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STRENGTHENING LOCAL INSTITUTIONS IN THE CONTEXT OF SHIFTING POLICIES

E.P. PURNOMO

PhD

UNIVERSITY OF BRADFORD
2014
STRENGTHENING LOCAL INSTITUTIONS IN THE CONTEXT OF SHIFTING POLICIES

The case of community based forest management (CBFM) in Yogyakarta in Indonesia

Eko Priyo PURNOMO

Thesis Submitted for the Degree of Doctor of Philosophy

School of Social and International Studies University of Bradford

2014
STRENGTHENING LOCAL INSTITUTIONS IN THE CONTEXT OF SHIFTING POLICIES

The case of community based forest management (CBFM) in Yogyakarta in Indonesia

Keywords: Institutions, Local institutions, Community-based forest management, Shifting policy

In response to the failure of forest management, the Indonesian government established a programme called Community Based Forest Management (CBFM) that gave an opportunity to local communities to use and utilise the state forest areas. This thesis portrays a case study in Yogyakarta, Indonesia, looking at the dynamic relationship between communities and the effectiveness of implementation of community based forest management (CBFM) policies and its programme, and particularly how local institutions deal with the shifting dynamics of these policies.

As there is currently an absence of research in this area this research therefore focuses on how the local community implements policy, builds relationships with other stakeholders and strengthens local community institutions.

Using a qualitative approach, this research found that the central government established an instable and unclear policy which has resulted in unsatisfactory implementation. The selected local communities did not, for the most part, recognise which regulations should be followed. Communities managed their allocated forest areas through local knowledge and communicated with other stakeholders, such as community groups, NGOs, and University researchers.

The research makes several recommendations. Firstly, the strengthening of local knowledge which is then adapted to new approaches within the local context. This would also require that Indonesian University scholars rethink how to study and develop knowledge based on Indonesian contexts and culture. Scientists should not be too ready to adopt “Western” knowledge and eliminate their “own”.

Secondly, capacity building can be done at individual and communal levels and importantly applied using a bottom-up approach. Regarding the lack of participation and patronage dilemma, groups should invite more people to participate in the policy-making processes, such as women and landless owners. If groups find it difficult to initiate this process from within, then external stakeholders could require this. External stakeholders could act faster to increase group participation, but this should be executed smoothly to minimise conflicts in the farmer group.
DEDICATION

Rima,
Dede,
Sakti and Bintang
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Parts of this thesis have been published in journals:


I participated in conferences at the University of Leeds in 2013 - “Selecting of interviewee correctly and avoiding possible bias and personal interest in the Qualitative research” and at the University of Exeter in 2013 as an invited presenter, my paper entitled “Institutionalised the Government Policy into Local Communities in the Contexts of Shifting Dynamics of Policy; A case study of the complexity of Community-based Forest Management Policy in Indonesia”.
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KEY TO THE ABBREVIATIONS

% Percentage or percent
£ Pound (British Currency)
a.s.l Above Sea Level
BAL Basic Agrarian Law see UUP A
BPS Badan Pusat Statistik (Central Agency of Statistics)
CBFM Community–Based Forest Management
CF Community Facilitator
CIFOR Center for International Forestry Research
DNPI Dewan Nasional Perubahan Iklim (The National Council on Climate Change)
DPD Dewan Perwakilan Daerah (Regional Representative Council)
DPR Dewan Perwakilan Rakyat (People’s Representative Council)
DPRD Dewan Perwakilan Rakyat Daerah (Provincial and District/town Councils)
FMK Forum Musyawarah Kelompok (Group Advisory Forum of Forest User Groups)
FRM Forest Resource Management
FUG Forest User Group
FWI Forest Watch Indonesia
GDP Gross Domestic Product
GKPPH Gabungan Kelompok Pengelola dan Pelestari Hutan (The Association of Forest User Groups)
GKR Gunung Kidul Regency
GR Government Regulation
HGB Hak GunaBangunan (Right to Construct and Posses Building)
HGU Hak Guna Usaha (Right to Commercial and Utilisation)
HKTI Himpunan Kerukunan Tani Indonesia (The Association of Indonesian Farmer Organizations)
HPH Hak Pengusahaan Hutan (Forest Concession)
HPK Hutan Produksi yang dapat Dikonversi (Convertible Production Forest)
HPT Hutan Produksi Tetap (Permanent Production Forest)
HTR Hutan Tanaman Rakyat (People’s Plantation Forest)
I'PHHBK Izin Pemungutan Hasil Hutan Bukan Kayu (License for Harvesting of non-timber Forest Products)
I'PHHK Izin Pemungutan Hasil Hutan Kayu (License for Harvesting of Timber Products)
I'UPHHBK Izin Usaha Pemanfaatan Hasil Hutan Bukan Kayu (License for Commercial Utilisation of non-timber Products from Natural and Planted Forests)
I'UPHHK Izin Usaha Pemanfaatan Hasil Hutan Kayu (License for Commercial Utilisation of Timber Products from Natural and Planted forests)
IUPJL  Izin Usaha Pemanfaatan Jasa Lingkungan (License for Commercial Utilisation of Environmental Services)
IUPK  Izin Usaha Pemanfaatan Kawasan Hutan (License for Commercial Utilisation of Forest Area)
Kanwil  Kantor Wilayah (Regional Office of central government agencies)
KdTII  Kawasan dengan Tujuan Istimewa (Area with Exceptional Purpose, see AEP)
KHCG  Karya Hutan Community Group
KHDTK  Kawasan Hutan dengan Tujuan Khusus (Forest Area with Special Purpose)
KTP  Kartu Tanda Penduduk (Citizen identification card)
MF  The Ministry of Forestry
MPR  Majelis Permusyawaratan Rakyat (People's Consultative Assembly)
NGO  Non-Governmental Organisation
NTFPs  Non-Timber Forest Products
PAD  Pendapatan Asli Daerah (Local Revenue)
Perda  Peraturan Daerah (Regional Regulation)
PERPU  Peraturan Pemerintah Pengganti Undang-undang (Government Regulation in lieu of Law)
PMDH  Pembinaan Masyarakat Desa Hutan (Forest Villagers Development in logging concession areas)
PPF  People's Plantation Forest (see HTR)
REDD  Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
REDD+  Reducing Emissions from Deforestation and Forest Degradation and Enhancing Carbon Stocks from the Forest in Developing Countries
Rp  Rupiah (Indonesian Currency)
RT  Rukun Tetangga (Neighborhood Association)
RW  Rukun Warga (Ward)
SFM  Sustainable Forest Management
SMGC  Sedyo Makmur Community Group
TAP MPR  Ketetapan Majelis Permusyawaratan Rakyat (Decree of People's Consultative Assembly)
TE  Timber Extraction
TGHK  Tata Guna Hutan Kesepakatan (Forest Land Use Agreement)
TM  Timber Management
UGM  Universitas Gadjah Mada
UNFCCC  United Nations Framework Convention on Climate Change
UPTD  Unit Pelaksana Teknis Daerah (Regional Technical Operations Unit)
UU  Undang-Undang (Statute Law)
UUPA  Undang-Undang Pokok Agraria (Basic Agrarian Law, see BAL)
CHAPTER ONE
INTRODUCTION

1.1. Background

The aim of this research is to explore the dynamic relationship between communities and policies for the effective implementation of community based forest management (CBFM). There are several objectives that shall be reached, such as practical, theoretical and policy issues. In terms of practical, the thesis is seeking to understand the concept of local community institutions and their role in the implementation of CBFM – in terms of how these communities implement their projects, as well as to find out whether they can act so as to realise sustainable development. Secondly, in terms of theoretical objective, the thesis seeks to contribute to theories about the development successful community institutions in forest management, mainly, how both formal and informal institutions interact in the selected sites. Besides, there is an absence of research on the strengthening of local institutions dealing with the shifting dynamics of CBFM policies in Indonesia contexts. Thirdly, in terms of policies, the thesis wants to make an attempt to identify policy implications for local and national governments to strengthen successful institution strategies that have the potential to support CBFM sustainability and articulate local institutions’ strategies

There are various studies that have already been undertaken focusing on the CBFM’s implementation in Indonesia. Research by Safitri (2010) focuses on legislation and licensing processes in CBFM’s implementation, dealing with the tenure security and its relation with Reducing Emissions from Deforestation and Forest Degradation (REDD) programme (Safitri, 2010). Other researchers also
attempted to deal with economics issues and national growth towards the CBFM's implementation (Dewi et al., 2005). In addition, Suwano and Nawir find out how participatory modelling improves partnership schemes and then Purnomo attempts developing scenarios on multi-stakeholder forest management (Suwano et al., 2009, Purnomo et al., 2005). Some scientists look at forest structure and different types of the forest structure that lead to different types of community forestry (Dietz et al., 2007). However, there is scarcity of research on how local institutions deal with the shifting dynamics of CBFM's policies and then how to strengthen local institutions to face that context. For instance, Dietz’s research only emphasises the communities’ diversity on protected areas only, and Moeliono looks solely at the decentralisation process in industrial forest areas (Moeliono et al., 2009).

In other words, the research is expected to contribute and to encourage policy makers to devise policies that can help to minimise poverty, reduce deforestation, and raise ecological awareness according to the community’s institutional approaches, particularly, on how to strengthen local institutions and how the institutions work on CBFM policy. Therefore, understanding the other scholars that focused on REDD and global contexts is important but this research would highlight to strengthen local communities in dealing with national and local policies dynamics.

In this present thesis, institutions could be considered to include formal institutions, such as government laws, charters and statutes, and informal institutions, such as codes of conduct and social expectations (North, 1991, Quinn et al., 2007, Smaigl and Larson, 2007). Institutions mean the direction that people use to organise all forms of repetitive and structured interactions, including those within families, neighbourhoods, private organisations and government (Ostrom, 2005). North (1990) proposes a key difference between organisation and institutions as
follows; organisation is a group of people that want to achieve the same goals, bound by common purposes, and institutions are mainly the rules of the game or code of conduct that define social practices and interactions among the stakeholders.

In Indonesia, CBFM policy emphasises that the role of the local community in managing and monitoring the state forest areas within a specific period and licence (Forestry, 1995). This policy has a goal that relies on understanding the process of policymaking regarding natural resources management, which requires balancing between aims of providing equitable access and sustainability.

It is a fact that deforestation has become a great danger, not only in Indonesia but also globally. Every year from 1999 to 2005, an area equivalent to about 1.08 million forests has been lost (Firman and Aquina, 2011, FAO, 2007). One of the problems of deforestation in Indonesia is that of a case of mismanagement of natural resources (FAO, 2007). For instance, the existing policies allow or put the control of natural resources in the hands of few people, especially those who are close to the political authority of the nation. As a result, industries such as the timber industry and palm industry got access to and occupied nearly 63 million hectares of forest in 1995, which rose to 69 million hectares of forest in 2000 (Forestry, 2002).

In addition, Indonesia annually loses forest revenue of nearly $2 billion in unpaid taxes, more than (50%) fifty percent of this being as a result of illegal activities (HNW.org, 2010, FAO, 2007). In other words, these massive illegal and legal loggings in Indonesia are crucial issues for concern in the sense that approximately the sizes of 40 football fields of forest are lost every day. Therefore, this is one of several reasons accounting for the loss of revenue to the country (HNW.org, 2010). Firstly, the Indonesian logging industry has been involved in
corruption, including tax evasion, in recent times (HNW.org, 2010). Furthermore, the weakness of law enforcement and less transparency also results in lack of accountability. Secondly, there are global needs where the Global demands log for performing their industries. In the contexts of Asia, Indonesia constitutes the biggest log exporter, around 20 percent of the Asian needs coming from Indonesia (Alliance, 2008). This situation leads to more deforestation and then Indonesian log industries operate by providing cheaper and even illegal resources (Alliance, 2008).

Regarding the above mentioned issues, Indonesian forest policies appear to be mainly oriented towards industry and less sensitive to the needs of local communities. For instance, many people among the communities that live in or near the forest have income per capita of less than 1 US dollar a day (Awang, 2004, FAO, 2007). Furthermore, even where there have been policies with community-based forest management, those policies have not been successfully implemented because of lack of community involvement. Therefore, the involvement of many stakeholders in the natural resource management by participation of communities is a solution to forest resources management in Indonesia, but this must be controlled and negotiated, especially by the community, otherwise, it will create new problems.

In 1995, the Indonesian government, specifically the Ministry of Forestry (MF), announced a ministerial decree no 622/1995 on Community-Based Forest Management - CBFM (referred to in the Indonesia national language as Hutan Kemasyarakatan) (Forestry, 1995). Actually, the main goal of this decree was only to mobilise local communities to rehabilitate destroyed forest. Actually, it could not re-allocate the resources from the state or industries to local communities (Safitri, 2010, Suwarno et al., 2009). After the fall of Soeharto’s regime, the political contexts and structure changed dramatically. The resources’ policy altered from the state-base to
the community-base. Soeharto reigned for more than 32 years and his term is labelled the new-order period. In 1998, labelled the reformism-order period, the Minister of Forestry introduced a new decree, which was the ministerial decree no. 677/1999 (Forestry, 1998). According to this decree, the community has a right to use, occupy and gain access to the forest for 35 years. Even as the main actor in forest management the community remains subject to rules. First of all, there is no individual access. They can get an access to forest areas on a group basis only. Secondly, the community can get a licence to occupy a small-scale forest area (Forestry, 1998, Purnomo, 2011).

By Ministerial Decree (Decree No 622/1995), the Ministry of Forestry initiated the CBFM programme. Furthermore, in 1999 the Enactment of Law No. 41/1999 on Forestry and No. 22/1999 on Local Government were introduced by the central government. These laws led the Ministry of Forestry to generate a new policy on CBFM, which is the Ministerial Decree No. 677/1999. However, in 2001, Dr Nur Mahmudi Ismail, the Minister of Forestry, revised Ministerial Decree No. 677/1999 and made a fresh Ministerial Decree, No. 31/2001. Decree No. 31/2001 also responded to the Enactment Law No. 22/1999 on Regional Government. According to the Enactment Law no. 22/1999, the central government should distribute their authority to the local government. Therefore, based on the Decree No. 31/2001, the local government is the main actor of this implementation of CBFM, where the district leader can give the right to the local community to use the forest resources. However, this policy did not last long, as usual. The Ministry of Forestry enacted the Decree No. 37/2007 and then the Decree No. 18/2009.

From 2001 to 2012, there were several government policies created to accommodate political interests of the central government, local government and
local community needs. However, the lack of good implementation on CBFM existed. For example, the local communities that had already established local institutions and created local arrangements had to keep on adapting to the shifting nature of government policies. It was difficult for the communities to follow the law because of the frequent changes. In this case, only a few local communities obtained a licence from the district leader; many of them are still waiting for the licence from their district leader (Sepsiaji and Fuadi, 2004). The CBFM’s licence is granted by the district leader but it should be authorised by the central government. On the other hand, the district leader also could not risk breaking the national rules even though local communities had already been managing the state forest areas. Therefore, it appears that the community is “illegally” using the forest area. For those communities that already managed and treated the state forest areas, they need legal certainty about their rights and their management obligations. In these cases, the communities spent time and resources in those areas. If the communities that are already spending time and resources do not receive benefits, they will just continue to fell trees. Therefore, this confusion about the status of communities is dangerous, not only for sustainability of the forest, but also for good practice of the communities’ forest management.

In conclusion, the forest operations in Indonesia do not only marginalise the local community but also eliminate local initiatives to utilise the forest resources sustainability (Nevins and Peluso, 2008, Suwarno et al., 2009). In the last decade the Indonesian government’s policies have supported only the market needs (Suwarno et al., 2009, Purnomo et al., 2005, Yarsi et al., 2009). These circumstances need an urgent response to solve that situation. The response could
not only save the forest, but could also reallocate and redistribute the forest resources from state or market based orientation to community based orientation.

To solve the problem and meet the community needs as the above background, which is to be highlighted, the Indonesian government, specifically the Ministry of Forest (MF), announced a ministerial decree on Community Based Forest Management. CBFM policy has goals not only to mobilise local communities to rehabilitate destroyed state forest areas but also to re-allocate the resources from the state or industries to local communities (Safitri, 2010, Suwarno et al., 2009). This policy is a good way to redistribute forest resources and also it is a response to the failure of state and market based policies that marginalise the local community. In practice, from 2001 to 2010, there were several government policies created to accommodate both political interests of the central government and local community needs relating to the CBFM policy.

Due to the shifting of CBFM policy, a lack of good implementation on CBFM existed. On the other hand, local communities that had already established local institutions and created local institutional arrangements should rely on the shifting of government policies. It was difficult for the communities to follow the changing of the law. As a result, the above background highlights the need to focus on the processes and consequences of Community-based Forest Management Implementation (CBFM) in Indonesia particularly, strengthening local institutions in the context of shifting policies in Indonesia, for example, and the dynamics of local institutions towards the shifting CBFM’s policies. How the local institutions can adapt and implement the CBFM policies are an important issue to consider. Also, to what extent can the community remain resilient during the shifting of implementation CBFM’s policies?
1.2. Research Questions

The leading question of this research can be stated as: to what extent do the processes and consequences of the shifting CBFM policy in Indonesia affect the ability of local institutions to perform in a sustainable way? Consequently, this main question is divided into sub-questions.

1. What actions do the communities take in order to implement sustainable CBFM?
2. What impact have these had on the functioning of the institutions?
3. What needs to be improved in order to strengthen the local institutions?

1.3. Goals of the Research

For this research to be important, there are several aims and objectives that must be reached:

1. To understand the local community institution on how to implement the shifting CBFM policy.
2. To investigate the implementation of CBFM in the area of study.
3. To develop a theory about successful community institution development on forest management.
4. To recommend a policy for local and national government levels, which strengthens successful institution strategies and that has the potential to support CBFM sustainability and articulate local institutions’ strategies.

1.4. Current Research in This Field

Recent Research on Forest’s resources management in Indonesia

There are various research studies that have already been undertaken focusing on the CBFM’s implementation in Indonesia (Table 1.1.). Even though,
some scientists looked at forest structure and different types of the forest structure that lead to different types of community forestry (Dietz et al., 2007), I could not find any research, which focuses on how the local institutions deal with the shifting dynamics of CBFM’s policies. For instance, Dietz’s research emphasises the communities’ diversity on protected areas only and Moelliono looks at decentralisation in industrial forest areas (Moelliono et al., 2009).

**Gap in research on CBFM in Indonesia**

There is an absence of research on the local institutions dealing with the shifting dynamics of CBFM’s policies. It is important that we can describe the institutional arrangements, specifically how the community monitors and enforces the rules they set and then how the community evaluates their rules and implementations. The second issue is an understanding of the shifting dynamics of power and management on forest resources in Indonesia.

**Table 1.1**

*Map in Research on Forest’s resources in Indonesia*

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<tr>
<th>Researcher</th>
<th>Issues</th>
<th>Main stakeholder</th>
<th>Level of analysis</th>
<th>Areas of study</th>
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<td>Safitri</td>
<td>Describe and analyse how the law and government act on CBFM in relation with REDD project</td>
<td>Central government</td>
<td>Elite and state-centric</td>
<td>Constitutional Regulation of the State on CBFM project</td>
</tr>
<tr>
<td>Dewi, Belcher and Puntodewo</td>
<td>Support the CBFM as economic and national growth tools</td>
<td>Central and local Governments</td>
<td>Elite and state-centric</td>
<td>CBFM areas</td>
</tr>
<tr>
<td>Suwarno and Nawir</td>
<td>Examine the participatory model on CBFM</td>
<td>Local communities</td>
<td>Grass root-centric</td>
<td>CBFM areas</td>
</tr>
<tr>
<td>Purnomo, Mendoza, Prabhu and Yasmi</td>
<td>Propose the scenarios on multi-stakeholders forest management.</td>
<td>Local communities</td>
<td>Grass root-centric</td>
<td>CBFM areas</td>
</tr>
<tr>
<td>Moelliono, Wollenberg</td>
<td>Forest structure leads to different</td>
<td>Central government</td>
<td>Combination between state</td>
<td>Forest protected</td>
</tr>
<tr>
<td>and Limberg, 2009</td>
<td>communities and local communities and grass root-centric, but mainly state policies. areas</td>
<td></td>
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</tr>
<tr>
<td>This research</td>
<td>Examine the institutions’ arrangements faced with the shifting dynamics of CBFM’ policies and recommend the sustainable communities on the implementation of CBFM.</td>
<td>Local communities Combination between state and grass root-centric but focussed on grass root.</td>
<td>CBFM areas</td>
<td></td>
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</tbody>
</table>

The research argues that in terms of institutionalism on resources management, analysing how local communities deal with the instability of government policies can help the communities themselves and resources sustainability. This argument is supported by some scientists who explain that local institutions can effectively control, maintain and manage the resources sustainably (Bischoff, 2007, Smajgl and Larson, 2007, Agrawal, 2001, Futterma et al., 2002, Behera and Engel, 2006). This argument has been followed by Ostrom’s opinion that an institutional approach can answer the tragedy of commons phenomena. The tragedy of commons refers to the phenomena of shepherds that benefit by the exploitation of shared resources (Hardin, 1969). The Institutional approach relies on the group of users developing regulations of how much, what manner and when the users can produce and use the resources. It means that stakeholders can be successful in using and managing their resources if they can build their institutions and meet with its contexts (Ostrom, 2008). Different contexts and cultures can create different institutions because the same rule cannot be implemented in different social contexts unless it is adapted (Agrawal, 2001). In other words, the practised forestry was created in different localities, influenced in part by the geographically and
historically specific politics, economies, ecologies and practices of producing knowledge and models about forestry (Vandergeest and Peluso, 2006). Vandergeest and Peluso (2006) called empires of forestry which are networks of knowledge, practice and institutions produced differently in different local contexts, and exchanged across sites through institutions facilitating this exchange. Therefore, developing effective local institutions should rely on the local contexts and cultures. The definite institution within precise context is the best way to deal with resources and environmental issues (Purnomo, 2011, Ostrom, 2005).

1.5. Proposed Methodology

Exploring and understanding the dynamic relationship between communities and the effectiveness of implementation of community based forest management (CBFM) policies is mainly a social phenomenon. The researcher must define her/him of his chosen research design in order to set the direction for the study as well as what and why data being collected (Denzin, 2000). This thesis, therefore, relies on the “subjectivity-ontology” and post-positivistic epistemology. A social phenomenon is subjective; a product of a social process and it could not be understood through a scientific approach (Corbin and Strauss, 2008, Silverman, 2010). Besides, the scientific approach requires social reality as being objective and participants are seen as a passive object. This thesis is intended to discover the actors' view and its relation. On the other words, as a social reality is less concrete determine than the natural world so this study is depending on the subjective ontology perspective. For instance, the post-positivistic epistemology suggests that social reality or social phenomenon can be analysed through qualitative investigation of qualitative data. Furthermore, the most appropriate approach of this research is exploratory research
and conducted by non-experimental and flexible research design. Data can be collected through several techniques, such as a review of documents, participative and non-participative observation and in depth interviews (Silverman, 2010). Moreover, this thesis is a qualitative research that is considered an appropriate and meaningful approach for understanding the contextual issues (Silverman, 2010, Denzin, 2000). It can be applied by a case study research that looks at the understanding of dynamics phenomenon within a single setting and can be conducted into an individual, a role, a group or a nation (Eisenhardt, 1989, Miles and Huberman, 1994).

Currently, the monitoring process is divided between two approaches (Fleming and Henkel, 2001, Pouliot et al., 2009, Cott et al., 2005). First of all, the traditional monitoring approach, a top-down activity implemented by scientists, government and international organisation officers. This approach has its roots in natural sciences and is common in many fields, such as soil degradation, conservation biology and forest conservation. Regarding this approach, the procedures, indicators and the monitoring authority comes from the scientists and government. If the monitoring activity is executed by the government, the communities are just a research object (Reed, 2005). The second approach is the post-modern approach, based on the communities and bottom-up activity. The approach is led by non-government organisations (NGO's) and its roots are post-modern thought within social science (Reed, 2005). The community can be involved in the monitoring process and also the researcher should collaborate with the community to develop the monitoring indicators.

The traditional approach has several weaknesses, such as a failure to analyse participation and local contexts. The procedures are mono interpretative and
the established-indicators are universal indicators. It can create misunderstanding and inaptequity with the community needs. To implement the monitoring process needs some training and many types of equipment. Therefore, this research uses the qualitative approach. That is a proper way to understand the community activity on the implementation of CBFM in Indonesia. Using the bottom-up approach is not only useful to assess, but also to develop the monitoring indicators based on the community. The indicators are suitable for the implementation of sustainable CBFM in Indonesia. Besides, [“what about them?”] the procedures and tools that have been developed to deal with the community needs and also the community is able to implement it.

1.6. Presentation of the Chapters

It is proposed to divide the thesis into eight chapters, including this first chapter.

The second chapter explores the various discourses on the institutional approaches and community-based forest management. This chapter elaborates each approach to the implementation of CBFM regarding with institutional approaches. The aims of this chapter are to select an appropriate literature review and then develop the theoretical framework for supporting this study.

The third chapter aims to highlight the background of the CBFM programme in Indonesia with some details relating to the political and legal basis of Indonesia on land and natural resources. This explains the legal basis of the state’s control of land and natural resources in Indonesia and then the social and political background that encourages the emergence of Community Based Forest Management (CBFM) in Indonesia.
The forth chapter discusses methodology and the selected methods that have been used for this study. In other words, it explains why the methods were selected and what the strengths and weaknesses of these methods are.

The fifth chapter aims at providing an overview of the research contexts, especially, a descriptive analysis of data and the selected research areas mainly, with some detail relating to the selected communities. This chapter analyses how the communities develop their institutions in a sustainable way and how they can maintain the CBFM policy to gain benefit.

The sixth chapter describes the sifting policy on CBFM. This chapter explains the central and local government policy relating to the CBFM. It also portrays the tension and conflict between central and local government and how the local institutions deal with this situation. This chapter is expected to analyse and elaborate the dynamics of local institutions towards the shifting CBFM's policies and how the local institutions can adapt and implement the policies is an important issue. Furthermore, it is followed by the consequence of the CBFM, not only for the communities itself, but also for the Indonesian government.

The seventh chapter investigates the Actors and their relationship. It highlights the position of local community institutions on CBFM implementation. It attempts to understand how the local communities develop and improve their bargaining position with other stakeholders.

The last chapter aims to highlight and sum-up the significance of the findings of this thesis, particularly to clarify the result of the research and then develop the new approach and scenario for the strengthening of local community institutions on the implementation of CBFM in Indonesia in a sustainable way.
2.1. Introduction

The previous chapter elaborated the background of the thesis and established the research questions followed by the aims of research. It has also briefly referred to the current research on the CBFM in global context. As mentioned in the introductory chapter, there is a lack of research on CBFM, especially research that focuses on the phenomena of shifting CBFM policy and how the local institutions deal with that. Furthermore, this second chapter aims to elaborate the institutional theory and describe the emergence of CBFM in global contexts.

The goals of this chapter are to explain the background of CBFM, particularly in the global context and describe the chosen approaches in this research. In the first part the theoretical framework of institutions in regards to the local community and sustainability issues is discussed. Clearly, we have to understand the institutional approaches on the implementation of CBFM. This chapter wants to put the institutions approaches that can look at the research goals narrow down. The next part will discuss the common property regime. This section explains clearly the conflict between state, private, and community actors. After that, this chapter explains the root of CBFM and then defines it. To understand CBFM clearly it can be useful to examine its implementation in
Indonesia. Therefore, understanding the institutions’ approaches, the common property regime and the correct definition of CBFM can develop the best theoretical framework for this research.

2.2. Forest Management in Developing Countries

The earth’s land area is covered by 30 percent forests and occupied around 3.8 billion ha in 2005 (Lindquist and FAO, 2012). Worldwide, the gross reduction in forest land use was 2.7 million ha per year from 1990 to 2000, 6.3 million ha per year from 2000 to 2005 (Lindquist and FAO, 2012). Significant forest conversion to other land uses occurred in South America and Africa. For example, in South America, the net annual forest losses were 2.8 million ha per year from 1990 to 2000 and 4.3 million ha per year from 2000 to 2005; in Africa there were statistically net annual forest area losses of 1.1 million ha from 1990 to 2000 and 2.7 million ha from 2000 to 2005 (Lindquist and FAO, 2012). Moreover, Europe, including the Russian Federation, had a significant net annual loss of forest area of 0.4 million ha from 1990 to 2000 and then 0.6 million ha from 2000 to 2005 (Lindquist and FAO, 2012). In Asia, on the other hand, there were significant mean annual gain in forest area of 1.4 million ha from 1990 to 2000 and then 1.4 million ha from 2000 to 2005 (Lindquist and FAO, 2012). In other word, Net forest loss was highest in tropical climatic area, for example, 5.6 million ha per year from 1990 to 2000 and 9.1 million ha per year from 2000 to 2005 (Lindquist and FAO, 2012). In Asian context, FAO confirmed that the increasing forest area of about 2.5 million ha per year for total 49.7 million ha
from 1990 to 2010 found in China because China established of planted forest that started in 1950s and continues today (Lindquist and FAO, 2012).

<table>
<thead>
<tr>
<th>Region</th>
<th>1990-2000 (million ha)</th>
<th>2000-2005 (million ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>- 1.1</td>
<td>- 2.7</td>
</tr>
<tr>
<td>Asia</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Europe</td>
<td>- 0.4</td>
<td>- 0.6</td>
</tr>
<tr>
<td>North and Central America</td>
<td>0.3</td>
<td>0.05</td>
</tr>
<tr>
<td>Oceania</td>
<td>- 0.1</td>
<td>- 0.06</td>
</tr>
<tr>
<td>South America</td>
<td>- 2.8</td>
<td>- 4.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>- 2.7</strong></td>
<td><strong>- 6.3</strong></td>
</tr>
</tbody>
</table>

Source; Lindquist and FAO, (2012)

There are many studies of the causes of deforestation or the forest land-use change. According to Gibbs et al. (2010), the total net increase in agricultural area from 1980 to 2000 in tropical countries was greater than 100 million ha, and nearly 80 percent of that came from previously forest land-use. Because of the sustained and increasing demand for food and energy, the forest conversion to other land uses in tropical areas in the period 2000-2005 was also happening (Lambin and Meyfroidt, 2011). Lambin and Meyfroidt (2011) claim that increasing concerns about environmental services and biotic diversity globally is also the cause of forest land-use change. In developing countries, due to globalization and the worldwide interconnectedness, the cross-border trade in food commodities increased more than fivefold between 1961 and 2001, and the trade in all raw wood products increased sevenfold (Lambin and Meyfroidt, 2011). Besides, economic globalisation significantly influences large agribusiness enterprises and international financial flows on local land use decisions (Lambin
and Meyfroidt, 2011). The other reason forest land-use change in developing countries exists is positively correlated with urban population growth and exports of agricultural products (Lambin and Meyfroidt, 2011). In conclusion, land-use change is driven by multiple, interacting factors that originate from the local, national to global scales, involve feedback loops and cascades through land use systems (Lambin and Meyfroidt, 2011).

In other words, many scholars agreed that the fundamental causes of deforestation and forest degradation are interrelated and are frequently socio-economic in nature (Lambin and Meyfroidt, 2011, FAO, 2012). FAO (2012) classified both the causes and the approaches to dealing with deforestation and forest degradation are often country-specific and therefore vary among countries. Furthermore, the underlying causes include (FAO, 2012):

- Poverty;
- Lack of secure land tenure patterns;
- Inadequate recognition within national laws and jurisdiction of the rights and needs of forest-dependent indigenous and local communities;
- Inadequate cross-sectoral policies;
- Undervaluation of forest products and ecosystem services;
- Lack of participation;
- Lack of good governance;
- Absence of a supportive economic climate that facilitates sustainable forest management;
- Illegal trade;
• Lack of capacity;
• Lack of an enabling environment, at both the national and international levels;
• National policies that distort markets and encourage the conversion of forest land to other uses.

In responding to those causes, FAO also suggests six strategies with potential for contributing to poverty alleviation are identified (Lindquist and FAO, 2012):

• People-centred forestry;
• Removal of tenure and regulatory restrictions, and return of public forests to local control;
• Improved marketing arrangements for forest products (a “level playing field”);
• Partnerships;
• Redesign of transfer payments;
• Integration of forestry into rural development and poverty reduction strategies.

During the period after World War Two, the accessibility of timbers from forests with high species diversity increased rapidly due to FAO technical assistance, new extraction and processing technologies (Vandergeest and Peluso, 2006). For example, demand for cheap construction timber for the reconstruction of Japan was a significant factor at this time, first from the Philippines, then, in the 1960s, from Kalimantan-Indonesia (Vandergeest and
Peluso, 2006). Java and Northern Thailand both had forests with concentrated
teat stands (Vandergeest and Peluso, 2006). The geographies and ecologies of
these areas also made teak relatively accessible. Teak grew only in elevations
up to 400 metres, and in Thailand was often found close to streams and rivers. In
addition, lack of technology, low timber value and difficult access to the interior
also precluded profitable access to interior forests, except for the highly profitable
trade in non-timber products (Vandergeest and Peluso, 2006). Overall, colonial
forestry in Sarawak and Dutch Borneo, belongs to Indonesia and Malaysia, was
important more for its contributions of Non Timber Forest Products for exports
than for the supply of forestry products for local economic activities (Vandergeest
and Peluso, 2006).

Globally, the majority of timber was harvested from natural forests, and the
primary thrust of forest management was to regulate the pattern and rate of
exploitation. By the middle of the twentieth century, many countries understood
that forests need to be managed for more than timber. Laws were enacted
mandating multiple uses of forests for recreation, wildlife and water, in addition to
timber (FAO, 2012). Forest management practices, including sustained yields of
timber, were established as public policy throughout Europe and North America,
and in colonial territories (FAO, 2012). In many developing countries that used to
be European colonies, attempts were made to replace the forest laws and
practices of the colonizing power (FAO, 2012). However, the end of colonial rule
often left a country without the technology, human capacity and financial
resources to manage its forest resources effectively (Lindquist and FAO, 2012).
Governments of newly independent countries had just focused on economic and social development, and forests were often seen – and used – as a resource and asset to support these efforts (Sunam et al., 2010, FAO, 2012). In many examples, poor governance and high corruption resulted in the rapid depletion of forests, without any concomitant benefits to society (FAO, 2012, Lindquist and FAO, 2012).

By the 1990s, the concept of “putting people first” was coming to the forefront in many developing countries (FAO, 2012). Forests play an important role in people’s socio-cultural system and influence their sense of places and identities (Charnley and Poe, 2007). Many scientists argue that there are struggles over forest access, use, ownership, control and associated human rights issues (Charnley and Poe, 2007, Peluso and Vandergeest, 2001, Nygren, 2005). Although same post-colonial countries and developing countries have recognised and formalised customary forest management and institutions maintained by local communities, in many cases, these have been replaced by state control with negative consequences for local communities (Nygren, 2005, Charnley and Poe, 2007, Menon et al., 2013).

In recent years, there has been also much discussion on the working of local forest institutions in developing countries focusing on understanding their role as rural institutions (Aravindakshan, 2011). In global contexts, there are many scholars interested in the participatory forest management that can be seen in village forest institutions and the community based forest management approach (Zulu, 2009, Tachibana and Adhikari, 2009, Suwarno et al., 2009,
Romm, 2009). Those approaches are a potential approach to improving the forest conservation and governance by local institution building (Romm, 2009, Aravindakshan, 2011, Charnley and Poe, 2007). The evolution of changing community rights over forest resources and the increasing state control over forest resources where those are shifting towards state-community partnership on forest resources is a vast subject of study (Charnley and Poe, 2007, Menon et al., 2013).

Increasing community participation in forest resources does not guarantee ecological and economical success. However, effective community level institutions for regulating resources use are also needed (Charnley and Poe, 2007, Chhatre and Agrawal, 2008). Therefore, there are two important issues to be successful in community based forest management which are well-defined property rights over forest resources and strong local community institutions for forest use and management (Charnley and Poe, 2007, Taylor, 2009).

2.3. Institutional Approaches on Resources Management

2.3.1 Understanding Institutions

According to Ostrom (1999), institutions have wide definitions and numerous concepts that are based on behavioural rules, norms and approaches. In other words, “institutions are the prescriptions that humans use to organise all forms of repetitive and structured interactions, including those within families, neighbourhoods, markets, firms, sport leagues, churches, private associations, and governments at all scales (Ostrom, 2005). The terms of institutions can be
considered to include formal institutions, such as Constitution, government laws, charter, decree and statutes, and informal institutions, such as code of conducts, customs, local knowledge and social expectations (North, 1991, Quinn et al., 2007, Smajgl and Larson, 2007).

North (1990) argues institutions are the rules of the game in society or, more formally, are humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social or economic. Moreover, North argues that conceptually, the rules must be clearly distinguished from the players. Besides, the purpose of the rules is to define the way the game is played but the objective of the team within that set of rules is to win the game (North, 1990). A key difference between organisation and institutions is as follows: organisation is a group of people that want to achieve the same goals bound by common purposes, and institutions are mainly the rules of the game or code of conduct that define social practices and interactions among the stakeholders (North, 1990).

On the other hand, there are some problems with North’s exposition. Hodgson (2006) says that North is insufficiently clear about the distinction, (a) between institutions and organisation, and (b) between “formal rule” and “informal constraint”. The first problem arises if we define the organisation as an actor or player. North simply ignored that the instances when “the group of people that want to achieve the same goals bound by common purposes” may not be the case. North is less interested in the internal mechanism by which the organisations coerce or persuade members to act together to some degree
(Hodgson, 2006). In other words, an organisation involves structures or networks, and these cannot function without rules of communication, membership and sovereignty so in that case, organisation must be regarded as a type of institution (Hodgson, 2006).

The second ambiguity of North’s argument is the distinction between formal “rules” and “informal” constraint. Some identify formal with legal and look at informal rules as non-legal; in turn, if “formal” means “legal”, then it is not clear whether “informal” should mean illegal (Hodgson, 2006). Furthermore, it is possible to identify the formal as being that which is designed, and the informal as spontaneous institutions, along the lines of Carls’s distinction between pragmatic and organic organisation (Hodgson, 2006). Therefore, it is suggested that the terms formal and informal with regard to institution and rules should either be abandoned or employed with intense care.

Another scholar says that institutions are also a body of norms, rules and practices that form behaviour and expectations of the stakeholders (Heywood, 2011). In other words, institutions can be described as the sets of working rules that are used to decide who is entitled to make decisions in some arena, what actions are permitted or restricted, what aggregation rules will be enforced, what procedures must be obeyed, what information should or should not be shared, and what rewards or punishments will be given to stakeholders based on their action (Ostrom, 1990).

In regard to describing the difference between norms and law, norms is all of those settings that define proper behaviour and then these norms make it
feasible for people to live together without excess (Ostrom, 1990). In addition, norms can build reputation. On the other hand, law is established by Government and applied throughout society; Law is compulsory; a citizen cannot choose which laws to follow or to ignore (Heywood, 2011). Furthermore, law is also recognised as binding on those whom it affects and law has a civic quality in that it consists of codified, published and enforced (Heywood, 2011). In addition, law provides rights to the people and promises that all the people or parties will be treated equally (Fennell, 2010).

2.3.2 Institutions on Resources Management

The terms of institutionalism on resources management, scientists argue that local institutions can effectively establish, manage and control sustainable resources (Bischoff, 2007b, Smajgl and Larson, 2007, Agrawal, 2001, Futemma et al., 2002, Behera and Engel, 2006). This reasoning has been continued by Ostrom’s point of view that an institutional method can respond to the tragedy of commons where the group of users can create a rule about how much, what method and when the users can produce and utilise the resources in a sustainable way (Ostrom, 2008). It means that stakeholders can be successful in using and managing their resources if they can meet their institutions with its contexts (Ostrom, 2008). Different contexts and cultures can create different institutions because the same rule cannot be executed in different social contexts (Agrawal, 2001). Therefore, the development of effective local institutions should rely on the local contexts and cultures. A specific institution
with a defined context is the best way to deal with resources and environmental issues.

Although the particular rules that are used in various settings cannot provide the basis for an explanation of the institutional robustness and resources sustainability, Ostrom (1990) proposes a set of eight principles on institutions, as follows:

(1) Clearly defined boundaries. The identity of the group and the boundaries of the shared resource are clearly delineated.

(2) Proportional equivalence between benefits and costs. Members of the group must negotiate a system that rewards members for their contributions. High status or other disproportionate benefits must be earned. Unfair inequality poisons collective efforts.

(3) Collective-choice arrangements. Group members must be able to create at least some of their own rules and make their own decisions by consensus. People hate being told what to do but will work hard for group goals that they have agreed upon.

(4) Monitoring. Managing a commons is inherently vulnerable to free-riding and active exploitation. Unless these undermining strategies can be detected at relatively low cost by norm-abiding members of the group, the tragedy of the commons will occur.

(5) Graduated sanctions. Transgressions need not require heavy-handed punishment, at least initially. Often a warning or a gentle reminder is
sufficient, but more severe forms of punishment must also be waiting in the wings for use when necessary.

(6) Conflict resolution mechanisms. It must be possible to resolve conflicts quickly and in ways that are perceived as fair by members of the group.

(7) Minimal recognition of rights to organize. Groups must have the authority to conduct their own affairs. Externally imposed rules are unlikely to be adapted to local circumstances and violate principle 3.

(8) For groups that are part of larger social systems, there must be appropriate coordination among relevant groups. Every sphere of activity has an optimal scale. Large scale governance requires finding the optimal scale for each sphere of activity and appropriately coordinating the activities; a concept called polycentric governance (Westfall et al., 2009). A related concept is subsidiary, which assigns governance tasks by default to the lowest jurisdiction, unless this is explicitly determined to be ineffective.

However, the set of principles on institutions by Osrom has been criticised. Some scholars argue (Cox et al., 2010);

"The critique that the design principles are incomplete is sound. There are several other important features of relevant systems that affect outcomes when CPRs are managed by communities of users. In an increasingly interconnected world, it is hard to argue that we should only consider local-level institutional properties. Local and external socioeconomic factors need to be considered as well. At the same time, we do not think that this critique undercuts the empirical
support for the principles indicated by our quantitative analysis. To some extent, exploring socioeconomic or biophysical factors is an analysis that is distinct from the one considered here, and empirical evaluations of the two are likewise distinct.”

Due to the diversity of regulations on social behaviour that can be observed at multi scales, institutions should be constructed. In attempting to manage a variety of common-pool resources, Ostrom modified the set of principles above and Ostrom developed the Institutional Analysis and Development (IAD) framework (Ostrom, 2005). In other words, the IAD framework is developed to systematise diagnostic, analytical, and prescriptive capabilities (Ostrom, 2005). It also supports the accumulation of knowledge from empirical studies and in the assessment of past efforts at reforms (Ostrom, 2005).

**Figure 2.1**

*A Framework for Institutional Analysis*

![Diagram of Institutional Analysis Framework](attachment:image.png)

Source: Ostrom (2005)

> Exogenous variable means independent variable that affects a model without being affected by it, and whose qualitative characteristics and method of generation are not specified by the model builder (Murcko, 2014). An exogenous
variable is used for setting arbitrary external conditions, and not in achieving a more realistic model behaviour (Murcko, 2014). For instance, the level of government expenditure is exogenous to the theory of income determination.

The term action arena refers to the social space where individuals interact, exchange goods and services, solve problems, dominate one another, or fight among the many things that individuals do in action arenas (Ostrom, 2005). A main part of theoretical work stops at this level and takes the variables specifying the condition and the motivational and cognitive structure of an actor as given. Analysis proceeds toward the prediction of the likely behaviour of individuals in such a structure.

An institutional analyst can take two additional stages after making an effort to understand the initial structure of an action arena. One stage digs deeper and inquires into the factors that affect the structure of an action arena (Ostrom, 2005). From this vantage point, the action arena is viewed as a set of variables dependent upon other factors. The second stage explicitly examines how shared understandings of rules, states of the world, and nature of the community affect the values of the variables characterising action arenas (Ostrom, 2005). Then one can move outward from action arenas to consider methods for explaining complex structures that link sequential and simultaneous action arenas to one another.

Ostrom argues that the problem could also be at a policy or collective-choice tier where decision-makers repeatedly have to make policy decisions within the constraints of a set of collective-choice rules (Ostrom, 2005). In this
case, the policy decisions then affect the structure of arenas where individuals are making operational decisions and thus impacting directly on a physical world (Ostrom, 2005). In other words, the problem could just as well be at a constitutional tier where decisions are made about who is eligible to participate in policymaking and about the rules that will be used to assume policy making (Ostrom, 2005).

Moreover, there are several reasons why the local institutions are required to manage resources sustainably. Firstly, government policies are failing because of scarcity of resources, such as funds and human resources for supporting their targets (FAO, 2007). Secondly, a local self-organisation is more able and adapted to work out the common resources' dilemma and promote sustainable natural resources (Ostrom et al., 1999, Agrawal, 2001, Anand, 2007). Thirdly, most of the policies are based on textbooks, and they are not down to earth or dealing with the social contexts so the best one to answer is one that understands the local contexts (Fairhead and Leach, 1996). Fourthly, participation is the paramount issue that has been advanced as a solution to re-distributing and re-allocating resources (McAllister et al., 2007, Nygren, 2005). For instance, when governments have taken out loans for programmes that subsequently fail they are then trapped in debt. On the other hand, many communities which follow their local wisdom and knowledge can maintain the forest resources sustainably (Fairhead and Leach, 1996).

Improving the local institutions that support decentralization and participate in natural resource management is an appropriate way to re-allocate
resources, but it cannot guarantee resources’ sustainability. However, there are several ways for developing community performance; the local institutions cannot establish it alone (Barrett et al., 2005, Nygren, 2005). First of all, by a legal mechanism that can establish rules and law enforcement. Secondly, capacity building that helps the local community build an equal relationship with other stakeholders, such as the local government and buyers. Thirdly, institutional transparency, that supports the information-equality system among stakeholders in the community. Finally, it is flexibility and adapting cooperative partnerships.

In other words, natural resource management should be built upon a robust system that requires effective, equitable and efficient management (Hanna and Munasinghe, 1995). In this case, the effective management should deal with the short-term interest of individuals and the long-term objectives for sustainable resources. Equitable management should meet with the diversity of interests and values of the stakeholders. Efficient management should provide reasonable costs on gathering information, implementing plans, and monitoring and enforcing policy. It seems that good natural resource management is a combination of various indicators and requirements and that these indicators should link and complement each other. Therefore, the institution of natural resources can be described by several criteria and indicators (Table 2.2). The bold character is the main focus of this research, especially on selected local institutions.
Table 2.2
Demographic, Political and Economic Characteristic

<table>
<thead>
<tr>
<th>1. Characteristics of the resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Small size</td>
</tr>
<tr>
<td>- Well-defined boundaries</td>
</tr>
<tr>
<td>2. Group characteristics</td>
</tr>
<tr>
<td>- Small size member</td>
</tr>
<tr>
<td>- Shared norms</td>
</tr>
<tr>
<td>3. Institution arrangements</td>
</tr>
<tr>
<td>- Rules are simple and easy to understand</td>
</tr>
<tr>
<td>- Law enforcement (incentives and disincentives)</td>
</tr>
<tr>
<td>- Accountable and transparent</td>
</tr>
<tr>
<td>- Benefit and cost, outcome and contribution.</td>
</tr>
<tr>
<td>- Meeting (formal and informal)</td>
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<tr>
<td>- Communication flow (downward and upward</td>
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<td>communication model)</td>
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<td>- Bottom up policy</td>
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<td>4. External environment</td>
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<tr>
<td>- Technology, low cost exclusion technology.</td>
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<tr>
<td>- Adaptable institution, open and close</td>
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<tr>
<td>organisation</td>
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<tr>
<td>- Government should not undermine local</td>
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<tr>
<td>community</td>
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<td>- Networking with other stakeholders</td>
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Adopted from Agrawal (Ostrom, 2002)

In terms of the limitation of this approach, it seems that there are a huge number of variables on sustainable institutions. Furthermore, each variable can relate with others and also depend on the others as well. So, when the number of variables is huge, and in the absence of well-prepared research it is impossible to be sure that the research results deal with the research hypothesis (Ostrom, 2002). It is also the limitations of the institutional approach that we have to consider. The researcher should count precisely the number of variables and cases that are relevant to their goals (Ostrom, 2002) because incorrect emphasis of the important variables can lead to unpredictable results.

According to the limitation of institutional approaches above, the focus of the research is the relationship between the institutional arrangements of
selected community groups and the sustainable forest management based on community in the contexts of shifting dynamic policy. The Nobel laureate, Douglas North suggests that the institutional arrangements are the rules of the game in the society that shapes human interaction and that the rules of the game are followed by the communities, governments and markets (North, 1990, Barrett et al., 2005). On the other hand, the sustainable forest management base for the community is the idea of decentralisation of common-pool resources that supports the local community’s access to the forest resources (Gilmour and Fisher, 1991, Adhikari et al., 2004).

Consequently, this research focuses on the development of effective institutional arrangements which could be useful to set, monitor and enforce the rule in the local contexts. If the local communities' institution has been properly implemented, the CBFM could be sustained. Many scientists have empirical evidence that the natural resources degradation is more common in rural areas when the community is poor and low income. Communities and governments without enough capital have less capacity to implement, articulate and enforce the rules of the game (Barrett et al., 2005, Adhikari et al., 2004). Thus, designing rules or local institutions that rely on community income and contexts is challenging (Barrett et al., 2005).

2.4. Community-Based Forest Management

Community is vague and has many different meanings. Some scientists argue that community is not essential and less important for explaining the
ecological phenomena (Muller, 1958, Stacey, 1969). They assume that social and political occurrences are purely by processes and not entities (Stacey, 1969). On the other hand, Young (1974) argues that communities do exist and are real, especially with particular dimensions. He explains that community is an integrated entity which lives in a place, creates collective action and follows its institutions (Young, 1974).

In addition, the concept of Community Based Forest Management (CBFM) is very broad. This research uses the CBFM’s concept as a model that provides the opportunity for local communities to manage, utilise and access the forest resources, especially in state-owned forest areas. The local communities are given the opportunity to use and manage forest resources according to their abilities. The community can develop their management resources by local community initiatives. The community management should be aware of the issues of participation, equality and sustainability.

There are several issues that relate to community forest management and conservation of resources. One of the important issues is how to maintain and improve local community’s access to natural resources. It is an urgent issue because of several factors. Firstly, most government policy marginalises the local community. Secondly, the economic approach to managing natural resources drives governments to prioritise meeting the needs of market demand (Tachibana and Adhikari, 2009). Thirdly, the idea of protected areas for biodiversity conservation; practitioners and governments have pushed for the implementation of biodiversity conservation, which they claim can only be
successful if the local community is not involved with the natural resources (Ellis and Porter-Bolland, 2008). Consequently, to understand the terms of community based forest management, it is useful if we understand the terms of common property regimes and the theoretical review of the forest management approaches.

2.4.1. Common Property Regimes

A common pool resource, such as a lake, an ocean, an irrigation system, a fishing ground, a forest, the Internet, or the stratosphere, is a natural or man-made resource from which it is difficult to exclude or limit users once the resource is provided by nature or produced by humans (Ostrom, 2005). To solve the problems of commons, we have to realize the root of its problems. It is suggested that this can be identified with understanding the property right and property regime perspectives. The economic approaches lead to the development of the paradigm of property rights. Property can be owned by a privately, by state and by the community. The property rights consider to how the state and society look for and get their property ownership. In addition, political approaches bring different interpretations of commons property regime. In this approach, commons should deal with several issues, such as whose rules or beliefs should determine how to use the resources, what have the stakeholders to do and who are the stakeholders or the owners of the resources? (Lu, 2001, Pavri and Deshmukh, 2003, Quinn et al., 2007). As a result, an understanding of property rights leads to recognising the concept of commons property regime.
itself. Besides, the terms of a regime relate to a system of regulation, rules and law for administration (APA, 2010).

As a result, there are three main perspectives of the property regimes: the state property regime, private property regime and community property regime (Figure 2.2).

![Figure 2.2 Resource Conflicts](image)

The first perspective is a state property regime. The government, as a representative of society as a whole thinks that natural resources belong to them and they can manage and use it as much as they want. This assumption is mono-interpretative and debatable, but this assumption has been used by most governments across the world (Awang, 2004).

This assumption had been supported by Hardin’s view when he looked at the Sherman phenomena in the field and his argument strongly supports state or government regime on resources management. Hardin argues that if pasture is open to all, each shepherd will attempt to keep as many sheep as possible on the commons. However, sooner or later, the inherent logical commons will remorselessly result in tragedy as the number of sheep exceeds the carrying
capacity of the land. Even if each shepherd tries adding just one more animal, it will also lead to a negative impact on the pasture.

There are some key arguments that Hardin proposes. Firstly, he argues that problems in the world which occur cannot be solved by technical solutions (Hardin, 1969). For instance, the question of population and a lack of food cannot be answered by producing a new wheat strain. Hardin also emphasises that only a finite population can solve the problem of a finite world but it could not happen (Hardin, 1969). Therefore, we have to produce fundamental action to solve the world’s problems.

Secondly, everyone has a personal interest that leads to their maximising their own interests. He explains that in the field is free and nobody is an owner. As a result, every herdsman will maximise their advantage by adding more sheep on the land. If this has been done by each herdsman, the pasture is used beyond its capacity and the resource will be eroded (Hardin, 1969).

Thirdly, he states that freedom in commons leads to ruin for all. Hardin also says that the herdsman as individuals, are individualistic, rational and just utility-maximizing (Hardin, 1969). Hardin says that people cannot reduce their needs and no one can deal with this problem and everyone always fails to solve their problems (Hardin, 1969). Even in the community or groups, they are not able to manage their needs. For example, if the legal system of private property is suggested as a solution, it can fail again. Private property is unfair and people who have freedom always ruin the resources. Therefore, Hardin suggests a government law could be a solution to this problem (Hardin, 1969).
Government regulations could solve the tragedy of commons where the government can be involved in the input and output process of resource management to bring the land usage in line with community and social needs. Hardin suggests that government can act as a public representative to create effective regulation and also tax policy (Hardin, 1969). This hypothesis assumes that the government is transparent and effective in allocating resources where people can receive incentive and disincentive depending on their contribution. Government should create incentive based-policy where this policy will motivate voluntary research, action and conservation to stake holders or landowners. In other words, government policy has a social function as well that can be used to distribute resources by balancing social cost, optimum production and sustainability of resources. In conclusion, government can create policy to solve and reduce the tragedy of commons because the government has rights and powers to implement it. Hardin’s assumption could be true if the government policies are transparent, efficient, effective and adaptive. Nevertheless, in reality this does not always happen or succeed because many governments fail to create and implement their policies.

The second perspective is the private property regime. This assumption appears to be in opposition to the state property regime. There are several characteristics of Government policies, which are centralised regulation, standardised and limited use of technology. The law is formal and has a coercion element which can enforce the rule. However, the ideal condition is quite far from the reality, with some evidence that governments are ineffective, inefficient and
irresponsible, government policies usually being uniform and centralised (Libecap, 2009, Benson, 1988). For instance, abuse of power and less use of discretion could be revealed in several ways, such as corruption and collusion. Corruption makes the circumstances of both resources and the community worse. Benson, who has conducted research on the common pool utilities, says that state apparatuses are less commitment to allocating resources and they are also weak on law enforcement (Benson, 1988). Conclusions, as an individual people can own and use the resources. They can control and manage it. Even individualistic, the people could be dealt with other people interests. Hardin says that an ethical solution is required, which can assist people to understand what they can do and cannot do. People would then have to exercise conscience and to control their attitudes and activities and to eliminate their human desire for exploiting resources (Hardin, 1969).

The last one is the community property regime. This perspective has emerged as an alternative approach to the management of the commons. There are some criticisms of the private property regime’s view. In terms of individualistic and economic actors, Angus suggests that Hardin's argument started with an unproven assertion, which is that every herdsman always wants to enlarge their herds, but even if the herdsman wanted to behave like Hardin's assumption, he could not do it unless certain conditions existed (Angus, 2008). Also, Angus said that Hardin mistreated the term of self-regulation by the communities involved (Angus, 2008). In addition, self-regulation processes such as those that occur in the community can reduce the overuse of land (Angus,
2008). Besides, all stakeholders can create internal rules which make clear what, when and how to produce the best crops. By cooperating with each other, they can manage to provide for the commons (Libecap, 2009). It seems that even if people are rational and have an economic perspective, they also have to consider their beliefs and those of others.

In terms of cooperation, Barclay, who conducted an experiment where people played some games and models using resources, argues that cooperation and coalition in reciprocal altruism are integrated in human relations and this can lead to immense benefit and reduce costs (Barclay, 2004). In other words, human behaviour responds appropriately to prevailing social and environmental conditions. So, a herdsman will use commons property in ways that lead either to overuse or sustainability depending on the circumstances. Neither Hardin’s conclusions nor management is inevitable (Berkes and International Union for Conservation of Nature and Natural Resources., 1989).

In terms of communication, a community that uses communication effectively can create several conditions, such as reaching higher benefits and developing their goals faster than communities which are less good at communication (Bischoff, 2007a). It is clear that all people in the community who want to use the commons property should ask and communicate with each other. For example, in Indonesian society, a Hak Ulayat is well-known. The Hak Ulayat, called the customary right, is a statute or local norms that every community member should follow when they want to plant, seed or cultivate anything in some communal area. According to this term (Hak ulayat), the land belongs to
the local community but every member can utilise it as long as they follow the community rule (IDLO, 2010). As a result, the resources can be managed in sustainable ways and the community can utilise the field as well.

In conclusion, communities and individuals as resource users have characteristics which make people and communities more aware of how to maintain resources in sustainable ways. Besides, collective action can lead to successful management and allocation of resources (Mukhija, 2005, Ostrom, 2005). On the other hand, ensuring that community rights are properly managed will minimise disputes on commons and it could minimise anarchism on commons. It is clear that the community that can manage their institution can be involved in resource management and this is the basis of the community property regime perspective.

2.4.2. The Development of Forest Resources Management

The development of forest resources management theory may be divided into two approaches, which are the conversional theory and the modern theory or social forestry approach (Simon, 1999, Yang and Liu, 2009). In other words, if it relates to those who are the main actors, it can be broken down between the state-based forest management and the community-based forest management (Suwarno et al., 2009). In terms of the conventional approach, there are several ideas, which are a timber extraction and timber management approach. In terms of the modern theory or social forestry approach, there are several ideas that are a forest resources management approach (Yang and Liu, 2009) and sustainable
forest management approach (SFM) (Simon, 1999). All the approaches have been developing gradually (Figure 2.3).

![Figure 2.3
Evolution of Forest Resource Management Approaches](image)

Timber extraction (TE) is the oldest approach on FRM and is based on an assumption that forest is similar to mining in that the forest can be exploited and all the trees can be felled. This approach has been divided into two generations. The first generation of TE was implemented in the wild forest and without any plan or technology so trees are just felled (Simon, 1999). The second generation of TE was implemented not only on the wild forest but also the planted-forest. This generation uses a system culture but less planning and technology. Besides, there are several characteristics that lead to TE activities, such as the area of wild forest is so wide, the amount of wood consumption is small and the population density is also small (Simon, 1999).

Timber Management (TM) is the second step in the evolution to FRM. It can be presented with the assumption that the forest looks like a farm, so it needs maintenance and good planning. The development of TM is more complex and requires several steps. First, TM needs robust system culture and management. Second, a good administration of the product is compulsory. Third, the forest product orientation is wood (Simon, 1999). Therefore, all resources on this industry are devoted to increasing wood production only.
Sustainable Forest Management (SFM) or Forest Resource Management (FRM) has been established when scarcity of resources happens. World population numbers and consumption is huge but the resources are so rare, especially forest resources. The fourth world forestry congress in 1960 included the theme Multiple Use of Forest Land and then in the seventh world forestry congress in Indonesia in 1978 issues were discussed around agro forestry, social forestry and tree farming (Simon, 1999). This idea has spread and been implemented around the world. It has not only been discussed as part of the discourse in academia but also has gained access into government policies.

There are also several phenomena that lead to the concept of SFM. Firstly, the amount of degradation and deforestation has increased significantly. For example, globally from 1990 to 97, 5.8 ± 1.4 million ha of humid tropical forests was lost each year and 2.3 ± 0.7 million ha of forests degraded (World-Bank, 2003). Secondly is the distribution of resources, which is unequal. As a result, the amount of poverty in the world has increased dramatically; for instance, two hundred and forty million people live in forested areas, representing 18.5% of the 1.3 billion people living on environmentally fragile land (World-Bank, 2003). This situation is also vice versa where poverty is the cause of deforestation as well. Thirdly is the massive spreading of the idea of decentralisation of common-pool resources that supports local community access to the forest (Ostrom, 1990).

In the context of Indonesia, government implemented SFM’s idea by establishing Community Based Forest Management (CBFM). Therefore,
implementing of CBFM needs a radical change of point of view from state-based to the community-based, from competition to cooperation, from top-down policy to bottom-up policy (Gilmour and Fisher, 1991). The shifting of paradigm is necessary if the SFM's idea is to be implemented properly on CBFM. The paradigm that the state is the main actor should be changed to the community paradigm that the community is the main actor. To implement this idea requires strong political-will and commitment from all of the stakeholders. Moreover, Campbell creates several indicators for developing CBFM sustainability (Suharjito, 2000) (Table 2.3).

<table>
<thead>
<tr>
<th>Table 2.3</th>
<th>The Evolution of CBFM</th>
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<tbody>
<tr>
<td>From</td>
<td>To</td>
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<tr>
<td>Orientation</td>
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<tr>
<td>Control</td>
<td>Facilitate</td>
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<tr>
<td>Leader</td>
<td>Companion</td>
</tr>
<tr>
<td>User</td>
<td>Facilitator</td>
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<tr>
<td>Policy maker</td>
<td>Participatory</td>
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<td>Profit oriented</td>
<td>Resources sustainable oriented</td>
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<tr>
<td>National Benefit</td>
<td>Local justice</td>
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<tr>
<td>Directed by Plan</td>
<td>Evaluative plan</td>
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**Institutional and Administration**

<table>
<thead>
<tr>
<th>Centralisation</th>
<th>Decentralisation</th>
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<tbody>
<tr>
<td>Government as the main actor</td>
<td>Cooperation between state and society</td>
</tr>
<tr>
<td>Top Down</td>
<td>Bottom up</td>
</tr>
<tr>
<td>Target as Goals</td>
<td>Process as goals</td>
</tr>
<tr>
<td>Rigid policy</td>
<td>Flexibility</td>
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<tr>
<td>Punishment</td>
<td>Conflict resolution</td>
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**Management Method**

<table>
<thead>
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<th>Strict</th>
<th>Adaptive</th>
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<tbody>
<tr>
<td>Mono interpretative</td>
<td>Multi interpretative</td>
</tr>
<tr>
<td>Uniformity</td>
<td>Diversity</td>
</tr>
<tr>
<td>One product</td>
<td>Many Product</td>
</tr>
<tr>
<td>Mono silviculture trees</td>
<td>Multi silviculture trees for specific area</td>
</tr>
</tbody>
</table>
2.5. Conclusion

Each community has its own experience and has problems dealing with their own contexts, so different communities can create diverse institutions. It means that one rule cannot be implemented properly in many places. Therefore, the development of effective local institutions should rely on local contexts and cultures. A specific institution with its particular context is the best way to deal with resource's environmental issues. In this case, improving the local institutions that support decentralisation and participation of natural resource management is an appropriate way to re-allocate the resources, but it cannot guarantee the sustainability of a resource. However, the local community should be supported and supervised by other parties, such as state, NGO, University and media.

In addition, institutions are so broad ranging and have various approaches. However, it can be argued that the term of institutions can be considered to include formal institutions, such as constitution, government laws, charter, decree and statutes, and informal institutions, such as codes of conduct, customs, local knowledge and social expectations. In relating to the local community, this research argues that community is an integrated entity that lives in a place, creates collective action and follows their institutions.

Community Based Forest Management (CBFM) is a concept that relies on several ideas, such as commons property regime and Sustainable Forest
Management approaches. In terms of commons property regime, there are several stakeholders who can hold, control and utilise the resources from the state property regime to private and community regimes. Moreover, the idea of CBFM is adopted from the idea of Sustainable Forest Management (SFM). The idea transforms the forest resources management from an extractive forest approach to a conservative and sustainable forest approach. It also changes from the idea of state based forest management to community based forest management. Therefore, my research uses the CBFM’s concept as a model that provides the opportunity for local communities to manage and access forest resources, especially in state-owned forest areas in a sustainable way.

This chapter has looked at the theory of local institutions, commons property regime and also the rise of the CBFM model. However, it is just in theory and mostly it is in global contexts. As a result, I will discuss and describe forest tenure and management in Indonesia, followed by the emergence of CBFM policy focusing on Indonesian contexts in the next chapter.
CHAPTER THREE

FOREST TENURE AND THE EMERGENCE OF CBFM IN INDONESIA

3.1. Introduction

This chapter discusses and then summarises the background of the CBFM programme in Indonesia, with some details relating to the political and legal basis of Indonesia land and natural resources. The first section of this chapter gives a legal and political analysis of the forest tenure in Indonesia. Understanding the land ownership and resources, mainly in the forest areas, can be useful to explain the CBFM's implementation. In particular, this paper aims to clarify who are the main actors and who control, maintain and classify the forest. For example, conflict and tension between state and community with regard to ownership, regulation and use of forest resources is a common problem in Indonesia. Because of unclear forest boundaries, some areas could be owned and maintained by many parties. Besides, the existence of double and multiple managers leads to the forest resources being degraded radically. Conflict is a difference in perspective that can appear in the form of complaints, war and violence (Wulan et al., 2004). Conflict can be seen as social phenomena and can be analysed by a deferent perspective, especially in environmental and natural resource policy decision making and conflict management (Daniels and Walker, 2001). For example, conflict of resources can be seen by its history, jurisdiction, culture, and significant symbolic and personal issues e.g., identity. Consequentially, the next section also explains the conflict of resources in Indonesia, particularly focusing on how the communities can deal not only with the state interest, but also with market needs.
Further, in this chapter I shall aim to show how Indonesia’s government developed the CBFM policy, how this policy changed over time and how the communities adopted it. The CBFM policy is a policy of the Indonesian central government that gives rights to communities gaining access to the state forest and attempts to reduce community poverty by sharing resources and preserving the forest’s sustainability. This paper is crucial to understand what the benefit of CBFM is for the communities and then how they can utilise this programme sustainably.

Forest degradation and conflict over forest resources can make forests vulnerable and their management less sustainable. On the other hand, there was a grass root movement and political change in Indonesia; for instance, the authoritarian regime of Soeharto moved towards reformation and a more democratic regime. These situations led to the natural resource policy continuously changing dramatically. After Soeharto stepped-down, central government could not maintain the resources and they should decentralise this authority to local government. The idea of decentralisation allowed the central government to distribute their authority. It supported the shifting of policy from the state centre outwards, not only to regional government, but also to community-based institutions. The last section will discuss the emergence of CBFM in Indonesia, particularly in the selected areas.

3.2. Forest Tenure and Forest Discuss in Indonesia

This study focuses on CBFM, a programme initiated by Indonesian central Government and implemented by communities in selected state forest areas. Therefore, analysing CBFM’s implementation should rely on the legal and political system in
Indonesia. There are several arguments why those frameworks are important. First of all, in Indonesia the state has absolute rights to own and control land, water, and resources (Government, 2000). According to the Constitution of Indonesia, 1945, article 33 (3), the state has the rights to control and utilise the earth, water, and airspace, including any resources on it (Government, 2000). Secondly, the state holds, manages and occupies around 60 percent of forest (Safitri, 2010, Fay and Sirait, 2005). In this context, the positioning and policy of the Ministry of Forestry as the state’s representative must be understood clearly. Thirdly, Indonesia is a unitary state whereby the central government strongly directs the provincial and district governments.

To understand the above arguments, it is necessary to explore some issues, such as the legal basis of the state’s right to land and resources, the interpretation of the state’s rights and the implication of the state’s rights for the forest community (Safitri, 2010). It is also important to elaborate on the conflict and friction on forest resources management in Indonesia by analysing the overlapping policy and law in these issues. By understanding the legal and political basis of the forest tenure, mapping of conflict of forest resources between state and community, providing the state’s failure on forest resources, this research could develop a strong argument as to why the community can be the best actor to maintain forest resources and to support that the CBFM programme should be applied.

The Indonesian 1945 Constitution contains explicit or implicit views and fundamental values, so the 1945 constitution is not only a political constitution but also an economic constitution and a social constitution (Asshiddiqie, 2005). The Constitution is not just related to the regulation by the state and the structure of governance but also
has dimensions of economic and social welfare arrangements (Government, 2000). These ideas were stated in Article 33 of the Constitution. This Article is the basis for the economic system of *Pancasila*, which is better known as the economic democracy (Mubyarto et al., 1981). *Pancasila* is the national philosophical foundation of the Indonesian state. Pancasila consists of two old Javanese words (originally from Sanskrit), "pañca" meaning five, and "sīla" meaning principles that means the five principals of the Indonesian state and it should held to be inseparable, solid and interrelated (Soekarno, 2001, Darmaputera, 1988).

The Article 33 is also used as a basis for the state’s right to control Indonesian natural resources. The following is the article: (Government, 2000):

“Section (1) says; economy is structured as a joint venture based on the principle of kinship, Section (2); Branches of production which are important for the State and the welfare of the people majority controlled by the State, subsection (3) states; Land, water and natural riches contained therein controlled by the State and used for the prosperity of the people, subsection (4), organized a national economy based on economic democracy with the principles of togetherness, efficiency of justice, sustainability, environmental friendliness, independence, and balancing progress and unity the national economy.”

In terms of the legal basis of the state’s right over land and resources, the Indonesian Constitution Article 33, as the highest legal basis for the state’s rights, states that the land and the water, as well as the natural riches therein, are to be controlled by the state and to be exploited for the greatest welfare of the people (Government, 2000). Safitri (2010) points out that this line was followed by the Basic Agrarian Law (BAL)
1960, and the Forest Acts of 1967 and 1999. The laws declare a manifestation of people’s administration and people’s needs so the State should control the land and the resources on behalf of the people. Both of the Forest Laws (1967 and 1999) state that all forest areas within Indonesian territory, including all the natural resources are controlled by the State (Safitri, 2010). This includes minerals, gas and oils which can be found in forest areas. Therefore, the state’s right to control the land and resources grants the state authority to: regulate and implement the allocation, use, reservation, and preservation of land, water and air spaces; decide and make regulations on legal relations between human and land, water and air space; decide and make regulations on legal relations among human and legal actions relating to land, water and air space (Safitri, 2010, Tunggal, 2011).

Paragraph two, that states “Branches of production which are important for the State and the welfare of the majority of the people,” is capable of multiple interpretations and leads to debates. For example, which is an important production, who has the majority? As a result, the Constitutional Court ruled the words “important production” should be determined between the central government and the parliament. In addition, that the phrase, “controlled by state”, means that the state holds the public authority on policy-making, regulating, governing, managing, and supervising and monitoring on the land and natural resources for the greatest prosperity of the Indonesian people (Safitri, 2010, Tunggal, 2011). The Constitutional Court explains the term, “regulating” means the authority has power to legislate and implement laws, regulations and policies. In addition, the term, “governing” means that the state has the authority for issuing and revoking licenses and concessions. The term, “managing land and natural resources”
means that the state can utilise the resources directly through state enterprises and/or share holding. Meanwhile, the term, “monitoring and supervising” means that the state should assure that the implementation of state’s control of land and resources is performed for the prosperity or benefit of the Indonesian people (Tunggal, 2011, Safitri, 2010).

Historically, the idea that the state should control land, water, air and everything in it was supported by Indonesia’s founding fathers, such as Soekarno, Hatta and Soepomo (Asshiddiqie, 2005). They argued that market mechanisms are unfair and rely on colonialism so they were against imperialism that was manifest in market mechanisms (Mubyarto, 1997). They wanted the state to control all resources to bring prosperity to the people. Hatta was very strong in criticising the open market policy, and suggesting that foreign capital and foreign investments could come to Indonesia but they should be minimised and controlled (Mubyarto, 1997). This is the reason that the Constitution recognises the need for the state to control natural resources and carry out the economic development.

The interpretation of prosperity of the people relates to the idea of Social welfare in the Constitution. This idea was proposed by one of the founding fathers, Mohammad Hatta, an economist, who was the first Indonesian Vice president. Hatta argued that the national economic system should be managed on the idea of mutual help and collective action (Mubyarto, 1997). Actually, Hatta did not reject the foreign investment and the market but he wanted to make clear that foreign loans and foreign investments do not interfere with the national independence. He was concerned that Indonesia’s development might not able to sit comfortably with market mechanisms. Wilopo
supported Hatta’s idea. Wilopo was the Indonesian Prime Minister from 1952 to 1953. He stated that Article 33 is the economic constitution of Indonesia that worked against liberalism, whose motives are to seek personal gain (Mubyarto, 1980). Wilopo also argued that market mechanisms and individual gain seeking could not match with the background of the Indonesian revolution and independence (Mubyarto, 1997).

In the contexts of forest resources, forest destruction also has occurred due to forest degradation in the colonial period. In the late eighteenth century, the process of forest degradation began on Java Island—the most populous island in Indonesia. It was mainly on account of extreme teak felling carried out by the East India Company (Vereenigde Oost-Indische Compagnie, VOC) and Javanese enterprises (Vandergeest and Peluso, 2006, Nevins and Peluso, 2008). The most critical period on forest areas in Java was the nineteenth century (Safitri, 2010). Using data collected by the Dutch colonial administration, Safitri (2010) assumes that Java lost many of its forests in this century. In 1840, 9.6 percent of Java and Madura consisted of teak forest and 38.7 percent of wood forest areas. These figures decreased to 5.3 percent for teak forest and 21.5 percent for wood forest areas in 1895 (Safitri, 2010). Besides, the other areas in Indonesia were pressured on forest increased mostly due to the Development of European-owned rubber, tobacco, and coconut plantations. During three years of Japanese occupation, timber cutting doubled (Vandergeest and Peluso, 2006). Furthermore, the forest resources revenues go to enterprise and Colonialist Countries (Vandergeest and Peluso, 2006).

As a result, those historical phenomena lead to the idea that the state should control and hold the land, water and its resources. This idea is a value of Article 33 of
the Constitution. The state is a representative of public needs so the government has the mandate to carry out the development of the state of Indonesia. It is in keeping with Hatta’s argument that the role of the state is central and important to ensure the resources’ exploitation relies on national needs and public prosperity (Safitri, 2010, Mubyarto, 1980). Mr Soepomo, who is one of the Constitutional thinkers, said that the centralisation of state control on land, water and its resources must be in the highest position in Indonesia (Safitri, 2010). Based on the historical and constitutional approach, therefore, it is clear that the state is the main actor in managing not only forest resources, but also all natural resources in Indonesia.

As mentioned above, the state’s right to control and manage forest resources has a strong legal basis. The point of view of state authority is state-led and economic centred but the Constitution obliges the state to create the regulations and practice to control land and natural resources in order to develop the prosperity of the people (Safitri, 2010). Actually, this idea is influenced by economic socialism (Mubyarto, 2004). In other words, Forest tenure and management in Indonesia is a combination between the economic centred and economic socialism approaches.

3.3. Conflict over Forest Resources and Inequality of Distribution of Resources

3.3.1. Conflict over Forest resources in Indonesia

It is really important then this section analyses the implications of the state’s rights on forest community, especially on revealing conflict of forest resources and also inequality of distribution of its resources. The Constitution is the main legal standing or the source of the law as was stated in a general statement that the state has right of
controlling the land, water and its resources. This should be described and implemented by its law under such as Decree and Law. This section then focuses on the regulation about the implementation of the state’s rights, especially on community and private forest ownership.

Every country has its own law how to hold and manage their land and natural resources that legalise it through various national laws based on their history and background. In Asian cases, these laws mainly, have been following the colonial law or regulations (Safitri and Moeliono, 2010, Indonesia, 2007). Indonesia has its own law that adopts some viewpoints of colonial law, such as the State is the main authority of the resources, and the community can own the resources as long as this does not interfere with the state’s needs. In terms of the hierarchy of land legislation and natural resources law, the Basic Agrarian Law No. 5 of 1960 and the Forest Act No. 41 of 1999 are the most important legislation after the Constitution 1945. Both of these rules directly regulate the management and distribution of land and natural resources. However, both of those policies have different points of view on land ownership. This situation leads to a conflict of interest and lack of clarity regarding law enforcement.

The Basic Agrarian Law No. 5 of 1960 led government in the provision of 7 types of land rights and additional rights to use 3 types of natural resources (Fay and Sirait, 2005, Tunggal, 2011). The rights of the most powerful of all kinds of these are proprietary. According to this law, people, community or industry can hold land ownership instead of state rights. On the other hand, the Forest Act No. 41 of 1999 claims that all of the land is state property and should be managed by the state(Tunggal, 2011).
In these contexts, the situation of the management of forest and natural resources in Indonesia is very diverse. In the millions of hectares of forest areas, local people replace trees with productive forest trees, (fruit, coffee and cocoa), often mixing timber species. These forests provide many environmental services, and resemble natural forests but are slightly lower in term of their biodiversity than natural forests. In other words, the situation of Indonesia's natural forests can only be described as a catastrophe when there is forest degradation and destruction of bio-diversity. Yet many people continue protecting natural forests in the landscape, sometimes in collaboration with local authorities, including forest officials as well as independently (Fay and Sirait, 2005).

However, conflicts between the local communities and the state and between the local communities and industries on rights to land and resources of the existing forest regions are massive in Indonesia (Moeliono et al., 2009, McCarthy, 2006). For example, there were 359 conflicts recorded by CIFOR from 1997 to 2003 (Wulan et al., 2004). In addition conflict between forest industries and forest officials have been a consistent feature over the last 15 years (McCarthy, 2006). The ambiguity of both the public and industry ownership has led to a reduction in land area under forests and is often accompanied by violence. The root of these problems is unclear "rules" by the Ministry of Forestry. The department states have jurisdiction over mainland Indonesia but cannot manage such a vast area and provide tenure security and management required for both the local community and for the forest industry.

The confusion and disagreement on who should have control of the forest and who is the owner of forests in Indonesia has increased and has been seen as the main
cause of Indonesia’s failure to manage its forest area (McCarthy, 2006, Moeliono et al., 2009, Awang, 1999). The root of the problem is caused by the basic misunderstanding of what and where the forests of Indonesia are and then what and where the authority of the Ministry of Forestry is. At the same time, conflicts over land and natural resources are also caused by the uncertainty of state land to the people of the land, and these will still be there if there is no serious attempt to rationalise state forests through clear strategic priorities (Fay and Sirait, 2005).

Actually, the MPR Decree No IX 2001 on Agrarian Reform and Natural Resources Management explicitly says that the laws and regulations related to control of land and other resources by department or agency sector should be stopped, because it creates a conflict of poverty and degradation of natural resources (Fay and Sirait, 2005, Tunggal, 2011). This legislation should be revised, repealed or modified, using a holistic approach. At the same time the conflict must be resolved through a fair process. On 14 November 2003 at UGM-Yogyakarta, all departments and state agencies related to land and natural resources (including forests) met and agreed that it is important to revise the Basic Agrarian Law (BAL) No. 5 of 1960 (Fay and Sirait, 2005). This revision could create a framework allowing land tenure system and other natural resources to be better managed and not partially approached. Other laws, such as the Law on Spatial Planning and the Law of Natural Resources, need to be created and to be revised as well (Tunggal, 2011).

However, State perception argues that 120 million hectares of Indonesia (which is 61% of Indonesian land) is "forest land", which should be owned and managed by the Forestry Department. This includes grasslands and agricultural areas, mostly rural
areas, as well as vast areas of primary forest and secondary forest. Indonesia’s natural resources can only be described as in crisis when the Forestry Department claims jurisdiction, so the implications for local communities leads to conflict of land tenure between local communities and the state, and then treat to the protection of natural forests. For example, in a particular area, state claims it and then the community do so.

According to BAL, some of the rights stipulated in this law are the right to the land, which shall be further defined clearly, such as leasehold, broking and right to use (Anonim, 1999, Tunggal, 2011). Furthermore, those issues have been clarified by the Government Regulation No. 40 (1996). In addition, Government Regulation no. 24, (1997) on Land Registration organise concepts and procedures for the submission or provision of various types of land rights (Tunggal, 2011). In this rule the land is divided into 2 (two) types, which are the customary land rights, i.e. rights that have long recognized its existence long before the BAL, and other rights granted land with more detailed rules are broking, leasehold or right to use based on the right of petition to the subject of land rights, which consist of individual persons and legal entities. However, BAL still leaves a lot of problems for example; in the formation of laws and regulations, is BAL implementing regulations or not? Besides, BAL is generally not equipped with a thorough regard to/understanding of the implementing regulations.

Actually, BAL gives much attention to the recognition of the communal land or customary rights. However, it is really difficult to implement that policy persistently and consistently. Central government, it seems, does not want the indigenous people to get their land. They prefer to give forest concessions to industries (Simon et al., 1992, Indonesia, 2007). This situation leads to conflict amongst forest stakeholders in
Indonesia. The Minister of Forestry uses the Forest Act No. 41 of 1999 as a legitimacy of state ownership on land and forest resources. This Act is one of the laws issued after Soeharto era, known as the period of reform. This legislation authorizes the government through the Ministry of Forestry to determine and manage the Indonesian Forest (Indonesia, 2007, Fay and Sirait, 2005). As a result, legally forests can be divided into two parts. Firstly are State Forest areas, (i.e. areas where the government, represented by the Department of Forestry, has determined that there is no private right to the land). Secondly are Private Forest areas, (the areas where the forest land and other private rights are granted).

In conclusion, understanding the Indonesian forestry legislation, such as BAL and the Forest Act 1999 is necessary in order to clarify some terms and concepts used by the state. With regards to property rights, these are classified as a state property, a private property and a community property, and furthermore based on their function, are classified as a production forest, a protection forest and a conservation forest (Safitri, 2010). Besides, the Indonesian government has another concept, namely forest areas. This concept is different from state forest and community forest (Safitri, 2010). Therefore, it is useful to clarify those concepts and terms in order to be able to analyse the establishment of CBFM and its implementation in the local community. The following are several terms that appear in the forest legislation and policy of Indonesia.

a. State forest, private forest and forest areas.

According to the Forestry Law of 1999, forest is any environmental landscape which unites land and all biological resources, in particular trees, into an integrated
ecosystem unit (Anonim, 1999). Moreover, based on property rights and ownership, forests can be divided into state forest and private forest. State forest refers to the untitled land and private forest refers to the titled/registered land. In addition, state forest can be managed by village institutions and can be utilised for community empowerment with Community-based forest management (Safitri, 2010). On the other hand, private forests that are located and entitled by private ownership are called community’s forest (hutan rakyat).

However, the existence of private forest is not fully protected, especially community forest or customary land (tanah adat). The private ownership in grey areas, such as customary land, is in danger because it is not clear whether it is a private or state forest area. This situation is getting worse because of the lack of land certification process and the abuse of government authority in providing permits to exploit the forest. Every person should own a land certificate to make sure that their land is belonging to them; however the process of certification takes a lot of time and is often very costly. Besides, the Forestry Decree 2005 states that the minister of forestry has authority to change the private forests to state forest if these forests are located in protected forest areas and conserved forest areas. Safitri (2010) argues that this process is a systemic expansion of state control over the Indonesian forest, because this process is less transparent and if the Minister states that the function of the forest changes to protection or conservation areas, the private forest should be changed straight away (Safitri, 2010).

According to the Forest Act 1999, forest areas mean the particular areas that are designated and required by Government as permanent forest (Anonim, 1999). The
forest areas are administrated by the Ministry of Forestry and it is they who determine to allocate and utilise a certain land area (Anonim, 1999). Some scholars assume that this process is very political. It is the way the state uses its power to control the land and natural resources (Safitri, 2010, Peluso and Vandegeest, 2001). As a result, this leads to conflict on forest resources in Indonesia. Many communities should leave their lands and move from their areas because the state changes the function of the forest. On the other hand, some scientists say that the idea of forest areas is not the way the state should control the forest but it is just an appropriate way to maintain the land in a sustainable way (Hidayat, 2008, Safitri, 2010, Fay and Sirait, 2005). For example, the state should preserve at least 30 percent of their areas to become forest areas. In addition, the idea of forest areas is the policy to promote forestry planning and management.

In order to implement the Forestry Law 1967 and 1999, the Ministry of Forestry can control and manage land and its resources (Safitri, 2010). In terms of management, forest management should be supervised by the Minister of Forestry (Fay and Sirait, 2005). In regard to this the Ministry of Forestry enacted a ministerial regulation No. 50/2009. In this regulation, it can be declared as a forest area if it meets several requirements, such as the forest areas have been designated and described clearly, the process verbal deliberation has been approved by the Ministry of Forestry and the forest areas have been enacted by the Ministry of Forestry (Safitri, 2010, Yasmi et al., 2009).
b. The change of forest areas

Even though the terms of forest areas are debatable and controversial, the Minister of Forestry still controls land and forest. In addition, its control can be transferred and changed to other stakeholders, such as industries and communities. There are three activities relating to this process, which are release of forest areas, exchange of forest area land, and agreement to let and use land (Tunggal, 2011). The policy on release and exchange of the forest areas is only applicable to production forest. In general, this process has been taken when the Ministry of Forestry need to develop these areas. Forest release mainly happens in Sumatra and Kalimantan and these areas are changed into transmigration and plantation project (Safitri, 2010, Yasmi et al., 2009). If those areas will be transferred and changed, it should be clear and clean of its legal status and its boundary. In many cases, the process is unclear and leads to conflict of resources among stakeholders.

c. The Function of forest

When we discuss forest management in Indonesia, we have to understand the function of forest. The Forest Act No. 41 of 1999, states there are three main types of forest functions, such as production, protection and conservation forest. Protection forest is an area that is intended to protect life-supporting systems, prevent floods, counter erosion, maintain soil fertility and prevent sea water intrusion (Anonim, 1999, Safitri, 2010). The production forest is divided into limited production forest, permanent production forest and convertible production forest (Anonim, 1999).
Moreover, the limited production forest is defined as a limited logging activities areas and then the permanent forest is an area that can be exploited and utilised because of its contribution to the needs of people and state. Meanwhile, the convertible forest areas are known as a production forest. It can be changed to a non-production forest, especially for specific purposes, such as agriculture and transmigration. On the other hand, the conservation forest strictly could not be exploited and should be preserved. It is divided into several types of forest, such as natural reserve, grand forest parks, wildlife sanctuaries, national parks and recreation parks. In regard to the forest function policy, this regulation is not only applicable for state forestry but also for private forestry. Private forests’ functions are designed and allocated by regency and town authorities. According to the Law no 24/1992 and Law 26/2007, the private forest can be divided into protected areas and cultivated areas.

d. Licensing of Forest resources

The Forestry Law 41 1999 enacted that anyone can access and utilise a state forest as long as they hold a License from the state authority. Forest Licenses are not private land ownership and the Licenses offer the right of utilising the state forest areas for a specific period. In the Licenses, there are terms and conditions that should be followed by the License holders. Most of the Licenses are extendable and based on the evaluation procedures. The Licenses can be issued to individual, corporate, industry, and state enterprises. The MF can offer a License to a selected party for utilising any state forest areas, from conserved forest areas to protected forest areas or from productive forest areas to non-productive forest areas. There are several well-known

Table 3.1.  
Licenses of Forest Utilisation, According to GR 6/2007

<table>
<thead>
<tr>
<th>TYPE OF THE LICENSE</th>
<th>LOCATION</th>
<th>LICENSE HOLDER</th>
<th>MAXIMUM DURATION</th>
<th>LICENSE ISSUER</th>
</tr>
</thead>
<tbody>
<tr>
<td>License of Commercial Utilisation of Forest Area (Ijin Usaha Pemanfaatan Kawasan, IUPK)</td>
<td>Protection Forest</td>
<td>Individual Citizen Cooperative</td>
<td>10 years</td>
<td>Bupati/Mayor/Regent; Governor for cross-district areas; Minister of Forestry for cross-province areas</td>
</tr>
<tr>
<td></td>
<td>Production Forest</td>
<td>Individual Citizen Cooperative</td>
<td>5 years</td>
<td></td>
</tr>
<tr>
<td>License of Commercial Utilisation of Environmental Services (Ijin Usaha Pemanfaatan Jasa Lingkungan, IUPJL)</td>
<td>Protection Forest</td>
<td>Individual citizen Cooperative State-owned corporations (central/regional government corporations) Indonesia private corporation</td>
<td>50 years depending on type of utilization</td>
<td>Bupati/Mayor/Regent; Governor for cross-district areas; Minister of Forestry for cross-province areas</td>
</tr>
<tr>
<td></td>
<td>Production Forest</td>
<td>Individual citizen Cooperative State-owned corporations (central/regional government corporations) Indonesia private corporation</td>
<td>50 years depending on type of utilization</td>
<td></td>
</tr>
<tr>
<td>License of Commercial</td>
<td>Natural</td>
<td>Individual citizen</td>
<td>55 years</td>
<td>Minister of Forestry</td>
</tr>
</tbody>
</table>

64
<table>
<thead>
<tr>
<th>Utilisation of Timber Products (Izin Usaha Pemanfaatan Hasil Hutan Kayu, IUPHHK)</th>
<th>production forest</th>
<th>Cooperative State-owned corporations (central/regional government corporations) Indonesia private corporation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Plantation Forest Area (HTI)</td>
<td>Cooperative State-owned corporations (central/regional government corporations) Indonesia private corporation</td>
<td>100 years</td>
<td>Minister of Forestry</td>
<td></td>
</tr>
<tr>
<td>People Plantation Forest area (HTR)</td>
<td>Individual citizen Cooperative</td>
<td>100 years</td>
<td>Minister of Forestry; can be delegated to governor</td>
<td></td>
</tr>
<tr>
<td>Rehabilitated Plantation Forest (HTHR)</td>
<td>Individual citizen Cooperative State-owned corporations (central/regional government corporations) Indonesia private corporation</td>
<td>1 year</td>
<td>Minister of Forestry</td>
<td></td>
</tr>
<tr>
<td>Natural production forest for ecosystem restoration</td>
<td>Individual citizen Cooperative State-owned corporations (central/regional government corporations) Indonesia private corporation</td>
<td>100 years</td>
<td>Minister of Forestry</td>
<td></td>
</tr>
<tr>
<td>License of Commercial Natural and</td>
<td>Individual citizen</td>
<td>10 years</td>
<td>Bupati/Mayor/Regent; Governor for cross-</td>
<td></td>
</tr>
<tr>
<td>Utilization of Non-Timber Forest Products (Izin Usaha Pemanfaatan Hasil Hutan Bukan Kayu, IUPHHBK)</td>
<td>planted production forest</td>
<td>Cooperative State-owned corporations (central/regional government corporations) Indonesia private corporation</td>
<td>district areas; Minister of Forestry for cross-province areas</td>
<td></td>
</tr>
<tr>
<td>License of Timber Products Harvesting (Izin Pemungutan Hasil Hutan Kayu, IPHHK)</td>
<td>Natural Production Forest</td>
<td>Individual citizen Cooperative</td>
<td>1 year</td>
<td></td>
</tr>
<tr>
<td>Planted Production Forest</td>
<td>Individual citizen Cooperative</td>
<td>2 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>License of Non-Timber Products Harvesting (Izin Pemungutan Hasil Hutan Bukan Kayu, IPHHBK)</td>
<td>Natural Production Forest</td>
<td>Individual citizen Cooperative</td>
<td>1 year</td>
<td></td>
</tr>
<tr>
<td>Planted Production Forest</td>
<td>Individual citizen Cooperative</td>
<td>2 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection Forest</td>
<td>Individual citizen Cooperative</td>
<td>1 year; 5 years only for bird nest collection</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source GR 6/2007 adopted from (Safitri, 2010)

3.3.2. Inequality and Mismanagement of Forest Resources in Indonesia

The State has very strong power and authority to control, manage and regulate land, and natural resources, especially forest resources in Indonesia. Based on the Forest Act 41 1999, they state that around 70 percent of Indonesia’s land is forest and is reclaimed as a state forest. The MF can also change an area to be a forest area, and/ private and state forest areas, even without community or private agreement (Tunggal, 2010, Safitri, 2010). However, the function of those areas can be changed
from the cultivated forest to the conservation forest. The MF Decree no 26/2005 said that the MF can enact a regulation to manage private forests’ function to become a protective forest or state forest (Tunggal, 2010).

The Spatial Planning Law no 24/1992 and 26/2007 determines that the mechanism and processes of the changing of Forest functions should be clear and it should be set up by scientific criteria and measurable procedures (Tunggal, 2010). If the government changes the private forest into conservative forest, this means that the people will lose their lands; therefore, the government should give compensation to the people. In many cases, the government never compensate the people and it leads to conflict (Barber, 1998, Matthews et al., 2002, Yasmi et al., 2009). This also happens with customary land. This creates massive conflict between the state and local community. In other words, it is just another example of inequality and mismanagement of forest resources.

In the context to understand mismanagement of forest resources, the Indonesian forest production systems should be described properly. The Indonesian government creates three main forest production management systems: KPH, HTI and HPH (Tunggal, 2011). The KPH (Kesatuan Pemangkuan Hutan/Forest Stewardship Unit) system has been developed in Java following the long history of forestry plantation dating back to the colonial era, mostly by the Dutch. Most KPH planted teak trees. The second forest management system is HTI (Hutan Tanaman Industri/Industrial Forest Plantation). The main purpose of HTI is “an activity to rejuvenate and revitalize in order to increase the potential of production forest to guarantee the availability of industrial material. Then it is an effort to rehabilitate unproductive production forest.” In practice,
HTI establishment is just a way to get more profits by cutting the logs in the HTI land (Barber, 1998). The third forest production system is HPH (Hak Pengusahaan Hutan/natural forest concession). This license is issued by the MF to Indonesian corporations or individuals. The licenses are only granted in production forests and limited production forests. The HPH license is non-transferable and can be held for 20 years (Tunggal, 2011).

A prominent example of the failure of state forest management is the issue of logging concession, which is called HPH (Hak Pengusahaan Hutan/natural forest concession). After more than three decades of operation, the HPH system has failed to achieve sustainable forest management. By June 1998, forest degradation from HPH operations had reached 16.57 million ha. According to FAO (FAO, 2009), deforestation in Indonesia was contributed to by most of the industrial activities, particularly the timber industry, which has been misusing concessions granted, thereby leading to illegal logging. Deforestation in Indonesia reached 40 million cubic meters a year. In other words, from the 1970s to the present, the government granted concessions to logging companies but the government has failed to adequately enforce sustainable harvesting and replanting regulations (FAO, 2009, Hidayat, 2008).

Some scholars also provide another example of mismanagement and inequality of forest resources management; the government gives logging concessions to industries and individuals without taking into account the forest function (Safitri, 2010, Broich et al., 2011). The companies hold the concession to exploit the forest where located in protected or conserved forest areas but not in production forest areas (Safitri, 2010, Broich et al., 2011). Besides, due to abuse of power and lack of procedures,
many HPH perform without paying attention to the land ownership. Some of them do not have clear boundaries and ownership (Purnomo, 2010, Aguilar et al., 2005). Therefore, there are conflicts between corporations, that hold the License, and the communities, who claim the land which traditionally belong to them (Aguilar et al., 2005). Actually in the Forest Act No. 41 of 1999, there is not listed the issuing authority of the Department of Forestry types of land tenure rights. However, this law is exploited by Central government to control and manage forest resources. Even legally correct to say that "forest land" does not exist in Indonesia as a definition of the law. The term forest land is not an official Indonesian term used in forestry and forest management debate.

3.4. Emergence of CBFM in Indonesia

In Chapter Two, I have explained the emergence of Social Forestry Management in general. Therefore, in this section, the emergence of Community Based forest Management in the contexts of Indonesia will be discussed. As mentioned before, the State is the major actor in forest tenure and management in Indonesia. They can control, regulate, manage, and exploit the forest as long as they want. The idea that the state’s right to control the resources to promote the social welfare and community prosperity is good as a blue print but it is far from being the reality. The industrialisation of forest resources in Indonesia drove the Indonesia government to exploit the forest resources massively so there are some crucial problems on this issue, such as conflict of resources, degradation of forest and marginalisation of local communities.

Together with the regulation, the unclear and ambiguous forest policy between the BAL and the Forest Act led to a catastrophe on forest resources. For example, the
License concession policy (HPH) to Industries gave the industries license to exploit the forest for 100 years and the industries utilised the License to the maximum of the benefit. As a result, the deforestation in Indonesia was so massive and was alarming. In 2002 the rate of deforestation was 1.6 million ha per year and then in 2012 the rate was 3.6 million ha per year (Musfah, 2013, Nawir et al., 2007). Industries such as the timber industry and palm industry got access to and occupied nearly 63 million hectares of forest in 1995, which rose 69 million hectares of forest in 2000 (Forestry, 2002). On the other hand, the land rehabilitation carried out only covering 400,000-500,000 ha per year and their success rate is around 50 percent (Nuradin, 2013). This policy was very biased to market mechanisms and relied on the economical orientation. KPA also recorded 198 conflicts on forest areas with the areal extent of the conflict reaching more than 963,411.2 hectares, involving 141,915 heads of households (Nuradin, 2013). In addition, from 2004 until now, there have been 618 conflicts with the natural resources area of 2,399,314.49 hectares and involving 731,342 heads of households (Nuradin, 2013). These conflicts occurred between state and communities and or the industries and communities.

The Indonesia government also loses the revenue from forest resources exploitation, because the Indonesian logging industry has been involved in corruption in recent times, including tax evasion (HNW.org, 2010). This happened, because of the weakness of law enforcement and less transparency, as well as resulting from a lack of accountability. Secondly are global needs. In Asia, Indonesia constitutes the biggest log exporter (Alliance, 2008). It leads to more deforestation and corruption, providing cheaper and illegal resources (Alliance, 2008).
Moreover, the forest policy does not accommodate local communities and local initiative. People who lived near the state forest were so poor and marginalised (Awang, 2004). They could not get any access to state forest areas, even near their area. Even though the state forest was degraded and could lead to landslide, the communities could not do anything (Awang, 2004, Sepsiaji and Fuadi, 2004). This situation really needed to be solved by the Government.

The amount of deforestation was really high but the effort to rehabilitate the forest has been very weak. Besides, the conflict over forest resources management was alarming, as the government policy only focused on and supported industries and has marginalised local communities. Most of the policies in forest management were driven by economical needs.

However, on global and national levels, there was a changing of paradigm on community development from top-down to bottom-up approach. In the Indonesia context, there was also a political dynamics where the civil society was so active on campaigning for community empowerment. In response to that, the MF established a policy called Community based forest management in 1995. The policy refers to the product of government regulations and implementing rules to the letter (Suharjito, 2000, Sepsiaji and Fuadi, 2004).

CBFM was introduced by the MF when they enacted the Ministerial Decree No. 622 1995. The aims of the policy, mainly, are to rehabilitate the degraded forest and give the communities change to get an access to the state forest. The first step, the government will not give community right to use the land for long periods if the communities cut down the trees. This approach is a form of “empowerment” for the local
communities. The policy has been changed nearly five times between 1995 to the present. At the first time, the policy was created by Central Government especially to maintain degraded forest. The amount of Forest degradation was so massive the government could not deal with this situation. In 1995, the Minister of Forestry enacted the Decree no 622/1995 and gave a chance to local communities to plant trees and crops in degraded forest areas. However, the policy was changed many times. It was a shifting policy from 622/1995 to 677/1998, 31/2001, 37/2007 and the last 18/2009. The idea for utilizing empowering the local communities also has been introduced by implementing those policies. The current policy gives the communities rights to use the land for a long period (35 years) and then communities can utilize the trees also. The discussion and the explanation on the shifting of the CBFM policy toward local community will be elaborated on the next chapter.

3.5. Conclusion

In Indonesian contexts, understanding the property regime is compulsory for mapping the actors involved in the forest management properly. It is clear that the state’s right of controlling forest resources is mandated by the Constitution of Indonesia. The original and amended versions of the Constitution state that the land, water, air and all contained therein is controlled by the State and used for the prosperity of the people, as declared in the Article 33. As a result, the legal basis of the state to control, manage, and regulate the forest resources is fundamental.

Historically, the idea to put the state in the role of central actor on forest resources is supported by the founding fathers. Soekarno, Hatta, Soepomo and Wilopo
have similar ideas that the market mechanism is not suitable in Indonesia and it only supports neo colonialism and capitalism. Hatta suggested that economics should be driven by mutual work and collective action. In other words, this idea is influenced by economic socialism and in the contexts of forest tenure and management in Indonesia is a combination between economic centred and economic socialism approach.

The interpretation of the state’s rights is a crucial issue on forest and natural resources management in Indonesia. It is stated that the formulation of the Indonesian 1945 Constitution contained explicit or implicit views and fundamental values, so the 1945 constitution is not only the political constitution but also is an economic constitution and social constitution. Moreover, the state is a representative of public needs so the government has the mandate to carry out of the life of the state of Indonesia. However, the Constitution is just a general statement of state's right and it should be described and implemented by its law under such as Act and Law. In term of the hierarchy of land legislation and natural resources law, the Basic Agrarian Law (BAL) No. 5 of 1960 and the Forest Act No. 41 of 1999 are the most important pieces of legislation after the Constitution 1945.

The crucial problem arises when the implementation of those policies is unclear and is not well executed by the Ministry of Forestry (MF). The BAL does not make clear the position of the communal forest or customary land, whether it is a private or public property right. This situation has been getting worse when the Forest Act no. 41 1999 was enacted. According to the Forest Act, the MF can design, regulate and enact the Forest areas without any permission from other parties, such as community or individual. The MF also can change the forest function from productive forest to
conserved forest. As a result, many individual and community forest areas have been taken over by the MF. This condition leads to massive conflicts between state and community in Indonesia.

Due to the mismanagement and inequality of forest management, the Indonesian government has been suffering in getting forest resources revenue. The Government loses the forest diversity and also is unable to find income. On the other side, the local communities are never able to utilise forest resources because the government only supported the industries and market needs. However, there is a solution that has been introduced by the MF representing the state. The MF established a Community Based Forest Management policy (CBFM). This policy brings an idea to redistribute and re-allocate the forest resources and at the same time it can conserve the forest sustainability and support to local communities’ empowerment.

This chapter has highlighted the forest tenure and management in Indonesia contexts, how the state can be so powerful and has a right to control and utilise the forest resources. It also described the ambiguity of state policy on forest resources that led to conflict among the stakeholders and then how the state had failed to manage forest resources sustainably and marginalised the local community so the state established the CBFM, the policy that attempts to re-allocate forest resources and empower local community. Consequently, the next chapter will explain and portray the selected research method that has been applied for this research. Besides, it will elaborate the ethical issues and data analysis validation.
CHAPTER FOUR
RESEARCH METHODOLOGY AND RESEARCH DESIGN

4.1. Introduction

As was explained in Chapter One, this research aims to explore the dynamic relationship between communities and policies for the effective implementation of community based forest management (CBFM), in the contexts of shifting CBFM policy in Gunung Kidul Regency, Yogyakarta, Indonesia.

Furthermore, the main aim of this chapter is to explain the combination of methods and tools that were used to assess the community monitoring processes on the implementation of CBFM in Indonesia. In order to do so, the first section describes in detail the research methodology and philosophy. It begins with a presentation of the foremost research methods available and a rationalisation for the chosen approach for this study. This is followed by a debate of the research methodology used in this research by expounding the dichotomy of Quantitative and Qualitative methods in research. It also focuses on the triangulated methods which were applied in the randomly selected community groups in two study areas in Gunung Kidul Regency (GKR), Yogyakarta, Indonesia. As a result, this chapter also elaborates on those methods and give details as to how to collect data and analyse it in line with the research objectives. Next, this chapter also looks at the limitations of the selected methods and ethical considerations applied for this research.

Furthermore, the chapter concludes with a consideration of the methods to be applied in this research by the technique highlighted of the collaboration learning
process from the local communities through a combination of some approaches. The result is an interpretative and cooperative process by both the researcher and the communities themselves.

4.2. Research Design

In designing research choosing the appropriate method to be used is a very delicate matter, which requires due diligence and attention. The researcher must define his chosen research design in order to set the direction for the study as well as what data is to be collected and why (Denzin, 2000). Without doing so, the researcher can neither solve the problem under examination nor make sense of data collection. Other scholars say that research is defined as a systematic process of collecting data and logically analysing information for some purpose. In other words, as Davis and Cosenza (1993) state, research design can be thought as a road map for researchers, while Frankfort-Nachmias and Nachmias (2008) argue that research design is a guide to the researcher in the process of collecting, analysing and interpreting observations.

Robson (2002) suggests that research design can be divided into two general categories: fixed design and flexible design. Fixed design is firmly pre-specified before you reach the main data collection stage, where data is almost always in the form of number – hence this type is commonly referred to as quantitative strategy. On the other hand, flexible design evolves during data collection, where data is mainly non-numeric, hence this type often referred to as a qualitative strategy. Table 4.1 shows the categorization of research designs under fixed and flexible research design and it allows the researcher to choose or combine deferent types.
Table 4.1
Fixed and Flexible Research Design

<table>
<thead>
<tr>
<th>Fixed Design Research</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental strategy</strong>&lt;br&gt;The main point is that the researcher actively and deliberately introduces some form of change in the situation, circumstances or experiences of participants with a view to producing a resultant change in their behaviour.</td>
<td>- Selection of sample of individuals from known populations&lt;br&gt;- Allocation of samples to different experimental conditions&lt;br&gt;- Introduction of planned change in one or more variable&lt;br&gt;- Control of other variables&lt;br&gt;- Usually involves hypothesis testing</td>
</tr>
<tr>
<td><strong>Non-experimental strategy</strong>&lt;br&gt;The overall approach is the same as in the experimental strategy but the researcher does not attempt to change the situation</td>
<td>- Selection of sample of individuals from known populations&lt;br&gt;- Allocation of samples to different experimental conditions&lt;br&gt;- Introduction of planned change in one or more variable&lt;br&gt;- Measurement of small number of variables&lt;br&gt;- Control of other variables&lt;br&gt;- May or not may involve hypothesis testing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flexible Design Research</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Case study</strong>&lt;br&gt;Development of detailed, intensive of knowledge about a single case or a small number of related cases</td>
<td>- Selecting a single case or small number of cases&lt;br&gt;- Studying of the case in its context&lt;br&gt;- Collecting the information via a range of data collection techniques including observation, interview and documentary analysis</td>
</tr>
<tr>
<td><strong>Ethnography studies</strong>&lt;br&gt;Seek to capture, interpret and explain how a group, organisation or community lives, experience and make sense of their lives and their world</td>
<td>- Selection of a group, organisation or community interest&lt;br&gt;- Immersion of researcher in that setting&lt;br&gt;- Use of participant observation</td>
</tr>
<tr>
<td><strong>Grounded theory</strong>&lt;br&gt;The main aim is to generate theory from data collected during the research</td>
<td>- Applicable to a wide variety of phenomena&lt;br&gt;- Commonly interview based&lt;br&gt;- A systematic but flexible research strategy which provides detailed prescriptions for data analysis and theory generalisation</td>
</tr>
</tbody>
</table>

Source: (Robson, 2002)
Moreover, Marshall and Rossman (2011) propose a quadripartite classification of research that is commonly used, distinguishing between exploratory, descriptive, explanatory and emancipatory research. In addition, those classifications are approached according to the purpose of inquiry (Robson, 2002, Sekaran and Bougie, 2010). Brief descriptions of the four classifications are as follows:

Firstly, exploratory research is undertaken to find out what is happening when the researcher does not know much about a phenomenon. This study is to seek new insights, to ask questions and generate ideas for future research. The most important point of exploratory research is to provide researchers pertinent information and help them to form initial hypotheses about the subject (Spector, 2008). This research uses observation and interview. In that case the phenomenon should be clarified so it mostly is flexible research design.

Secondly, descriptive research is assumed to portray an accurate profile of a person or situation. Previous knowledge is required to know appropriate aspects on which to gather information and to answer questions like who, what, when, where and how (Denzin, 2000). The most common types of this research are observation and survey. Therefore, it allows the researcher to familiarize him/herself with the problem or concept to be studied, and perhaps produce hypotheses to be tested. Besides, this research can be applied by fixed and flexible research design.

Thirdly, explanatory research is a type of research when little is known about the topic and previous theories or ideas do not apply. In addition, this research implies that the research in question is intended to explain, rather than simply to describe, the
phenomena studied (Maxwell, 2013). Moreover, this research can be flexible and or fixed research design.

Lastly, emancipatory research is research that seeks to empower the subjects of social inquiry, create opportunities and the will to engage in social action. This type of research contrasts with the traditional research processes argued for the objective and value-free production of knowledge (Jupp, 2006). Mostly, this research can be flexible research design.

In conclusion, research design is an important stage of any research undertaking, which stands for an effort to systematise and direct the work or researcher in clear and sequential order. The research design should answer the following questions: what data should be gathered; how to collect it; why the data should be collected and how to analyse it. Based on the above discussion and brief explanation of types of research design and approaches to doing the research, the most appropriate approach of this research is exploratory research, conducted by non-experimental and flexible research design.

4.3. Methodology

Moreover, methodology and methods also rely on the nature of research, aims and objectives of the research. While methods can be understood as the set of procedures and techniques applied for the conduct of research and collection of evidence, methodology is the underlying meta-principles and philosophy behind the methods (Corbin and Strauss, 2008). Before discussing the methodology used in this research, it
should be useful to review the two major methods in social science, which are quantitative and qualitative methods.

Quantitative research refers to the systematic empirical investigation of social phenomena via statistical, mathematical or numerical data or computational techniques. Given (2008) and Robson (2007) state that quantitative is empirical examination of quantitative characters, phenomena and their relationship. In other words, quantitative research is essentially about collecting numerical data to clarify a particular phenomenon. Particular questions seem immediately suited to being answered using quantitative methods, for example, how many females compared to males get a first-class degree at university? (Robson, 2007).

The foundation of quantitative research is realism and positivism. What does it mean? Realists take the view that what research does is to uncover an existing reality. ‘The truth is out there’ and it is the job of the researcher to use objective research methods to uncover that truth. This means that the researcher needs to be as detached from the research as possible, and use methods that maximise objectivity and minimise the involvement of the researcher in the research (Aliaga and Gunderson, 2006). According to positivism, the world works according to fixed laws of cause and effect (Aliaga and Gunderson, 2006). Scientific thinking is used to test theories about these laws, and either reject or provisionally accept them (Aliaga and Gunderson, 2006). In this way, researchers finally understand the truth about how the world works. By developing reliable measurement instruments, researchers can objectively study the physical world. In other words, Aliaga and Gunderson (2006) argue that quantitative research has a viewpoint or epistemology as objectivist.
Sekaran and Bougie (2010) classify the characteristics of quantitative research as a follow Deductive or top-down process of research, where the researcher tests the hypothesis and theory by data collection. The objectives of such research are descriptive, explanatory, and predictive in nature; the research involves two or more variables and the researcher attempts to find out of the relationships those variables; the data gathered is in the form of numeric and statistical; reality is objective, separated from individual beliefs and feelings; the results of research are generalizable in nature.

On the other hand, qualitative research uses data-gathering techniques that are focused on the significance of observations made in a study rather than the raw numbers themselves, and this approach focuses on explaining a situation or a specific social setting in detail without depending on the numerical data (Denzin, 2000, Maxwell, 2013). A qualitative approach is more suitable when a micro level of social organisation or phenomenon is under investigation as opposed to quantitative approach appropriateness at a macro level (Silverman, 2010, Spector, 2008).

The foundation of qualitative research is interpretivism and it is subjectivist as opposed to quantitative. In addition, Walsham (1993) states that interpretive methods of research start from the position that our knowledge of reality, including the domain of human action, is a social construction by human actors and that this applies equally to researchers. Thus there is no objective reality which can be discovered by researchers and replicated by others, in contrast to the assumptions of positivist science (Walsham, 1993). This argument is supported by Geertz’s argument that the scientific method is reductionist and often misses the point of qualitative research (Geertz, 1975). Instead, this approach, stemming from a hermeneutic tradition, is more interested in interpreting
deeper meaning in discourse that is represented in a collection of personal narratives or observed behaviours and activities (Geertz, 1975).

Furthermore, a post-positivist approach is based on the fundamental idea that (a) interpretations should be derived directly from data observed and (b) data collection and analysis methods should, in some way, be systematic and transparent (Denzin, 2000). In some ways, post-positivism is, therefore, closely associated with the scientific method (Denzin, 2000). It distances itself, however, from the strict epistemological position that a truly objective reality can be assessed and represented. In other words, Post-positivists accept the premise that a completely objective reality is impossible to apprehend but assume that research accounts can approximate, or at least attempt to approximate, an objective truth (Denzin, 2000).

The researcher is part of the world so when they are observing, cannot completely detach themselves from what they are researching (Aliaga and Gunderson, 2006). In addition, historical research has shown that what is studied and what findings are produced, are influenced by the beliefs of the people doing the research and the political/social climate at the time the research is done (Denzin, 2000). Based on this viewpoint or epistemology, qualitative researchers are subjectivists (Aliaga and Gunderson, 2006).

Moreover, there is a summary of the characteristics of qualitative research method and it is presented next, according to Sekaran and Bougie (2010); inductive or bottom-up process of research wherein the researcher generates hypothesis from data collected during the fieldwork; the type of research insists a profound knowledge of and familiarisation with a specific case or context; the research objective are of a
descriptive, explanatory and discovery nature; attempt to study behaviour in which
behaviour occur; reality is subjective, personal and socially constructed; and the results
of research are specific to the particular context.

In conclusion, understanding the dynamic relationship between communities and
the effectiveness of implementation of community based forest management (CBFM)
policies, particularly on how to strengthen local community institutions, is mainly a social
phenomenon that needs to be explored. In this research, qualitative research methods
were used. This thesis, therefore, relies on the “subjectivity-ontology” and post-
positivistic epistemology perspective as mentioned above. A social phenomenon is
subjective; that is a product of a social process and it could not be understood only or
entirely through a scientific approach (Corbin and Strauss, 2008, Silverman, 2010). The
scientific approach considers a social reality to be objective and participants are seen
as passive objects (Denzin, 2000).

However, in this research participants and social contexts are the main object. In
this part also, this study should state clearly the terms of Epistemology and Ontology of
this research. Epistemology is the way in which we understand what establishes
knowledge and how the knowledge can be achieved (Corbin and Strauss, 2008). In
addition, ontology means the position about what is the truth and what constitutes the
social reality (Corbin and Strauss, 2008). Therefore, exploring and understanding the
dynamic relationship between communities and the effectiveness of implementation of
community based forest management (CBFM) policies is mainly a social phenomenon
that could be suitable for exploring by using a subjective and post-positivism approach
as mentioned above. In other words, this thesis is intended to discover the actors’ view,
which is less concrete determinant than the natural world and in that case this study is depending on the subjective ontology and post-positivistic epistemology.

Furthermore, the post-positivistic scholars claim that social reality or social phenomenon can be analysed through qualitative investigation and then it can be collected through a review of documents, participative and non-participative observation and in depth interviews (Silverman, 2010, Eisenhardt, 1989). This study is a Qualitative research, which is considered as an appropriate and meaningful approach for understanding the contextual issues such as those in this study (Denzin, 2000). It can be applied by a case study research that looks at understanding of dynamics phenomenon within a single setting and can be conducted in an individual, a role, a group or a national context (Miles and Huberman, 1994, Eisenhardt, 1989).

Dealing with communities’ implementation of a particular programme and shifting those policies is the main goal of this research. Currently the monitoring process is divided into two approaches (Fleming and Henkel, 2001, Pouliot et al., 2009, Cott et al., 2005). First of all, the traditional monitoring approach, which is a top-down activity, implemented by scientists, government and international organisation units. This approach has its roots in natural sciences and is common in many fields such as soil degradation, conservation biology and forest conservation. The procedures, indicators and the monitoring person come from the scientists and government. If the monitoring activity is executed by the government, the communities are just as a research object or not participative process (Reed, 2005). The second approach is the post-modern approach, based on the communities and bottom-up activity. The approach is led by non-government organisations (NGOs) and it is an element of participatory research
method (Reed, 2005). The community is involved in the monitoring process and also
the researcher should collaborate with the community to develop the monitoring
indicators.

The traditional or top-down approach has several weaknesses, such as a failure
to analyse participation and local contexts. The procedures are mono interpretative and
the established-indicators are universal indicators. It can create misunderstanding and
inexpediency with the community needs(Reed, 2005). To implement the monitoring
process needs some training and many types of equipment. Therefore, this research
uses the qualitative approach, which is a proper way to understand the community
activity on the implementation of CBFM in Indonesia. Using the bottom-up approach is
not only useful to assess but also to develop the monitoring indicators based on the
community. The indicators are suitable for the implementation of sustainable CBFM in
Indonesia. Besides, the procedures and tools that have been developed deal with the
community needs and also the community is able to implement them.

4.4. Type of Data and Data Collection

The information about community monitoring processes was gathered and
integrated between the literature review, observations and in-depth interviews. Several
steps have been taken in this research. It is clear that the data could be obtained by
dealing with research question, skills of researcher and resources of the data (Lysack

The research relied on two main types of sources of collecting data: primary and
secondary sources of data. Primary data is data that was gathered by the researcher.
Such data could be found or generated by a proper research design, mainly through the interview method. The data also can deal with the aims of research. On the other hand, secondary data means the data was originally collected by other parties and used for other purposes. The data could be state act, literature, official statistics, UN and World Bank publications and administrative records. Such secondary data is comprised of published and unpublished documents.

The first step in collecting data was to collect and read a lot of reports about the community. Secondary data, such as books, journals and government reports were used for developing the theory and research frameworks. Reading this literature expanded the research proposal and developed interview guides. In addition, the secondary data was found in, books and journals about institutions, local community and forest management and the policy papers of the local and district government, especially about CBFM in both Indonesia and GKR. Moreover, for this research, the secondary data was gathered from both National and local government, materials such as the Indonesian constitution, Government regulations, Presidential regulations, and Ministerial Decrees and Regional regulations and from selected communities, such as Village and community regulations and community administration.

The second step of collecting data was the observation activity. Observation was selected because this technique can portray the social interaction and help to understand local contexts clearly (Adkisson, 2008, Hay, 2005, Robson, 2011). This technique is not only relying on the people’s retrospective values, but also allowing for the generating of multidimensional data in the specific context and site. There were
several activities following this observation, such as selecting the appropriate site, gaining access, presenting oneself, gathering information and analysing the data.

The observation-interaction was performed with the selected local community groups that implement CBFM. Before explaining the details of each site, a synopsis is described of the site contexts. The community groups section was purposive and the comparison model was made on the observation (Sekher, 2001). In this research two community groups were selected. These communities were selected because they had already participated in and implemented the community based forest management (CBFM) project. Secondly, those communities could represent the dynamics of communities in implementation of CBFM in Indonesia, especially in Yogyakarta special province. Thirdly, the environment of those communities has specific conditions. For example, the land is so hilly, the risk of erosion so high, and in dry monsoon they have lack of water (Agency, 2009). Last but not least, the land boundary between state and private is clear and there is less conflict (Sepsiaji and Fuadi, 2004).

The two community groups are called Sedyo Makmur (promise to reach the prosperity) in Semanu district and Karya Hutan (the guard of the forest) in Semin district. Both of the communities are located in Gunung Kidul Regeny: 110° 37’ 11” and E07° 52’ 50”S (Agency, 2009). The reasons for choosing those sites are the size of the areas and the number of the group members. Karya Hutan has 185 members and gets a licence to use 50 Ha State-Owned forests. Sedyo Makmur has 254 members and can use 154 Ha State-Owned forests. Secondly, those communities have different levels of knowledge and ways of establishing the local institution (Agency, 2009, Sepsiaji and Fuadi, 2004). For example, Sedyo Makmur was established before the CBFM, on the
other hand, Karya Hutan was established during the CBFM project. In other words, each community has a local farmers’ group who were involved in the implementation of CBFM on the state owned forest and each has differences. Lastly, in terms of economic background, they are mostly farmers who do not have enough land, most of them having less than 0.20 ha of land (Interview-Farmer, 2012). The people’s dependency on the limited land resources is quite high. Therefore, they consent about how to find more land where it is utilised to provide their life by involvement with CBFM. In other words, each community member enrolls in the CBFM programme because the programme allows the community as a group to use the state forest in sustainable ways. In conclusion, these selected local farmers groups in this research can represent different community groups.

In terms of gaining access, before the first visit, I had sent an official letter to the Provincial government. I had explained about my research and also submitted my proposal. According to Provincial law, every researcher should get the government’s permission. In Yogyakarta’s context, there is no evidence or case that Provincial government uses this policy to eliminate any research. This policy is just a type of procedure. As a result, in less than a day, I got the government authorisation, which was very useful when I was contacting the government officials, members of parliament in Regency, Village leaders and my other respondents. The other reason I could gain access to the selected sites was because I had communicated with my respondents in many ways. Some of them I knew from when I was involved in the social movement in Indonesia.
In terms of presenting oneself, I clarified to the respondents that I would conduct research on CBFM. I assumed that they would be able to help me and assist me. I put them as my strategic partners and I always appreciated their comments. As an observer, I tried to remain objective by avoiding their personal problems that were unrelated to this research, so as to avoid bias in this research. As a result, my respondents told their opinions freely and I could observe their daily activity smoothly.

During the observation, I recorded the community habits and values, especially on forestry management. Through observation, I collected data on the community issues, their interaction and its natural sites. I managed to find detailed information on the community's participation and implementation of the CBFM, including how the communities develop and establish their rules and monitor it properly.

The third step of the research data collection was in-depth interviews. Even having produced the interview guide and allocated time, it was changed on the researcher's field dependent on the community's agreement. For example, I asked the respondent how they know this programme on Monday and then I came back on Tuesday to raise other issues and questions. The semi-structured interviews were performed with the selected stakeholders. There were two groups of stakeholders: primary stakeholders and secondary stakeholders. The primary stake holders are those parties who are directly affected by the project. In this case, the selected stakeholders would be farmers who are involved in the CBFM, community group officers and formal village leaders. The reason these categories are proposed is because the designing community institutions relate to these stakeholders (Becker et al., 2005, Ostrom et al., Eisenhardt, 1989). By following a qualitative approach, the main issue is not the number
of interviewees, but it is about being representative of the stakeholders that can deal with this research. As a result, the recommended number of people per group who can be interviewed was usually six to ten or as few as four (Reed, 2005). The snow-ball technique was also chosen to find the appropriate interviewees or the farmers. The interviewees represented each stakeholder. In this case, the snowball method can be defined as a technique for gathering research subjects through the identification of an initial subject who is used to provide the names of other actors (Given, 2008).

The second key actors and target interviewees, (secondary stakeholders) were the Local Government officers in the Forestry Office, members of local House Representative, NGO activists, researchers that are concerned with the CBFM and buyers or traders. In addition, the researcher consulted with NGO’s activists and university staff who study the CBFM implementation in Indonesia. Activity’s target was also to understand the local community context that would be useful to find the key actors who are involved in CBFM in GKR. In conclusion, the number of interviewees was around 28 people, who can represent the target stakeholders (Table 4.2).

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Technique</th>
<th>Relevant Primary Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Informal Interview</td>
<td>Semi-structured interview</td>
</tr>
<tr>
<td>Province Officers</td>
<td>2</td>
<td>Designing, executing and monitoring the policies</td>
</tr>
<tr>
<td>Regency Officers</td>
<td>2</td>
<td>Designing, executing and monitoring the policies</td>
</tr>
<tr>
<td>NGO Activist</td>
<td>3</td>
<td>Empowering, Advocating local community groups</td>
</tr>
<tr>
<td>University Researcher</td>
<td>3</td>
<td>Supporting data and researching the new technique for local community groups</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Local Member of Parliament</td>
<td>2</td>
<td>Articulating local communities’ needs</td>
</tr>
<tr>
<td>Village formal leader</td>
<td>4</td>
<td>Establishing village rule</td>
</tr>
<tr>
<td>Community Group Officer</td>
<td>4</td>
<td>Understanding history, background and establishing local institutions</td>
</tr>
<tr>
<td>Farmers</td>
<td>8</td>
<td>Understanding their motives, participating and establishing local institutions</td>
</tr>
<tr>
<td><strong>Total Respondents</strong></td>
<td><strong>28</strong></td>
<td></td>
</tr>
</tbody>
</table>

4.5. **Site Visits and Implementing the in depth-interviews**

Before I did my field-work, I had called my contact persons who could help me to carry out my research properly. From the UK, I had explained to my key persons that I wanted to do some interviews in the Gunung Kidul District. I requested help from them. For example, I contacted my colleague at my University in Indonesia to help me to send a letter of permission to the Bureau of Planning and development of Yogyakarta Special Province. I had also contacted my former students, my friend who engaged in NGO and researchers who focused on CBFM issues. I made a time schedule of interviewing before leaving from the UK.

A day after I arrived in Yogyakarta, I got a letter from the provincial government officer granting approval for conducting my research in Yogyakarta. I contacted my key persons, such as formal-community leaders, NGO’s activists, and researchers informing them that I wanted to start my field-work. I double-checked our schedule and appointments. My field-work was carried out over nearly two months. My field-work
could be done because I recruited four assistants who helped me in contacting the respondents, dealing with secondary data and writing the transcripts of interviews. For example, they contacted the local officers and arranged the schedule; relating to secondary data, they went to Yogyakarta’s library and Government, office to collect my secondary data. Table 4.3 shows the activities I have done in the field. In other words, most of these activities have been done by me.

**Table 4.3. Comparison of Applied Methods**

<table>
<thead>
<tr>
<th>Sedyo Makmur Community Group A</th>
<th>Karya Hutan Community group B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Empirical Data Collection</strong></td>
<td></td>
</tr>
<tr>
<td>Observation</td>
<td>Observation</td>
</tr>
<tr>
<td>Semi-structured questionnaires</td>
<td>Semi-structured questionnaires</td>
</tr>
<tr>
<td>Snow ball technique for gathering the interviewees</td>
<td>Snow ball technique for gathering the interviewees</td>
</tr>
<tr>
<td>The interviewees represent the village officer, group officers, and farmers.</td>
<td>The interviewees represent the village officer, group officers, farmers</td>
</tr>
</tbody>
</table>

The first visit was to Sedyo Makmur Community Group (SMCG), located in Semanu district, Gunung Kidul regency. Conducting interviews in this area was so challenging for several reasons. First, they live in a remote area and quite far from the Regency capital. Secondly, there is no public transport. Thirdly, the community has occupied the largest forest area in Gunung Kidul regency that relies on the CBFM project, around 115 ha. That area encompasses two villages and is in very hilly terrain.

My first step was visiting the group leaders. I met them to introduce my research programme and so I could get the permission to do so. Consequently, I did my first in-depth interview with the Leader of SMCG at his house. Before the interview, we
discussed and dealt with my research consent, the safety of researchers and respondents and the schedule of this research. In a brief, we agreed my research and he agreed to help me. During the research, I stayed with the farmer and/or local leader. This would be appropriate for me so I could get to my respondents quickly. It also facilitated my getting to know the social contexts and social feel of its community.

Through site visits, I observed the interaction between diverse stakeholders at their natural site. Gathering data from various settings in those actors and interacted each others, it could enabled me understand the insights how the social relation, culture norms and economic factor that lead to the CBFM implementation sustainably. Engaging in the daily life of the community allowed me to gather detailed information and understand the embedded principles of this community.

In this community, I did in-depth-interviews with 10 respondents. Using a combination of snow-ball and stratified-random sampling techniques, I interviewed two formal leaders, two informal leaders who knew this project, two SMCG officers and four members of SMCG. Snow-ball refers to choosing a respondent and those respondents suggested my next respondent, so this method seems direct and functional (Bachman and Schutt, 2003, Corbin and Strauss, 2008). For reducing the personal bias of respondents, I would choose the next respondent after I had got several recommended respondents. The snow-ball technique was chosen because it was simple, quick and cost-effective. Besides, stratified-random sampling was applied for reducing potential biases of the snowball technique and for capturing the key characteristics of respondents (Corbin and Strauss, 2008, Denzin, 2000, Hay, 2005). As a researcher, I
have to make sure that my participants can speak freely and in a comfortable situation. The interviews did not only take place in the morning, but also in the evening.

Informal meeting and informal interviews were the best way to get useful information and understand the village clearly. As a result, the interviews were conducted in the farmers’ house or (mostly) in their field during the day. In the first week, an in depth-interview was done for the formal and informal leaders and the officers of group. The next week, I did interviews with members of group. Sometimes, the interview was accomplished in two visits. It could be done because the first visit could not meet the respondents or the first visit was not enough for gathering the data.

The second site, Karya Hutan Community Group (KHCG), is located in the North West from GK Regency’s capital city. The group was chosen because it was the smallest community group that participated in CBFM. Secondly, this group is situated quite near to the GK city (around 17 km away) so the researcher could do interviews in this site and also with regency officers and local members of parliament. In KHCG, on the first day, I joined in their formal meeting and in the meeting I informed the audiences about my research. A briefing gathering gave me a chance to explain my research objectives, discuss the research questions, and schedule our interview.

If there was not an interview in this village and I had no appointment with either Regency Officers or local Members of Parliaments, I came down to the city to conduct an interview with provincial officers. I first got a good relationship with the senior officers, both at Provincial level and Regency level. Through them, I could contact and meet my target respondents. Maximising this position, this research gained access to explore deeply many issues related to the implementation of CBFM in Gunung Kidul.
Regarding the venues and times, these were changed and re-scheduled following the respondents’ availability. Sometimes, it was really time consuming.

The in depth-interview technique is influenced by the characteristics of the researcher and the respondent, such as race, gender, religion, and educational background (Denzin, 2000). As a result I could meet NGO’s activists (Shorea) and conduct in depth-interview with researchers at University Gadjah Mada. If the researcher did not go to the community’s sites, usually the researcher went to them to conduct interviews in informal meetings either at their office or in a coffee shop.

Each participant was interviewed at a place and time convenient to the respondent. I was to be aware of their personal needs. For example, female respondents were questioned in the daytime, mostly at their home and accompanied by my female assistant. It could be difficult to ask them in the evening because they have to prepare their dinner and they were busy with domestic tasks. Most of the farmers were interviewed in their field or forest during their daily activity. Sometimes, I interviewed them more than twice when I needed some clarifications on important issues or I had not finished the interview because they had to go. Most of the interviews lasted from thirty minutes to one hour depending on the agreement. However, for the interviews over several times, we discussed for more than one hour.

4.6. Data Recording and Analysis

In terms of recording the data, be it secondary or primary, the data was recorded and classified every time it was gathered. Making notes and using voice recording were done simultaneously. For example, during observation and interviews, I noted down
every single community activity relating to this research. The researcher wrote the observed events, persons, places and any interactions. It has been maintained and preserved to present insights and meanings to the researcher every time. Consequently, at the end of the day, I listened to the voice recording of my respondents. I made a note and classified it so I could use it to explore and elaborate on in the next interview.

The last step of research is data analysis. Data analysis was so challenging in this thesis because it was complex, time consuming and difficult so I tried to deal with it by following my design research and schedule. Some scientists argue that data should be recorded and analysed after it has all been gathered, but some suggest that data should be analysed straight away as soon as it is collected (Corbin and Strauss, 2008, Silverman, 2010, Robson, 2011). The data analysis therefore began with the first day of observation and site visits. Because data collection was integrated with data analysis, it gave the researcher an opportunity to check out the outline of the collected data in dealing with the research goals.

The analysis method also relied on the epistemological, ontological position and methodological objectives of this research (Fay, 1987, St.Pierre, 2006). It leads to this research as a hermeneutic in nature. Hermeneutic refers to a method that focus on understating and interpreting the meaning of a text or text-analogue (Myers, 2009). As a result, I could apply for constructing and developing the research results by interpreting the data collected. The transcript of this research was abstracted into paragraphs, sentences, phrases and words, in order to construct the meaning explicitly
and then the phenomena in selected areas could be emphasised (Corbin and Strauss, 2008, Denzin, 2000).

Moreover, the second step of data analysis was classification of data. Data came out from the narratives of respondents so it was bulky and complex. I offered my respondents opportunity to raise any issues or concerns that they felt relating to my research. The in dept-interview has a flow so it is flexible and it did not restrict. However, as a researcher, I kept it focussed on my research question. It was just giving my respondents flexibility and I could engage with their daily life. Data categorisation should be linked precisely to key words, themes, places, persons, and its relationship into categories (Robson, 2011, Hay, 2005). The coding process was done by cutting and pasting and developing similar reaction under different heading (Hay, 2005).

The final report has been classified and compiled according to both the research goals and objectives. By integrating approaches and combining different methods, community-based monitoring processes could be developed properly. However, qualitative research is non statistical and it relies on human activities. Sometimes, different methods are interconnected and complimentary, and overlap each other (Miles and Huberman, 1994). Therefore, data analysis encompasses three processes: data reduction, data display and develop verified conclusion (Miles and Huberman, 1994). As a result, the last step would possibly be for the researcher to establish a comprehensive approach for measuring the implementation of CBFM in Indonesia, which is an appropriate model according to the researcher itself.
4.7. Validation and Limitation of Research Methods

Validity of data is one of the critical issues of social research and I have quoted Mason (2002) that the research process is not neutral and passive but it is interactive, creative, selective and interpretative. This argument leads to the generalisation and reliability, and especially external validity, of research (Denzin, 2000). This research could be criticised for paying too much attention to local community and having too few respondents. In this research, the data and the appropriately selected method provided me with deeper insights and contextual explanation of the local community institution in CBFM implementation.

In addition, the bottom-up approach offers data more qualitative. It can help the researcher learns how the communities dialog, cooperate and manage between their need and their ability. However, this approach has weaknesses or limitations (Reed, 2005). Firstly, if the two local groups have different perceptions and choose different indicators, it is quite difficult to justify the result. In this situation, the researcher attempts to develop the indicators and simpler.

Secondly, if the community members do not act and behave in a sustainable way or they act against the research goals, the researcher has to communicate and negotiate it with the local communities. Thirdly, the snow-ball technique has the potential to alienate community members, such as women and children, so the researcher attempted to find the marginalised stakeholders too by also using stratified random sampling.

There are limitations on the generalisation of the research results that can be drawn from this research. In other words, this research cannot be generalised to other phenomenon that have a different context and situation. This is a common limitation of
this type of qualitative research. The micro and community level can produce detailed local insights that offer an opportunity to investigate the local dynamics towards finding broader trends. My position relies on some scholars’ arguments that state a researcher should focus on a specific, rare and unusual phenomenon in order to contribute knowledge of the bigger picture (Denzin, 2000). This research was aiming to portray how the local community institutions deal with the shifting policy in Gunung Kidul, Indonesia. Consequently, the results can be generalisable beyond the selected sites so far as local institutions similar to the Gunung Kidul, Indonesia contexts. It is clear that the research finding will limit generalisation to other communities because of the different contexts and circumstances of Gunung Kidul, which is embedded in history and culture. In other words, generalisation was not the main goal of this research, but this study focuses on strengthening the local community institutions at the micro-level, to clarify how the shifting government policy shapes the local community institutions and vice versa, and how the local community institutions deal with it in a particular context.

4.8. Ethical Consideration

Most research is embedded by ethical concern as is this research. Respondents should be given the ethical information clearly (Silverman, 2010, Shore, 2007). The researcher gives information about the nature of research, and explains the right to withdraw at any time to the participants. Any steps and procedures that will be done by the researcher should be clear (Shore, 2007). In addition, the relationship between interviewer and interviewee must be genuine and voluntary.
Moreover, this research has an academic purpose. As a researcher, I did not provide any direct benefit to my respondents. I did not give special incentive to encourage the farmers, NGO activists and other respondents involved in this research. The respondents participating in this research were made aware of the benefit of this research both as individuals and group (Silverman, 2010). My respondents were informed very clearly about the nature of this research and the condition of this research. Luckily, I got strong support from them. The farmers were happy because they could express their ideas or issues in relation to CBFM. Surprisingly, they gave me crops from their forest. Though I rejected it, they asked me to accept. I respected to my respondents and they all participated in this research without any pressures.

The respondents have their own interests and priorities, which could or could not be similar to the researcher’s. I made an effort to avoid and minimise any interferences into the respondents’ private lives. In addition, this research also tried to omit anything that may cause harm to the respondents; for example, a question that makes them stressed or depressed (Robson, 2011). In regard to that issue, I treated them in a comfortable way and did not ever use bad language. Every effort was made to conduct this research ethically and the respondents gave their informed participation willingly.

In terms of confidentiality, privacy, and anonymity, I gave a commitment to my respondents that I could not publish their names. Even though, I did record my in-depth interview, I did not mention their name, place and position in my voice recording. If they were addressed, it could be by a fake name. In order to deal with these issues of anonymity, this research used numbers and symbols instead of real names, real position and place. I kept the gathered data confidential.
4.9. Conclusion

This chapter aimed to explain the philosophical method that has been chosen in this research. In a case study research particularly on community based activities it was considered an appropriate method to use a post-positive and bottom-up approach. In other words, this research umbrella is qualitative research with an exploratory research design. A triangulation method for gathering and analysis of data was chosen also. Semi structured questions mixed with observation and in depth-interviews were applied for this research. A combination of snow ball technique and stratified sampling was used to choose the best responders and reduce the personal bias to this research. In order to reach the research goals, the limitation of this research was anticipated. Ethical consideration also was explained clearly so the researcher respected the respondents' rights.

The next chapter will explain the dynamics of selected local communities on the implementation of CBFM policies. It will describe the political and social backgrounds that drive the local communities interacting with this policy. Followed by the evolution of CBFM policy, the next chapter will also elaborate the consequences of those evolutions for the community.
CHAPTER FIVE
UNDERSTANDING THE SITE CONTEXTS AND LOCAL INSTITUTIONS

5.1. Introduction

This chapter describes the selected areas of research and it portrays the sites in terms of the contexts, current community practices, community management and monitoring processes. The first section describes the environment and local situation of selected communities. Based on a combination of secondary data, observation and in-depth interviews, an attempt is made to understand the local contexts.

This chapter elaborates the data on the local economy and communities’ livelihoods. According to the economic data, the majority of population are farmers and they do not have sufficient land. Most of them just have less than 0.15 hectares or 1500 m². In terms of livelihood, this chapter elaborates the community’s income and the level of education in the community. The next section describes how the local communities develop their institutions and then how they join the CBFM at the first time. The local community’s practices on CBFM implementation during the shifting policy could be explained. It begins by discussing how the local communities became involved in the CBFM and how they initiated establishing their local institutions.

Therefore, the last part of this chapter explains the current community practice on the implementation of CBFM. It deals with the society’s values, local institutions and environment in two areas. The first study area is Sedyo Makmur Community Group (SMCG), located in Semanu district, in the north of Wonosari (capital city of Gunung Kidul Regency). The second site or local community is Karya Hutan Community Group.
(KHCG). This group is located in Nglipar district. Both of the selected sites are located in Gunung Kidul Regency, in Yogyakarta Special Province, Indonesia.

Overall, comparing the two sites can help to understand the local community social and environmental background that can help the researcher to analyse the current issue on developing of local institutions, how the local communities implemented and developed a monitoring process on CBFM policy based on its local contexts. Finally, the last chapter explains the possible local community management system and develops the future monitoring process based on community that strengthens the local institutions themselves.

5.2. Descriptive Analysis of Site

5.2.1. Boundaries, Land Use, and Distribution of Land Use

The study areas are located in Gunung Kidul Regency and belong to Yogyakarta Special Province with Wonosari as a capital city of GKR (110.21° - 110.50°E and 7.46° - 8.09°S), Indonesia. Gunung Kidul means South Hills in the Javanese language. Yogyakarta is one of the special Provinces in Indonesia and the others are Papua and Aceh Province. This province is situated in Java Island and Yogyakarta is the only region in Indonesia that is still governed by a monarchy system, the current Sultan of Yogyakarta being Sultan Hamengkubuwo X (Purwadi, 2008, Government, 2000). According to the Indonesian constitution, the Sultan serves as the hereditary governor of the Province (Government, 2000). In the Javanese language, Yogyakarta or Jogjakarta is pronounced [jogja’karto], and named after the city of Ayodhya in Javanese-Hindu mythology (Purwadi, 2008).
In making clear the boundary of the land and areas of resources, it is important to ensure that local institutions can establish their institutions properly (Ostrom, 2005). Using secondary data and primary data, these selected groups could be analysed their social and ecological background properly. The secondary data was collected from University, NGOs, and white paper of Government offices. Besides, the secondary data was collected by observation and interview.

Therefore, this section needs to emphasis the situation and context of this research clearly. The GKR has borders with Bantul Regency in the West and Sleman Regency in the North West. Klaten and Sukoharjo Regency are in the north and then to the south is the Indonesian Ocean (figure 5.1). The total area of GKR is 1485.36 km² or approximately 46.63% of the total area of Yogyakarta Province. Besides, the State forests in the whole area of GKR is 1,3221.5 ha, represents approximately 8.90% land area of GKR 146 539 ha (Agency, 2009). The topography of the area is so hilly for 100-700 m a.s.l. The soil is low fertility and mostly limestone. The climate is semi-arid with a mean annual rainfall of 1720.86 mm. The daily average temperature of GKR is 27.7°C, the minimum temperature of 23.2°C and the maximum temperature of 32.4°C (Agency, 2009). Due to a karst region, this constitutes a difficult geography for farmers and contributes to considerable poverty (Agency, 2009).
Administratively GKR is divided into 18 districts, 144 villages, and 1,431 villages. Districts in Gunungkidul include: Grilled Sub, Purwosari, Paliyan, Saptosari, Tepus, Tanjungsari, Rongkop, Girisubo, Semanu, Ponjong, Karangmojo, Wonosari, Playen, Patuk, Gedangsari, Nglipar, Ngawen, and Semin. However, there are only 6 districts and 15 villages involved in Community-based Forest Management (CBFM), which are the townships, namely: Paliyan, Playen, Karangmojo, Semanu, and Nglipar (Rahman and Fuadi, 2004). In addition, this research has been done in Semanu and Nglipar district.

As mentioned, Gunungkidul Regency is the largest regency in Yogyakarta Special Province, covering 1,485.36 km$^2$ or approximately 46.63% of the area of Yogyakarta (Agency, 2009). Forest resources owned by the GKR are mostly private forest (24,531 ha or 16.52 percent) and state forest (13,755 ha or 9.26 percent). In this case, much of the state forest is bare and barren. The degradation of state forests is caused by illegal logging and replanting which has not been successful. As a result, many areas in GKR have or face scarcity of water in the dry season, due to lack of
available forest land that can supply sufficient water (Interview-Government Officer, 2012).

In this research, there are two community groups that have been chosen: Sedyo Makmur, (which means promise to reach prosperity), located in Semanu district and Karya Hutan, (which means the guard of forest, located in Nglipar district. Semanu District is situated 110° 38’ 57”E and 08° 00’ 09” S and Nglipar district: 110° 37’ 11” and E07° 52’ 50”S (Agency, 2009). Each community has a local farmers group, who are involved in CBFM implemented in the state forest owned areas. The selected areas are located in the mountainous area. The main trees are teak (Tectona grandis), Acacia (Acacia auriculiformis), (Gnetum gnemon) and Kesambi (Schleichera oleosa). The community harvest some fruit, beans, herbal pants in intercropping areas under the tree canopy.

Moreover, in these sites of study, the researcher attempted to understand the local contexts and deal with the research question by living in the community for observation for one and half month. The site contexts were analysed by gathering primary data and also secondary data. The secondary data was found by asking the Regency officers and village officers. Observation and semi-structured interviews were used to gather the primary data. The snow ball method was used to find the key actors and the important stake holders. The summary of social contexts in each case study is detailed by profile of case study method (Sekher, 2001).

Before explaining the details of each site, a synopsis is described of the site contexts (Table 5.1). The community groups selection was purposive and the comparison model was made during the observation (Sekher, 2001). This research
selected two community groups that have similarities and also differences. Both of the communities were located in the hilly and karst areas. In terms of economic background, they are mostly farmers who do not have enough land, most of them having less than 0.20 ha (Interview-Farmer, 2012). In Indonesia, the average area of farmer owned land is 0.33 ha (BPS, 2013). This situation leads to the people’s being quite highly dependent on the limited land resources. Moreover, the farmers in selected sites was in agreement about the need to find more land that it can be utilised to provide their livelihoods. As a result, each community member became involved in the CBFM programme because the programme allows the community as a group to use the state forest in sustainable ways. Each community group, however, represents several key figures (Table 5.1).

The perception of farmers and community group’s condition decided because of some differences. For example, SMCG has members coming from two villages and the total number of households involved is 750. On the other hand, members of KHCG originated from one village only, and the number of households is smaller, only 285. Besides, the SMCG has around 254 members, bigger than the KHCG, whose membership is only 185. Interestingly, not all households living in the two villages where the SMCG was established became members of the SMCG. For example, some did not participate in this programme because they have other jobs, such as a teacher or a public officer. Areas which are managed by SMCG covered 254 hectares. This is larger than the area managed by the KHCG which covers only 40 hectares (Table 5.1).
Table 5.1
Comparison of Selected Study Areas

<table>
<thead>
<tr>
<th></th>
<th>Sedyo Makmur Community Group A</th>
<th>Karya Hutan Community Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic Features</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size of the community</td>
<td>2 villages (750 households)</td>
<td>1 village (285 households)</td>
</tr>
<tr>
<td>Total member of a group</td>
<td>254</td>
<td>185</td>
</tr>
<tr>
<td>CBFM’s Managed areas</td>
<td>115 ha</td>
<td>40 ha</td>
</tr>
<tr>
<td>Background of members</td>
<td>Relatively diverse</td>
<td>Relatively homogeneous</td>
</tr>
<tr>
<td>Economical composition</td>
<td>Mostly small farmers and landless owned</td>
<td>Mostly farmers and landless owned</td>
</tr>
<tr>
<td><strong>Established Institution</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Established a co-operative organisation</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Established rules of the game or institution arrangements</td>
<td>Yes</td>
<td>Yes, but not implemented properly</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Already developed the monitoring team</td>
<td>On going to develop monitoring team</td>
</tr>
</tbody>
</table>

In terms of establishing monitoring institutions, the SMCG has already developed the monitoring indicators and also the monitoring team. The SMCG has already published their rules to their members and other community members from different villages. In addition, a cooperative organisation has been established in SMCG. The cooperative organisation is mandatory for the community group if the community group wants to fell trees and sell the timber. At the same time, the KHCG has not developed their monitoring team and a cooperative organisation yet. They have just already created the monitoring and punishment rules.
5.2.2. Exploring the Site 1

SMCG is located in Jragrum hamlet, Ngeposari village, Semanu district and GKR. This group were granted the rights from the government to use 115 hectares state forest area. The forest community group works and spreads across 2 villages and 4 hamlets, which are Jragrum, Wediwutah, Gemuling hamlets belonging to Ngepohsari village and Plembengan hamlet belonging to Candirejo Village. Three of these hamlets are close each other but the last hamlet is quite a distance away (around 3 kilometres) in the south Ngeposari Village (Figure 5.2). This makes the last hamlet quite difficult to access by the main road and also causes communication difficulties with other member groups. The number of group members is 254 and around 75 percent come from Jragum and Wediwutah.

Figure 5.2
The Map of Sedyo Makmur Managed Areas
The majority of people living in the villages are farmers. The inhabitants that are involved in the CBFM are farmers (about 71 percent) while the rest earn their livelihoods as public servants, merchants, labourers and small entrepreneurs, such as in carpentry, brick making and manufacture (Figure 5.3). Products that have been produced from their land are fruits, nuts and herbal plants. In addition, most of the farmers involved in CBFM do not have enough land, the average land ownership being only 0.15 hectare. To support their needs most of them go to the city to become informal workers. This happens especially in the draining season from August to October.

**Figure 5.3**
Types of Jobs in Sedyo Makmur

In terms of ecological background, the environmental conditions around the community are the same, with most areas in GKR being hilly, with rocky red soil and the level of drainage system is relatively bad (Interview-Government Officer, 2012). Even though, there are some wells, drilling wells and lakes that are used to provide their water needs, those lakes and wells dry up during the drought. Because of that situation, the residents must buy water from the local company using tank-cars. The price for each tank is Rp 500,000 (25 pound) (they are paid Rp 40,000 - 2pound a day). Even in the raining season, the drought problem always happens, especially in Gemulung and
Plembengan village because the pipe water supply does not reach their location. Because of this situation, most of the residents are very aware of the sustainability issues.

“If the dry season comes, we have to struggle for finding water especially for drinking water. Usually I go to Telaga (a small lake used to support drinking, bathing and also cattle). Sometimes I buy water from the local company if the lake is dried up.” (Interview-Farmer, 2012)

![Figure 5.4](image)

**Figure 5.4**
The Lake near the Village in Rainy Season

In terms of housing type, the settlements of the population accumulate around the hamlet where the areas around the settlement are forest and gardens. Gardens and forests’ ecosystem that are generally dominated by teak trees, which mainly function as a garden border, and besides that there are crops of vegetables and fruit crops, like banana, mango and coconut. Meanwhile, to support economic activity each household
usually keeps animals, especially cattle and goats, while pet birds, especially chickens, are kept by only a small portion.

Figure 5.5
The Area in the Dry Season

Figure 5.6
The Area in Rainy Season

In terms of level of education, the figure 5.7 shows that the majority of farmers (46 percent) finish their elementary school. Around 34 percent of farmers graduated
from junior high school and only 4 percent of farmers graduated from higher education. In conclusion, most of them are literate or able to read.

![Figure 5.7: Level of Education in Sedyo Makmur](image)

The forest topography is undulating and so hilly with low soil fertility (thin soil or humus, sometimes rocky) and to access the forest is relatively difficult. However, in some areas its roads are pretty good, because some streets have been paved with cast blocks. The main tree species are teak (*Tectona grandis*), Acacia (*Acacia auriculiformis*), *(Gnetum gnemon)* and Kesambi (*Schleicheria oleosa*). Besides, the land cover is mostly with teak as the principal crop. A common cropping pattern is intercropping (agro-forestry concept) that is planted with various species of plants in one area. The farmers especially cultivate food crops along with perennial crops and forage. But at the moment, food crops have been difficult to grow because the areas were covered by the tree canopy, as a solution to utilise the group gets together with other CBFM group to make plans to grow plants that can live and be productive under the teak’s canopy.
“Last two years we cultivated vegetables, corns and herbal plants and we got some money from that. Currently, we could not crop any vegetables because the tree canopy is quite dense so we have to consider that we should look for another job.” (Interview-Farmer, 2012)

5.2.3. Exploring Site 2

In terms of the Social and Ecological contexts, the number of the KHCG’s members equates to 185 households, spread across three hamlets, Kalialang, Ngasinan and Tlepok. Ngasinan and Kalialang hamlets belong to Kalitekuk village, whereas Tlepok belongs to Semin village (Figure 5.9). This group is located in Nglipar district, approximately 35 kilometres from Wonosari, a regency capital city. The study area is well-connected by paved roads that connect the village to the local market and regency market (main market). These roads also are used to connect the village with the local public services, such as schools, hospital and banks.

“The road’s condition is quite good in this area. We built it by gotong-royong (mutual assistance, the community collects money and then they buy the material and build the project together). Our community really understood that a good road is a best way to help us for selling our product.’ (Interview-Farmer, 2012)

Livelihoods of the majority population are as farmers. 51 Percent of households that involved in the CBFM are farmers. The second most frequent jobs are as private workers, such as merchants, labourers and small entrepreneurs, these being around 38 percent. Around 9 percent are public officers while the rest is other (no answer in the interview).
Figure 5.8
Types of Jobs in Karya Hutan

Figure 5.9
The Map of Karya Hutan Managed Areas
Regarding the level of education, the figure 5.10 shows that the majority of farmers (34 percent) finish their junior high school and around 30 percent attend elementary school, around 26 percent graduated from senior high school and only 2 percent are non-educated. In conclusion, the level of education of this site is better than Sedya Makmu Farmer Group. Most of the farmers of Karya Hutan finished their junior high school or beyond.

![Figure 5.10](image)

**Figure 5.10**
Level of Education in Karya Hutan

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Education</td>
<td>2%</td>
</tr>
<tr>
<td>Elementary School</td>
<td>8%</td>
</tr>
<tr>
<td>Junior High School</td>
<td>26%</td>
</tr>
<tr>
<td>Senior High School</td>
<td>30%</td>
</tr>
<tr>
<td>Higher Education</td>
<td>34%</td>
</tr>
</tbody>
</table>

In general, the environmental conditions around the community are the same as the conditions in most areas in GKR, i.e. hilly, rocky red soil and with a relatively poor level of drainage. Settlements of the population accumulate around the hamlet where the areas have moors and gardens. Gardens and moors’ ecosystems are generally dominated by teak trees, which mainly function as garden borders; besides that there are crops of vegetables, and fruit crops, like banana, mango and coconut. Meanwhile, to support economic activity, each household keep livestock, especially cattle and goats, while pet birds, especially chickens, are kept by only a small proportion.
The forest topography is undulating and so hilly with low soil fertility (thin soil or humus, sometimes rocky) and to access the forest is relatively difficult. The main tree species are teak (*Tectona grandis*), Acacia (*Acacia auriculiformis*), (*Gnetum gnemon*). The community produce a traditional snack, called *emping*, from *Gnetum gnemon*. It is quite famous in Indonesia and also this product can be sold as income revenue.

“*I make emping from melinjo (Gnetum gnemon). I sell it to the nearest market. It gives me some money, for example, for 1 kg emping I will get Rp 35,000 (around £3). This is a good additional income for me but I have to spend at least 2 weeks to make it.*” (Interview-Farmer, 2012)

In some areas of this site, its roads are pretty good, because some streets have been paved with cement-blocks. Besides, the land is mostly covered with teak as the principal crop. A common cropping pattern is intercropping (agro-forestry concept), planted with various species of plants in one area. Most of the farmers plant forage under the teak trees. Besides, the farmers especially cultivate food crops with perennial crops and herbal plants. But at the moment, food crops have been difficult to grow because the areas were covered by the tree canopy. As a solution the group gets together with other CBFM group to make plans to grow plants that can live and be productive under the teak’s canopy.

5.3. **Current Local Institution Management on CBFM in Indonesia**

CBFM was first established by Central government in 1995. The CBFM programme was marked by the publication of the Ministry of Forestry Ministry Decree No. 622 in 1995. There is a chance that involvement of the local community in
managing forest resources could increase significantly. The policy proposes that the involvement of the community was better able to ensure security and forest conservation. The CBFM is one solution to reduce the rate of deforestation in Indonesia that was increasing day by day (Nevins and Peluso, 2008) and these problems could not be controlled. The limitation of resources also is a reason to initiate the CBFM (Suwardo et al., 2009, Sunderlin et al., 2001). The CBFM is a breakthrough that benefits many stakeholders. Its goals are improving the welfare of society, reducing the deforestation and preserving the forest.

According to ministerial decree no. 31/2001, supported by ministerial decree no. 252/Menhut-V/2002, the state owned forest in GKR that is tilled by the group can be used for several years, depending on the government permit or licence (Forestry, 1995, Forestry, 1998, 2003). The community should be in a group that has right of usage, due to following their collective action and calling for the preservation of the forest resources. The programme intends that the CBFM farmers will be able to gain not only from harvesting the crops but also from felling the wood in a long-term contract.

The CBFM has the prospect of improving the welfare of society and forest in Indonesia with the local community being tasked to assist in securing the forest. The one targeted area is the state forest, which is GKR. There are approximately 13,755 hectares of state forest in GKR, where the amount of deforestation in GKR is immense, more than 50 percent of the area. The deforestation is caused by many factors, such as relevant apparatus limitations, the communities around the forests or far from the forest, the country's economic crisis, and, of course, related industries of forestry. Also, each of these factors and determines is interrelated. The greatest factor is the demands of the
furniture industry. In addition, the CBFM has been implemented in 1,089.4 hectares state forest and issued for 35 community groups (Sepsiaji and Fuadi, 2004).

“Actually, CBFM programme is allocated for 4,186.4 hectares of state forest but the central government and the regency government thought the local community does not have the ability to maintain it. Nevertheless, I think this is a government strategy. They do not want to give to local people more land and they do not want to lose their asset.” (Interview-Activist, 2012).

Scientists argue that people want to become involved in community events when they have an opportunity to do so (Midgley and Reynolds, 2004). An opportunity can be given by other stakeholders or should be achieved by themselves. The people’s participation also happens because of self interest, being socially responsible and in the interest of community development (Cleaver, 1999). During the in-depth interviews several reasons why farmers involved in the CBFM were disclosed.

5.3.1. Establishment of CBFM’s Institution in Site 1

The researcher records that the farmers join because of self interest. If they have rights, they can plant more crops. The CBFM land can be used for gaining cash crops and also it can support their basic needs. Some of the farmers have to join the programme because of socially responsibility and also in the interest of community development.

“I just own 1,000 m² (0.01 hectares) of land. It is not enough to sustain our daily needs. I am involved in the project because I hope I can get more land that I can plant
more crops. I am very happy now as I get 3500 m² land from this project.” (Interview-Farmer, 2012)

Owing to living in the drought area, they pay attention to environmental issues, such as increasing soil erosion, and declining soil fertility. They want to keep the forest greener. Most of them were worried if the forest disappears and they cannot withstand natural damage. They could be in a dangerous situation. The worst event ever happened in 1998-1999 when the amount of deforestation rose. As a result, the community could not harvest anything from their field. The environmental concern is an appropriate indicator that the community members are aware of resources sustainability.

The type of organisation of SMCG is a non-Government people’s organisation and voluntary group. This is an open organisation where every community member is eligible for joining the SMCG. In this site, local farmers established their local group in 1985. It is quite far from the Decree about CBFM. There were 100 (hundred) farmers joining in this group. They signed a contract with the provincial government and got the licence for 2-3 year for utilising the state forest. They only can plant intercrop-plants, such as vegetables, corn, peanut, etc but they not allow felling off the trees and they should plant trees in degraded areas. In other words, before the CBFM project was launched, many community members were sharecroppers.

When the CBFM was first established, most of the farmers who were sharecroppers with the state joined. The sharecroppers were the first members of SMCG and then SMCG got more members from others. The current membership of the group increased from 100 to 254 farmers. Besides, the lands that they can use and
must manage increased from 20 ha to 115 ha. Surprisingly, the initiative for an organisation’s development comes from within a group or local community and then the organisation is also established by the local community members. In 1995, the CBFM was introduced by a government officer to the local people. The community was enthusiastic about this project. They got teak seedlings, *Molucca albizia* seedlings and *Acacia (Acacia auriculiformis)* seedlings from the government. The farmers however like to plant the teak seedlings and they use the land also for vegetables.

“I am involved in the project because I am a sharecropper. At the beginning of the project in 1995, I planted vegetables and corns. Unluckily, it was a bad weather. The dry season was quite long so I could not harvest anything.” (Interview-Farmer, 2012)

According to the government licence, SMCG already got the regent's decision letter no. 73/2004 that gives rights to maintain 154 hectares of state forest (2004). As a registered organisation, they have made statutes and post-secondary law. According to these institutional arrangements, they must conduct an election. The executive boards are elected by all of members. Deliberative democracy is the main tool to choose their leader. They did not use voting (procedural democracy) where the leader is whoever gets the biggest vote (Springett and Foster, 2005). This group uses deliberation method (*musyawarah*) to elect their leader. Therefore, their leader is the person who got trust and support from its members.
5.3.2. Establishment of CBFM’s Institution in Site 2

In site 2, the farmers have similar motives with regards to participating in CBFM as in site 1. Self interest also leads them to becoming a member because they want to get revenues from the forest products. Participation in this programme gives them a chance to get more land and then they can produce more crops. It can be useful to sustain their lives. Especially this programme gives a chance to the farmers for using the forest for 35 years. Another motive is socially responsibility that drives the farmers to have to pay attention to their environment. Deforestation is a major issue of environmental concern. The farmers were aware that they have to keep the forest sustainable. In their belief, they say that if they lost the forest they will be losing their life as well.

“Forests are our life support; from there we get a life. If the forest is damaged then our salvation would be endangered as well.” (Interview-Farmer, 2012)
Relating to the type of organisation, KHCG is similar to SMCG, which is a Non-Governmental people’s organisation. This organisation has members coming from any background. Before the CBFM, around 19 farmers participated in a reforestation programme in 1995. Due to the forest degradation, they want to rehabilitate the degraded state forest near their village. After the CBFM was enacted by Central government and implemented by local government, Gunung Kidul officers encouraged local farmers to establish a new group and join in CBFM programme. In other words, the organisation's development comes from the group or local community but this initiative comes from the forest department officials, particularly at regency level. It is quite different to site one. In site two, the farmers who are sharecroppers in the state forest consider how to organise their community interest.

“When we look at the deforestation and illegal logging next to our village, we are considering that this village would face a big problem. During the local community meeting, we decided to develop a new organisation for protecting our forest. This is a reason why our group name is Karya Hutan (the guard of Forest).” (Interview-Farmer, 2012).

This group already received the regent’s decision letter no. 403/kpts/2003 and then this was renewed by No. 220/kpts/2007 on 12 December 2007(2007). According to this decrees, they are allowed to use the state forest for 35 years when they have rights to around 40 hectares. Nevertheless, the leader of this community is not elected in an appropriate way. The current leader is the son of the former leader. When the former leader passed away the community members decided to choose his son. It could be less democratic but the decision was made in a smooth way.
“Five years ago our leader Sartono (fake name) passed away; he is a good person who encouraged us to establish this group. After 14 days, we conducted a meeting to elect a new leader. We made a consensus about the new leader and we decided that the new leader would be the son of the former leader. Our current leader is different. We have chosen last year in a group meeting. We have chosen a new leader to lead this group. We are happy and satisfied with that.” (Interview-Farmer 2012).

A comparison of the group’s profiles on the CBFM institutions in the two groups is shown in table 5.2.

<table>
<thead>
<tr>
<th>No</th>
<th>Sedyo Makmur Group A (Site 1)</th>
<th>Karya Hutan Group B (Site 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Reason for joining the group</td>
<td>Can plant crops</td>
</tr>
<tr>
<td></td>
<td>Increase soil erosion</td>
<td>Increase soil erosion</td>
</tr>
<tr>
<td></td>
<td>Decline in soils fertility</td>
<td>Decline in soils fertility</td>
</tr>
<tr>
<td></td>
<td>Environmental concern</td>
<td>Environmental concern</td>
</tr>
<tr>
<td>2.</td>
<td>Type of community group</td>
<td>Non-Government people’s organisation</td>
</tr>
<tr>
<td>3.</td>
<td>Legal status of the group</td>
<td>Registered body</td>
</tr>
<tr>
<td>4.</td>
<td>Initiative for organisation’s development</td>
<td>Group or local initiative</td>
</tr>
<tr>
<td>5.</td>
<td>Executive board</td>
<td>Elected representatives. The members vote the person from their group</td>
</tr>
</tbody>
</table>

Table 5.2
Comparison of Community Groups
5.4. Development of the Participatory Monitoring Techniques for the Local Community Group on the Implementation of CBFM

This part describes how the local community establish and monitor their rules that they set. Institutional arrangements require several activities to establish and monitor it. First, community-member participation and bottom-up process are important in decision making (Becker and Ostrom, 1995, Suwarno et al., 2009). Participation is an appropriate way to support the decision making process, particularly to analyse the stakeholder involvement (Reed et al., 2009). Second, the establishment of a protection system; the simple and adaptive laws are essential. Besides, establish a security team who implement and monitor the rule is important (Quinn et al., 2007, Reed, 2005). Third, a reward and punishment system, which is the best way to make sure community members receive benefits and also get fined when they break the rules (Sekher, 2001). The last one is member mobilisation (Sekher, 2001).

5.4.1 The Situation in Site 1

In this organisation they have already created a structure and distributed jobs. The chairman is the top leader and then they have several sections or sub divisions for performing the organisation goals. All of the members understand that their leader needs supporting staff. On the other hand, the leader recognises that distribution of power and decentralisation of authority are a good way as well. As a result, the combination of these ideas creates the best structure (Figure 5.12).
Relating to the decision making process, the organisation is a flexible and adaptable organisation. The organisation has a main rule and is relatively adaptable and also easy to change. The organisation will be easy to adapt and change their environment and base it on their stakeholders’ needs. If the members of SMCG need to change the rule, they can conduct a meeting that discusses it. SMCG is divided into 7 units, each unit having around 37 people. Each unit has a leader who leads and monitors all the processes in their unit.

“Every two week my unit has a meeting and here I can discuss about my opinion. Last time I suggested the unit should add fertilizer to our land. This is the best time because of the changing seasons. Next month it would be rainy season.” (Interview-Farmer, 2012)

The unit conducts a regular meeting every two weeks. In this meeting they discuss any problems or the progress of the unit. All members can attend and share
their interests. This meeting also can be used for discussing the next plan, for example, planting vegetables and cleansing the land. If the unit has a problem or idea that could be solved, they can take it to a group meeting. The big group meeting is conducted every month and only the executive board, unit leader and invited persons can join. Actually, a member could present in the meeting if they want to express their idea. It is clear that the decision making process in this group is quite participative.

This group created a monitoring system successfully. There are several evidences such as development of patrol team and development of group court. Although, they have initial vigilance and a voluntary active patrol, they think that it is not enough. In the last two years, they have already established patrol teams. A patrol team is the team that monitors the security of the forest and also the implementation of their rules. There are several rules and punishments that are published by SMCG (Table 5.3).

<table>
<thead>
<tr>
<th>Level of Violations</th>
<th>Activities</th>
<th>Punishments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious violations</td>
<td>-Illegal logging in the CBFM area.</td>
<td>-If the timber thieves are member of the group,</td>
</tr>
<tr>
<td></td>
<td>*Fell down the trees (diameter more than 13 cm)</td>
<td>*They will be handed over to the police.</td>
</tr>
<tr>
<td></td>
<td>*Fell down the trees using the chainsaw.</td>
<td>*They will be taken out from the group.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Their land will be taken over by the group.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-If the timber thieves are non member of the group,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*They will be passed to the police officer.</td>
</tr>
</tbody>
</table>
| Medium Violations                                                                 | -Destroying the small tree (diameter less than 13 cm)  
|                                                                                   | -Pruning branches, trees on the land belonging to others more than 2 times  
|                                                                                   | -Did not present in the group event                                                                 |
| -Plant the same tree and get a fine Rp 50,000 (£3.5)                              | -Pay a fine 2 times the wood value.                                                                       |
|                                                                                   | -Pay a fine Rp 2,500                                                                                        |
| Minor violations                                                                  | -Pruning branches, trees on the land belonging to others                                                 |
|                                                                                   | -Get an admonitory warning.                                                                                 |

If the infringement of rule happens, the patrol team will investigate it. The team will interview and collect some information about the incident. If the incident is an illegal logging, the team will invite an independent price estimator who estimates the lumber price. The thieves then should pay 4 times the lumber price. The lumber price is a very crucial issue. The team really understood this situation, so the price estimator also should ensure that the price is the actual price. The lumber can be sold to the market if the market does not agree with the price the estimator should pay it. Therefore, it is the best solution to maintain and monitor the forest resources based on the local knowledge.

5.4.2. The Situation in Site 2

In terms of the decision making process, KHCG is quite similar to SMCG. KHCG members can involve in the policy making processes in their group. This group is
divided by 3 units that represent their controlled areas. Each unit has a leader and structure where they conduct unit meetings every two weeks. Interestingly, this group has a meeting every week. In this meeting, every member can be present and join in. It happens because these group members are smaller than SMCG. In addition this group have already developed a job description for their members (Figure 5.13).

“On 5th every month, we have a group meeting where every member can join and discuss anything. Last meeting we got training from Shorea (local NGO). They help us to create a new proposal to get government funds.” (Interview-Farmer, 2012)

**Figure 5.13**
**The Organisation Structure of KHCG**

In terms of protection system, this organisation has not established the monitoring team yet but they already have a security section. This unit has tasks such as monitor the forest areas and enforce the rule of law. Especially, this group expects
voluntary patrols and community vigilance (Table 5.4). Currently, this group has already published their internal arrangements through their village members.

**Table 5.4**
The Rule of Law in KHCG

<table>
<thead>
<tr>
<th>Level of Violations</th>
<th>Activities</th>
<th>Punishments</th>
</tr>
</thead>
</table>
| Serious violations  | - Illegal logging in the CBFM area.             | - If the timber thieves are members of the group, they have to pay 4 times the timber value.  
|                     |                                                 | - If the timber thieves are non members of the group, they will be passed to the police officer.  |
| Medium Violations   | - Destroying the small trees                    | - Plant the same tree                                                       |
|                     | - Neglect their land                            | - Pay some fine                                                            |
|                     | - Didn’t participate in the group event          | - Pay a fine Rp 3.000                                                      |
| Minor violations    | - Pruning branches of tree                      | - Get an admonitory warning.                                               |

Overall, both of the groups have already established their institutional arrangements. They are aware that this programme is a good opportunity to get benefit from the forest and also to earn additional income. Looking inward and dealing with outward is really what they want. So both the executive board and members join together to make sure that the forest is safe and they can get more income as well. Monitoring is a crucial issue that they understand. If they fail to monitor their rules they will lose the rights for using the state forest. The comparison of monitoring system in the study areas is presented in table 5.4. In addition, both of the groups already published their rules, not only to their group members but also to their neighbouring villages. This
happens to make sure that their rule can be implemented and then their forest will be secure.

“Safeguarding forests is everyone's obligation so every community member understands it. Keep in their mind; they will lose their land if they not succeed in preserving this forest.” (Interview-Farmer, 2012)

**Table 5.5**
Comparison of Monitoring and Management System in Study Areas

<table>
<thead>
<tr>
<th>No</th>
<th>Sedyo Makmur Group A (Site 1)</th>
<th>Karya Hutan Group B (Site 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Decision Making</strong></td>
<td>Participatory and decentralised</td>
</tr>
<tr>
<td></td>
<td><strong>Regular meeting (on the big group these are every month and only executive board attended. In addition, each sub-group every two weeks and every member attended.</strong></td>
<td><strong>Regular meeting (on the big group is every month and only executive board attended. In addition, each sub-group every month and every member attended.</strong></td>
</tr>
<tr>
<td></td>
<td>Communication model tends to be a top down process</td>
<td>Communication model is more top down</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Protection System</strong></td>
<td>Initial vigilance</td>
</tr>
<tr>
<td></td>
<td>Voluntary active patrol</td>
<td>Voluntary active patrol</td>
</tr>
<tr>
<td></td>
<td>Establish patrol team/security section</td>
<td>Establish patrol team/security section</td>
</tr>
<tr>
<td></td>
<td>Invite independent estimator for estimating the wood and any forest product if they are stolen.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establish Group court</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td><strong>Perceived the Benefit</strong></td>
<td>Receive rights for 35 years</td>
</tr>
<tr>
<td></td>
<td>Plant any vegetables, fruits, corn and herbal plants</td>
<td>Plant any vegetables, fruits, corn and herbal plants</td>
</tr>
<tr>
<td></td>
<td>Receive tree seedling, and fertilizer</td>
<td>Receive tree seedling, and fertilizer</td>
</tr>
<tr>
<td></td>
<td>Receive capacity building from government, NGO’s</td>
<td>Receive capacity building from government, NGO’s</td>
</tr>
</tbody>
</table>
5.5. Conclusion

This chapter shows that the environment and social background of selected communities is important to understand how the local community is involved in this programme. According to Ostrom, the basic strategy to understand and develop local institutions is indentify those aspects of the physical, cultural and institutional setting that are likely to affect the determination and establishing the local institutions. Therefore, some key points can be found in this chapter such as, the forest state areas in GKR is the largest forest areas in Yogyakarta Special Province but it is located on land that is critical and disaster-prone. The boundary between state forest area and private areas is clear and firm so there is less conflict amongst stakeholders relating to land boundary. The farmers who join in CBFM mostly could not have their own land. In addition, the local community already established their local group and then used it to deal with the CBFM policy.

In terms of motive and interest, most of the farmers want to join in CBFM because they look for the forest’s revenue. Due to lack of land, the farmer participates and then they can get some more state land that they can utilise it for the long term. During the project, the farmers also are aware that they have to manage the forest resources in a sustainable way. They understand that their environment relies on the
forest quality so they attempt to manage it by following the government rule and NGOs or University’s suggestion.

In terms of strong and effective institutions, based on the findings, the institutions that come from local community initiatives and then are established by their own need will be run better than the local institutions that are initiated by external actors. Where the local farmer develops their own groups and they have own initiatives they can develop the institutions properly.

These findings also emphasise that local communities have capability to develop their institutions. They can establish institutional arrangements by collaboration in their formal and informal institution so it can help them to monitor and manage their resources. Each community has its own way to adapt their environment as well. They can develop the best practices on the development of institution arrangements that can monitor the rules that they set. However, this chapter has not elaborated on how the local communities deal with the shifting dynamic of CBFM policy. Therefore, this issue will be explained and exposed in the next chapter, which is Chapter six.
CHAPTER SIX
THE SHIFTING DYNAMICS OF CBFM POLICY IN INDONESIA

6.1. Introduction

Development of the sustainable CBFM will be influenced significantly by the policy governing CBFM. If the policy is enabling the stakeholders to utilise the forest resources in a proper way, it is likely that the forest resources will be preserved and sustained. In this case, policy is a rather broad term and refers to the various rules, regulations, ownership mechanisms and financial incentives that have been formed by the Indonesian Government in relation to CBFM. In this chapter, the first section describes the orientation or goals of its policies. The orientation of the government policy can be useful to indicate how and what the governmental will in this project is. Is the government keen on empowering the community, or reducing poverty or promoting forest sustainability, or is it aiming to do all of these?

The next section of this chapter elaborates the changing of CBFM policies at Central Government level and local level. By the middle 1990s, the Minister of Forest of Indonesia (MF) committed to creating a new forest management regime that is based on empowering the community. The first decree that was enacted by the MF is the decree no 622/KPTS/1995. This regulation gave a chance to communities to gain access to the state forest. However, the MF already ratified several regulations on the CBFM project. From 1995 to 2009, the MF revised the decree on the CBFM five times. On the other hand, the local governments at both provincial and district level also decided some regulations. As a result, the changing of CBFM policies and
synchronisation of its policies between the Central and local governments is important to understand (Sieniawski, 2011, Schulte and Sah, 2000). Moreover, the next section will explain any friction and divergence between Central government policy and local Government policy. It also will elaborate how those policies were implemented in the local community.

In addition, this changing of policy should also be dealt with by the communities who already participated in this process. In the other words, the clarity of the CBFM regulation should be followed by the communities. How do the communities manifest its policy on their implementation? Therefore, the following section elaborates the social and political basis of the communities. Understanding the contexts could help us to explain the communities running of the programme sustainably (Colchester, 1994, Taylor, 2012). In this section the strategies undertaken by the communities dealing with the policy will be portrayed.

6.2. The Shifting of CBFM Policies

Forest could be seen as a simple thing. Most people think that a forest just produces timber which can be sold to get money. Forest is not looked at as a complex thing. As a result, people who live in and near the forest are marginalised, and the biodiversity is slighted and in danger (Sepsiaji and Fuadi, 2004). These phenomena are common in Indonesia. In addition, there are several issues that relate to the forest resources in Indonesia, particularly in terms of forest management. Those variables are interacting and interrelating as a mutual process.
Firstly, the idea of share of benefit scheme is not being implemented properly. Share of benefit scheme means the forest should give profit not only to a privileged few but also to society as a whole. Many regions that have natural resources and contribute to national income only get small benefits compared with the central government (Moeliono et al., 2009). Besides, the existing forest management policy works with limited transparency and accountability. Unjust processes lead to many conflicts, not only between central and local government but also between government and communities (Sepsiaji and Fuadi, 2004). For example, the dispute in Aceh, Kalimantan and Papua, where those communities think that their resources have been exploited by central government but they have not got enough advantages from this. The resources are degraded, nearly damaged and the communities are still poor.

Secondly, the changing of development approach reveals a new paradigm from the top-down to bottom-up process, from state-based management to community-based management. As a result, forest management should be transformed from market need to society needs. Market and state forest management practices provide short-term economic gains. Many scholars argue that community forestry, on the other hand, can provide a range of holistic and long-term benefits for societies (Barr and CIFR, 2006). This approach could resolve the conflict of resources and management of resources and this approach is also sensitive to communities and sustainable mechanisms (Sepsiaji and Fuadi, 2004, Purnomo et al., 2005). Decentralisation policy on forest resources was raised as a breakthrough to resolve these problems. Decentralisation has several goals, such as to redistribute the resources, encourage the community’s participation, support the autonomy of the community and preserve the resources. The
decentralisation policy is not only about distributing the resources but also requires responsibility of each party or stake holder.

In conclusion, the CBFM can be established because there also are several social, political and environmental conditions leading to the projects. Firstly, the social aspect, the number of communities in poverty who live near the forest was so huge. In addition, illegal logging was happening on a large scale, the illegal activities being operated by people or industries. The illegal logs would be traded in both national and international markets. Unluckily, it was not executed by the communities near the forest; consequently they were still poor. Secondly, the political aspect; government policy was so unequally implemented. Industry could get a licence to occupy the forest area for a long term and over a huge area. However, the community could not access the forest, even near their area. The last one is the environmental aspect; degradation of the forest was massive. This is an indication that the government did not have enough resources to tackle and manage it.

As a result, in response to demand by NGOs, activists and political changes, central government created the CBFM policy. The government assumes that this programme can solve the above problems. The thinking appears to be that giving licences to communities to use forest resources can reduce poverty. The community can get benefit from the forest area near where they live. It also reduces conflict between community, state and industry. Government attempts to be fair in their forest policy. They give the community responsibility to manage the forest sustainably. At the same time, the degraded forest areas will be restored and then conserved in a sustainable way.
In Indonesia actually, forest resources policy relies on the centralised approach but demands a decentralised approach. Forest resources management was implemented to produce profits for the Indonesian government during the New Order regime, Suharto era. However, this policy produced problems such as deforestation, poor community and unsustainable forest. Therefore, a decentralised approach has been introduced as a solution, mainly in the post-Suharto Era, called the Reformation Order Era. Relating to the above background, the shifting of CBFM policy implementation is explained on two levels: central government policy and local government policy.

6.2.1. Central Government Policy

6.2.1.1. The Minister of Forestry Decree no 622/1995

Any discussion of the CBFM policy should quote the history of this policy and mainly refer to central government policy on it. According to the 1945 Indonesian Constitution and Basic of Agrarian Law (BAL) 1960, (discussed in the chapter three), if we want to analyse forest management in Indonesia, it should be pointed out that the Minister of Forestry (MF) is the main actor. State can use, manage and utilise the resources because the state has the rights to control and utilise the earth, water, and airspace, including any resources on it (Government, 2000). In this context, the positioning and policy of the Ministry of Forestry as the state’s representative must be understood clearly.

Therefore, CBFM Policy was initiated as a national project in 1995 by Mr Djamaludin Suryohadikusumo. He enacted the Ministerial Decree no.622/KPTS-II/1995.
According to this decree, the community has limited rights for using and accessing the forest. Even if they have a licence, it should be in degraded forest areas, and they cannot take the timber. The central government claimed that this policy is a model of development of community-based forest management and can rehabilitate the degraded forest.

There are several terms used in this decree, such as CBFM, Forest Areas, The Participant, Rights and Responsibility. The following is quoted from Article 1. “CBFM policy is a system of forest management collaborated with the local communities and the area is implemented only in those areas that set up into this project.” Consequently, the community cannot propose any forest areas near to them. They just get the forest areas that have been allocated by the central government. Since Article 3, allocated CBFM areas can be implemented in a forest conservation area that is degraded forest.

Relating to the above Article, the community is only like a forest security officer and also they gain less income from the forest because the community only gets rights for using degraded forest; they could plant trees on it, manage the forest and preserve the forest sustainably. Therefore, the community should spend many of the resources they have. This is an example of the phenomenon, when the government does not have enough resources, and they think the forest is profitless then they give it to the community. The government wants the community to perceive them as a good government (Interview-Activist, 2012). In addition, Article 3 also mentions that the community should plan and revitalize the forest. It seems the kindest of governments, but it is really a trap to the community. The farmers spend their resources but they
cannot gain adequate benefit (Interview-Activist, 2012). In this situation, the government gets much more benefit compared to the communities.

Article 6 point 1 stipulates, “The participant of CBFM can be individual, group or cooperative.

Point 2, Appointment of individual, group or cooperation designed by the chairmen of Provincial forest Biro and proposed by the chairmen of District forest biro which are recommended by Formal Village leader.

Point 3, the agreement of both parties appointed by the director general of reforestation and land rehabilitation.”

Based on the above Article, the participant of CBFM is a local community may be an individual or group who live near the forest and they can be involved in this project voluntarily. However, in terms of involvement of the community, the community is an invited party and cannot actively join in this project. Even if the community actively want to join in the programme they need many agreements from other parties. Many people would like to join this opportunity but the local government could not give any response properly (Interview-Activist, 2012). It means that the community is less able to participate and more marginalised. Their position is not strong enough compared with the government’s because only an invited and selected community can participate and get access to this project.

Article 9: “The communities that are eligible for Community-based Forestry activities pick up and take advantage of non-timber forest products in the work area as determined in the agreement and based on the collection of the license published by the forestry authorities.”
In addition, in terms of the benefits of the project, it is clear that the community only gets non timber revenue. In this project, the community can get anything except the timber. For example, the community can plant crops, corns, cassava, etc. Mostly the participating community plant some vegetables in between the trees as long as it has short term crops. Actually, the farmers think that this is not enough to help the community’s needs (Interview-Farmer, 2012).

According to articles 6 and 9, it seems that the policy tends to be top-down and less participatory because it does not involve the participation of Communities. An example of this is in the article page, where people are not able to determine the most productive crop for themselves, but it is determined by government they must plant the most productive crop for the government’s needs, even though the chosen plant may not be suitable, not only for the community but also for the land environment. As a result, the crops do not grow and mostly fail. The communities cannot actively plan any planting.

As regards responsibility, Article 11 is clear that the community should do several things. First, they have to make a management plan actively. Secondly, the community has to secure both in the forest area and outer forest area. They are also required to plant many trees in the degraded area and make sure the trees grow in their allocated site. The community also should keep the forest from burning and prevent illegal activities. On the other hand, the government, both central and local government, have several tasks also. The government should facilitate and support the community in order to implement the CBFM sustainability. For example, they give training to the
community on how to maintain and manage the forest in a sustainable way. The government also gives the community freedom on how to establish their group properly.

As the first policy on CBM, this Decree does not state clearly how long the community’s access to the forest is. The participant community, as a result, only plant short term crops. Even if they want to plant trees, they do it as a second option. The Decree also does not give any details about terminating procedures and issuing the licences. The Decree does not regulate under which conditions the participants can lose their licence and how the Governor evaluates the participants.

In conclusion, this decree could be noted as a breakthrough in the forest policy in Indonesia. The first project gives the local community access to the state forest area. The community can participate and be involved in the project although not actively involved. Secondly, this is an alternative action to conserving and rehabilitating the forest; at the same time it can distribute the forest resources. However, there are several points related to this decree. Regarding the forest sustainability, the ideas for involving the community in reforestation should be noted. Government does not spend lots of resources yet the degraded forest will be improved. In terms of open access to the community, this project supports the community’s participation and involvement. At least, the community can have a chance to get revenue from the state forest area near to them.

6.2.1.2. The Minister of Forestry Decree no 677/1998

The Suharto regime ended in May 1998. An authoritarian government was pushed to be transformed as a democratic government. This change meant that
government policy should be community oriented rather than private or state oriented. It also happened in the Ministry of Forestry of Indonesia (MF). This Department should enact policies in line with this idea. Political changes drove to the altering of CBFM policy also. As a result, Dr. Ir Muslimin Nasution, Minister of Forestry, legalised a new Decree, Decree no. 677 to amend Decree no. 622/1995.

There are substantial changes from Decree no. 622 to Decree no. 677. The changes give the community more opportunities to use forest resources sustainably. Firstly, it is about forest allocating. According to Article 4, CBFM areas are allocated not only in production forest areas, but also in protected forest areas and certain areas within conservation forest zones. It is an opportunity for communities to get access to more state forest areas. In addition, in degraded conservation forests reforestation activities can be implemented.

Secondly, the management period of the forest is clarified: the community can get a licence to use the forest areas for 35 years. Article 5 states that the concession of the community to get forest access in CBFM is 35 years. This policy gives benefit to the community and also to the forest resources sustainability. The community has legal certainty so they need not worry about their rights or their investment. They can plant and then get their crops for as long as 35 years. As a result, it is in a better condition to encourage the community to manage their forest in a sustainable way. If the community succeeds in those periods, they can benefit and the forest can be sustainable.

Thirdly, regarding participation and openness, communities should create a CBFM master Plan that guides on forest management and commercial utilisation of forest. The Master plan should be developed by communities in collaboration with
NGOs and Universities. It is a good idea to encourage the community’s participation and recognise that forest suitability is a concern to many stake-holders.

Fourthly, for the encouragement of local community, the Decree no 677/1998 defines the term, local community. The local community is a group of people who live in the forest or around the forest. They can be involved in the CBFM and then they have to have a characteristic as a community, such as sharing of values, similarity of livelihood and historical background. The Decree is quite clear that any participation is not on an individual basis or any other groups; it relies on the local community.

Fifthly, cooperative and right of commercial forest resources, the participants in CBFM should establish a cooperative and then they have the right to utilise the forest. In terms of right to commercial utilisation of Forest, it can be interpreted as the right to utilise the state forest based on the forest sustainability and sustainable business (Safitri, 2010). According to this Decree, the Community can plant, harvest, cut, process and sell the forest products, and not only the temporary crops but also the trees. It means the CBFM licence holder is no different to a small or medium logging enterprise. This is a step forward from Decree no 622/1995.

Sixthly, an idea of ecotourism is raised, with the government suggesting that the forest has not only potential economical benefit based on timber and non-timber products, but also potential for ecological revenue. Communities have been persuaded to develop their forest as tourism destinations. Government states that if the forest can be maintained in a sustainable way and forest conservation is preserved, the communities can get many benefits from it.
6.2.1.3. The Minister of Forestry Decree No 31/2001

Three year later, following the Law no. 31/1999 on Forest Legislation and the Law no. 22/1999 on Regional Government, the Ministry of Forestry enacted Ministerial Decree no. 31/1999. Mr Nur Mahmudi Ismail said that the decree adapted the legislation to incorporate stakeholders’ suggestions on CBFM implementation (Sepsiaji and Fuadi, 2004). Therefore, the next section will explain a number of significant issues.

Decree no. 31/2001 gives local governments the authority to implement the CBFM programme. This is a way to decentralise power and authority from Central government to Local government. Regency as a representative of local government can actively encourage and choose the local community to be involved in this project. As a result, a Regent can grant a licence to a local community to implement CBFM. In this sense, the Regent has rights to empower the local community, to grant a share of the benefit of forest resources and make sure of the forest’s sustainability. Even though a Regent has these rights, they have to follow the basic principles of the CBFM project.

Other significant changes of this decree are: first of all, the allocated state forest for CBFM is only production and protection forest areas so it cannot be implemented in conservation forest areas. Secondly, the community is granted a licence after the MF has stipulated the CBFM areas, based on an inventory by the Regency Governments. Lastly, the duration of the licence is decreased from 35 years to 25 years and the community should prepare their master plan before definitely obtaining their full licence (Safitri, 2010).

However, there are some criticisms of this decree. Firstly, the uncertainty principle; there are two types of licences, which are temporary and long term licence. In
the first step, the community in a working group get a short-term licence (from three to five years). In this preparation stage, the community would be evaluated and then they gain long-term licence if they can establish community cooperatives. Decree No. 31/2001 states that only the cooperative can get a long-term licence. This situation reveals insecurities and uncertainties. This policy is open to questions, such as can the temporary license to be extended? How long is the process of gaining the long-term license?

A second criticism is about the position and responsibility of the Regent. A Regent can award a license to a community but they have to follow the recommendation from the monitoring team and the central government. The monitoring team, established by Central, Provincial and Regency government, evaluate and investigate the community implementing CBFM. It seems that Regency Government only has rights but it has less authority.

6.2.1.4. The Minister of Forestry Regulation no 37/2007 and 18/2009

Due to the unstable relationship between Central and Local Government and conflict of interest among CBFM stakeholders, the Minister of Forestry, Dr M.S Kaban, replaced Decree no. 31/2001 by Regulation No. 39/2007 and Regulation No. 18/2009. The regulation launches several new terms, such as business license for utilisation of CBFM-Ijin Usaha Pemanfaatan Hutan Kemasaratan (IUPKHM) and business license for timber utilisation of CBFM-Ijin Usaha Pemanfaatan Hasil Hutan Kayu dalam Hutan Kemasarakan (IUPHH HKm). According to Article 1, IUPHKM is a community’s rights to get access to and then utilise forest resources in protection state-forest and
production state-forest areas. In addition, IUPHH HKm is a business license for timber utilisation in production state-forest areas only.

It is clarified by Regulation No. 18/2009 that the community forest cannot take any timber in protection state-forest areas but they can get it in production state-forest areas. If the license holder wants to utilise the forest resources, they have to do it in their allocated areas. Article 7 states that a forest area can be allocated as CBFM if the area is not held by other parties and the area is useful for local community. If the local community want to join in the programme they have to submit a proposal to their Governor if that area is located in a different Regency or to their Regent if that area is located in their specific regency. The proposal should be authorised by a Village leader and includes the forest area plan. The Governor or Regent then will send it to the Forest Minister after the documents are verified by a team. The team is established by the Governor or Regency. One member of the team is the Provincial and Regency Agency who can be accompanied by NGO activists, researcher and University.

Regulation No. 37/2007 is also different to the previous Decree. In this regulation, there is only one licence, which is a long-term licence, so there is not a temporary and long-term licence. The user group can obtain 35 years and it can be extended. However, the licence will be evaluated once every five years by the Governor or Regent. Three years prior to the permit expiring, the Group should apply to the Governor or Regent for an extension. The Governor or Regent can terminate the contract if the group does not meet with the terms and conditions (for example, if the community does not provide a master plan or the forest is degraded).
Moreover, Regulation No. 18/2009 clarifies two things: the submission procedure of CBFM and the licence holders’ rights, IUPHKm holders, who work in protection state-forest and Production state-forest. In terms of the procedure, it seems that Central Government wants to get back their power again from Local Government. Article 1 is clear that any verification team should be from the Forestry Minister and it cannot be from Provincial or Regional Offices. In terms of the licence holders rights (especially implementation of IUPKHKm), the licence holders can get facilitation, can do environmental services, get non-timber forest revenue but they cannot get forest revenue, especially timber production in protected state-forest areas, but they can gain timber in a production state-forest area. In addition, the licence holders, getting IUPHKm licence and working in forest production areas, can gain timber forest revenue.

6.2.2. Local Government Policy

At the introduction of the implementation of CBFM in Indonesia, 13 (thirteen) regencies were chosen to implement it. One of them is located in Yogyakarta Special province. The establishment of CBFM areas in Yogyakarta was declared by the Minister of Forestry by Ministerial Decree No. 252/2002. According to this Decree, the Forest minister gives the rights to the Governor to grant a temporary licence to the local community. Actually, there are two regencies implementing the policy, which are Gunung Kidul regency and Kulon Progo regency. In Gunung kidul regency, there are 35 (thirty-five) Local community groups and then In Kulon Progo regency, there are 7 (seven) Local community groups involved in CBFM projects in their area.
According to Provincial Decree no. 188.4/3710/2003, the scale of state forest is 18,044,967 ha, around 5.6 percent of the Yogyakarta area. In addition, the provincial government reserved 4,186,4 ha in GKR and 203 ha in GK to be used for CBFM project. Those reserved forest area also was verdict by Ministerial Decree no 252/2002. GKR has been selected because its area is 46 percent of Yogyakarta province. As a result, to implement this Decree and to accommodate the aspiration of local community, the Gunung Kidul Regent published the Regent Decree no 213/2002. The Regent gave the temporary licence to 35 (thirty five) Local community groups to implement CBFM project in their area.

There are several conditions that govern areas selected for CBFM project. First, the forest area is used and managed by local communities. Second, the communities can benefit from the forest by both direct revenue, such as woods and non timber, and indirect revenue, such as air and water. Third, the forest area is claimed by the local community. Fourth, the local communities have already proposed to get a business license for utilization of CBFM-Ijin Usaha Pemanfaatan Hutan Kemasyarakatan (IUPKHam). Fifth, those forest areas are obliged to raise any economical, social and political problems, such as illegal logging, fire forest, and conflict of interest.

The Regent Decree no. 213/2002 states a local community can join in the CBFM in a group as long as the group is legalised or in the form of a cooperative. The community should be legalised because it could be easier for the authority to control and manage them (Interview-University, 2012). This programme is transferring the resources and also the responsibility from state to community so it makes sense that the local government requires those conditions. In a case where the community cannot
meet with government requirements; the government can withdraw the temporary licence. However, the community can get the long term licence if they meet with requirements.

Article 4 of Regent Decree no. 213/2002 declares that a community can get facilitation and mentoring from the regency. Consequently, the local government give to the communities some support. For example, the communities get training for institutional capacity building. In this training, the participants learn how to develop their organisation and be well-managed. The communities also even get funds and plants seedlings. Even it was not enough, the communities get many benefits from it.

The crucial problems arise when the temporary licence nearly expires and there is no regulation to extend it. The local communities and many stake holders demand that the local government solve this situation. As a result, the Provincial Government made a recommendation letter to GKR for giving the long term licence to 35 groups. The recommendation can be found as the Decree no. 522/4245/2007. Based on this regulation, Gunung Kidul regency announced the Regent Decree no. 233/2007 and this decree also replaced the Regent Decree no. 213/2002.

This decree is a solution of the legal vacuum of the CBFM implementation. According to this decree, 35 (thirty-five) selected groups get a long term licence for 35 years. The communities will be monitored every 5 years. The main point of this policy is about term and conditions. The local community cannot transfer and sell the licence. If they do, they will lose the licence and also can be prosecuted. This condition should be followed by them because the government just want to make sure that the state-forest area will be used by the right person and can support community development.
6.3. Friction and Tension Between Centre and Local Government

CBFM has been published as an opportunity for the community to get access to forest resources. This policy also gives a chance to encourage local communities to use forest resources in a sustainable way and then this project also wants to support local initiatives and participation. The problem of deforestation also is main concern and reason why this programme is important. The amount of deforestation in Gunung Kidul in 1997 was quite huge and critical (Rahman and Fuadi, 2004). Local participation should solve the problem and it can be immersed by the CBFM project.

The number of state forest areas in Gunung Kidul Regency is around 13,755 ha and nearly 40 percent is degraded and this situation can become worse (Rahman and Fuadi, 2004). As a win-win solution, CBFM can reduce forest degradation and improve the quality of life of the local community. Rahman and Septiaji claim that forest degradation arises because of several factors (Sepiaji and Fuadi, 2004, Rahman and Fuadi, 2004). Those factors are linked and sometimes depend on each other and can be direct and indirect factors. For example, the direct factor which is the local community activities. The community that live near or far from the forest area just do illegal logging. On the other hand, an indirect factor is the industrial activity. The Industry and market support the logging, either legal or illegal.

In 1997, the extent of deforestation in the state forest area in Gunung Kidul was massive because the political situation of Indonesian politics was unstable. The government had no power and so law enforcement was weak. Before 1997, the deforestation existed but it was smaller than in 1997 and also it was gradual. When the
logging activity grew so massive, rehabilitation and reforestation was less. Therefore, it led to the forest being degraded still faster.

In 2007, there was an economic crisis in Indonesia, where the currency exchange between Indonesia and dollar was so big. This situation made many exporters got immense profit. One of these exporters was the furniture industry. The economic crisis prompted local communities to cut the trees and sell them to the furniture industry for a good price. Because the exporters wanted to get many benefits from the exchange rate and open new markets, both in Europe and America, they needed more timber. They never questioned if it was legal or illegal wood or if it came from the private or state-forest area. Gunung Kidul was one of the sources of timber supporting the furniture industry at that time.

This situation also was compounded by the social and economical society in Gunung Kidul. The majority of the local community was so poor and the economic crisis made everything change dramatically. They could not afford to buy their needs. As a consequence, they became involved in illegal logging. They did this as a short cut to solve their problems and meet their needs. It was a kind of mixture between intentions and chance. When they needed something they resorted to even illegal means, and at the time there was less of law enforcement.

“The rate of Deforestation in Gunung Kidul was so high due to economic crisis and illegal activities. In 1997-1998, Indonesia got economic crisis and the people could not effort their basic needs so many of them went to the state forest areas and felled down the trees massively.” (Interview-Activist,2012)
The degradation of forest was really a big problem in Gunung Kidul, because the demand was so big and the supply for legal logging was so small. Besides, the industry was not aware of the source of the timber. Luckily, the quality of Gunung Kidul timber is very good and it made Gunung Kidul a main resource for the furniture industry. For example, Gunung Kidul produced 60,000 m³ logs every year (Sepsiaji and Fuadi, 2004). However, the data was criticised and it may be not accurate. The data could not count the amount of timber for illegal activity. Therefore, the amount of timber production from Gunung Kidul could be more than that. The point is the logging activity should be aware of sustainable forestry. When the demand is so high and the supply is so small, it should consider how to plant trees and measure that the amount cut and planted is equal.

Many of logs were already sent from Gunung Kidul to industry. It led to private forest and state forest being degraded and needing to be managed. At the same time, the local community was so poor and they were aware that timber was priceless (Interview-University, 2012). These contexts really needed to be solved. CBFM policy, therefore, was created by central government to answer those phenomena. The policy aimed to improve the social, economical problem, reduce forest degradation and also give support to forest sustainability. In Gunung Kidul, this policy was an appropriate way to decentralise the forest resource management and support local participation on forest management also. The local community could get benefit from the forest resources whilst local government could get income from the tax and commission of that activity.

However, the implementation of this policy did not work smoothly. The first problem was about site allocation for this project. According to the Minister of Forestry
Decree no. 622/1995 and 677/1998, Gunung Kidul Regency investigated, indentified and then made an inventory of the state forest area that would be allocated for CBFM. As a result, there were around 4,186 ha state-forest area that would be planned as CBFM area (Agency, 2009). However, those areas had been not signed by Central government. This situation caused participant community to fear for their project’s sustainability. The authority was in central government and local government could not decide it.

“Actually, local government wanted to support this programme but we had not got enough resources and we constrained the existing rules. The central government policy was clear that they are the main authority to give any licence to the local communities. We could not break these rules as we are just local government level.” (Interview-Regency Officer, 2012)

CBFM forum region Yogyakarta¹, called FKKM-(Forum Komunikasi Pengembangan Hutan Kemasyarakatan Wilayah Yogyakarta-Yogyakarta CBFM Communication Forum), that forum established by NGO, local community, University, communicated with the representative of the Minister of Forestry in Yogyakarta. They argued that the local community needs legal security. As a result, in 2000, there were only 3 (three) local community groups which got a temporary licence (Interview-Activist, 2012). Furthermore, CBFM Forum conducted research to analyse what the CBFM problem in Gunung Kidul is, what the solutions are and what the recommendation is. Based on their study, they held a public hearing and invited many stake holders on 25 October 2001 (Interview-Activist, 2012). After that CBFM Forum initiated a multi-stakeholders dialog on 10 November 2001. There were several conclusions to this

¹ CBFM Forum will be explained later in the chapter seven about the stake holder and their relationship in CBFM.
discussion. First, the forum agreed to advocate for the local community to get the licence. Second, the Forum wanted to organise local community groups. Third, the Forum should organise a public hearing at Yogyakarta House of Representative and invited Local house representatives and other stakeholders (Interview-Activist, 2012).

A public hearing was held on 11 December 2001. This meeting recommended that forestry and plantation office of Yogyakarta Province should consult the Governor, Sri Sultan. At the same time, the office sent a letter to the Minister of Forestry in Jakarta to enact allocated state forest as CBFM area (Interview-Activist and Regency officer, 2012). Finally, the minister of Forestry announced the verdict no. 252/2002 that gave authority to the Governor to grant a temporary licence through the Gunung Kidul Regency. Based on that verdict, the forestry and plantation office of Yogyakarta Province re-registered local community groups and the local community groups were required to propose a new application. The office therefore, decided that there were 35 (thirty five) groups that met with the administration requirements and recommended these to get the licence.

On 14 June 2003 the Regent of Gunung Kidul enacted Decree no. 213/2003. Following with the forestry and plantation office of Yogyakarta Province recommendation, the Regent gave a temporary licence to 35 thirty five groups. This is one of the areas of friction in policy between Central and local government. According to the central government policy, the licence can be for thirty five years but the local government just gave 5 years as a temporary licence. Second, the Regent Decree said that local community can get a licence if they are in a group and the group has been legalised or is a cooperative. This was quite different with the Minister of Forestry
Decree no. 31/2001. The Ministerial Decree said that local community can get a licence only if they are in a cooperative.

During the interviews, another crucial problem rose about the dividend or share of forest resources. The regency decree managed several points. First, all of intercropping product is for the benefit of the farmer. Second, the timber would be arranged in the following way; if the plants come from the farmer, the government will get 40 percent of the product. If the seedlings and also the community get funds from Government - either Central of Local Government, the farmer will get 50 percent and the rest to the Government. If the seedling and funds are 100 (hundred) percent from either Central of Local Government, the farmer will get 25 percent and the rest for the Local Government. All of those conditions will be applied for after tax. Actually, this policy did not match with the Ministerial Decree. As a result, that policy was criticised by Local groups, NGOs activists and University. They argued that CBFM is an opportunity for developing the local community and it cannot be used as an income generator for Government. Farmers spent their best resources to implement this project so they have to get the best result.

Furthermore, many stakeholders suggested a draft Regulation of Gunung Kidul Regency. The draft clarified some points. First, all of the intercrops and non timber production is for farmers. Second, all of the timber from the CBFM programme will be taxed by 10 (ten) percent provision tax. If the CBFM programme gets any support from Government (either Central or Local), the government will obtain 20 (twenty) percent and the rest is for the farmers. All of the Government benefit will be counted as local government income (Interview-Activist, 2012).
On the emergence of the forestry and plantation office of Yogyakarta Province a recommendation for a mutual understanding among stakeholders in Yogyakarta was made. However, it did not work properly. For example, the Provincial Officer did not support the programme because they thought it should be Regency’s responsibility. At this situation, there were conflicts between Provincial and Regency Government. In addition, there was The Law no. 22/1999 about Local Government and decentralisation. However, the derivatives of that Law did not say clearly that Central Government distributed and gave an authority to Regency in relation to managing Natural Resources and Forest Resources. This situation meant Gunung Kidul Regency could not make progress in CBFM implementation.

Gunung Kidul Regency wanted to support local initiatives and give more chances to local communities participating CBFM. However, it did not match with the Provincial regulation. They always proposed that state-forest should be based on local initiative and involved in local activities but the Yogyakarta Province Officers did not support this. Provincial Government insisted that state-forest areas in Yogyakarta are in their control. The implication of this situation was the Regent did not respond the local proposal properly and It made the local communities so demanding.

This situation became worse when the Central Government made a new Law, no. 32/2005 to replace Law no. 22/1999 about the Local Government and Decentralisation (Tunggal, 2011). When the new Law has been got the derivative regulations for implementing it, this made vacuum of law on CBFM in Gunung Kidul. Actually, there was the Government Regulation no. 34/2002 that regulated t Forest resources management and Forest resources planning (Tunggal, 2011). According to
this Regulation, the Regent and Mayor, under the Governor and the Minister, have the right to manage their forest resources and can give a licence to the local community. Besides, the Governor can give a licence if the CBFM areas are located between two or more Regencies or cities. However, this regulation was less socialised.

6.4. Institutionalisation of the Government Policy into Local Communities

The above portrayed the complexity of CBFM policies that have been implemented at the local level. The first crucial issue is the political will and consistency of the Central government. The CBFM policy was introduced in 1995 by the MF. It was a policy to involve the local community to reforesting degraded state forest areas. However, the policy has been changed nearly seven times and many related policies have been enhanced also. Due to the lack of consistency of the Central Government, the Central government managed the implementation of this programme improperly.

A second significant issue is the dynamics of politics, power and conflict within local government and Central government. These situations could happen because the government failed in the governing of decentralisation of forest resources. The government should manage and regulate the stakeholders’ interests, values, ideas and preferences. The government itself is not homogenous and synchronised with others. The Central government has its own interests and which differ with the local government. Consequently, both of those significant issues lead to the Central government, local government and especially the participant local communities having many problems.
The next section will attempt to describe how the selected local communities implement, negotiate and handle those situations. Therefore, institutionalising the CBFM policy will be an appropriate way to illustrate how the local communities dealt with the shifting of CBFM policy. Institutionalised refers to the way a new authority or policy to coordinate the individual decisions and regulate their implementation was put in place within delimited space (Platteau and Abraham, 2002). The interpretation and implementation of the policy will be redefined in the course of daily practice so it is clear that analysing the processes should be looked at through the local community activities.

In order to do this, the implementation of CBFM in the selected communities will be divided into three parts. These parts are relating to the period and remarkable process that the local communities have been doing from the earliest period to the current period. These periods were analysed by the licence that local community groups hold (the type of licences explained in chapter 4). The first one is when the local communities wished to be involved in the programme and they had not yet obtained the licence from the Central or Local government. The second period is the phase when the local communities receive a temporary licence from the Central or Local Government and the last period is the contemporary period when the selected communities hold a long term licence from the Central or Local government to use and utilise the state forest areas. Those periods intend to demonstrate that the local communities struggle to deal with the shifting dynamics of policy but they can negotiate and succeed in that situation.
6.4.1 Accessing the Forest in the Unlicensed Period

The farmers who were involved in the CBFM in early period, were local communities joining in clearing and logging activities in State forest areas. They were recruited by plantation and forestry agency (PFA) and their profession is called *Blandong* means logger or lumberjack. Some farmers were not loggers but they were recruited by the PFA for joining the social forestry programme. Based on this programme, every farmer can get an access to the forest state areas for intercropping activities. For example, in the case of the Sedyo Makmur Community Group (SMCG), the farmers joined a clearing and logging programme, which is every three year. The farmer then participated in planting the threes and crops.

“In 1985, many farmers joined in the reforesting programme that held by the Plantation and Forestry Agency. Every three year they cut the threes down so there are some available areas for planting and using to my communities. These activities are moving from one place to other places.” (Interview-Farmer, 2012)

In Indonesia contexts, due to the political changing in Indonesia around 1997-1998, the state was less legitimate and there was no law and order (Tohari et al., 2011). Many people came into the State forest areas and they felled the trees on a large scale. Therefore, in GKR contexts, the forest state areas were greatly damaged and degraded. The Land-degrading patterns of agricultural development are often taken to be endorsed by adverse economic conditions (e.g. poverty) and malfunctioning institutions, such as tenure insecurity or open access to land without restraints on its uses (Tanguilig and Tanguilig, 2009). However, the local government unit could not succeed in overcoming constraints such as: lack of budget, manpower, technical skills, and poor
community involvement (Interview-Activist, 2012). This situation led to local community’s being concerned. When the state forest area near their village degraded, they could face problems. For example, in the raining season, there could be flooding and landslide and then in the dry season their well would dry out. As a result, those people who were lumberjacks took initiative in managing the degraded state forest areas near to their village.

Legally CBFM was established by the Ministerial Decree no. 622 1995 and it was also implemented in Gunung Kidul Regency. In the contexts of Sedyo Makmur Community Group (SMCG), before the CBFM there were around 100 farmers involved in this programme and then they just managed and used around 20 ha state forest area. After the policy was enacted, the group members became 254 as they recruited more members and it had was more openness than before. In addition, they also got more managed land. They could manage the state forest areas to around 115 ha. Most of them are farmers who own less than 0.1 ha of land.

“The first time, I joined in this programme because I do not have enough resources. My land is around 1,000 m2. When the government established this policy I want to get benefit on this programme for my family.” (Interview-Farmer, 2012).

In the contexts of Karya Hutan Community Group (KHCG), the farmers involved in this project number around 19 people. This group was established in 1995 and has a goal to bring reforestation to degraded forest near their village. Currently, the group members are 185 and they manage around 40 ha state forest area. It seems that SMCG was founded longer than KHCG and has managed more state-forest area.
This research found there are several key points on the initiation period of CBFM implementation. Firstly, farmers who took on the programme were lumberjacks and they have got a relationship with the plantation and forestry agency. Most of them live near the state forest areas that were degraded due to legal and illegal logging activities. In other words, the land was managed by individuals who have contact with the Governmental officer and the lumberjack. Secondly, the forest was maintained only to seek a profit so the farmers did not pay attention to forest sustainability. The forest management was executed merely incidental. Thirdly, there was not a structured group of farmers. There was a group of CBFM farmers but it was not well-managed and less organised. The group has some members and it was led by a single person as the leader. Fourthly, due to kinship phenomena, the farmers involved in this programme were only a few people and then the group was managed less transparently and less participatively.

6.4.2 Struggling with the Forest Ownership Rights and Entitlement to the Land in the Temporary Licensed Period.

In 1999, there were NGOS and a University coming to GKR. They wanted to empower local communities through CBFM policy in line with the Ministerial Decree No. 3132001. According to this law, the CBFM has goals for empowerment of forest communities in forest management and forest conservation where this programme should consider the forest’s function. To achieve these goals, this programme is opened for participation to many stakeholders such as NGO and University as long as they are in support of accomplishing those goals.
“My institutions support this programme because it is an appropriate way to give a chance to local community for gaining an access to state forest. If they can succeed it, the state probably will be giving more to the local communities. Therefore, we have to support and maintain the local communities’ practices.” (Interview-Activist, 2012)

There were some preparation and facilitation that local communities had been advised on by NGOs and University such as, establishing regular group meetings, preparing the proposals for the local and central government, developing internal rules and institutional arrangements, and preparing the proposed land areas. At the end of 1999, the local communities, helped by the NGOs and University, submitted the proposal to GKR. They wanted to get a temporary licence. As a result, on the basis of the proposal of the local communities, the Regent of Gunung Kidul gave a temporary licence to the local community. According to the Regency Decree no. 213 2001, the community could then use and utilise the allocated state forest areas for 5 years. The Regency Decree also stated that the allocated state forest areas for CBFM is 1087.45 ha and is distributed for 35 (thirty five) farmer groups.

In the history of implementation of CBFM, there were no records of the local communities who could get the long term licence. Many CBFM areas were allocated but local communities failed to meet with the government requirements. There are several obstacles preventing the local communities from achieving it. For example, the CBFM policy and the policy relating with the CBFM have been always changing so there is no criteria and indicators to get the long term licence that has been published to the local communities. As a result, there are several activities that the local communities should
be doing such as consolidation of the allocated forest areas, institutional strengthening group, and raising local stakeholders support (Wiyono and Santoso, 2009).

The consolidation of allocated forest areas relates to the arrangement of the work areas per group and per person, completion of planting for vacant land, plant maintenance actions and developing monitoring systems. CBFM has a goal that 100 percent land should be planted but there is no vacant land as the CBFM areas are covered by teak trees. Besides, institutional strengthening group had been prepared for gaining the long term license. NGOs, University and local government afforded facilitation, mentoring and workshops to local communities. In this event, they did some activities such as strengthening of the organization, administration and financial structuring, internalisation of internal rules and making plans for management. Raising local stakeholders support means that the farmer group activities should attempt to get endorsement from local government such as Province, Regency and from the media.

“Local communities really need more support from many stakeholders. It is not just money or funds but the most important thing is skill, and technical help on developing the organisation.” (Interview-Government Officer, 2012)

During the temporary license period there were some major achievements by the local communities and supported stakeholders in this programme. Firstly, in terms of environment, around 80 per cent of the forest land has been already planted and before the area was degraded and there were no trees. It is a significant progress from the degraded areas to green areas (Interview-Activist, 2012). Most of the land was covered by teak trees and it was really difficult to get intercropping areas. Secondly, in terms of institutional condition, the farmer groups are well managed and have good
administration and procedures. They already developed their internal mechanisms and monitoring systems. Thirdly, in relation to raising the stakeholders support, there are different levels of support, such as in the village level where the village government established a policy to regulate the rights and obligations of CBFM farmers and on CBFM farmers; in the District level where the district facilitate some CBFM groups to communicate and share information with each other in the same district; in Regency and Province level where multi stakeholders work together and collaborate to achieve the CBFM’s goals and strengthen the local communities.

6.4.3 Managing the Forest Sustainability in the Long Term Licensed Period

The critical problem arose when the temporary licence had nearly expired but local communities had not yet received the long-term licence. In the site contexts, local communities had got the temporary licence for 5 year and the licence was nearly expiring. However, they have not got any monitoring activities for the government. Therefore, they could not get the long-term licence. In other words, in the local communities there was anxiety about the sustainability of this programme and also they had already spent lots of resources on managing the land. If they just got the temporary licence, they would lose their resources, especially the trees. At the same time, the MF enacted a new Ministerial Decree no. 37 2007. According to this decree, a community who wants to get a long term licence should be monitored and evaluated by the MF. Therefore, NGOs, University and local government helped the local communities to prepare this monitoring process. As a result, in December 2007, the Ministry of Forestry

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2 The detail about stakeholder activities and stakeholder relationship for supporting the CBFM will be explained in the next chapter (Chapter seven).
and the Gunung Kidul Regent gave the long-term licence to the local communities. In Gunung Kidul regency, there are 35 groups who were granted this licence so they can use and utilise state-forest by implementing the CBFM for 35 (thirty five) years. Moreover, this research also found several concerns relating to the performance of the local community institutions.

In terms of inclusivity of organisation, inclusivity is explained by some approaches that are used to describe the data. First of all, it can be asked, is this organisation open or closed? An open organisation is one that makes it easy to become a member and a closed-organisation is one that is not easy to interact with or become a new member. Secondly, is it a bureaucratic procedural or flexible organisation? The bureaucratic organisation refers to one that involves a lot of complicated, official rules and processes whereas flexible refers to an organisation which can adapt its environment and change its rule to synchronise with its environment (Anderson, 1999, Moffat, 2003). Relating to this belief, both of the selected groups are open organisations and it is easy to participate. For example, Karya Hutan Community Group (KMCG) membership increased from 19 to 185 people. It does not care about gender, race, and social political background of the stakeholders.

In terms of participation issues, the participants who engage with the project have different backgrounds and identities. As a member commented, “Women are as welcome to get involved in this group as men” (Interview-Farmer, 2012). For example, during the observation, I joined the meeting and there were women who participated actively in the meeting. Besides, there are no fees, no requirements but few procedures if anyone wants to become a member of the groups. In other words, the participants just
pay with their commitment to join (Interview-Farmer, 2012). As a result, members are so diverse and heterogeneous. Currently, it seems that this project’s philosophy is to be open-minded and concerned about participation issues.

In terms of flexible and adaptable organisation, both of the groups are also flexible and adaptable organisations. This is not only because it is a new organisation but also due to the commitment of their stakeholders. The stakeholders understand the consequence of being a voluntary organisation. The volunteers should adapt to their environment because the main value of voluntary service is to be a willing participant without being forced.

In terms of a protection and monitoring system, both of the groups create a monitoring system successfully. There are several evidences of this, such as establishing a rule of law and developing a monitoring team. For example, the communities also have initial vigilance and voluntary active patrols. Particularly at the site 1, they think that it is not enough so they created a patrol team and developed a group court. A patrol team is the team that monitors the security of the forest and also monitors the implementation of their rules. Reward and punishment mechanisms are a good way to encourage people to be aware of sustainability (Ady Kuncoro and World Agroforestry Centre., 2006). The farmers who make a mistake or break the rule will be fined. For example, from 2007 to 2012, there are 7 people get fine. The groups develop levels of violations with corresponding punishments as well. Interestingly, in the site 1, they offer a nice solution to deal with the illegal logging issue. Inviting the independent estimator who can help calculate approximately the lumber price is a good idea, then the group can judge every mistake precisely.
Furthermore, accepting the long-term licence means that there is a lot of work to be done by the local community, NGOs, University and local government before the communities can get the benefits. The communities should make sure that the implementation of the long term licence is considering the sustainable forest. The local communities can maintain the licence obtained. Besides, these activities can be described as follows: land expansion, strengthening productive activity group, submission of certification and making a cooperative group.

Firstly, the land expansion is an idea that the state should allocate the state forest areas to CBFM more so it could invite more local communities to get involved in this programme. If there are many local communities that can join in this, the benefit of this programme will be obtained by more people. In other words, more allocation of state forest areas for this project can help many people, improving prosperity and it also can accelerate the forest cover for supporting forest sustainability.

Secondly, strengthening productive activity group refers to facilitation activities that assist the local community in optimising the allocated land. When they have been managing the forest for more than 10 years, it is the best time to perform tree thinning. It should be monitored so they will not fell the trees as much as they want. In addition, the local community also should be introduced to the production of non timber products so they can still get revenue from their land.

Thirdly, submission of certification means that the local community should be encouraged to get eco-labelling for their forest. By gaining of eco-labelling or certification, it is a proof that the local communities are maintaining the forest in a sustainable way. It is an achievement that public and government will recognised. It also
means that their forest products can be sold, not only in the local market but also in the international market. As a result, the local community can get higher prices for their product.

The last thing is forming a cooperative group. According to the Ministerial Decree no. 37 2007, the local community will get a License of Commercial Utilisation of Timber Products, which is a licence for utilising the timber, if they can establish a cooperative. The cooperative is needed because the group will sell lots of logs so the cooperative is the best way to do that. Therefore, establishing a cooperative should be a priority for the local government, NGOs and University in Gunung Kidul.

6.5 Conclusion

CBFM is an appropriate policy to share benefits between Central, Local Government and local community. It also wants to distribute forest resources from the state-based to the local community-based. The programme supports local initiatives and local participations. At the same time, it is keen on reforestation and improving degraded forest state areas. Actually, this programme offers support to local community development. The idea makes for sustainable forest resources and prosperous communities.

In the first instance, the policy was created by Central Government especially to maintain degraded forest. In 1995 and based on Gunung Kidul contexts, the extent of state-forest degradation was so massive (nearly 4000 ha) and the government could not deal with this situation (Sepsiaji and Fuadi, 2004). In 1995, the Minister of Forestry enacted the Decree no. 622/1995 and gave a chance to local communities to be involved in planting trees and crops in degraded forest areas. However, the policy was
changed many times. It was a shifting policy from 622/1995 to 677/1998, 31/2001, 37/2007 and then, finally 18/2009. This changing seems to indicate that the Central Government does not have an overarching, grand design about forest resources management. Second, the Central Government can be influenced by many interests, such as political and social interests. Third, this is evidence that the local community cannot be the main factor to implement this programme.

During the implementation of CBFM, there were many instances of friction and conflicts. First, Central Government do not give clear guidelines and they do not distribute the authority precisely. Even if there are some policies, the policies are not implemented in the real situation. Second, Province and Regency have too little communication and cooperation. As a result they do not support the programme and just fight each other to find their own benefit. Therefore, it is a good example that state is not homogeny and monolithic. They are so many factors and many interests.

In terms of local community and forest resources sustainability, these always become a victim of the shifting of policy. The community do their best to follow any government rules. In this case, they make proposals and are being evaluated many times. However, they only get the licence, either a temporary or long term licence, after waiting for long periods and processes. Based on the above contexts, it seems that sustainable forest resources are just second sector and it is not the main issue of Indonesian Government. When the state changes the policy many times it is clear that they do not have an idea of sustainability. They are just concerned with how to find benefit from it. In these contexts, the local community get many supports from other stakeholders and this will be explained in the next chapter.
<table>
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<tr>
<th>No</th>
<th>Important Point</th>
<th>Decree No 622/1995</th>
<th>Decree No 677/1999</th>
<th>Decree No 31/2001</th>
<th>Decree No 37/2007</th>
<th>Decree No 18/2009</th>
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| 1  | Implemented Areas | a. Degraded Protection Forests  
b. Production Forests non Rights of Forest Management (HPH) | a. Degraded Protection Forests  
b. Selected areas in Conservations Forests  
c. Production Forests non Rights of Forest Management (HPH) | a. Any State Forest areas | a. Production Forests  
b. Protection Forests | a. Production Forests  
b. Protection Forests |
| 2  | Authoritative Institutions for issuing the licence | Minister of Forestry as a recommend  
Minister of Forestry Regional Office | Minister of Forestry as a recommend  
Minister of Forestry Regional Office and the Governor | a. The Regent or Major  
b. The Governor for cross regency area  
c. Minister of Forestry for timber utilisation | Minister of Forestry as a recommend the Governor, Regent or Major | Minister of Forestry as a recommend the Governor, Regent or Major |
| 3  | Participants | a. Individual  
b. Farmer group  
b. Cooperative | a. Farmer Group for IUP HKm (non timber licence)  
b. Cooperative for IUPHHK HKm (timber utilised licence) | a. Farmer Group for IUP HKm (non timber licence)  
b. Cooperative for IUPHHK HKm (timber utilised licence) |
| 4  | Participants’ Rights | a. Get four Ha per | a. Collect and use | a. Collect and use Non | a. Get Facilitation | Two type Forest |
| 5 | **Participants’ Obligation** | a. Security, planning, planting and preventing forest fire, as decided by Minister of Forestry  
b. Pay Forestry provision | a. Security, planning, planting and preventing forest fire.  
b. Rehabilitate and Conserve the Forest  
c. preventing forest fire  
d. Pay Forestry provision | a. Delineate Forest Area  
b. Making plans, and planting forest area  
c. Pay Forestry provision  
d. Making report to the Government | a. Delineate Forest Area  
b. Making plan, and planting forest area  
c. Pay Forestry provision  
d. Making report to the Government |
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<th>Fund</th>
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<th>Regency and any resources</th>
<th>Central, Local Government and Any resources</th>
<th>Central, Local Government and Any resources</th>
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| 7 | Monitoring and Supervision    | Minister of Forestry Regional Office in Provincial and Regency Level | Minister of Forestry Regional Office in Provincial | a. Provincial Government but Dominant in Regency  
   |                              |                                                  |                                               | b. Farmer Group can appeal                          | a. Central and Local Government  
   |                              |                                                  |                                               |                                                 | b. Community                             | a. Central and Local Government  
   |                              |                                                  |                                               |                                                 | b. Community                             |                                             |
| 8 | Revocation of Licence         | Minister of Forestry                             | Minister of Forestry after the group get three warnings from Minister of Forestry Regional Office in Province | Regency                                                       | Government, either Central or Local.        | Government, either Central or Local.       |
| 8 | Decentralised Discretion      | Predominantly of Minister of Forestry            | Decentralise of the Authority to Minister of Forestry Regional Office in Province | Decentralise of the Authority to Regency                              | Predominantly of Minister of Forestry       | Predominantly of Minister of Forestry       |
| 9 | Participation                 | Minimum and less local initiative                | Local initiative and participation exist       | a. Local initiative and participation exist  
   |                              |                                                  |                                               | b. NGO, University, Researcher can participate | Open participation and many stake holders can be involved, such as NGO, University, State-owned Enterprises, Cooperative and Private enterprises | Open participation and many stake holders can be involved, such as NGO, University, State-owned Enterprises, Cooperative and Private enterprises |
CHAPTER SEVEN
ACTORS, INTERESTS AND INSTITUTIONALISM

7.1. Introduction

Community-based forest management (CBFM) is an idea that has spread quickly and it has been adapted by many countries (Adhikari, 1990, Armitage and Hyma, 1997, Colchester, 1994, Schmink, 2008). The concept of CBFM emerged in response to the failure of the previous model of forest management that was mainly state-led and oriented towards industry. CBFM calls for a change from state-based, centralised control and privatisation oriented to people-based or community-based (Agrawal, 2001b, Mendoza and Prabhu, 2005). At first, this idea also aimed to boost the benefit of forest resources to Local community and then the local community can improve their quality of life (Gilmour and Fisher, 1991, Baland and Platteau, 1997).

A CBFM initiative also is a significant change in approach on forest resources management. The change is from state-based and private-based, to one that is a modern approach biased towards community or people-based, influenced by a postmodern approach or participation approach (Maryudi, 2011). The conversional or state-based approach put the state as the main actor. This approach also was top-down, and less participatory. On the other hand, the second approach is bottom-up, encourages local participation, supports collective action and is aimed at a fair distribution of resources.

Moreover, North (2005) argues that the institutional structure that is involved establishes who the stakeholders are and how they can affect their choices. In terms of
informal constraints, this is an integral part of institutional structure that determines human interaction and some of them may arise as a result of the uncoordinated action of individuals or organisations (North, 2005). In addition, CBFM is illustrated by the collaboration and cooperation of many stake-holders. Stakeholder in this research can be an individual, group, or institution, who share their values, ideas and beliefs combined with their social, political background (Suwarno et al., 2009, Maryudi, 2011). Moreover, the next section of this chapter also will elaborate who the stakeholders in CBFM in Gunung Kidul are and how they relate each other. Because activation of local capabilities and networking across various local stakeholder groups through, it can be useful to identify the CBFM implementation on sustainable way (Bodorkos and Pataki, 2009).

The basic idea of CBFM is a synergy between local people and their environment (Purnomo and Mendoza, 2011, Agrawal, 2001a). If the local people can participate and get access to the forest recourses near to them, and they use their local knowledge in a sustainable way, the forest resources will be sustainable, and the local people will gain economically and socially (Agrawal and Yadama, 1997). Therefore, it is clear that CBFM should describe the local knowledge relying on the forest sustainability. Besides, local knowledge is an important component and value of traditional systems and significantly involved in local community activity (Mulyoutami et al., 2009, Bodorkos and Pataki, 2009). Understanding of social, political and local knowledge is important for this research in order to get a portrait of community institutions. As a result, this chapter will explain and elaborate the social, political and local knowledge of selected sites that rely
on the implementation of CBFM and then elaborate on how to strengthen local institutions.

7.2. Identification of Stakeholders and Their Relationships.

Basically, CBFM is a programme, established by Central Government, which gives a chance to the local community to access and use state-forest area. In Gunung Kidul, the area is hilly, highly eroded and this area has a 13,221 ha state forest area. Besides, it has nearly 4,000 ha state forest area planned for CBFM project. It is really important that this project will distribute the resources to stakeholders (mainly the local communities), and it will preserve the forest resources sustainably. In addition, there are economical problems in this area. For instance, the rate of land ownership is very low, at just around 0.55 ha per household. Therefore, it is relevant that we have to look at who the stakeholders in this project are and how the relationship is. It can be useful to make sure that the programme will be conducive to forest resources sustainability and the idea of sharing of benefit from it.

"Actually, GK regency had planned nearly 4,000 ha state forest area to be distributed to local communities. However, we just allocated 1,087.65 Ha to the communities recently. We want to check whether the communities can manage and utilise the forest or not." (Interview-Regency Officer, 2012)

The main actor or stakeholder of CBFM is the forest farmer. There are two types of forest farmers here. First, a farmer who participates in CBFM, joins in a group and has already got the licence. Second, the non-CBFM farmer, who is a farmer, uses the state-forest area but does not participate in CBFM. In Gunung Kidul, the non-CBFM
farmers can access, utilise and manage the state-forest area near to their village. Mostly, they use degraded state forest area and then plant crops by an intercropping method. The farmer does not plant trees as they just need a short-term product. Therefore, they do not have a licence and they just use the forest temporarily. In addition, the CBFM farmer, as the main actor of CBFM, gets legal access to the forest areas. They plant not only short term crops, but also long term plants, such as trees. When they are alone, the individual farmer is the weakest stakeholder in comparison with other stakeholders. For example, the farmer cannot bargain with a trader and they cannot articulate their interests to the government. In this selected sides, they are aware this situation so they make a group.

“As a farmer, I really understand that I have to join in this group. This is not only required by the government but also I need it to improve my skills and articulate my idea to the government.” (Interview-Farmer, 2012)

The second stakeholder is a group of CBFM farmers. When farmers make a group not only do they have to follow the rule of law, but also they need to organise and then to cooperate with each other. The group of CBFM farmers is a group that gets access to a particular state-forest area because the government gives the licence to the group, not to an individual farmer. It seems they are in a group because they have a mutual understanding and mutual goals. In a group, they have formal institutions and informal institutions. Informal institutions can be values, norms and beliefs and the formal institutions can be rule of law, organisation planning, structure and committees. Both of them influence the members of the group to maintain and manage the forest in a sustainable way. The group is created not only to boost their bargaining position or
follow the government rules, but also they need to improve their capacity building (Interview-Farmer, 2012). The farmers recognise that they do not have the technical knowledge of forest management methods and techniques. Therefore, they need to learn from each other or other stakeholders.

Even already in a group, it is not enough for CBFM farmers to articulate, communicate and bargain with other stakeholders, especially in dealing with government. As a result, they establish a federation of farmer groups. The federation is a network of farmer groups. They establish it because the farmer groups want to mobilise their resources dealing with state or government policy. Therefore, in 2000, there was a meeting between NGO, University, farmer group and Forestry officers. In that meeting, there was a mutual understating that farmers should be supported and united. The meeting's participants also agreed that farmer groups could be strong internally and then externally so they can negotiate their interests. Internally, the farmer groups can improve their abilities and create a good plan for their forest area. Externally, they can demand the government issue them a licence if at the time they have not got a licence. Consequently, the meeting supported establishing an association of farmer groups.

“In the beginning of this programme, we were confused with the government policy and we did not know how to meet with their requirements. For example, I don’t know how to get the licence from the government? How to write the proposal? Due to these situations and gaining supported by NGO, we met and created a federation.” (Interview-Farmer, 2012)
In Gunung Kidul, it is called the federation of CBFM farmer group (*Paguyapan Kelompok Petani Hutan Kemasyarakatan-PKTHKm*). The members of this federation are 35 (thirty-five) farmer groups that registered by Gunung Kidul Regency. According to their manifesto, there are several tasks of the association. First, it develops the farmer and farmer groups independently. Second, it creates togetherness of the members of federation. Third, it can articulate their interest and needs, as they are always seen as an inferior party compared with others. Fourth, it can support developing planning and managing of forest resources sustainability. Fifth, it can be a vehicle for farmer groups to link and communicate with others. The farmer group agreed that CBFM should unite their resources to reach their goals.

The existence of the federation was useful also to the Forestry and Plantation office in Yogyakarta. If they had some information or programmes they contacted the federation. And then the federation would facilitate a meeting. For example, the Forestry and Plantation office in Yogyakarta had some funds and then the federation distributed that funding to the groups. In other words, there were so many advantages to it. The federation was required to conduct a regular meeting, create a programme and make a network with other stakeholders. It seemed that the position of the association was so strategic.

However, the strategic position of the federation created a potential conflict between their members. Some of the members thought that the organisation gave only benefit to the committees and a few members. The federation should have been united but it was not. Therefore, this institution was dissolved by 27 (twenty seven) of its 35 (thirty-five) members on 20 December 2003. Besides, it happened also because the
federation did not have articles of association and bylaws or rules of the game. Figure 7.1 describes the relation of stakeholders in the context of CBFM in GK regency.

**Figure 7.1**
Stakeholder relationship in CBFM

Non-Governmental Organisation (NGO) is a stakeholder that also influences CBFM implementation in Gunung Kidul. There is no common agreement about the definition of an NGO and the term leads to different connotations in different contexts (Freeman, 1995, Willetts, 2002). For example, there is a perception that NGO is a rebel organisation, one that always criticises Government Policy, so it looks like that they are
a provocateur (Interview-Activist, 2002). However, it is not true. In CBFM policy, they help and support farmers in many ways and with many things. In addition, an NGO must be independent from the direct control of government (Willetts, 2002, Freeman, 1995). In conclusion, there are three points or accepted characteristics of NGO that should be considered. First it will not be represented as a political party; it will be non-profit-making and it will be not be a criminal group; in particular it will be involved only in non-violent activities (Willetts., 2002).

There are several NGOs involved in CBFM implementation in Gunung Kidul, such as Shorea (Small Home of Rural Empowerment Activists), which is an NGO that works for the management of natural resources based on the idea of equality and sustainability; Arupa (Volunteers Alliance for Saving the Nature) is an NGO that seeks to revise inappropriate national forestry and nature resources management paradigms; PERSEPSI (Society for the Study of Economic and Social Development) is an NGO that wants to campaign for a more prosperous and equitable society, in order to establish democracy, gender justice, uphold human rights and protect the environment. The last one is YP2SU, that is an independent non-profit organization advocating for the poor and marginalised (Arupa, 2012, Sepsiaji and Fuadi, 2004). There are several main activities of those NGOs. First, they gather information about CBFM and then share it, mostly to farmers. Second, they create a capacity building programme for farmers and farmer groups, Third, they do legal advocacy and also look for funding.

“I and my colleagues got involved in this programme because local communities really need help. They do not have enough confidence to deal with the government rules so in the beginning this programme, the local communities get many troubles. My
NGO supports the local communities to get their rights. National resources should be for local community and the idea of forest for people can be implemented by CBFM.” (Interview-Activist, 2012)

Besides NGOs, University and researchers are other stakeholders who take part in CBFM implementation. University refers to an institution providing higher education and researchers refers to individuals who focus on and are interested in CBFM. In this case, they are actively involved in CBFM. There are several actions they have done (Interview-Activist, 2012). First, through their expertise, they gather data, information and then analyse CBFM policy. Second, based on their research, they do an advocacy on behalf of the local community for receiving the licence from Government. Third, based on their assessments to farmer groups, they conduct training, and workshops to improve the farmers and farmer groups’ capacity building. For example, they give training on how to create a good plan and sound administration of farmer groups.

As above mentioned about federations, the federation was really not working for articulating the farmer interests. Because of that, forest farmers and farmer groups really need support to articulate and communicate with other stakeholders. As a result, they established an association. An association is an organised body of people or stakeholders that have a common interest, activity, and purpose and then they want to articulate their interest, cooperate their activity and attempt to reach their goals together (2011a, Black, 1995, 2011b). They establish an association because the farmer groups want to mobilise their resources dealing with state or government policy.

The consortium is another stakeholder in CBFM implementation, called KPHKm (Konsorsium Pengembangan Hutan Kemasyarakatan) the Consortium for CBFM. The
initiative began when CBFM forum region Yogyakarta, called FKKM-(Forum Komunikasi Pengembangan Hutan Kemasyarakatan Wilayah Yogyakarta), held a seminar and public hearing on 25 October 2001 at Wisanti Hotel (Interview-University, 2012). There were important points raised in that meeting such as supporting social forest, village forest and community forestry. At that meeting, there were recommended agendas. First, the forum would share their research data. Second, there would be a multi stakeholders dialog on transferring state-forest from state to community. Third, a public hearing would be held with Provincial House Representatives. Fourth, it will conduct a meeting with all farmer groups in Gunung Kidul for establishing a network and communication among them. The last one, it would support capacity building of farmer groups such as creating internal regulation and strategic plan. This consortium was established by 5 (five) stakeholders, which are FKKM-(Forum Komunikasi Pengembangan Hutan Kemasyarakatan Wilayah Yogyakarta); NGOs such as SHOEA, ARUPA, PRESEPSI, YP2SU; and University Gadjah Mada, especially PKHR-Centre of Community Forestry. It was declared on 1 April 2003.

“During the meeting, we were mapping the problem and developing the solution of CBFM. We can elaborate as much as information we have to construct a road map for helping the CBFM farmers to utilise the forest on sustainable way and help them to get the long term licence from the government.” (Interview-Activist, 2012)

Roles and Tasks of the Consortium also started when there was stagnancy of CBFM implementation. Gunung Kidul Regency already planned 4000 ha as CBFM area and the communities really wanted to participate in it, but there was friction between Central Government and Provincial government (chapter six explained). Both
parties thought that CBFM should be under their control. The consortium therefore, would do an advocacy for this policy and articulate the community’s needs. According to their documents, there are several roles and tasks of the consortium.

1. Supporting capacity building and skills of farmer groups, particularly in managing forest resources on CBFM area.

2. Improving the local institutions capacity for increasing of Farmer Groups’ bargaining position with other stakeholders.

3. Facilitating a conflict resolution toward CBFM implementation in Gunung Kidul.

4. Promoting a Local Regulation that is aware of Sustainable Forest Resources Management.

5. Performing an initiative of CBFM Forum supported by many stakeholders.

6. Documenting of CBFM implementation in Gunung Kidul.

Forest enterprises and future industry is the other stakeholder who plays a role in this programme also. They are a key player on the issue of sustainable forest resources. Most of them are motivated by profit (Maryudi, 2011). Timber quality in Gunung kidul is very good and also the demand is high, as the traders or enterprises want to get the timber from Gunung Kidul Farmers (Interview-Farmer, 2012). In this case, the traders do not follow the government regulation and most of them just push the farmers for gaining a big profit. They use their money and power to approach and control the forest farmers for selling their forest products. This is really risky for the development of sustainable CBFM in Gunung Kidul (Interview-Farmer, 2012).

The State is the stakeholder that refers Government institution, especially the institution concerned with CBFM implementation. The state is an actor who can
announce a regulation, has an authority and can enforce the law (APA, 2010, 2011b). In addition, the state has some abilities, such as ability to penetrate society, ability to control social and political interaction, ability to enforce a law, ability to extract national resources and the ability to use the result of natural resources based on their best choice (APA, 2010, Marx et al., 1970). The state also has a sovereign political power or community and it includes central and local government, House of representative, and Judicative (APA, 2010). However, in the previous chapter, it is made clear that the state is not single actor and it has one interest. In the CBFM implementation in Gunung Kidul, state can be central Government, Provincial Government, Forestry and Plantation Office in Yogyakarta, Gunung Kidul Regency and Local House of Representative.

For instance, the Forestry and Plantation Office in Yogyakarta is a body that represents Central Government Policy but it is located in the Province. In Forest resources management and forest utilisation, this institution works to regulate and monitor any stakeholders who operate in this sector. They also maintain state-forest areas in their area. In context of CBFM, state can be a facilitator, mediator, regulator and also the player. In practical evidence, the state becomes a superior stakeholder and local communities seem so inferior. CBFM policy should put the local community in the position of a main actor. The government should distribute their resources and their authority at the same time.

<table>
<thead>
<tr>
<th>No</th>
<th>Stakeholder</th>
<th>Role</th>
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<tbody>
<tr>
<td>1</td>
<td>Non-CBFM farmer</td>
<td>• Use and utilise the Forest</td>
</tr>
<tr>
<td></td>
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<td>• Use local knowledge</td>
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<td>• Adapt a new technique</td>
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<td>• Government Policy</td>
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<tr>
<td>Role</td>
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<td>-------------------------------------------</td>
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</table>
| CBFM farmer                               | - Use and utilise the Forest  
- Manage the Forest  
- Use local knowledge  
- Adapt a new technique  
- Follow the Local institutions  
- Government Policy |
| 2  Forest farmer group                    | - Develop local institutions arrangements  
- Communicate with other stakeholders  
- Prepare the Proposal  
- Establish a Cooperative |
| 3  Forest farmer federation               | - Establish networking amongst Farmer groups  
- Articulate their interest  
- Develop communication with other stakeholders |
| 4  NGO                                    | - Give advice and Services to Forest Farmers  
- Conduct training for Farmers’ capacity building  
- Do lobbying and Negotiation  
- Provide legal and political support |
| 5  University and Researcher              | - Conduct research  
- Provide information and data to Farmers and other stakeholders  
- Educate and perform capacity building for Forest Farmers  
- Advocate for institutional reform |
| 6  Association or Consortium of CBFM      | - Perform public relations and campaign on CBFM  
- Make lobbying and negotiation with State on behalf of Forest Farmers  
- Give sources of Funds to Forest farmers |
| 7  Forest enterprise and furniture industry | - Buy Forest Products  
- Provide employment |
| 8  State; Central government-Minister of Forestry, forestry and plantation office in Yogyakarta | - Establish Policy  
- Control and monitor the Programme |
<table>
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<th>Role</th>
<th>Responsibilities</th>
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| Local government-governor, regent         | - Provide services and funding  
                                          | - Give and review the licence                                                    |
| Forest security officer                   | - Monitor and secure the forest on behalf of the government.                       |

In conclusion, because many people have a mutual interest and mutual goals, they make a group and work together. Forest farmers in Gunung Kidul also do so. The initiative could be not just from their local community itself, but it could be from Government policy or NGO encouragement. At the beginning, some of the farmer groups established by less participative processes. And they made decisions by committee interest as these groups were run predominantly by committee. Nevertheless, those situations could be minimised by supporting NGO, University and many stake holders. And then it can lead to farmer groups that are more independent and well-organised.

In relation to the stakeholders’ relationships, there are some lessons learned. Firstly, CBFM policy supports the idea of decentralisation of power and authority. Central Government gave authority to Local government, especially Regent and Mayor, so local government can implement a forest policy supporting the local community. Secondly, the CBFM is an appropriate way to give a local community a chance to improve their quality of life and access forest resources (Interview-Activist, 2012).
Even though, the position of Farmers and farmers’ Groups is one with less power than other stakeholders, it still has a possibility to improve its position.

“CBFM is a good way to distribute the resources. In this case, before the implementation of CBFM, local communities cannot get any benefit from the forest, even near to their village. After involvement in this programme, they can get some income that supports their life, especially they have a hope that they can get more revenue by selling the timber.” (Interview-Activist, 2012).

Thirdly, in terms of involvement of stakeholders, the farmers and farmers’ Groups are so weak compared to others. For example, farmers cannot negotiate with traders or furniture industries when they want to sell timber. On the other hand, the state is not homogenous and they do not have a grand design and a firm policy so they change the CBFM policy many times. In this situation, the next lessons were learned. The above section referred to conflicts of interest among stakeholders, but there are some solutions to it. It can happen because the government should become a facilitator or mediator, less authoritarian. Luckily, in Gunung Kidul, there is an association or consortium, established by NGOs, University and researchers, which plays a role as a facilitator. If there is a problem or issue on the CBFM implementation, this consortium attempts to solve it. Mostly, the consortium supports the farmers’ needs and encourages them to manage forest resources sustainably.
7.3. Strengthening the Local Institutions toward CBFM Implementation

7.3.1. Measuring of the advantages and weaknesses of the local institutions

The key argument of the next section is that the relationship of stakeholders is not autonomous and independent, especially the engagement on public policy, but it is created by their local culture, knowledge and their position. Consequently, it is important to explain and understand those local cultures and contexts relating to strengthening the local institutions. This section focuses on strengthening local institutions in the context of dealing with the shifting policy on CBFM.

One of the CBFM goals is building a system of forest resources management that supports local community participation and local initiatives. In addition, this programme wants to invite many stakeholders to become involved. Participation is divided into two arguments, which are the efficiency argument and empowerment arguments (Tanguilig and Tanguilig, 2009, Ostrom, 2009). The efficiency arguments suggest that participation is a tool for reaching and achieving better project results. On the other hand, the empowerment argument looks at participation as a process that enhances the capacity of individuals to improve their social life and this argument wants to support social change to the advantage of marginalised society. Therefore, this CBFM should be implemented by a synergy between efficiency and empowering. For example, forest farmers’ contribution is not only giving an alternative activity for them to get an access, and use forest resources that makes the programme look participative but it should be a conscious activity of farmers and empowering regardless of actual activity undertaken. The new institutionalism approach influenced discourses on local
community participation (Ostrom, 2009). This approach argues that institutions lead to formalised mutual expectations of co-operative behaviour and allow the exercise of sanctions for non-co-operation so it can minimise the cost of individual transactions and reach better mutual goals. Informal institutions that can be represented by social institutions or norms are considered an appropriate solution to the problems of trust and malfeasance, for instances, in CBFM implementation, the norms can minimise cheating and free riding so it solves the problem in a not too costly way. Formal institutions, mostly understood as organisation, structure and law, can transform individual activity and orientation into collective activity in a form which is visible, analysable and amenable. In this case, when the farmers participate in this project they have own interest and it can raise a conflict among them so the committee publish rules of law to deal with that situation.

Regarding informal institutions, there are several key activities on these selected sites. Well-defined of institutions are an appropriate way to solve the problem on Forest resources. This idea can be made by understanding and implementing informal institutions, such as codes of conduct, customs, local knowledge and social expectations (Platteau and Peccoud, 2011). In addition, the term of local knowledge or local wisdom sometime is changeable. In the context of development of local institutions, this term raises much debate and criticism, both academic and in practice. It can be a counter argument of the theory of environment degradation when the main argument says that the environment crisis happens in developing or an under-developed country because they do not have any knowledge of sustainable development (Purwadi, 2007). Actually, developed and less developed countries have
their own knowledge suitable with the contexts and their norms and are aware regarding natural resources sustainability (Ballard et al., 2008, Mulyoutami et al., 2009). Local knowledge is skills or techniques embedded within local culture or local activity and it is tested by them dealing with their life problem (Fischer, 2000, Wahono et al., 2001). Wahono (2001) argues that in terms of relationship between human and its environment, Local knowledge should be seen as a holistic knowledge of community and coming for their specific culture dealing with their needs and environmental sustainability.

“Local communities have local knowledge on how to survive in this degraded area and how to get water in drying season. Because of the soil is so thin, less fertiliser, and mostly lots of stones, they cannot plan any crops. There are a few of crops that can survive in this area and the farmer know it how to optimise it. Every house has a water reservoir and it use to gather the rain water from the roof. This water will be used in drying season.” (Interview-Activist, 2012)

Berker (2007) argues that local knowledge is important, not only for its own sake, but also for its potential to develop and design more effective management for various ecological systems and obstacles. In addition, documentation and method of local knowledge became part of environmental policy since the Earth Submit in 1992. Furthermore, those terms remain focused on by scholars and policy makers to deal with environmental issues. This knowledge can emerge into two types, which are values and attitudes, beliefs and skills (Berkes, 2007). Local knowledge refers to knowledge held by local people or local communities as a cumulative body of knowledge and belief handed down through the generations by processed transmission. Another benefit of
local knowledge is that local knowledge develops a holistic approach to convert day to
day activities (Berkes, 2007, Purwadi, 2007). Besides, it is better operated compared
with a modern approach (Berkes, 2007, Purwadi, 2007). For instance, Lansing
conducted research in Bali, where Hindu priests maintain a system of water in the
temples. The system optimizes the use of irrigation water for rice terraces, called
Subak. Due to the green revolution approach, Subak was modernised by the
introduction of a new irrigation system. However, the new system worked so poorly
compared with the old one. Therefore, the traditional system has been restored and is
used again.

Moreover, understanding the local knowledge of selected sites in Gunung Kidul
Regency can be a good way to portray the local institutions’ resilience to implementing
CBFM programme. Forest farmers realise that forest sustainability is important. It can
provide not only for their economical needs but also for social needs, for instance,
economical need, such as income and social need, such as friendship and recreation.
The majority of farmers from selected sites do not have enough income to support their
daily life. Lack of land ownership is the main problem. For instance, most of them just
have 0.1 ha or less land and some of them do not own any land. That is why they are
involved in CBFM programme. Forest farmers are conscious that forest is a source of
timber, livestock, fruits, honey and water during the drying season so they manage and
use the forest wisely.

“If my forest greener and “lestari” sustainable, I am sure that I can obtain many
benefits. I can sell my intercrops products and timber so I can get money. I can go to
the forest so I can meet my friend and feel the fresh air in there as well” (Interview-Farmer, 2012)

In terms of social capital, in the selected sites, the farmers or forest users involved in a collective initiative share their resources and then take risks in what is a resource constrained environment. Arisan is the most common form of social capital manifestation. Variations of Arisan or pooling of money or resources can exist in many activities. This activity operates by members of the group collecting money every month in their group meeting and then they do a raffle so those who are lucky can get the money. Usually, it can be that the saving may be used to finance a wedding or funeral of a member of the group. Arisan can be one form of bonding social capital and also it has a role as a social safety net.

In addition, one of the communities’ local wisdom is motivation and ability to learn. They have motivation to preserve or handarbeni forest resources (Purwadi, 2007). Initially their motivation to join in this programme is one of economical concern. Because they want to get at 0.25 ha state-forest minimum, they are involved in this programme. A household consists of 5 people; if the just have own less than 0.1 ha of land it is not enough to provide for their daily needs. It looks like gaining benefit, which is the motivation of forest farmers. However, the economic factor is not the main factor, as can be proved by how they propose and join in this project. It takes a long time for joining the programme, receiving a temporary licence and collecting the long-term licence. Even with no licence, they still protect and manage the forest in a sustainable way. Their motivation and forbearance is evidence that they are tough. They joined in
CBFM programme in 1995 when the programme just gave them intercrops product. As a result, the trees in selected sites have grown and are in good condition.

Forest farmers have massive and successful experiences of developing private forest or hutan rakyat-forest for the people. The amount of private forest areas is around 24,531 or nearly 64 sixty-four percent of forest area in Gunung Kidul (Awang, 2001). Most of them are managed in a sustainable way and some of them get a certification of eco-labelling (Awang and Universitas Gadjah Mada. Fakultas Ekonomi., 2002). In other words, the local community has enough experience and ability to get ‘trust’ from the state to maintain and access state forests.

Besides, there are some advantages of informal institutions. First, the informal institutions rely on social backgrounds and social values of the community. It seems that informal institutions are formed by a historical context so it makes informal institutions durable and long-lasting. Second, informal institutions are down to earth so it can solve any conflict among the community members easier and faster. Third, informal institutions require small or no overhead costs to negotiate, adjudicate and enforce. Regarding informal institutions, Fukuyama argues that if the members of a group follow the set of informal rules, it can save costs substantially (Fukuyama, 1995). However, informal institutions have weaknesses also. First, it cannot deal with complex and systemic problems in society. Second, a reward and punishment system of the community cannot be implemented straightaway. For example, if the farmer who has the licence passed away, who should take the land over? Norms or social institutions cannot answer this problem so it should be answered by establishing the formal institutions.
On the other hand, formalized institutional arrangements can be considered as a solution to the weakness of informal institutions. It is also a more forceful and desirable approach, giving for example, clearly identifiable members and boundaries, establishing a system of reward and punishment, and solving collective and public conflict (Ostrom, 1999). Ostrom (1999) argues that formalisation is an evolutionary process that is linked to a general progression from traditional form to modern form (Cleaver, 1999). Ostrom’s argument seems that is the possibility of crafting institutions and it looks like to simplify the local institutions. Moreover, this approach has been criticised for being oversimplistic and for avoiding the historical and social contexts and dependency of shaping institutions (Cleaver, 1999). Therefore, in relation to strengthening the local community, I have to accept that local institutions are a combination between formal and informal institutions and that both of them can maintain negotiations between all users, create a strong principle of conflict resolution and decision making and protect the forest resources in a sustainable way through the practical adaptation and local value.

Local communities already established formal institutions that can be seen in their formal organisation and formal structure. Both of the selected areas have committees, which divided by several tasks between Chairman, Secretary, Treasurer, and section officers. They perform in accordance with the group’s articles of association and bylaws. This is evidence that formal institutions already exist in the local community. Based on the observation and in-depth interviews, the groups were established gradually. At the beginning, it was just an informal group that accommodated farmers who used state-forest areas mainly for intercropping activities.
Those groups were mobilized and used by Forest officers to protect and guard forest security. The farmers or forest users met only incidentally, as events required.

“After the central government enacted the Decree no 622/1995, they transformed their group from informal to formal group. Forest farmers or users made formal structure and rule of organisation. They follow formal institutions approach such as division of works and reward and punishments system. For example, the treasurer cannot withdraw money or give money to someone without an authorization of the chairman and the farmer will be punished if they break the group’s rule.” (Interview-Activist, 2012)

Even after establishing formal institutions, farmers’ groups still have drawbacks. I quoted from Fukuyama (1995) who suggests small organisations, in my case small or local institutions, tend to be better at organizing more member incentive activities and have flexibility, innovativeness and speed in decision making. Fukuyama also implies that big institutions or organizations should down size, decentralize and be more flexible (Fukuyama, 1995). On the other hand, the weaknesses of local institutions or small organizations are lack of finance and technology and they do not have enough staying power (Fukuyama, 1995).

The first drawback of formal local institutions is in the decision making process. Participation in the decision making process is quite challenging. Actually, both communities attempted to make decisions through participation but sometimes it did not work. Due to patronage belief, elite or leader is in the strongest position. Sometimes, the elite consist of some informal leaders and formal leaders. Reflecting to the history of groups, this situation happened because the groups were established by several people who have close relationship with government officers or forest officers. It is clear that
the elite is the farmers who have a link with and an access to authority. In the case of
the patronage system, this system was built by community integration and also
designed by Government. Because of the local communities insufficient of social
capital, local people would follow the rich or powerful people, and the same time,
Government failed in developing the state formation process. The patronage system
leads to the decision making process being less participative. Therefore, the forest
farmers hardly participated in the decision making process, and they could not obtain
service delivery, investment, and allocation of funds properly.

In these selected groups, they have issues of capacity building. Capacity refers
to the ability to do something and it can be at the level of both individual and communal.
It is related to the actors and other actors relations, and also the ability to solve an
actor’s problem (Bebbington et al., 2006). For example, they were not aware how to
operate their organisation properly. They just performed their organisation as a second
task and the first task is their forest. As a result, they could not negotiate with other
stakeholders, especially when dealing with government regulation because they do not
have enough data and organised documents.

7.3.2. Empowering Informal Institutions and Establishing Formal Institutions

Based on the previous explanation, I can clarify that the implementation of CBFM
in Gunung Kidul raises some problems. The problems arise from two levels of
institutions, which are the state and the local level. Firstly, in the state level, central
government creates a policy that is subject to numerous changes – this tends to
marginalise the local community. Forest farmers also had to deal with a number of
policies, both of central and local government. Secondly, at the community level, problems occurred relating to the weaknesses of local institutions. It can arise from both informal and formal institutions. Even though, they have some potential resources, forest farmers have not adequate knowledge and are in a weaker bargaining position compared with other stakeholders. In these contexts, CBFM implementation looks stagnant and not very well implemented. It can lead to the failure of CBFM and ultimately to unsustainable use and degradation of forest. Therefore, there are two levels of activities to solve that problem. The first level is dealing with the government policy and the second level is strengthening local institutions, both formal and informal institutions.

The shifting of CBFM policy and the friction between central and local government create many problems. It can happen because there is no political will in central and provincial governments. The central government thinks that local government, which is Gunung Kidul District, does not have enough resources to implement this programme. In addition, an economic aspect is another factor. Provincial Government does not want to lose their asset or income (revenue) source. The extent of forest area in Gunung Kidul is 77.5 percent of Yogyakarta Forest. If Province gives it to the Regency they think they will be unable to find another source of domestic income. On the other hand, Gunung Kidul Regency does not want to propose the sharing or transferring of authority. It is an example of a dilemma in Community-based forest management in Indonesia.

A solution should be to develop an initiative on forest policy that is participatory, transparent and accommodative. A policy that relies on the community needs and forest
sustainability can be proposed from several points. Firstly, central government should enact a robust (and stable) policy that allows local government to grant licences straightaway. It is also clear that Central Government authorizes the local community or forest farmers to use and cut the timber by licence for utilising the timber. In this site, central government (especially Minister of Forestry) should perform a Decree that gives rights to local government to declare the 4,000 allocated state forest areas to be a CBFM area.

Secondly, Gunung Kidul Regency should propose to Central and Provincial Governments that they (the regency) want to manage and administer the allocated state-forest area for CBFM implementation. In addition, Gunung Kidul Regency should continue to establish Regency Decree on CBFM that accommodates local community need and local contexts. For example, this decree could be clear to regulate a share of benefit between central, local government and farmers in relation to timber production. Because the argument on share of timber production is the main issue in local community, it can be solved by creating the Regency Decree.

Thirdly, establishing a cooperative (or a collective action institution) is very challenging for farmer groups. According to the Ministerial Decree, every group should be in a cooperative if they want to get the timber utilisation licence. Many problems arise in the local contexts and also in forest areas, such as institutional arrangement. Independence, professionalism, and commitment should be possessed by the local community itself. Independence can be shown in that the farmers do not rely on traders' needs; professionalism means the farmers can manage the group and forest in a proper way; and commitment should be seen in how the farmers develop their institutions and
maintain their forest sustainability. To achieve these goals, it could be supported by stakeholders, especially State, NGOs and University researchers.

At the community level, there are several issues that should be solved in dealing with shifting policy and strengthening of local institutions. For that reason, the next section will explain and elaborate on how to improve local institutions by strengthening informal and formal institutions, based on the selected sites’ situation. It maximizes the informal institutions potency and then establishes formal institutions.

It is clear that informal institutions require small or little over-head cost to negotiate, adjudicate and enforce (Fukuyama, 1995, Gibson et al., 2000). Regarding with informal institutions, Scientists argue that if the members of a group follow the set of informal rules, it can save costs substantially (Fukuyama, 1995, Gibson et al., 2000, Ostrom, 1990).

In terms of informal institutions, particularly, in how to plant and grow a crop, forest famers are aware that forest sustainability is important. They choose the intercrops plants that can grow and also have endurance on its environment. They use organic fertilizer from their waste or castle because it is cheap and also supports its environment. When they want to grow a crop, farmers do not do it at the same time, they do it in rotation. It is not only to help each other but also so it can preserve the forest resources. The local knowledge is precious and it has depth and value and is holistic. The above is an example of local knowledge on the sites that should be learned and also shared. Local communities understand which situation, plants and rules are the best for both environment and their life. The next point that has to be considered is how to make local knowledge more systematic, and easier to adopt by other
communities. Therefore, this is the first activity to strengthen the local knowledge. Indonesian University and scholars should rethink about how to study, learn, and develop knowledge. They should be not easily to adopt “Western” knowledge and eliminate “own” knowledge. Many of them are so fast to adopt, share and teach “Western” way that it could be not suitable for Indonesian contexts. It could be an appropriate way that Indonesian scholar should do is learn, understand, reflect, modify and share their own knowledge and then compare or collaborate with “Western knowledge”. CBFM’s goals are to empower the local community to preserve forest resources and support them to improve the local community’s prosperity. There is a concept that argues if the local community is prosperous, forest resources and its environment will be sustainable. In other words, the forest will be in jeopardy if the local community is poor. This approach is a solution when the anthropocentric approach and state-based approach fail to distribute forest resources. In local words-Javanese words, called memayu hayuning bawono-ensuring safety, happiness, and welfare in the world, it means a holistic approach that puts local knowledge and local community as a main concern on CBFM implementation. The second activity that should be encouraged is how to support local participation and local wisdom by eliminating structural obstacles and systemic procedures.

CBFM has an opportunity to optimize the potency of forest resources relating to economic, social and ecological sustainability. Economic potency of CBFM can be beneficial to the local community and also local government in this case, Gunung Kidul Regency. Gunung Kidul Regency can gain by collecting provision tax of CBFM and sharing of the benefit of CBFM products. Because of that, Local government should
support the local community to implement CBFM in a sustainable way. CBFM really has social benefit; if the community get some resources from it, they can improve their quality of life. If the stakeholders get the benefit of CBFM, and they implement it in a proper way, by theme, forest sustainability can be reserved.

Capacity building can be done to individual and communal level (Bebbington et al., 2006). At the individual level, forest farmers need to understand how to participate in the decision making process, articulate their interests, and negotiate with other stakeholders. If individual capacity increases, the communal capacity will improve. In this case, local community capacity building can be initiated by Government, NGOs and University researchers. It seems that collaboration between local community and external civil society organizations, such as NGOs, University and researchers can increase local community capacity. The external civil society can continue their programme and give more to local community, such as in training, providing information and advocacy.

Capacity building should be implemented by a bottom up approach (Kerkhof, 2001). The external stakeholders always ask the community and asses them before they support the local communities. Besides, capacity building could be linked with science and local knowledge (Kerkhof, 2001). Both of these should be considered by external stakeholders. The benefit of capacity building that relies on a bottom-up approach and a linking between science and local knowledge such as this method is that it can help the forest farmers to learn easily and faster; this method can reduce the failure of the implementation of the new technique; and then it can secure the knowledge so it becomes long-term knowledge and life-long understanding.
There are some suggestions to improve and strengthen formal institutions. The problems and threats of CBFM implementation in Gunung Kidul regency really need to be solved and anticipated. Anticipation of the problem is important because the CBFM goals are to share forest resources and preserve forest sustainability. It is an appropriate way for community to prove to the state that they can manage forest resources better.

One of the crucial problems in local institutions is participation in decision making processes. Because of the lack of social capital and the failure of state formation, local participation is in danger. For example, in a selected group, one or two people may dominate in the group decision making process. It makes the policy less transparent and accountable. It is really suggested that a patronage system should be avoided. If so, the groups can be more transparent, and it will reduce the failure to implement the group’s decisions and policy can accommodate the members’ needs. Two activities could be taken to reduce the patronage system and improve farmers’ participation. First, it should increase the representative of landless, women, and marginalised members (Chakraborty, 2001). It could be difficult if the first step comes from group initiative. Therefore, the second activity is support from the external stakeholders, such as NGOs and University. It makes sure that the participation process could change the decision making process and it does not threaten the group stability.

In response to the lack of networking and conflict among groups, a collaborative action should be performed to ensure all stakeholders share responsibility. In Gunung Kidul's case, forest farmers are less powerful than traders and each group of forest farmers is less organised to negotiate with Government and other stakeholders. In other
words, conflict between stakeholders or distant users is quite common and difficult to solve (Chakraborty, 2001, Purnomo, 2010). There are several actions that can be offered. First, making a forum or dialogue, that can accommodate and share each party’s interests. Due to the failure of farmers’ groups’ federation, it is an example that infirm institutions are dangerous to farmers and CBFM implementation. Consequently, the next forum ideally puts each stakeholder in the same vision, having the same position and wanting to share responsibility. Second, encourage groups’ independency, the existence of the Association or Consortium of CBFM is proven to improve forest farmers’ and groups’ bargaining position. By this Association, the groups’ independency can be developed. Groups can learn how to articulate their interests, communicate their needs and negotiate their wants.

7.4. Conclusion

This research found that there are many stakeholders involved in CBFM implementation in Gunung Kidul Regency. They contacted and communicated among themselves but there were many issues to it. First, the state is the main actor and they are not a homogenous actor. Each level of government apparatus has its own interest and they can represent their position; for example, regency officer will represent the Regency agenda even different from the Province agenda. Second, the farmers have their own group and already established a networking with other stakeholders but they could not articulate their ideas properly. As a result, their bargaining position is weak and they really need support and assistance. Thirdly, NGOs and University are catalysts
for better empowering of local communities. They did many activities aimed at supporting local communities.

In relation to strengthening local institutions, this chapter already suggested how to encourage the local community to optimise their informal institutions and develop formal institutions properly. The initiation of the above solutions can be supported in regard to CBFM implementation properly. Community-based Forest management would be run in a sustainable way if this programme relied on local contexts and it has robust institutions. Nurse and Kabamba (2000) argue that collaborative management refers to the partnerships of the local community of forest users with government and other stakeholders. Collaborative management has emerged as a response to the failure of government. Government do not perform effectively to ensure the ecological and productive integrity of forests resources so it is necessary to support collaborative management initiatives that put the local forest farmers/users groups as the main actor in forest management.
8.1. Introduction

This thesis discusses the dynamic relationship between communities and the effectiveness of the implementation of Community Based Forest Management (CBFM) policies and whose programme which focus on how local institutions deal with the shifting dynamics of CBFM’s policies. In the context of Indonesia, Indonesian deforestation is caused by the incorrect use of forest resources and then marginalizing forest communities result polemics. This situation occurs mainly due to the failure of government, both in its policy making and policy implementation. The policy is state centred and market oriented. As a result, the local communities are marginalized and remain poor. To respond to these polemics, it is important to arrive at solutions by engaging local communities in the management of forest resources through a changing approach from state based to community based.

The idea to involve local communities is contained in the idea of Community Based Forest Management (CBFM). This idea arises as forest communities were not able to have forest benefits. Indeed, forest communities had merely become a spectator of the exploitation of forest products by state and industries. As a result, CBFM was developed to further enhance the participation of forest communities in accessing forest resources that could improve their income and quality of life. In addition this programme also needs to be maintained in a sustainable way. The local community should consider
that they can get benefit from the forest but they have to preserve the forest sustainably and they also have to comply with government policy.

Currently, there are various researches focusing on the CBFM’s implementation in Indonesia that have already been undertaken. For examples, Safitri conducted research on the issue of how legislation and licensing processes in CBFM’s implementation deal with security of tenure and its relation with REDD programme (Safitri, 2010). Other scientists also attempt to deal with economic issues and national growth towards the CBFM’s implementation (Dewi et al., 2005). In addition, Suwarno and Nawir find out how participatory modelling improves partnership schemes and then Purnomo attempts developing scenarios on multi-stakeholder forest management (Suwarno et al., 2009, Purnomo et al., 2005). Even though some scientists looked at forest structure and different types of forest structure that lead to different types of community forestry (Dietz et al., 2007), I could not find any research which focuses on how the local institutions deal with the shifting dynamics of CBFM’s policies. For instance, Dietz’s research emphasises the communities’ diversity in protected areas only and Moeliono looks at decentralisation in industrial forest areas (Moeliono et al., 2009, Dietz et al., 2007).

In addition, I could find a gap in research on CBFM implementation in Indonesia. There is an absence of research on the local institutions dealing with the shifting dynamics of CBFM’s policies. It is important that we can describe the local institutional arrangements; how the communities establish their rules, how they can adopt their informal institutions and optimise their formal institutions, and then how they monitor
and enforce the rules and specifically how they deal with the frequent changing of government policy on CBFM.

The second issue is an understanding of the shifting dynamics of power and management on forest resources in Indonesia. I could not find how transferring of power and management from state based to community based in the context of the shifting of CBFM policy in Indonesia. In these contexts, therefore, it is essential that CBFM should rely on the empowerment and engagement of local communities, how they communicate in their group and how they articulate their interest with other stakeholders, such as NGO, local and central government. The local community also can get benefit from the networking with others, especially how the local communities can utilise these networks to deal with the shifting of the government’s requirements due to the changing of CBFM policy.

The research has shown that CBFM policy as a solution of the tenure and forest management is applied by the central government. This policy is basically a programme initiated by the government to provide better access for local communities in managing forest resources. This is to establish forest communities or local communities who increasingly have a prosperous life while maintaining the sustainability of the forest. The welfare of local communities and forest sustainability are two things that are integral and complementary. In other words, the forest will not be sustainable if the communities surrounding the forest are not given greater access, either de facto or de jure in forest resource management. Without adequate access, people still live below the poverty line, and are economically and socio-politically marginalised. Also, working in reverse, forest communities will not prosper forever, when forests are miserable, broken, and
cannot be used optimally by the public and especially by the forest surrounding communities.

This research mainly takes a qualitative approach, applying a case study method which was described clearly in Chapter 4 (four). In terms of research design, this is an important stage of any research undertaking, as it attempts to systematise and direct the work of the researcher in a clear and sequential order. The research design should answer the following questions: what data should be gathered; how to collect it; why the data should be collected and how to analyse it. Based on the above discussion and brief explanation of types of research design and approaches to doing the research, the most appropriate approach of this research is exploratory research, conducted by non-experimental and flexible research design.

This thesis is intended to learn the actors’ view and relation, and as social reality is less concretely determined than the natural world so this study depends on the subjective ontology and post-positivistic epistemology (cf. chapter four). Moreover, the post-positivistic epistemology understands that social reality or social phenomenon can be analysed through qualitative investigation of qualitative data and then it can be collected through a review of documents, participative and non-participative observation and in depth interviews (Silverman, 2010, Eisenhardt, 1989). Secondly, the qualitative approach was applied by a case study research because the case study could look at understanding of dynamics phenomenon within a single setting and can be conducted into an individual, a role, a group or a nation (Miles and Huberman, 1994, Eisenhardt, 1989). Two selected community groups have been observed and those communities
are involved in the CBFM programme, located in Gunung Kidul regency, Yogyakarta Special Province.

Chapter 2 (two) and 3 (three) elaborated the literature review with the aim of understanding the theory on institutionalism approach toward shifting government policy and local community-based forest management. It underpinned local institutions' role on forest resources management. I argue that in terms of institutionalism on resources management, analysing how local communities deal with the instability of government policies and can help the community itself and sustainability of resources. This argument is supported by some scientists who explain that local institutions can effectively control, maintain and manage the resources sustainably (Bischoff, 2007, Smajgl and Larson, 2007, Agrawal, 2001, Futemma et al., 2002, Behera and Engel, 2006). This argument has been followed by Ostrom’s opinion that an institutional approach can answer the tragedy of common phenomena where the group of users develops a regulation how much, what manner and when the users can produce and use the resources. It means that stakeholders can be successful in using and managing their resources if they can meet their institutions with its contexts (Ostrom, 2008). Different contexts and cultures can create different institutions because the same rule cannot be implemented in a different social context (Agrawal, 2001). Therefore, developing effective local institutions should rely on the local contexts and cultures. At the specific institution level, with its precise context, it is the best way to deal with a resource’s environmental issues (Purnomo, 2011, Ostrom, 2005).
8.2. Shifting Policy and Tension and impact on Stakeholders

As a result, there are several objectives have been reached, such as practical, theoretical and political themes. In terms of practical themes, the thesis wanted to understand the local community institutions’ implementation of CBFM, how the communities implement it and whether they act in a sustainable way. This thesis focused not only resources on the changing of CBFM policy but also the implementation of those policies by central and local government influencing the local communities.

This research found that the first time the policy was created by Central Government specifically to maintain degraded forests. The extent of forest degradation was massive and the government could not deal with this situation. In 1995, the Minister of Forestry enacted Decree no. 622/1995 and gave a chance to local communities to plant trees and crops in degraded forest areas. However, the policy was changed many times. It was a shifting policy from Degree 622/1995 to 677/1998, 31/2001, 37/2007 and then again in 18/2009. In addition there are many regulations, enacted by central government relating to the CBFM such as Law 41/1999 about Forestry, Law no. 22/2002, Law 32/2004 and Law 3/2005 and Law 12/2008 about the Local Government Decentralisation.

On the other hand, local government, which are GK regency and Yogyakarta Special Province, also established many decrees and regulations. Those decrees were not only to manage, regulate and control local communities’ participation in CBFM, but also to implement the central government policy. For example, Provincial Decree no. 188.4/3710/2003 regulated that reserved 4.186.4 ha in GKR and 203 ha in GK to be used for the CBFM project and then Gunung Kidul Regent published the Regent Decree
no. 213/2002. According to that decree, the Regent gave a temporary licence to 35 (thirty-five) local community groups to implement CBFM project in their area.

In Gunung Kidul contexts, the implementation of this policy did not work smoothly. The first problem was about site allocation for this project. In regard to implementation of the Minister of Forestry Decree no. 622/1995 and 677/1998, Gunung Kidul regency investigated, indentified and then made an inventory of state forest area that would be allocated for CBFM. As a result, there were around 4,186 ha of state-forest area that would be planned as CBFM area. However, those areas had not been signed and agreed by the Central government. This situation caused the participant community fear for their project’s sustainability. The authority rested with central government and local government could not decide it.

In these selected sites, there are three steps or evolutions for a local community implementing CBFM. The first step is no license period. The local community joined in the CBFM programme and used the state forest areas without gaining a licence or permit from the authority. From 1995 to 2003, the communities had not got any licence yet they managed the state forest areas near to them. Even without the licence, they rehabilitated the degraded forest areas. Most of the forest that the local communities used was deforested areas. The second step is gaining a temporary licence. Local communities got a temporary licence for 5 years. They got this licence, after they had won long support from NGO and University between 2003 and 2007. The third period is obtaining a long-term licence and then the License for commercial utilisation of timber products for ecosystem restoration (Ijin Usaha Pemanfaatan Hasil Kayu-IUPHHK). In 2007 local communities received their long term licence so they could manage and
utilise the state forest areas for 35 years. However, they could not cut the trees down and sell the timbers as they had not got the license for commercial utilisation of timber products in natural forest for ecosystem restoration (Ijin Usaha Pemanfaatan Hasil Kayu-IUPHHK) yet. They could plant crops and then harvest them. Luckily, in 2013 the local communities were given the license for commercial utilisation of timber products in natural for ecosystem restoration (Ijin Usaha Pemanfaatan Hasil Kayu-IUPHHK) from the Minister of Forestry so they can cut down the trees but they had to establish a cooperative and meet with the requirements, such as paying attention on forest sustainability and paying tax.

This research has shown that due to the shifting of policy and derivation of policy, the local communities mostly did not recognise which regulations should be followed. As a result, the communities manage their allocated forest areas according to their knowledge and communicated with other stakeholders such as community Groups, NGOs, and University researchers. Mostly, the communities found their way by adopting their custom, local wisdom and then getting new knowledge from supporting NGOs and University researchers.

In conclusion, during the implementation of CBFM, there was much friction and conflict. First, Central Government did not provide clear guidelines and they did not allocate authority precisely. Even if there were some procedures or regulations, those regulations were not implemented in site contexts. Secondly, Province and Regency lacked communication and cooperation between them. As a result they could not support and manage the programme in an appropriate way. They just fought each other
to obtain their own benefit. Therefore, it is a good example that state is not homogeneous and monolithic. There are so many factors and many interests.

Furthermore, the community tried and did their best to follow any government rules. In this case, they made proposals and were evaluated many times. However, they got a licence after waiting for a long period and due process, in this case more than 12 years for obtaining the long-term license and 17 for getting the license of utilisation of forest resources. Based on the above contexts, it seems that sustainable forest resources and local community engagement are just secondary issues and not the main issue for the Indonesian Government. When the state changed the policy many times it is clear that they do not have an idea of sustainability. They were just concerned with how to find benefit from it.

8.3. Optimising Informal Institutions and Establishing Formal Institutions

The second objective of this thesis is about the theoretical objective. The thesis proposed to develop a theory about successful community institutions developing forest management, mainly, how both informal and formal institutions work on the selected sites. Besides, there is an absence of research on the strengthening of local institutions dealing with the shifting dynamics of CBFM’s policies in Indonesian contexts.

This research argued that the new institutionalism approach influenced discourses on local community participation. This approach claimed that institutions lead to formalise mutual expectations of co-operation and behaviour and allows the exercise of sanctions for non-co-operation so it can minimise the cost of individual transactions and reach better mutual goals. In these research contexts, institutions can
be divided into informal and formal institutions. The informal institutions that can be represented by social institutions or norms are remarked as an appropriate solution to solve the problems of trust and malfeasance; for instances, in CBFM implementation, the norms could minimise cheating and free riders so it could solve the problem in a not too costly way. On the other hand, formal institutions are mostly understood as organisation, structure and law, and can transform individual activity into collective activity in a form which is visible, analysable and amenable. In this case, when the farmers participate in this project each has their own interest and this can lead to conflict among them so the committee publish a rule or law to deal with that situation.

In these selected communities, I have found that there are several key activities relating to establishing and strengthening local institutions. First of all, understanding the local knowledge of selected sides in Gunung Kidul can be a good way to show the local institutions’ resilience to the implementation of CBFM programme. Both of the selected communities have their own local knowledge on managing forest resources. While poor in resources and land ownership, they known how to utilise their allocated CBFM forest areas in a sustainable way. Most of the farmers only have less than 0.1 ha of their own land and then they got from 0.15 ha to 0.3 ha or 1,500 to 3,000 square meters additional forest land from this programme. During observation, I noted that they managed their land following their local practices and knowledge. For example, they planted crops according to soil, nature and location. Even though they were offered seedlings aid from government, they did not receive it. If they thought the seedlings were not suitable to be planted in their area, they would not receive and plant them.
In addition, social capital, in the selected sides, is one of a significant type of the informal institutions. The farmers or forest users were involved in a collective initiative to share their resources and then take risks in what is a resource constrained environment. This activity was called “arisan”. Every 35 days (selapan), they collected money and then used it as a social safety net. For example, the money will be given to any member of groups who has an expected event such as illness, a death or demand for payment of the school fee.

The values that strengthen local institutions are local wisdoms, such as motivation and ability to learn. The farmers have the motivation to preserve forest resources in a sustainable way and this is called handarbeni. There is a strong belief in local farmers that they have to protect and manage forest resources as a life saviour where they believe if the forest degraded they would get in trouble, such as they may not get water. Because their location is so eroded and drought-stricken, the farmers really know that the forest is really important. In the dry season, they have to buy water from a truck, with a capacity of 5,000 litres. The proof that the farmers are highly motivated and committed is evident in how they propose and join in this project. It takes a long time to join the programme, from receiving a temporary licence to collecting the long-terms licence. At the beginning of the programme and when there is a vacuum of regulation, they had no licence, but they still protected and managed the forest in a sustainable way.

Besides, there are some advantages to informal institutions. First, the informal institutions rely on social backgrounds and social values of the community. It seems clear that informal institutions are formed by a historical context so this makes informal
institutions durable and long-lasting. Secondly, informal institutions are down to earth so they can solve the conflict among the community members easier and faster. Thirdly, informal institutions require small or no overhead costs to negotiate, adjudicate and enforce. Regarding informal institutions, Fukuyama argues that if the members of a group follow the set of informal rules, it can substantially save cost (Fukuyama, 1995).

However, informal institutions also have weaknesses. First, they cannot deal with complex and systemic problems in the society. Secondly, any reward and punishment system of the community cannot be executed straightaway and rigidly. For example, should the farmer who gets the licence pass away, who should take the land over? Norms or social institutions cannot answer this problem so it should be answered by establishing formal institutions.

On the other hand, formalised institutional arrangements can be considered as a solution to the weakness of informal institutions. It is also a more forceful and desirable approach for example, clearly identifying members and boundaries, establishing a system of reward and punishment, and solving collective and public conflicts (Ostrom, 1999). Scholars argues that formalisation is an evolution process that is linked to a general progression from traditional form to modern form (Cleaver, 1999, Ostrom et al., 1999). Ostrom’s argument seems that is the possibility of crafting institutions and it looks like to simplify the local institutions. As a result, this approach has been criticised for being over-simplistic and for avoiding the historical and social contexts and dependency of shaping institutions (Cleaver, 1999). Therefore, in relation to strengthening the local community, I have to focus on local institutions as a combination between formal and informal institutions that together can maintain negotiation between
all users, create strong principles of conflict resolution and decision making and protect the forest resources in a sustainable way through practical adaptation according to local values.

Local communities had already established formal institutions that can be recognised by their formal organisation and formal structure. Both of the selected areas have committees which are divided into several tasks allocated to Chairman, Secretary, Treasurer, and section officers. They perform following the group’s articles of association and bylaws. This is evidence that formal institutions already exist in the local community. Based on the observation and in-depth interview, it is evident that the groups established gradually. Initially, it was just an informal group that accommodated farmers who used state-forest areas mainly for intercropping activities. Those groups were mobilized and used by Forest officers to protect and guard the forest security. The farmers or forest users met incidentally, and according to need.

The first drawback of formal local institutions is the decision making process. Participation in the decision making process is quite challenging. Actually, both communities attempted to be democratic but sometimes it did not work properly. Due to patronage and belief, the elite or leader has the strongest position in the group. Sometimes, the elite consisted of some informal leaders and formal leaders. Reflecting the history of groups, this situation happened because the groups were established by several people who have a close relationship with government officers or forest officers. It is clear that the elite are the farmers who have links with and access to the authority. The patronage system was built by community integration and also designed by Government. Due to the lack of social capital in a local community, local people would
follow the rich or powerful people and the same time, Government failed in developing the state formation process. The patronage system leads to the decision making process being less participative. As a result, the forest farmers hardly participated in the decision making and they could not get service delivery, investment, and allocation of funds properly.

8.4. Re-thinking the Role of State and Local Community on the Forest Resources Management

The Third aim of this research is the political objective. The thesis attempted to create a recommendation policy for local and national government levels, which strengthens successful institution strategies and has the potential to support CBFM sustainability and articulate local institutions’ strategies. Ulybina and Fennell (2013) argue that success or failure of forest management as a multi-level governance mechanism is disproportionately dependent on ground-level player. Therefore, based on this research, it is clear that the implementation of CBFM in Gunung Kidul leads to crucial problems. The problems come from two levels of institutions, which are state and local levels. Firstly, in the state level, the Indonesian Central Government changed the CBFM policy many times and then established a new policy that tends to marginalise the local community and give the forest resources back to central government. In addition, the local government (both of Yogyakarta Province and Gunung Kidul Regency) also enacted some regulations. As a result, the forest farmers had to deal with a number of policies, both of central and local government.
Secondly, at the community level, problems occurred relating to the weaknesses of local institutions. For example, local communities already transformed their informal institutions and then established formal institutions to deal with the CBFM policy. Using strong motivation, local knowledge and social capital, farmers in the selected study created mutual understandings to preserve the forest resources. For example, the local farmers collect the money and give it to a person who needs money because those people get an accident or wants to buy seeds. Besides, following the government rules and adopting the directions from NGOs and University researchers, the farmers developed their own institutions. However, they still have further actions to deal with, such as participation, capacity building and networking.

Based on the above contexts, there are two layers of problems so two layers solutions are provided. At the State and governmental level, there should be an initiative on forest policy that is participative, transparent and accommodative. A policy that relies on the community need and forest sustainability can be proposed by several points. Firstly, Central Government should enact a robust policy that requires Local Government to grant the licence straightaway. It is also clear that Central Government should authorize the local community or forest farmers to use and cut the timber by granting them a licence for utilising the timber. Central Government, specifically the Minister of Forestry, should perform a Decree of the allocated CBFM area.

Secondly, Gunung Kidul Regency should propose to the Central and Provincial Government that they want to manage and administrate the allocated state-forest area for CBFM implementation in the name of autonomy and decentralisation of government. In addition, Gunung Kidul Regency can continue to establish a Regency Decree on
CBFM that accommodates local community needs and local contexts. For example, this
decree could be clear to regulate the share of benefit between central, local government
and farmers in relation to timber production. Because the friction of sharing of timber
production is the main issue in the local community, it could be solved by creating such
a Regency Decree.

Thirdly, establishing a cooperative in local communities is so challenging for
farmer groups. According to the Ministerial Decree, every group should be in a
cooperative if they want to get the timber utilisation licence. Many problems arise in the
local contexts and also in forest areas, such as developing of institutional arrangements,
independency, professionalism and commitment that should be possessed by the local
community itself. Besides, achieving those goals could be supported by stakeholders,
especially State (central and local government), NGOs and University researchers. In
this research, NGOs and University help the local community groups for making the
proposal and submitting the proposal to Government.

Fourth, in terms of intervention policy, if the central government could establish a
clear master plan on CBFM that clearly explains who can access the forest, and who
should be involved, the local institutions will be strengthened and forest resources will
be sustainable. For example, at the level of Regency, the government should reduce its
intervention and issue directions to local communities. In addition, the position of
Regency or local Government can become a policy regulator of CBFM so the local
government could support the local community for developing capacity building and
networking. This intervention is primarily at the level of technical operations and can be
performed as the role of the community itself.
At the community level, there are several issues that should be solved in dealing with shifting policy and strengthening of local institutions. For that reason, the next section will explain and elaborate on how to improve local institutions by strengthening informal and formal institutions, based on the selected sites’ situation. It maximises the informal institutions power and then establishes formal institutions. Chapter 7 (seven) described clearly how to strengthen the local community. Firstly, the first activity to strengthen is the local knowledge that should be learnt and maintained, especially the local knowledge that supports forest resource’s sustainability and local communities’ benefit. After that, the local communities should adopt a new approach or new knowledge but it should rely on local contexts. In many cases, Indonesian University researchers and scholars should rethink about how to study, learn and develop knowledge based on Indonesian contexts and culture. The scientists could be less ready to adopt “Western” and to eliminate “own” knowledge easily. Many of them are so fast to adopt, share and teach “Western” ways which may not be suitable for Indonesian contexts. The best thing that Indonesian scholars should do is learn, understand, reflect, modify and share their own knowledge and then compare or collaborate with “Western knowledge”. If the mentioned activities fail, the local institutions especially, their informal institutions such as, norms and local wisdom are in danger.

Second, in terms of capacity building weaknesses, the capacity building can be done at an individual and communal level and those activities should be applied by a bottom-up approach (Bebbington et al., 2006). At the individual level, forest farmers need methods to participate in the decision making process, articulate their interests, and negotiate with other stakeholders. This research has found that the farmers lack
those abilities so these could be solved by empowering and supporting from Central, local government, NGOs and University. Chapter seven describes the relationships between stakeholders in this research. For example, those external actors of civil society can continue their programme and give more support to local communities, such as training, providing information and advocacy. In addition, by using the button-up method the farmers gain some points which are: this method can reduce the failures in the implementation of the new technique; and then it can secure the knowledge becoming long-term knowledge and long-life understanding. If individual capacity increases, the communal capacity will improve significantly as well.

Because of less participation and the patronage dilemma, one or more people dominated the policy-making processes in farmer groups. The local community then is less transparent and members of groups could not all articulate their interest. In responding to this situation internally, the groups should invite more people to participate in the policy-making processes, such as women and those who own no land. If the group find it is difficult to initiate this process from within, the external stakeholders could do this. External stakeholders could be faster to increase group participation but it should be executed smoothly to minimise conflicts in the farmer group.

8.5. Recommendation

I want to state that this recommendation is intended for the future research. In this research, the CBFM was launched by the central government and implemented by local governments in 1995. In this research, it has been implemented by GKR government and its communities as well. The communities already established their
local institutions to implement that opportunity. There is a hope that the involvement of local communities in managing state forest resources will increase the forest resources' sustainability and bring significant prosperity to local communities. The researcher believes that the security and forest conservation is better ensured through the involvement of communities. The CBFM could be a better solution to reduce the rate of deforestation than the government’s involvements. As a result, participation and strengthening of local institutions could become a keyword in preserving the forest because the forest area is very vast and cannot possibly be monitored and supervised solely by the government officer’s orders due to relatively limited numbers. In addition, this programme can be a breakthrough that has a prospect of improving the welfare of society.

These findings emphasise that local communities have the capability to implement, monitor and manage their resources in a sustainable way. Each community has its own way to adapt their environment as well. They can develop best practices on the development of institution arrangements that can monitor the rules that they set. However, future research could be successful if the researcher can do several things. First, the future research can analyse how the local community can maintain the forest sustainability when they are felling the trees. The farmers had already got the license to cut the trees at the time of this research being done. It is crucial to the situation that the farmers prove that they can manage their CBFM areas in a sustainable way.

Second, the next research also can facilitate more stakeholders such as government officers, NGO’s activists and traders in various forest areas. It is useful to understand more comprehensively how to develop a monitoring-policy system based on
the community participation. The evaluation system also could be developed if the
future research can invite more stakeholders and use more comprehensive research
methods.
Appendix A

Risk Assessment
### Fieldwork Project Details

<table>
<thead>
<tr>
<th>Faculty/School/Service</th>
<th>School of International and Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fieldwork Location</td>
<td>Gunung Kidul, Yogyakarta, Indonesia. 5 May-18 July 2012</td>
</tr>
<tr>
<td></td>
<td>Data collection/fieldwork will be carried out in this place</td>
</tr>
</tbody>
</table>

#### Brief description of Fieldwork activity and purpose

The purpose of the trip is to:

- Conduct observation and in-depth interviews with stakeholders in the Gunung Kidul Regency of Yogyakarta Province in order to understand and assess the implementation of Community-based Forest Management.
- Visit the Local Government office to get Regency and local level socio-economic data, which are relevant for all those carrying out our research aims.

#### Timetable

<table>
<thead>
<tr>
<th>Dates</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 May</td>
<td>Depart from Manchester</td>
<td>UK</td>
</tr>
<tr>
<td>6 May</td>
<td>Arrive in Jakarta</td>
<td>Indonesia</td>
</tr>
<tr>
<td>12 - 25 May</td>
<td>Gain access</td>
<td>Yogyakarta, Indonesia</td>
</tr>
<tr>
<td>20 - 31 May</td>
<td>Recruit research assistants</td>
<td>Yogyakarta, Indonesia</td>
</tr>
<tr>
<td>1-15 June</td>
<td>Observation and In-depth interviews</td>
<td>Gunung Kidul, Indonesia</td>
</tr>
<tr>
<td>16-30 June</td>
<td>Collect secondary data in local government office</td>
<td>Gunung Kidul, Indonesia</td>
</tr>
<tr>
<td>1-10 July</td>
<td>Observation and In-depth interviews</td>
<td>Gunung Kidul, Indonesia</td>
</tr>
<tr>
<td>11-17 July</td>
<td>Re-Check the data</td>
<td>Gunung Kidul, Indonesia</td>
</tr>
<tr>
<td>18 July</td>
<td>Depart from Jakarta</td>
<td>Indonesia</td>
</tr>
<tr>
<td>18 July</td>
<td>Arrive in Manchester</td>
<td>UK</td>
</tr>
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</table>

#### Accommodation details

ADDRESS & PHONE NUMBER

<table>
<thead>
<tr>
<th>Organiser Details</th>
<th>Contact details Name, email, telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Leader</td>
<td>EKO PRIYO PURNOMO, <a href="mailto:eko@umy.ac.id">eko@umy.ac.id</a></td>
</tr>
<tr>
<td></td>
<td>UK Mob: 07593891697 Indonesia No 62-821334-77745</td>
</tr>
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</table>
### School of International and Social Studies

#### Fieldwork Risk Assessment

<table>
<thead>
<tr>
<th>Nature of visit:</th>
<th>Data collection, fieldwork.</th>
</tr>
</thead>
</table>

#### Hazard Identification

*Identify all hazards specific to fieldwork trip and activities, describe existing control measures and identify any further measures required.*

<table>
<thead>
<tr>
<th>HAZARD(S)</th>
<th>CONTROL MEASURES (e.g. alternative work methods, training, supervision, protective equipment)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) The climate is tropical. I will bring and use sun protection (cream and clothing) and drink sufficient bottled water. It is the dry season so rain is unlikely but I will bring waterproofs to wear if necessary. I will also bring suitable warm clothing for evenings or if at higher elevations.</td>
</tr>
<tr>
<td></td>
<td>2) Dysentery and other diseases will be avoided by only drinking bottled water, or water that has been boiled and filtered. I will also take every precaution to avoid eating raw/uncooked foods such as salads, unpeeled fruit.</td>
</tr>
<tr>
<td></td>
<td>3) I have a comprehensive first aid kit including sterile needles (in case of poor quality hospital equipment) and a range of bandages/plasters.</td>
</tr>
<tr>
<td></td>
<td>4) Personal security will be maintained by not travelling alone wherever possible (I will accompany with my research assistants so I will be accompanied by them for the majority of the trip), and keeping valuables discretely stored in a money belt.</td>
</tr>
<tr>
<td></td>
<td>5) The chance of a car accident will be minimised by using a reliable car hire company, driving according to local road regulations and not travelling at night or alone.</td>
</tr>
</tbody>
</table>

| Process | 1) During the fieldwork I will also be accompanied by an experienced local assistant to help with interviews with local government officer and villagers. |
|         | 2) I will try to find the suitable stakeholders who can deal with this research. |
|         | 3) I am intending to rent a car and have experience of driving off-road. The rainy season will have ended when I get there and the roads are expected to be fine. I won't be driving at night. |
|         | 4) I will have a cell phone with me at all times and will keep my wife (Rima Erviana) informed of my whereabouts. |
|         | 5) I don't intend to have any manual handling during the fieldwork. |
|         | 6) I will be using a laptop but will make sure it is used on a desk in the correct position. |

| Transport – | 1) Return flights – Emirates Airlines (Manchester to Jakarta) |
|             | 2) Licensed taxis will be used to and from the airport |
|             | 3) Public transport, I will use it because it is an appropriate way to reach the site. |

| Equipment | Laptop, mobile phones, digital recording device |

| Violence | Likely to be low; I will stay in secure accommodation and most at my home, travel in company where possible, and avoid travelling at night. I will avoid political rallies. |

| Individual(s) - | 1) I have extensive experiences in long duration travel and rural/remote fieldwork in Indonesia (Kalimantan, Sumatra, Riau, Papua and Java). |
|                | 2) I have a first aid at work qualification. |
|                | 3) I have prescription medication for first aid and will ensure I have adequate amounts for the field season. |

Passport number: S 173255

The Nearest Hospital:

**Panti Rapih Hospital, Yogyakarta, Indonesia**
# School of International and Social Studies
## Fieldwork Risk Assessment

<table>
<thead>
<tr>
<th>Work Pattern</th>
<th>0274 – 552118, 514845, 514014, 563333 ext 325</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other-</td>
<td>08.30 – 17.30 where possible and all travel will take place during daylight hours.</td>
</tr>
<tr>
<td></td>
<td>No visa needed for research, no residency permit required because I have conducted a research in my country.</td>
</tr>
</tbody>
</table>

### Additional Control Measures

**Training:** Identify level and extent of information; instruction and training required consider experience of workers  
No further training required

**Supervision:** Identify level of supervision required

- e.g. full time, Periodic telephone/radio contact

I will keep in touch with DR P.B Anand and Prof Dr J. Weiss via e-mail. I will carry a mobile phone for emergency purposes.

- e.g. background checks for site visits

Prof Dr San Afri Awang and Prof Dr A Nurmandi will obtain all permissions to visit and interview in villages and organise meetings. I have visited most of the sites previously so I am familiar with the procedures for visiting and also the community culture.

### Identify Persons at Risk

This may include more individuals than the fieldwork participants e.g. other employees of partner organisations  
N/A

### Additional Information

| Dr P.B Anand |
| Bradford Centre for International Development, University of Bradford, UK |
| p.b.anand@bradford.ac.uk |

| Professor John Weiss |
| Associate Dean Research, Professor of Development Economics |
| j.weiss@bradford.ac.uk |

| Department of Governmental Science |
| University of Muhammadiyah at Yogyakarta |
| Dr Suranto |
| JI Lingkar Barat, Bantul |
| Yogyakarta |
| Indonesia |

| Relevant Contacts |
| Rima Erviana |
| rimapurnomo@yahoo.com |
| 081328283336 |

### Assessment carried out by

| Name: |
| Signature: |
| Date: |
### School of International and Social Studies
### Fieldwork Risk Assessment

<table>
<thead>
<tr>
<th>Names of person(s) involved in Fieldwork</th>
<th>Name: EKO PRIYO PURNOMO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Signature:</td>
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<td></td>
<td>Date: 15 February 2012</td>
</tr>
</tbody>
</table>
Appendix B

Consent Form
CONSENT FORM

The Processes and Consequences of Community-based Forest Management Implementation in Indonesia

Name of Researcher: Eko Priyo Purnomo
Institution: School of Social and International Studies, University of Bradford, UK
Contact information: 082133477745- ekopurnomo9@yahoo.com

1. I confirm that I have read and understand the information sheet and interview guide dated 7 May 2012 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I understand that any information given by me may be used in future reports, articles or presentations by the research team.

4. I understand that my name will not appear in any reports, articles or presentations.

5. I agree to take part in the above study.

6. I agree to be recorded during the above study.

Date
Signature

Name of Participant

Researcher

When completed, please return in the envelope provided (if applicable). One copy will be given to the participant and the original to be kept in the file of the research team at: PLACE

Supervisors: Dr P.B. Anand and Prof John Weiss • Web: http://www.bradford.ac.uk
23rd March 2012
Appendix C

Interview Guide
Interview Guide for Farmers and Local Community

Respondent Identity
No :
Position :
Age :
Current education :
Address :
Land Owned (Ha) :

A. Responses of the Community Living Around CBFM Forest Implementation

1. Are you engaged in CBFM activities?
2. In what activities are you engaged? (from the beginning up to now)
3. Tell me the history of local community involvement in CBFM?
4. What sorts of efforts have you made to support the success of CBFM in your area?
5. Is there any public awareness to support CBFM?
6. Are you involved in a CBFM farmers groups?
7. What is your position in the group?
8. What is your motivation to get involved in it? (active / passive)
9. What sorts of benefits could you gain? (economy, ecology / conservation)
10. What is your opinion about the implementation of CBFM in this area?
11. In your opinion is there any hope for the sustainability of CBFM?

B. Factors that Hinder and Support the Activities of CBFM

1. Can you explain and describe the factors that inhibit the activities of CBFM?
2. Tell me the factors that support the success of the CBFM?

The factors that hinder and support CBFM can be grouped into two criteria:
Internal factors (the members of the community and CBFM farmers groups)
External factors (socialization of programs by the government, the sharing of seeds, planting, maintenance, supervision, establishment of institutions, institutional arrangements, institutional programs, and local government policies. Do you have your own view?

C. Process of Formation and Institutional Strengthening of Institutions

History
1. Tell me the history or process of the establishment of these groups?
2. Who were the initiators?
Inclusivity
1. What do you think of CBFM? Do you support it or you do not support it? Give your reason(s)?
2. Does the project have diverse members/various attributes of stakeholders?
3. Is it easy to get involved in this project?
4. Is there a joining fee?
5. What are the requirements to join the project?

Adaptation New Technology and Local Knowledge
1. Do you recognise local values or knowledge that can be useful in managing the forest resources? Such as how to choose types of crops etc.
2. Who can help you to learn a new technology in this project?
3. Do you think you can adapt a new technical skill from other stakeholders?

Institutional Compositions
1. Does the group have an appropriate management structure?
2. Does the group have institutional compositions to guide the implementation of CBFM?
3. Who made the rules for the farmers groups to carry out the CBFM activities?
4. How do the group members resolve conflicts (who resolves them and how does the process go?)
5. What do the group members do to make sure the rules are applied within the groups? (Internal organisation and management of land Gunung Kidul)
6. What is decision making process like in the groups?
7. How can knowledge transfer be done in the groups?

Networking
1. Does the Organisation have a regular meeting?
2. How often is the regular meeting conducted?
3. Does the organisation have any network with any other organisations?
4. What is the name of the network?
5. What kinds of events have been conducted collaboratively with other organisations?
6. Do you think the role of government is very important in implementing CBFM?

D. Recommendations
What is your expectation towards the implementation of CBFM in the future?
Interview Guide for NGOs Activists and Government Officers

Respondent Identity
No : 
Position : 
Age : 
Current education : 
Address :

A. Responses on CBFM Forest Implementation

1. Are you engaged in CBFM activities?
2. In what activities are you engaged? (from the beginning up to now)
3. Tell me the history of your institution involvement in CBFM?
4. What sorts of efforts have you made to support the success of CBFM in your area?
5. Is there any public awareness to support CBFM?
6. Are you involved in a CBFM programme?

B. Factors that Hinder and Support the Activities of CBFM

1. Can you explain and describe the factors that inhibit the activities of CBFM?
2. Tell me the factors that support the success of the CBFM?

In this section, there are a few key points to be asked;

1. Government’s rights and responsibilities
2. Policy and legal organisation
3. Delivery services
4. Transfers of rights and rights allocation
5. Dispute resolution
6. Expropriation and compensation
7. Taxation
8. Recording, monitoring and evaluating

C. Recommendations

1. What is your expectation towards the implementation of CBFM in the future?
2. What should the community, government and other stakeholder do in respond to implementation of CBFM sustainability?
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