitated by the changes in the national polity, supported by donors, and aligned with prominent university scholars (see for instance Colchester 2002, Fay and Sirait 2002) the advocating tasks had some degree of success in pushing for forest and forest-related laws and regulations with greater nuance on local people participation and pressurizing the state to implement the current models of community forestry.

In delivering the tasks, some remained focused with 'confrontional strategies' which placed themselves in an adversial positions toward the forest administration as the cases of Bumi Sari Makmur and Wana Tani have shown; others including those involved in HKm community forestry appear to switch to more delivering services to local communities and facilitating the acceptance of the local people to the community scheme the state offered and its swift implementation on the ground. In both cases, the formally pronounced interests of the social NGOs involved in our community forestry cases rests on democratic and fair forest management and decision-making, highlighting the emphasis on empowerment and eventually the poverty alleviation of direct forest users (Table 7.6).

Table 7. 6 Formal interests of the social NGOs in the community forest cases

	Shorea	**ARuPa**	**YBL Masta**
Vision	Fostering fair and sustainable community-based natural resource management	Sustainable, fair, and democratic natural resources management.	Studies on and facilitation of poor villages, facilitation local economic institutions, poverty alleviation of forest margin communities
Mission	Creating awareness and active participation local people in natural resource management through enhancing discourses & lobbies and empowering local organization	Saving and sustaining natural resources management based on communities' sovereignty. Further emphasis: Conflict resolution mechanism, empowerment of local community organizations	

Source: Javlec 2008- http://www.javlec.org/dspLsmDetail.php?id=13 (2/12/ 2010)
Perhimpunan Shorea 2010 - http://perhimpunanshorea.org/visi-dan-misi (2/12/ 2010)
Arupa 2010 - http://www.arupa.or.id/download/profileng.htm (2/12/ 2010)

We sense nonetheless -as of our analysis on the power features-, a certain degree of economic motives that saw the disorientation from their formal interests. Colchester (2002) also raises concerns on the accountability issues on the activities of socially-minded forest NGOs in Indonesia that many of them appear to focus on seeking fundings for projects at the expense of their 'supposedly constituents' of local communities, principally the forest users. This eventually leads to some degree of drawbacks the forest users are to experience.

Such is validated in our cases. The confrontrational strategies as used by those in Bumi Sari Makmur and Wana Tani community forests, creating images of themselves as "people's defender" appear to swifly persuaded donors to splash funds to support their activities. It is by no means that their advocating roles had no impact in improving the extent to which the forest users can get better access to the forests. In fact, being facilitated by the NGOs, the users and their group committees become more undaunted in accessing the forests. As Bumi Sari Makmur case reveals, although the NGO has been ousted from the networks, the group committees and their users remain attached with them and sporadically access the forests illegally. However, such inadversial positions has in turn impacted the users as they have been deemed to oppose the forest administration which eventually opted not to provide meaningful benefits to them.

Similarly, being plagued by the increased uncertainties in securing funding from donors, the teaming up with forest administration provided the NGOs in HKm community forests with strong platforms for secured involvement in the community forestry and even facilitated some 'new projects' (see Chapter 5), which primarily focus on bridging the divergence between the forest administration and the people, as we have previously observed. Kusumanto and Sirait (2002: 13) also point similar experience that some NGOs appear to act as an implementing agency of governmental community forestry projects. In our two HKm forests, the more 'state co-opted'-NGOs eventually maintained the enthusiasm of the forest users and their group committees on the 'more discounted' community forestry scheme compared to that the people have initially wished for. Indeed, such is perhaps the best deal the users could obtain –given the tough stance of the forest office. More importantly, the state's aspiration of restoring the forests has been well-served in the community forestry as the NGOs foster the objective in a high degree in their facilitation to the people.

7.2.4 Universities: Sustainable research actions on community forestry

Forest universities and research institutions have also played central drives in shaping community forestry policy and practices. Even prior to the formal implementation, they have been involved in the experiments on exploring appropriate models, although given their roles were limited to as delivering agencies of governmental community forestry projects (see Simon 1994,

Kusumanto and Sirait 2002). That the government later formalized community forest policy the roles of universities cannot be discounted. A number of university professors and students were instrumental in ad-hoc alignment of societal elements and political manoeuvres on striving for changes in new paradigms on the management of the state's forests (see Fay and Sirait 2002, Colchester 2002). Being a part of epistemic communities, along with particularly social-minded NGOs, they were heavily involved in generating ideas on community foresty and disseminating them through the political up-streaming of 'closer to the people' approach by providing scientific foundations and the moral suasions to the new paradigm that finally saw in the formalization of the program, including our two community forestry model cases.

The formal lines of universities and research institutions are beyond doubt echoing the promotion of sustainable forest practices which include the three pillars of economic, social and environmental, with strong emphasis on the poverty alleviation and empowerment of forest users. Nonetheless, have been in the forefront of the promotion of the program, universities and research institutions posses a clear agenda on seeing the program lasts long on the ground, principally for sustainable research projects, the dissemination as well the replications of so-called best practices for the concrete paradigm shifts on transparent, democratic and fair forest management approach across the country. From our cases, the establishment of the Center for Community Forestry Studies (Pusat Kajian Hutan Rakyat) also falls under the interests to foster community forestry research actions (PKHR 2010). Having seen the political will from the government and the forest administration in formalizing the program- albeit far from the initial expectation, the university in our cases, and the given the strong position of the forest administration, sees the importance of 'gradual' implementation. Frontal strategies might not foster the promotion of the program as an alternative approach for the management of the forests in the country.

Aside from the success in advocating the program, we have seen how the university involves in some of our cases; a great deal of influence in the respective community forests has been shown. Looking at the implementation of HKm community forestry model, the university was pivotal in mediating the divergence of interest between the forest administration and the forest users, manifested in the current 'compromised' HKm model. Its involvement in the two PHBM community forest cases, i.e. Wana Bersemi and Karya Lestari, also suggests some degree of influence, particularly on the group committees. In fact, the university, collaborated with CIFOR, was successful in persuading the group committees of Wana Bersemi in the uses of the share they receive from the forest office, including some portion allocated for direct forest users, which previously received none. Similarly inKarya Lestari, although the group has yet to receive such shares, it was also able to define the distribution of the share once the groups receive.

While it is beyond doubt that the university offers assistance to the user groups, the committees and their direct users, particularly in dealing with the powerful forest administration, its involvement also provides a huge assist for the forest administration, as it also encourages active participation of the users in rejuvenating the forestland. Its interests on promoting the balanced objectives of community forests, particularly the emphasis on promoting forest sustainability to some extent contribute to limiting the opportunities of the users to access the forests – albeit indirectly-, as their involvement in the particular community forests is also guided by the interests to promote forest sustainability, particularly in terms of the improved forest conditions. In doing so, they work with the group committees by encouraging them to set up different regulations and internal rules for the users as explained above.

7.3 Powerful interest desired outcomes (PIDOs)

Our approach on PIDOs rests on the assumption that the community forestry outcomes can be explained through the interests of the powerful stakeholders, who influence the processes in the community forestry and eventually fabricate the outcomes. When we observe that the outcomes reflect open or hidden benefits for the interests of at least one powerful stakeholder, we consider our hypothesis on the linkages is proven out. Looking at the formal interests, rarely we see that the powerful stakeholders in the cases are not aspiring for the positive outcomes from the community forests in terms of the three pillars of sustainability, i.e. economic, social and ecological. We have nonetheless witnessed in the previous section a great deal of divergence of the interests of the powerful stakeholders from the forest users' hopes and aspirations for genuine empowerment in the form of meaningful access to the forests that eventually facilitate them obtain economic benefits from the forests. Financial benefits from the community forests clearly fall short of the expectation. Indeed, signals on the improvement on the forest conditions are emerging, but such might impress the forest users less. These circumstances as we have analyzed are in fact the resultants of the contestations of the interests of the powerful stakeholders. Explaining this, Bradshaw (2003: 141) outlines: "*if the priorities of the powerful...do not include a genuine desire to sustain the local resource base, then we should not expect the outcomes of community-based resource management to differ from those of centralized management*". We have identified how the interests of those proved out powerful in the community forest networks to a great extent explain the current outcomes of the community forestry cases (**Table 7.7)**.

Table. 7 Validation of the outcomes with through the powerful interests

Community forest	Existing outcomes			Powerful stakeholder	Interests				PIDO		
	Soc.	Econ.	Ecol.						Soc.	Econ.	Ecol.
Wana Berseni	0	0	0	A,B,D	FA (Code A)	Poverty alleviation, improvement of livelihood	Empowerment	Improved forest condition, secured forests	Non-1	Non-1	1-
Wana Jati Wasesa	0	0	0	A		Restoring control over forests			Non-1	Non-1	1-
Wana Tani	0	0	0	A		Well-stocked forest, profit through low cost activities, enhanced production	Functional participation	Improved forest condition, secured forests	Non-1	Non-1	1-
Karya Lestari	0/1	0	0/1	A,B,D					Non-1	Non-1	1-
Rimba Lestari	0	0	0	A	FUGC (Code B)	Poverty alleviation, village development			Non-1	Non-1	1-
Lestari	0	0	1	A		Personal perks			Non-1	Non-1	1-
Sedyo Rahayu	0	0	1	A, B	NGO (Code C)	Democratic uses of forests, poverty alleviation			Non-1	Non-1	1-
Bumi Sari Maknur	0/1	0/1	0/1	A, B		Financial gains			Non-1	Non-1	1-
Sedyo Rukun	0/1	0	1	A, B, C, D	Uni (Code D)	Poverty alleviation	Empowerment	Improved forest condition	Non-1	Non-1	1-
Sedyo Lestari	0/1	0	1	A, B, C, D		Interests on research			Non-1	Non-1	1-

Note:
Formal interests
Informal interests

PIDO:
(Non-1) means powerful actors do not aspire for high outcomes
(1) means powerful actors aspire for high outcomes

Existing outcomes: 1 means high, 0 means low 0/1 means modest

It is the interests of the forest administration for restoring controls over the forests and maximizing profits through the implementation of the community forestry that profoundly determine the mere socio-economic outcomes of the community forests, while the rejuvenated forest conditions clearly satisfy them. More importantly is the pivotal roles of the group committees in fostering their interests. Stories sell on the representation roles of the group committees for their users, but there are strong signals on a diverse array of personal ambitions of the committees - from economic to political motives- that dissuade them to shift away from their constituents and even conspire against the aspirations for the improvement of their livelihood.

Indeed, we have also identified some degree of inconsistencies from those general findings, but such is scattered and is often less connected to the interests of the powerful stakeholders in the particular community forests. For instance, that the forest office expects swift forest restoration and forest security appears not being satisfied in Wana Tani and Wani Jati Wasesa community forests. This can be explained by the relatively poor forest soil that interests the users less, while the limited benefits for the committees dissuade them from 'all-out actions' to supporting the forest office. In addition, the sporadic illegal forest access in Bumi

Sari Makmur appears to compromise the interests of the forest office, but this on the other hand serves that of the group committees in opposing them.

Other powerful stakeholders involved in a limited number of research cases, despite all their best efforts and intentions to foster the interests of the users, appear to being dogged by the lack of capacity to deal with the strong pressure from the forest office. They are indeed to influence the processes in the community forestry, strategically collaborate with the forest administration that allows them to continue their influence. Nonetheless, the approach compromises their effort to encourage the full use of the community forests to achieve the initial goals. Such is evident from the involvement of NGOs and a university in some community forests.

Our analysis further suggests how some influential actors have tended to narrow the scope and meaning of empowerment to only partial participation of the direct forest users in forest activities without providing them with meaningful spaces to have a say. That some user groups, e.g. Karya Lestari, Sedyo Rukun and Sedyo Lestari, have enjoyed marginally better access to decision-making procedures enlightens us some extent of 'successes' of other external actors, including universities and research institutions, and social NGOs, involved in the community forests. Their efforts are nonetheless amputated to the extent consistent with the provisions from the forest administration (as an example, see Guizol et al. 2004, Guizol and Santoso 2005), due either the coercive pressures or the expectations on economic gains from encourages such participation or the combination of them (refer back the previous two chapters). Even so, their assistance appears to be limited to the group committees, instead of the direct forest users. Overall, we have identified arrays of 'interpretation' on so-called empowerment, which all nonetheless still diverges from our theoretical concepts. Such at the same time supports and validates our arguments on the powerful interest driven social outcomes.

Our cases have also validated that the relatively limited economic outcomes for the users –that the benefits appear to only satisfy their subsistent needs, instead of providing them with opportunities to commercial production for creating wealth – can be well explained through the interest of the powerful stakeholders. The meagre economic outcomes of the community forestry for the users are not inexplicable, and in fact a resultant of 'careful calculations' by some of the powerful stakeholders, particularly the forest administration. Larson and Ribot (2007: 190) point out that forest policy and the implementation "*systematically exclude various groups from forest benefits…and often impoverish and maintain the poverty of these groups*". They further argue that poverty is is also produced by the policy that enables some others to profit at their expenses. In this case, we do not argue that the powerful stakeholders want to see the forest users remain in the poverty in their daily life. Instead, the powerful stakeholders do not aspire for high economic

outcomes for the users as such would have jeopardised their own interests. Therefore, the benefits for forest users are just kept for subsistence economy.

Formally, improved forest conditions have been desired by most of the (powerful) stakeholders involved in the community forests. Nonetheless, drived by their own interests, their focus and emphasis differs. We have seen concerns on ecological outcomes are narrowed to the extent they serve the best interests of the forest authorities of promoting healthy forest stands, keeping the forests intact and therefore improving the economic potentials of the forests. Across cases, the forests have been growing immensely, but this is not followed with adequate attention on the broader issues of forest biodiversity. Our analysis in the previous chapter suggests that in many cases the positive forest growth is often compensated with the decline of the biodiversity.

Chapter 8 – Concluding Remarks

Our research has arrived to a comprehensive understanding that community forestry program in Java has had mixed impacts on the ground. On one hand, signals on the improved forest conditions are strongly emerging. Forest restoration activities have created visual greeneries and have improved the forest stocks while organized forest patrols have boasted the forest security. On the other hand, despite the disparity across cases on the degree of benefits gained, the users have to keep 'their patience' on the promises of community forestry as the program has yet to create meaningful livelihood opportunities. The users amass relatively few products and services from the forests. Such is explained by the lacks of self determination by forest users on the decision making and the lacks genuine control and access to the forests. There is a great deal of evidence that the implementation of the community forestry apparently reduce their opportunities to access the forests since the group committees appear to be accountable to forest officials, by creating various prohibitive procedures on the forest access. As a consequence, the current practices appear to diverge away from the initial goals, focusing on the empowerment and poverty alleviation of the direct forest users. Overall, our findings are to augments the pool of scholarly studies on the outcomes of community forestry across the globe, in that rarely the blend comprehensive goals of economic, social and ecological terms are rarely achieved in community forestry program (Brendler and Carey 1998, Chakraborty 2001, Dev et al. 2003, Malla et al. 2003, Thoms 2006, Springate-Baginski and Blaikie 2007).

We have also come up a conclusive finding that the mixed outcomes of the community forestry, rather than 'created in a vacuum', have been 'intentionally set up' by the contestation of external interests. Dryzek (1997: 98) argues that powerful interests try to skew the outcomes of policy debates and decision-making processes in their direction. As such, the forest users, which are supposedly the core actors in the community forestry, have become 'casualty'. They remain powerless and endure extensive influence from powerful external actors. We learn how few external actors -albeit at different degrees-, have influenced the processes of the community forest cases through different power features or a combination of them. They transmitted their interests in the community forestry activities that eventually defined the outcomes, coherent to the interests.

Across the cases, it is the forest administration, which proves itself as the most influential actors in the community forests. It is beyond suffice to argue that through the program the forest administration aspire to restore its control over the forest and the activities within as it once was, with the eye on maximizing the profits from the community forestry. The numerous power features it has built-from principally coercive modalities of regulatory frameworks to the informational

instruments as well as resources for induce the change of behaviour of other actors-, allow the forest administration to make appropriate select to outmuscle different types of actors and strategies it has had to deal with.

At the first place, the forest administration observed the importance on collaboration with influential figures of the locals in the formal context as those people have some degree of control over their people (forest users). Bearing in mind the costs of not doing so –that the legal muscles previously proved to having limited assists, manifested in the persistent forest encroachments and timber raids, there are emerging nuances the current community forestry has got a certain element of 'making uses' of the group committees. As Edmunds et al. (2003) argue community forestry "allow [s] the state to extend its influence by reducing its management costs by 'outsourcing' forest protection and other management responsibilities to the locals". Either the formal joint management with or management licenses to the user groups – represented by the local elites of group committees, allows the forest administration to coerce them to accept the pre-defined community forest models and eventually impose the regulatory frameworks containing conditionalities of rights and responsibilities as well as sanctions for non-compliance.

Through the 'coercive collaboration' with the group committees, the forest administration clearly establishes strong footholds for regaining its control over the forests. That the group committees have economic expectations from the community forests -either for the whole benefits of the people or personal perks- allows the forest administration to further influence the internal processes of the user groups from slating a forest officer in the structure of the committees to influencing the internal rules and regulations. We have witnessed how the internal rules and regulations contain extensive prohibitive conditions on the access of the forests by the users, including effective enforcement of sanctions for offences. We are confident to argue that due the combination of accounts of being powerless to resist the coercive force from the forest administration and as well as pursuing their personal interests that are satisfied with inducement of economic incentives have made the group committees to become a 'dysfunctional unit' for their users, but a handy body of 'control broker' for the forest administration on the other hand.

Not only over the group committees and effectively the forest users, the legal clouts combined with the restored legitimacy for administering the forests allow the forest administration to select those interested in being involved in particular community forests. The community forestry itself has been effective in confiding local governments which eventually support the forest administration. Their support is massively effective. With the assist from local governments and their apparatus, some forest administration, e.g. the forest office of Randublatung and Kedu Selatan, was able to oust those perceived to undermine its interests of

implementing the community forest by persuading the users and their group committees to persist in their resistance toward the program.

Our cases also reveal how the legal muscles have forced several actors collaborate with the forest administration, who simultaneously offers diverse forms of incentives to them to foster its interests. We have witnessed how a coalition of social NGOs and a research center were forced to compromise their aspirations coherent with the interests of the forest administration to keep themselves in the equations of the community forestry networks. For the NGOs, the continous involvement means of having chances to secure fundings from different agencies, both donors as well as governmental ones, which have placed some degree of trust upon them due the changing approach from opposition to coalition. Therefore, while they work within the corridor set by the forest administration, they have further opportunities to influence the community forests and eventually obtain some benefits from. Such suggest us to argue that contrary to their claim to working toward the 'levelling playing field' between the forest administration and the forest users, their work in fact to some degree of supporting the interests of the forest administration that is being framed within the corridor of forest sustainability which in result limit the current access by direct forest users on the forests and the resources.

Overall, there have been evidence and strong arguments on the connection of the existing outcomes of the community forests with the influence of the few powerful external stakeholders. Based on such findings, we are confident to argue that our hypothesis that "the activities and outcomes in community forestry depend mostly on interests of the powerful external actors" were well-validated. Only few external actors prove to heavily influence the processes in community forestry, their interests as a consequence drive the outcomes of the community forests.

Our empirical findings have successfully explained that the outcomes of community forestry as function of the interests of the most powerful actors, who are not situated in the inner circle of the community forestry network, but in the periphery. This implies that for a diagnosis of a community forestry project, looking at the external actors is at the zenith of importance. Attempts to discover strategies for improving the practices of community forestry are most effective if they are set in the view of the external actors and their networks. Furthermore, the strategies are of the effectiveness if they address 'internal-external power disparities'. The engulf power between the actors of community forestry, as our research has validated as the main drivers influencing the outcomes of community forestry. Therefore, efforts to expand the users' influence in community forestry are of also high importance.

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Appendixes

Appendix 1: **List of interviewees**

	Type of stakeholders	Position	Date
	A. KPH Kedu Selatan		
1	Forest administration	Chief, KPH Kedu Selatan	05/11/08
2	Forest administration	Vice Chief, KPH Kedu Selatan	05/11/08
3	Forest administration	A PHBM Officer	06/11/08
4	Forest administration	A PHBM Officer	06/11/08
5	Forest administration	An officer (Forest ranger)	06/11/08
6	Village administrator Burat, Chairman 'Rimba Lestari'		06/11/08
7	NGO	Chairman of YBL Masta	9/12/08
8	NGO network	Chairman of Javlec	09/12/08
9	District government	Chief, Agriculture and Forestry Service	10/12/08
10	Village administrator Burat, Chairman 'Sedyo Rahayu'		10/11/08
11	A forest user of "Sedyo Rahayu"		10/11/08
12	A committee member "Bumi Sari Makmur"		12/11/08
13	Village administrator Burat, Chairman 'Lestari', Chairman of user Group Federation of Kedu Selatan		13/11/08
14	A forest user "Bumi Sari Makmur"		06/10/ 09
15	A committee member"Bumi Sari Makmur"		06-12/10/09
16	Village administrator Benowo, Chairman of "Bumi Sari Makmur"		12/10/ 09
17	A committee member "Bumi Sari Makmur"		12/10/ 09
18	Forest administration	An officer	14-15/10/ 09
19	Forest administration	A PHBM Officer	14-15/10/ 09
20	Forest administration	An officer	14-15/10/ 09
21	Forest administration	An officer	14-15/10/ 09
22	Forest administration	Chief, KPH Kedu Selatan	17/10/ 09
23	Forest administration	Vice Chief, KPH Kedu Selatan	02-03/11/09
24	Village administrator Burat, Chairman 'Rimba Lestari'		02/11/09
25	Forest administration	An officer	02-05/11/09
26	Forest administration	An officer	02-05/11/09
27	Forest administration	A forest Ranger	03/11/09
28	Forest administration	An officer	03/11/09
29	Forest administration	An officer	03/11/09
30	Forest administration	An officer	03/11/09
31	Village administrator Burat, Chairman 'Sedyo Rahayu'		03/11/09
32	Committee member "Sedyo Rahayu"		03/11/09
33	Chairman 'Sedyo Rahayu'		05/11/09
34	NGO	Chairman, YBL Masta	10/11/09

	B. KPH Randublatung		
35	Forest administration	Chief, KPH Randublatung	17/11/08
36	Forest administration	Vice Chief, KPH Rd.blatung	17-22/11/08
37	Forest administration	A PHBM Officer	17-22/11/08
38	Forest administration	An officer	18/11/08
39	Secretary of "Wana Bersemi"		18/11/08
40	Committee member "Wana Bersemi"		18/11/08
41	Forest administration	Chief of PHBM section	22/11/08
42	Chairman of "Wana Jati Wasesa"		19/11/08
43	Village administrator 'Gembyungan'		19/11/08
44	Villager of Temulus		Online chatting 13/10/08
45	NGO	Former Director of ARuPa	Online chatting 15/11/08
46	CIFOR	An LPF officer	7/10/08
47	Chairman of user group association		22/11/08
48	District government	District major	23/11/08
49	Forest administration	Vice Chief, KPH Rd.blatung	28,29,30/09/09
50	Forest administration	Chief of PHBM section	28/09/09
51	Forest administration	PHBM Officer	28-30/09/09
52	Forest administration	Chief, KPH Rd.blatung	29/09/09
53	Forest administration	An officer	29/09/09
54	Forest administration	An officer	29/09/09
55	Forest administration	An officer	29/09/09
56	Forest administration	Vice Chief, KPH Rd.blatung	29/09/09
57	Village administration, Temulus Village		29/09/09
58	Chairman of "Wana Tani"		29/09/09
59	Chairman of "Wana Jati Wasesa"		30/09/09
60	Forest administration	Community Facilitation Team	30/09/09
61	Forest administration	Community Facilitation Team	30/09/09
62	Secretary of "Wana Bersemi"		01/10/09
63	District government	An officer in Forest Service	26-28/11/08
64	District government	Chief of Forest Service	26/11/08
65	Chairman of "Sedyo Lestari"		27/11/08
66	Chairperson of "Sedyo Rukun"		28/11/08
67	NGO	Chairman of Shorea	29/11/08
68	NGO network	Chairman of Javlec	09/12/08
69	Forest administration	Chief of Provincial Forest Service	10/12/08
70	University	A PKHR officer	9-13/12/08
71	University	PKHR Secretary	12/12/08

72	University	PKHR Chairman	12/12/08
73	NGO	A member of Shorea	9/12/08
74	NGO	A member of Shorea	9/12/08
75	Provincial Forest Planning Agency (PFPA)		13/12/08
76	Chairperson of "Sedyo Rukun"		19/10/09
77	Chairman of "Sedyo Lestari"		20/10/09
78	NGO	Chairman of Shorea	19-21/10/09
79	University	PKHR Secretary	20/10/09
80	NGO	A member of Shorea	21/10/09
81	University	A PKHR Officer	22-23/10/09
82	University	PKHR Chairman	24/10/09
	C. KPH Pemalang		
83	Forest admistration	Vice Chief, KPH Pemalang	21-22, 29/12/08
84	Forest admistration	A forest ranger	23-26/12/08
85	Village administrator Glandang Village		23-26/12/08
86	Chairman "Karya Lestari"		23-26/ 12/08
87	Committee member of "Karya Lestari"		23-26/ 12/08
88	Committee member "Karya Lestari"		23-26/ 12/08
89	University	PKHR officer	23-25/12/08
90	University	PKHR officer	23-25/12/08
91	Forest user "Karya Lestari		24/12/08
92	Forest admistration	Acting Chief, KPH Pemalang	29/12/08
93	University	PKHR Secretary	12/12/08
94	University	PKHR Chairman	12/12/08
95	CIFOR	An LPF officer	7/10/08

Note: Names are kept in the research protocol

Appendix 2: **Stakeholder identification, power and interest assessment – A general guideline**

<table>
<tr><th></th><th>Variables</th><th>Questions</th><th>Methods</th></tr>
<tr><td colspan="4">First step- Applicable to all stakeholders identified during the field work</td></tr>
<tr><td>1</td><td>Stakeholder</td><td>Name of the stakeholder:

How many members are organized in your organization?</td><td>Interview</td></tr>
<tr><td></td><td></td><td>The stakeholder is:
▪ Local (at community and district) level
▪ Regional (at regional or provincial or federal state level)
▪ National level
▪ International level</td><td>Interview and self assessment</td></tr>
<tr><td></td><td></td><td>Please, mention about your task in CF?</td><td>Interview</td></tr>
<tr><td></td><td></td><td>The stakeholder is belongs to:
<table>
<tr><td>State</td><td></td><td>Non-state</td></tr>
<tr><td>Gov.</td><td></td><td>NGOs</td></tr>
<tr><td>Local Gov.</td><td></td><td>Users, users' group and their Federations</td></tr>
<tr><td rowspan="5"></td><td colspan="2">Forest based enterprises and industries</td></tr>
<tr><td colspan="2">Associations and Political Parties</td></tr>
<tr><td colspan="2">University and Research Institutions</td></tr>
<tr><td colspan="2">Media</td></tr>
<tr><td colspan="2">Consultants</td></tr>
</table></td><td>Self Assessment</td></tr>
<tr><td></td><td></td><td>CF is supported by many stakeholders, what are your experiences? Please, mention the stakeholders in CF processes:</td><td>Interview/ self identification</td></tr>
<tr><td>2</td><td>Communication and information network</td><td>Many stakeholders are dealing about CF; based on your collaboration and experiences since last 5 years, please, mention the stakeholders with whom your organization have contact :
▪ Frequency of contact: ….. time/ time units
▪ Please, mention which stakeholder gives you the information?
▪ How good was the information?
(No information) 0…1.…2…3 (very good information)</td><td>Interview</td></tr>
</table>

3	**Power element**		
A	***Trust***	Based on your experience and collaboration with them, whom you could trust most? *(not at all) 0……1……2……3 (complete trust)*	Interview
B	***Incentives***	Please mention, which stakeholder provides support (financial, and knowledge and information) to you? *0 = no support* *1 = support provided*	Interview
C	***Coercion***	Please, mention which stakeholder(s) is absolutely necessary for you to fulfill your task in CF: *0 = totally replaceable* *1 = totally irreplaceable*	Interview
Second step- Applicable only to the most powerful stakeholders identified from the first step			
4	**Organizational task**	Your contribution in community forestry is very important; could you explain little bit more about your task in community forestry? ▪ Please, mention about the legal status of your organization: ▪ Based on your experiences since 5 years, how important is the community forest? ▪ Please mention about the role of collaborator in the community forest:	Interview
5	**Resources**		
	Human Resources	How many full-time and part-time employed are in your organization? Full-time… Part-time…	Interview
	Financial Resources	Your organization is financed by: ▪ State ▪ Donor ▪ Membership fee ▪ Donations ▪ Others	Interview
	Publication &documentation	Publication and documentation related to community forestry	Self collection, organizational data-base
6	**Interests**	What will be the optimal results that you expect from community forestry?	Interview

Appendix 3: **Assessment on the outcomes of community forestry – A general guideline**

1. Economic outcomes

Benefits for direct users	**Quantity** **(time series, if applicable)**
1. *Forest products (including land-based products)*	
– Fodder – Fuelwood – Poles/lumber – Timber – NTFPs/food – Agricultural crops – Others	
2. *Money*	
– Loan – Grant – Subsidy – Salary for workers	
3. *Community development / services*	
– School – Health posts – Community building – Dams – Roads – Irrigation – Others	

2. Social outcomes

Access	Level	How it is defined
1. Access to information on forests	High-Low	• No regulation • Regulated through: group memberships, agreements, regulation, rights, laws etc.*
2. Access to decision-making		
Forest planning	High-Low	
Forest management		
Forest uses		
Marketing		
Others		
3. Access to forest land and resources	Open access, permits, bans etc.	

* These are only preconditions, the most important thing whether these are implemented. Regulation, permits, bans might have been put in place in particularly CFs, but it is possible that users are not following such. In this case empowerment is considered high.

3. **Ecological outcomes**

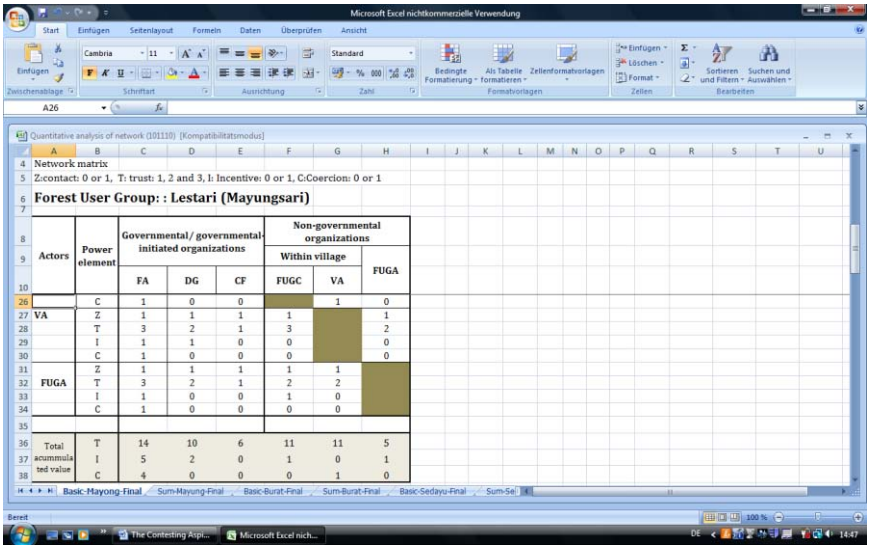
Inventory and monitoring tools	Prior	After
1. *Community-Ecosystem (Stand Level)* - Aerial photographs/ remote sensing - Ground-level photo stations - Physical habitat measures and resource inventories - Habitat suitability indices (HIS) - Censuses		
2. *Population-Species* - Censuses (counts, captures, signs, radio-tracking) - Remote sensing - HIS - Species-habitat modelling - Population viability analysis		
3. *Field observation plus CFUG review of existing programs (e.g. management plan review)* What is written about biodiversity/forest health or related terms in the management plan of the CFs under study? What are the justifications in such statements? Is there any forest blocks allocated for biodiversity (species….) conservation, watershed protection? Vegetative composition of the forests? Any other field observation?.		

Source: point 1&2 from Noss, 1990

Appendix 4: **Procedures of power prognosis through the use of dominance degree**

After accomplishing the complete network survey, we used calculation of "individual concentration value-Xi" and "dominance degree-Di" to identify the powerful group of stakeholders in each network of community forests. In order to calculate the Xi and Di, following procedures were followed:

1. The quantitative value of each power element (coercion, trust and incentives) of each identified stakeholder measured by partner stakeholders from the complete network survey were entered into the Microsoft excels sheets. Then each summarized power element which is called "total accumulated value" was calculated by simply adding the value under each power element. The calculation of „total accumulated value" of each power element was done separately for each stakeholder, and the corresponding element has to be seen as independent as shown below:



Network matrix

Z:contact: 0 or 1, T: trust: 1, 2 and 3, I: Incentive: 0 or 1, C:Coercion: 0 or 1

Forest User Group: : Lestari (Mayungsari)

Actors	Power element	Governmental/ governmental-initiated organizations			Non-governmental organizations		
					Within village		FUGA
		FA	DG	CF	FUGC	VA	
	C	1	0	0		1	0
VA	Z	1	1	1	1		1
	T	3	2	1	3		2
	I	1	1	0	0		0
	C	1	0	0	0		0
	Z	1	1	1	1	1	
FUGA	T	3	2	1	2	2	
	I	1	0	0	1	0	
	C	1	0	0	0	0	
Total acummulated value	T	14	10	6	11	11	5
	I	5	2	0	1	0	1
	C	4	0	0	0	1	0

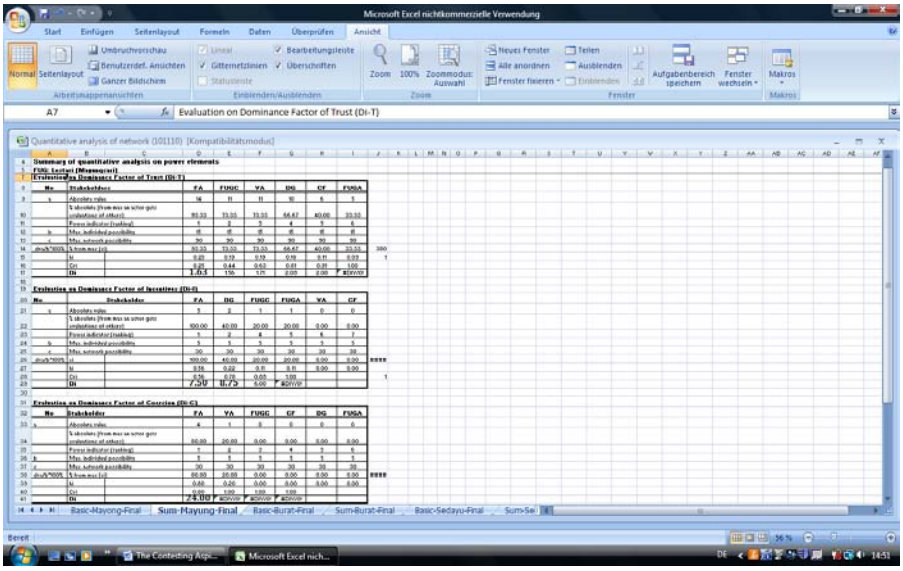
2. After calculating the "total accumulated value", the shorting of value of each power element was done by being ranged from high to low as shown in the next figure. By using "total accumulated value" of each stakeholder in regard to each power element, the individual relative power -Xi (in percentage) of each stakeholder in the corresponding network was calculated separately:

- **Percentage of relative power -Xi (Trust):**
  Total accumulated value of stakeholder *100
  = ----------
  ((Total number of stakeholders in the network-1)*maximum scale of the measurement i.e. 3 in the case of trust)

- **Percentage of relative power -Xi (Incentives):**
  Total accumulated value of stakeholder *100
  = ----------
  (Total number of stakeholders in the network-1)

- **Percentage of relative power -Xi (coercion):**
  Total accumulated value of stakeholder *100
  = ----------
  (Total number of stakeholders in the network-1)

We defined "Xi" as the percentage of the maximum amount a stakeholder gets from the evaluation of all other stakeholders in the network. The amount was evaluated for each power element separately.



3. The "individual distribution value (Hi)" of each stakeholder under each power element was calculated by dividing the "individual relative power –Xi" of each stakeholder by the sum of Xi (ΣXi) of all the network stakeholders. The formula can be constructed as follows:

$$h_i = \frac{x_i}{\sum_{i=1}^{n} x_i}$$

(Source: Jonas and Pfisterer, 2010)

The sum of Hi (ΣHi) of stakeholders under each power element is always "1".

4. After calculating Hi of each stakeholder under each power element, the "cumulative accumulated value-Cri" of each stakeholder in the network was calculated as follows:
   - Cri of stakeholder 1= Hi of stakeholder1
   - Cri of stakeholder 2 = Hi of stakeholder 1 + Hi of stakeholder 2
   - Cri of stakeholder 3= Hi of stakeholder 1 + Hi of stakeholder 2 + Hi of stakeholder 3
   - Cri of stakeholder "n" = Hi of stakeholder 1 +…..+ Hi of stakeholder "n"

5. Now, with the measurements of "cumulative concentration value- Cri" under each power element: coercion, trust and incentive of each stakeholder, calculation of "dominance degree-Di" is possible by using following formula:

$$D_i = \frac{\frac{CR_i}{i}}{\frac{1 - CR_i}{n - i}}$$

(Source: Jonas and Pfisterer, 2010)

Where, "i" refers to the position of specific stakeholder after shorting a specific power element and "n" refers to the total number of stakeholders in the network which acquired positive (more than 0) value under a specific power element.

By using the "dominance degree-Di" of each actor under each element of power of specific community forestry networks, it was further visualized in the form of a chart diagram in the Microsoft excel program. The first highest peak, which is considered as the boundary between the powerful and weak groups of stakeholders in the network of specific community forest due to specific power element, was considered as an evaluation criteria of power networks in this study. Hence, actors then ranged up to the highest dominance value, which falls under the group of powerful stakeholders (coded as "1") and remaining stakeholders are considered as the group of weak stakeholders (coded as "0") for qualitative assessment.

Appendix 5: **Summary on power diagnosis**

Forest User Group (Village)	No. of actors	Power element	Governmental organizations						Non-governmental organizations							
									Within village		FUGA	NGO	NGO Net	Uni	CIFOR	Donor
			FA	DG	CF	PG	PFRCA	PFPA	FUGC	VA						
Lestari (Mayungsari)	6	T	**1**	0	0				0	0	0					
		I	**1**	**1**	0				0	0	0					
		C	**1**	0	0				0	0	0					
Rimba Lestari (Burat)	6	T	**1**	**1**	0				0	0	0					
		I	1	**1**	0				0	0	0					
		C	**1**	0	0				0	0	0					
Sedyo Rahayu (Sedayu)	7	T	**1**	**1**	0	0			**1**	**1**	0					
		I	**1**	**1**	0	**1**			0	0	0					
		C	**1**	0	0	0			0	0	0					
Bumi Sari Makmur (Benowo)	10	T	0	**1**	0				**1**	**1**	0	**1**	0	0		0
		I	**1**	0	0				0	0	0	**1**	**1**	**1**		**1**
		C	**1**	0	0				0	0	0	0	0	0		0
Wana Jati Waseso (Gembyungan)	5	T	**1**						0	0	0					
		I	**1**						0	0	0					
		C	**1**						0	0	0					
Wana Tani (Temulus)	8	T	0	0	0				**1**	**1**	0	**1**	0			
		I	**1**	0	0				**0**	0	0	**1**	0			
		C	**1**	0	0				0	0	0	0	0			
Wana Lestari (Gempol)	8	T	**1**	0	0				**1**	0	0			**1**	0	0
		I	**1**	0	0				**1**	0	0			**1**	**1**	0
		C	**1**	0	0				0	0	0			0	0	0
Karya Lestari (Glandang)	6	T	0						**1**	0				**1**	0	0
		I	**1**						0	0				**1**	0	0
		C	**1**						0	0				0	0	0
Sedyo Rukun (Banyusoco)	9	T	0	0			0	0	1			1	0	1		0
		I	1	0			0	0	0			1	0	1		0
		C	1	0			0	0	0			0	0	0		0
Sedyo Lestari (Karangasem)	9	T	0	0			0	0	1			1	0	1		0
		I	1	0			0	0	0			1	0	1		0
		C	1	0			0	0	0			0	0	0		0

Note: (1)indicates 'powerful', (0) indicates 'not powerful'

Appendix 6: **Quantitative analysis of power in each case**

Case 1.

Forest user group : Lestari
Village : Mayungsari
KPH : Kedu Selatan

a. Summary of Total Accumulated Value

FUG	Number of actors	Power element	Governmental/ governmental-initiated organizations			Non-governmental organizations		
						Within village		FUGA
			FA	DG	CF	FUGC	VA	
Lestari	6	Trust	14	10	6	11	11	5
		Incentives	5	2	0	1	0	1
		Coercion	4	0	0	0	1	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	FA	FUGC	VA	DG	CF	FUGA
Total accumulated values (Ordered)	14	11	11	10	6	5
% absolute (from max an actor gets evaluations of others)	93.33	73.33	73.33	66.67	40.00	33.33
Power indicator (ranking)	1	2	3	4	5	6
Max. individual possibility	15	15	15	15	15	15
Max. network possibility	90	90	90	90	90	90
% from max (xi)	93.33	73.33	73.33	66.67	40.00	33.33
Hi	0.25	0.19	0.19	0.18	0.11	0.09
Cri	0.25	0.44	0.63	0.81	0.91	1.00
Di	**1.63**	1.56	1.71	2.09	2.08	#DIV/0 !

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	**FA**	**DG**	**FUGC**	**FUGA**	**VA**	**CF**
Total accumulated values (Ordered)	5	2	1	1	0	0
% absolute (from max an actor gets evaluations of others)	100.00	40.00	20.00	20.00	0.00	0.00
Power indicator (ranking)	1	2	4	5	6	7
Max. individual possibility	5	5	5	5	5	5
Max. network possibility	30	30	30	30	30	30
Xi	100.00	40.00	20.00	20.00	0.00	0.00
Hi	0.56	0.22	0.11	0.11	0.00	0.00
Cri	0.56	0.78	0.89	1.00		
Di	**7.50**	**8.75**	6.00	#DIV/0!		

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	**FA**	**VA**	**FUGC**	**CF**	**DG**	**FUGA**
Total accumulated values (Ordered)	4	1	0	0	0	0
% absolute (from max an actor gets evaluations of others)	80.00	20.00	0.00	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6
Max. individual possibility	5	5	5	5	5	5
Max. network possibility	30	30	30	30	30	30
Xi	80.00	20.00	0.00	0.00	0.00	0.00
Hi	0.80	0.20	0.00	0.00	0.00	0.00
Cri	0.80	1.00	1.00	1.00		
Di	**24.00**	#DIV/0!	#DIV/0!	#DIV/0!		

Case 2.

Forest user group : Rimba Lestari
Village : Burat
KPH : Kedu Selatan

a. Summary of Total Accumulated Value

FUG	Number of actors	Power element	Governmental/ governmental-initiated organizations			Non-governmental organizations		
						Within village		FUGA
			FA	DG	CF	FUGC	VA	
Lestari	6	Trust	14	7	5	13	13	4
		Incentives	5	2	0	0	1	0
		Coercion	5	0	0	0	2	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	FA	FUGC	VA	DG	CF	FUGA
Total accumulated values (Ordered)	14	13	13	7	5	4
% absolute (from max an actor gets evaluations of others)	93.33	86.67	86.67	46.67	33.33	26.67
Power indicator (ranking)	1	2	3	4	5	6
Max. individual possibility	15	15	15	15	15	15
Max. network possibility	90	90	90	90	90	90
% from max (xi)	93.33	86.67	86.67	46.67	33.33	26.67
Hi	0.25	0.23	0.23	0.13	0.09	0.07
Cri	0.25	0.48	0.71	0.84	0.93	1.00
Di	**1.67**	**1.86**	**2.50**	**2.61**	2.60	#DIV/0!

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	**FA**	**DG**	**VA**	**FUGC**	**CF**	**FUGA**
Total accumulated values (Ordered)	5	2	1	0	0	0
% absolute (from max an actor gets evaluations of others)	100.00	40.00	20.00	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6
Max. individual possibility	5	5	5	5	5	5
Max. network possibility	30	30	30	30	30	30
Xi	100.00	40.00	20.00	0.00	0.00	0.00
Hi	0.63	0.25	0.13	0.00	0.00	0.00
Cri	0.63	0.88	1.00	1.00		
Di	**8.33**	**14.00**	#DIV/0!	#DIV/0!	0.00	#DIV/0!

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	**FA**	**VA**	**DAFA**	**DVA**	**CF**	**FUGA**
Total accumulated values (Ordered)	5	2	0	0	0	0
% absolute (from max an actor gets evaluations of others)	100.00	40.00	0.00	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6
Max. individual possibility	5	5	5	5	5	5
Max. network possibility	30	30	30	30	30	30
Xi	100.00	40.00	0.00	0.00	0.00	0.00
Hi	0.71	0.29	0.00	0.00	0.00	0.00
Cri	0.71	1.00	1.00	1.00		
Di	**12.50**	#DIV/0!	#DIV/0!	#DIV/0!	0.00	#DIV/0!

Case 3.

Forest user group : Sedyo Rahayu
Village : Sedayu
KPH : Kedu Selatan

a. Summary of Total Accumulated Value

Villages	Number of actors	Power elements	Governmental/ governmental-initiated organizations				Non-governmental organizations		
							Within village		FUGA
			FA	DG	PG	CF	FUGC	VA	
Sedayu	7	Trust	18	9	8	6	16	16	4
		Incentives	5	3	2	0	1	1	1
		Coercion	5	0	0	0	0	1	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	FA	FUGC	VA	DG	PG	PG	FUGA
Total accumulated values (Ordered)	18	16	16	9	6	8	4
% absolute (from max an actor gets evaluations of others)	100.00	88.89	88.89	50.00	33.33	44.44	22.22
Power indicator (ranking)	1	2	3	4	5	6	7
Max. individual possibility	18	18	18	18	18	18	18
Max. network possibility	126	126	126	126	126	126	126
% from max (xi)	100.00	88.89	88.89	50.00	33.33	44.44	22.22
Hi	0.23	0.21	0.21	0.12	0.08	0.10	0.05
Cri	0.23	0.44	0.65	0.77	0.84	0.95	1.00
Di	**2.14**	**2.37**	**3.09**	**3.28**	3.25	6.08	#DIV/0 !

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	FA	DG	PG	FUGC	VA	FUGA	CF
Total accumulated values (Ordered)	5	3	2	1	1	1	0
% absolute (from max an actor gets evaluations of others)	83.33	50.00	33.33	16.67	16.67	16.67	0.00
Power indicator (ranking)	1	2	3	4	5	6	7
Max. individual possibility	6	6	6	6	6	6	6
Max. network possibility	42	42	42	42	42	42	42
Xi	83.33	50.00	33.33	16.67	16.67	16.67	0.00
Hi	0.38	0.23	0.15	0.08	0.08	0.08	0.00
Cri	0.38	0.62	0.77	0.85	0.92	1.00	1.00
Di	**3.75**	**4.00**	**4.44**	4.13	4.80	##########	#DIV/0!

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	SFC	VA	FUGC	DG	CF	FUGA	PA
Total accumulated values (Ordered)	5	1	0	0	0	0	0
% absolute (from max an actor gets evaluations of others)	83.33	16.67	0.00	0.00	0.00	0.00	
Power indicator (ranking)	1	2	3	4	5	6	7
Max. individual possibility	6	6	6	6	6	6	6
Max. network possibility	42	42	42	42	42	42	42
Xi	83.33	16.67	0.00	0.00	0.00	0.00	0.00
Hi	0.83	0.17	0.00	0.00	0.00	0.00	0.00
Cri	0.83	1.00	1.00	1.00			
Di	**30.00**	#DIV/0!					

Case 4.

Forest user group : Bumi Sari Makmur
Village : Benowo
KPH : Kedu Selatan

a. Summary of Total Accumulated Value

Number of stakeholders	Power elements	Governmental organizations			Non-governmental organizations								
					Within village		NGO	NGO Net	Uni	Donor	FUGA	IVF	Media
		FA	DG	CF	FUGC	VA							
12	Trust	13	17	8	25	24	19	12	12	6	4	6	5
	Incentives	3	0	0	0	1	4	4	1	3	0	0	0
	Coercion	8	0	0	0	1	0	0	0	0	0	0	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	FUGC	VA	NGO	DG	FA	NGO Net	Uni	CF	Donor	IVF	Media	FUGA
Total accumulated values (Ordered)	25	24	19	17	13	14	13	7	6	6	5	4
% absolute (from max an actor gets evaluations of others)	75.76	72.73	57.58	51.52	39.39	42.42	39.39	21.21	18.18	18.18	15.15	12.12
Power indicator (ranking)	1	2	3	4	5	6	7	8	9	10	11	12
Max. individual possibility	33	33	33	33	33	33	33	33	33	33	33	33
Max. network possibility	396	396	396	396	396	396	396	396	396	396	396	396
% from max (xi)	75.76	72.73	57.58	51.52	39.39	42.42	39.39	21.21	18.18	18.18	15.15	12.12
Hi	0.16	0.16	0.12	0.11	0.08	0.09	0.08	0.05	0.04	0.04	0.03	0.03
Cri	0.16	0.32	0.44	0.56	0.64	0.73	0.82	0.86	0.90	0.94	0.97	1.00
Di	**2.15**	**2.36**	**2.40**	**2.50**	2.49	2.73	3.19	3.14	3.07	3.20	3.39	####

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	NGO	NGO Net	Donor	FA	Uni	VA	DG	FUGC	Media	CF	FUGA	IVF
Total accumulated values (Ordered)	4	4	3	3	1	1	0	0	0	0	0	0
% absolute (from max an actor gets evaluations of others)	36.36	36.36	27.27	27.27	9.09	9.09	0.00	0.00	0.00	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6	7	8	9	10	11	12
Max. individual possibility	11	11	11	11	11	11	11	11	11	11	11	11
Max. network possibility	132	132	132	132	132	132	132	132	132	132	132	132
Xi	36.36	36.36	27.27	27.27	9.09	9.09	0.00	0.00	0.00	0.00	0.00	0.00
Hi	0.25	0.25	0.19	0.19	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Cri	0.25	0.50	0.69	0.88	0.94	1.00	1.00	1.00				
Di	**3.67**	**5.00**	**6.60**	**14.00**	**21.00**	**####**						

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	FA	VA	FUGC	NGO	NGOnet	Donor	Uni	DG	Media	IVF	FUGA	CF
Total accumulated values (Ordered)	8	1	0	0	0	0	0	0	0	0	0	0
% absolute (from max an actor gets evaluations of others)	72.73	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6	7	8	9	10	11	12
Max. individual possibility	11	11	11	11	11	11	11	11	11	11	11	11
Max. network possibility	132	132	132	132	132	132	132	132	132	132	132	132
Xi	72.73	9.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hi	0.89	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cri	0.89	1.00	1.00									
Di	**88.00**	### #										

Case 5.

Forest user group : Wana Jati Wasesa
Village : Gembyungan
KPH : Randublatung

a. Summary of Total Accumulated Value

FUG	Number of actors	Power element	Governmental organizations		Non-governmental organizations		
					Within village		FUGA
			FA	CF	FUGC	VA	
Wana Jati Wasesa	5	Trust	10	6	6	7	3
		Incentives	4	0	1	1	1
		Coercion	4	0	0	1	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	FA	VA	FUGC	CF	FUGA
Total accumulated values (Ordered)	17	7	6	6	3
% absolute (from max an actor gets evaluations of others)	141.67	58.33	50.00	50.00	25.00
Power indicator (ranking)	1	2	3	4	5
Max. individual possibility	12	12	12	12	12
Max. network possibility	60	60	60	60	60
% from max (xi)	141.67	58.33	50.00	50.00	25.00
Hi	0.44	0.18	0.15	0.15	0.08
Cri	0.44	0.62	0.77	0.92	1.00
Di	**3.09**	2.40	2.22	3.00	#DIV/0!

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	FA	VA	FUGC	FUGA	CF
Total accumulated values (Ordered)	4	1	1	1	0
% absolute (from max an actor gets evaluations of others)	100.00	25.00	25.00	25.00	0.00
Power indicator (ranking)	1	2	3	4	5
Max. individual possibility	4	4	4	4	4
Max. network possibility	20	20	20	20	20
Xi	100.00	25.00	25.00	25.00	0.00
Hi	0.57	0.14	0.14	0.14	0.00
Cri	0.57	0.71	0.86	0.43	
Di	**8.00**	6.25	8.00	0.56	

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	FA	VA	FUGC	FUGA	CF
Total accumulated values (Ordered)	4	1	0	0	0
% absolute (from max an actor gets evaluations of others)	100.00	25.00	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5
Max. individual possibility	4	4	4	4	4
Max. network possibility	20	20	20	20	20
Xi	100.00	25.00	0.00	0.00	0.00
Hi	0.80	0.20	0.00	0.00	0.00
Cri	0.80	1.00	1.00		
Di	**24.00**	#DIV/0!	#DIV/0!		

Case 6.

Forest user group : Wana Tani
Village : Temulus
KPH : Randublatung

a. Summary of Total Accumulated Value

No. of stakeholders	Power elements	Governmental organizations			Non-governmental organizations				
					Within village		NGO	NGONet	FUGA
		FA	DG	CF	FUGC	VA			
8	Trust	5	4	6	11	8	10	4	6
	Incentives	4	1	0	1	1	3	1	1
	Coercion	4	0	0	2	1	0	0	0

b. valuation on dominance factor of Trust (Di-T)

Stakeholders	FUGC	NGO	VA	FUGA	CF	FA	DG	NGONet
Total accumulated values (Ordered)	11	10	8	6	6	5	4	4
% absolute (from max an actor gets evaluations of others)	52.38	47.62	38.10	28.57	28.57	23.81	19.05	19.05
Power indicator (ranking)	1	2	3	4	5	6	7	8
Max. individual possibility	21	21	21	21	21	21	21	21
Max. network possibility	168	168	168	168	168	168	168	168
% from max (xi)	52.38	47.62	38.10	28.57	28.57	23.81	19.05	19.05
Hi	0.20	0.19	0.15	0.11	0.11	0.09	0.07	0.07
Cri	0.20	0.39	0.54	0.65	0.76	0.85	0.93	1.00
Di	**1.79**	**1.91**	**1.93**	1.84	1.89	1.92	1.79	#DIV/0!

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	FA	NGO	FUGC	VA	DG	NGO Net	FUGA	CF
Total accumulated values (Ordered)	4	3	2	1	1	1	1	0
% absolute (from max an actor gets evaluations of others)	57.14	42.86	28.57	14.29	14.29	14.29	14.29	0.00
Power indicator (ranking)	1	2	3	4	5	6	7	8
Max. individual possibility	7	7	7	7	7	7	7	7
Max. network possibility	56	56	56	56	56	56	56	56
Xi	57.14	42.86	28.57	14.29	14.29	14.29	14.29	0.00
Hi	0.31	0.23	0.15	0.08	0.08	0.08	0.08	0.00
Cri	0.31	0.54	0.69	0.77	0.85	0.92	1.00	1.00
Di	**3.11**	**3.50**	**3.75**	3.33	3.30	4.00	##########	#DIV/0!

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	FA	FUGC	VA	CF	FUGA	DG	NGO	NGO Net
Total accumulated values (Ordered)	4	2	1	0	0	0	0	0
% absolute (from max an actor gets evaluations of others)	57.14	28.57	14.29	0.00	0.00	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6	7	8
Max. individual possibility	7	7	7	7	7	7	7	7
Max. network possibility	56	56	56	56	56	56	56	56
Xi	57.14	28.57	14.29	0.00	0.00	0.00	0.00	0.00
Hi	0.57	85.71	100.00	100.00	100.00	100.00	100.00	100.00
Cri	0.57	85.71	100.00	100.00	100.00	100.00	100.00	100.00
Di	**9.33**	-3.04	-1.68	-1.01	-0.61	-0.34	-0.14	#DIV/0!

Case 7.

Forest user group : Wana Bersemi
Village : Gempol
KPH : Randublatung

a. Summary of Total Accumulated Value

No.of stakeholders	Power elements	Governmental organizations			Non-governmental organizations				
					Within village		Uni	CIFOR	FUGA
		FA	DG	CF	FUGC	VA			
8	Trust	17	8	9	18	11	18	7	8
	Incentives	5	1	0	4	0	4	3	0
	Coercion	5	0	0	0	1	0	0	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	FUGC	Uni	FA	VA	CF	DG	FUGA	CIFOR
Total accumulated values (Ordered)	18	18	17	11	9	8	8	7
% absolute (from max an actor gets evaluations of others)	85.71	85.71	80.95	52.38	42.86	38.10	38.10	33.33
Power indicator (ranking)	1	2	3	4	5	6	7	8
Max. individual possibility	21	21	21	21	21	21	21	21
Max. network possibility	168	168	168	168	168	168	168	168
% from max (xi)	85.71	85.71	80.95	52.38	42.86	38.10	38.10	33.33
Hi	0.19	0.19	0.18	0.11	0.09	0.08	0.08	0.07
Cri	0.19	0.38	0.55	0.67	0.76	0.84	0.93	1.00
Di	**1.62**	**1.80**	**2.05**	2.00	1.90	1.80	1.82	#DIV/0!

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	FA	FUG	Uni	CIFOR	DG	VA	CF	FUGA
Total accumulated values (Ordered)	5	4	4	3	1	0	0	0
% absolute (from max an actor gets evaluations of others)	71.43	57.14	57.14	42.86	14.29	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6	7	8
Max. individual possibility	7	7	7	7	7	7	7	7
Max. network possibility	56	56	56	56	56	56	56	56
Xi	71.43	57.14	57.14	42.86	14.29	0.00	0.00	0.00
Hi	0.29	0.24	0.24	0.18	0.06	0.00	0.00	0.00
Cri	0.29	0.53	0.76	0.94	1.00	1.00	1.00	1.00
Di	**2.92**	**3.38**	**5.42**	**16.00**	########	######	########	#DIV/0!

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	FA	VA	FUGC	Uni	CIFOR	DG	CF	FUGA
Total accumulated values (Ordered)	5	1	0	0	0	0	0	0
% absolute (from max an actor gets evaluations of others)	71.43	14.29	0.00	0.00	0.00		0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6	7	8
Max. individual possibility	7	7	7	7	7	7	7	7
Max. network possibility	56	56	56	56	56	56	56	56
Xi	71.43	14.29	0.00	0.00	0.00	0.00	0.00	0.00
Hi	0.83	85.71	85.71	85.71	85.71	85.71	85.71	85.71
Cri	0.83	85.71	85.71	85.71	85.71	85.71	85.71	85.71
Di	**35.0**	-3.04	-1.69	-1.01	-0.61	-0.34	-0.14	#DIV/0!

Case 8.

Forest user group : Karya Lestari
Village : Glandang
KPH : Pemalang

a. Summary of Total Accumulated Value

FUG	Number of actors	Power element	Govt. organizations	Non-governmental organizations				
				Within village		Uni	CIFOR	Donor
			FA	FUGC	VA			
Karya Lestari	6	Trust	9	14	11	14	10	11
		Incentives	3	3	1	3	2	2
		Coercion	4	3	0	0	0	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	Uni	FUGC	Donor	VA	CIFOR	FA
Total accumulated values (Ordered)	14	14	11	11	10	9
% absolute (from max an actor gets evaluations of others)	93.33	93.33	73.33	73.33	66.67	60.00
Power indicator (ranking)	1	2	3	4	5	6
Max. individual possibility	15	15	15	15	15	15
Max. network possibility	90	90	90	90	90	90
% from max (xi)	93.33	93.33	73.33	73.33	66.67	60.00
Hi	0.20	0.20	0.16	0.16	0.14	0.13
Cri	0.20	0.41	0.57	0.72	0.87	1.00
Di	**1.27**	**1.37**	1.30	1.32	1.33	#DIV/0!

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	FA	Uni	FUGC	Donor	CIFOR	VA
Total accumulated values (Ordered)	3	3	3	2	2	1
% absolute (from max an actor gets evaluations of others)	60.00	60.00	60.00	40.00	40.00	20.00
Power indicator (ranking)	1	2	3	4	5	6
Max. individual possibility	5	5	5	5	5	5
Max. network possibility	30	30	30	30	30	30
Xi	60.00	60.00	60.00	40.00	40.00	20.00
Hi	0.21	0.21	0.21	0.14	0.14	0.07
Cri	0.21	0.43	0.43	0.79	0.93	1.00
Di	**1.36**	**1.50**	0.75	1.83	2.60	#DIV/0!

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	FA	FUGC	VA	Uni	CIFOR	Donor
Total accumulated values (Ordered)	4	3	0	0	0	0
% absolute (from max an actor gets evaluations of others)	80.00	60.00	0.00	0.00	0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6
Max. individual possibility	5	5	5	5	5	5
Max. network possibility	30	30	30	30	30	30
Xi	80.00	60.00	0.00	0.00	0.00	0.00
Hi	0.57	0.43	0.00	0.00	0.00	0.00
Cri	0.57	1.00				
Di	**6.67**	#DIV/0!				

Case 9.

Forest user group : Sedyo Rukun
Village : Banyusoco
District : Gunungkidul

a. Summary of Total Accumulated Value

No.of stakeholders	Power elements	Governmental organizations				Non-governmental organizations				
		FA	DG	PFRCA	PFPA	FUGC	Donor	NGO	NGO Net	Uni
9	Trust	8	10	8	11	18	6	16	10	21
	Incentives	6	3	0	1	2	3	3	3	7
	Coercion	7	0	0	0	1	0	0	1	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	Uni	FUGC	NGO	PFPA	DG	NGO Net	FA	PFR CA	Donor
Total accumulated values (Ordered)	21	18	16	11	10	10	8	8	6
% absolute (from max an actor gets evaluations of others)	87.50	75.00	66.67	45.83	41.67	41.67	33.33	33.33	25.00
Power indicator (ranking)	1	2	3	4	5	6	7	8	9
Max. individual possibility	24	24	24	24	24	24	24	24	24
Max. network possibility	216	216	216	216	216	216	216	216	216
% from max (xi)	88	75	67	46	42	42	33	33	25
Hi	0.19	0.17	0.15	0.10	0.09	0.09	0.07	0.07	0.06
Cri	0.19	0.36	0.51	0.61	0.70	0.80	0.87	0.94	1.00
Di	**1.93**	**1.98**	**2.08**	1.96	1.90	1.95	1.92	2.13	**#DIV/ 0!**

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	Uni	FA	DFA	NGO	Donor	NGO net	FUGC	PFPA	PFRCA
Total accumulated values (Ordered)	7	6	3	3	3	3	2	1	0
% absolute (from max an actor gets evaluations of others)	87.5	75	37.5	37.5	37.5	37.5	25	12.5	0
Power indicator (ranking)	1	2	3	4	5	6	7	8	9
Max. individual possibility	8	8	8	8	8	8	8	8	8
Max. network possibility	72	72	72	72	72	72	72	72	72
Xi	88	75	38	38	38	38	25	13	0
Hi	0.25	0.21	0.11	0.11	0.11	0.11	0.07	0.04	0.00
Cri	0.25	0.46	0.57	0.68	0.79	0.89	0.96	1.00	1.00
Di	**2.00**	**2.17**	1.78	1.58	1.47	1.39	#DIV/0!		

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	FA	VA	FUGC	Uni	CIFOR	DG	CF	FUGA
Total accumulated values (Ordered)	5	1	0	0	0	0	0	0
% absolute (from max an actor gets evaluations of others)	71.43	14.29	0.00	0.00	0.00		0.00	0.00
Power indicator (ranking)	1	2	3	4	5	6	7	8
Max. individual possibility	7	7	7	7	7	7	7	7
Max. network possibility	56	56	56	56	56	56	56	56
Xi	71.43	14.29	0.00	0.00	0.00	0.00	0.00	0.00
Hi	0.83	85.71	85.71	85.71	85.71	85.71	85.71	85.71
Cri	0.83	85.71	85.71	85.71	85.71	85.71	85.71	85.71
Di	**35.0**	-3.04	-1.69	-1.01	-0.61	-0.34	-0.14	#DIV/0!

Case 10.

Forest user group : Sedyo Lestari
Village : Karangasem
District : Gunungkidul

a. Summary of Total Accumulated Value

No. of stakeholders	Power elements	Governmental organizations				Non-governmental organizations				
		FA	DG	PFRCA	PFPA	FUGC	Donor	NGO	NGO Net	Uni
9	Trust	8	10	8	11	17	6	14	10	19
	Incentives	6	3	0	1	2	3	3	3	6
	Coercion	7	0	0	0	1	0	0	1	0

b. Evaluation on dominance factor of Trust (Di-T)

Stakeholders	Uni	FUGC	NGO	PFPA	DG	NGO Net	FA	PFRCA	Donor
Total accumulated values (Ordered)	19	17	14	11	10	10	8	8	6
% absolute (from max an actor gets evaluations of others)	79.17	70.83	58.33	45.83	41.67	41.67	33.33	33.33	25.00
Power indicator (ranking)	1	2	3	4	5	6	7	8	9
Max. individual possibility	24	24	24	24	24	24	24	24	24
Max. network possibility	216	216	216	216	216	216	216	216	216
% from max (xi)	79	71	58	46	42	42	33	33	25
Hi	0.18	0.17	0.14	0.11	0.10	0.10	0.08	0.08	0.06
Cri	0.18	0.35	0.49	0.59	0.69	0.79	0.86	0.94	1.00
Di	**1.81**	**1.88**	**1.89**	1.82	1.78	1.84	1.82	2.02	**#DIV/0!**

c. Evaluation on dominance factor of Incentives (Di-I)

Stakeholder	**Uni**	**FA**	**DFA**	**NGO**	**Donor**	**NGO net**	**FUGC**	**PFPA**	**PFRCA**
Total accumulated values (Ordered)	6	6	3	3	3	3	2	1	0
% absolute (from max an actor gets evaluations of others)	75	75	37.5	37.5	37.5	37.5	25	12.5	0
Power indicator (ranking)	1	2	3	4	5	6	7	8	9
Max. individual possibility	8	8	8	8	8	8	8	8	8
Max. network possibility	72	72	72	72	72	72	72	72	72
Xi	75	75	38	38	38	38	25	13	0
Hi	0.22	0.22	0.11	0.11	0.11	0.11	0.07	0.04	0.00
Cri	0.22	0.44	0.56	0.67	0.78	0.89	0.96	1.00	1.00
Di	**1.71**	**2.00**	1.67	1.50	1.40	1.33	#DIV /0!		

d. Evaluation on dominance factor of Coercion (Di-C)

Stakeholder	**FA**	**FUGC**	**NGO Net**	**DFA**	**Uni**	**NGO**	**PFRCA**	**PFPA**	**Donor**
Total accumulated values (Ordered)	7	1	1	0	0	0	0	0	0
% absolute (from max an actor gets evaluations of others)	87.5	12.5	12.5	0	0	0	0	0	0
Power indicator (ranking)	1	2	3	4	5	6	7	8	9
Max. individual possibility	8	8	8	8	8	8	8	8	8
Max. network possibility	72	72	72	72	72	72	72	72	72
Xi	88	13	13	0	0	0	0	0	0
Hi	0.78	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Cri	0.78	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Di	**7.00**	4.00	#DIV /0!						

That community forestry is yet to meet its high promises on tackling forest degradation and the pervasive rural poverty cannot be separated from the contexts of political processes and the dynamic of social interactions among the stakeholders involved in the program. This book analyses how few external stakeholders, with the use of different power features, influence the processes and try to skew the outcomes of the community forestry to their directions. The direct forest users, which are supposedly the core stakeholder in the community forestry, remain powerless and endure extensive influence from the powerful external ones.

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