AN INSTITUTIONAL ANALYSIS OF POLICY-REDD+ IN INDONESIA:
A Case Study of the Tesso Nilo REDD+ Voluntary Project, Riau-Indonesia

MASTER THESIS

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ABSTRACT

This thesis analyses the policy-REDD+ (reducing emissions from deforestation and forest degradation) transfer from institutional aspect on the different levels in Indonesia. Its policy transfer is done because of international agreement, and failure of forest management system. Its policy transfer is very complex, depends on the contextual matters, and works through the institutions both formal and informal. There are many institutional problems particularly regulations, type government, planning, value, culture, etc. Qualitative method with supporting of institutional theory and good governance are used to analyze these. The different institutions supported by case study of The Tesso Nilo REDD+ project as a case selection identifies many problems and barriers which are lack of institutional arrangements and bad performance of good forest government. These problems stimulate the policy-REDD+ doesn't work well and lead to failure. For succession of the policy-REDD+ transfer and implementation, it needs adaptation institutions and regulation/policy reform.

Keywords*: climate change mitigation, emissions reduction, REDD+, policy transfer, state forest and CBFM, institutional arrangements, good forest governance, and adaptive collaborative management.*

GUIDELINE FOR USING THESIS

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PREFACE AND ACKNOWLEDGEMENT

Carbon trading policy under REDD+ (reducing emissions from deforestation and forest degradation) scheme is now the most controversy and becomes the highest attention international politics. This policy is believed as an efficient and effective way for reducing emissions globally using market mechanism. In this scheme developed countries should help developing countries to reduce emissions. Currently Indonesia has done hybridization of REDD+ in the national forest policy on the different levels. This hybridization obviously is worked through institutions and faced with many problem and barriers. This policy transfer implicates to forest management and policy, and to forest providers and local/indigenous communities who live and depend on the forest.

Accordingly, this study addresses the problems and barriers of policy REDD+ transfer on the different level institutions either from international, national, provincial, and local level. To analyze deeper, I use the qualitative method using the case study of Tesso Nilo REDD+ project in Riau, Indonesia. It identifies what are the international and the national debates, problems, opportunities and challenges, and what are problem and barriers faced in local level (provincial, district, and project site). In addition, indeed I analyze the transfer REDD+ policy will work or no, and what is the possibility strategy and recommendation to solve the problems and barriers. In the final I suggest the adaptive collaborative management is appropriate way for succession of the policy-REDD+ transfer.

This thesis would not have been possible finished and realized without the support of many people. First of all, I would like to express my gratitude to Almighty God that gives me health and bright thinking. I wish to express my gratitude to Dr. Margo van den Brink who supervises and inspires me for open mind with the broader perspective and Ir. Teti Armiati Argo, M.E.S Ph.D who supports my thinking. Special thanks to all my friends, especially group members of DD ITB-RUG 2008 for sharing great moments in Bandung and Groningen. Deepest gratitude is also due to Ford Foundation International under International Fellowship Program of IIE USA and IIEF-Jakarta Indonesia for enriching my English capability in University of Indonesia and for supporting financially to study in ITB and University of Groningen. I would also like to convey thanks to my colleagues Emmy Primadona, Erna D. Kusumawati, P. A. Chrisnarmoko, Susanah Agus, and Maria Purnama for my thesis grammar checking. I wish to express my love and gratitude to my beloved wife (Mariati Lince L) and my beloved-The Three Musketeers-Son: Martin Lamano, Ryan Aghata, and Frans Boaz for your passion, supports and prayers. I would also like also to express my parents and parent in-laws for your teaching and shared leaning.

May all that have been learned and achieved be positive contributions to my countries, our forest and natural resources management and policy, and Indonesian forest people generally.

Groningen, August 2010

Mangarah Silalahi

LIST OF ABBREVIATIONS

ACM	Adaptive Collaborative Management
AWG-LCA	Ad hock Working Group on Long Term Cooperation Action
BAPPENAS	*Badan Perencanan dan Pembangunan Nasional*
CBFM	Community Based Forest Management
CO2	Carbon Dioxide
COP	Conference of Parties
DNPI	*Dewan Nasional Perubahan Iklim*
EU	European Union
EU-ETS	European Union Emissions Trading Scheme
EC	European Union Commission
FAO	Food and Agricultural Organization
FPIC	Free prior informed and concernt
FCPF	Forest Carbon Partnership Facility
GHG	Green House Gases
GoA	Government of Aceh
GTZ	German Society for Technical Cooperation
IFCA	Indonesian Forest Climate Alliance
INPRES	*Instruksi president*/ Presidential Instruction
IPCC	Intergovernmental Panel on Climate Change
ITB	Institute Technology Bandung
ITTO	International Timber Trade Organization
KPK	*Komisi Pemberantasan Korupsi*/ Eradication Corruption Commission
MENHUT	*Menteri Kehutanan (Ministry of Forestry)*
MRV	Measurable, Reportable, and Veriviable
PERMENHUT	*Peraturan Menteri Kehutanan*
PTAK	*Pengadilan Tinggi Anti Korupsi/Anti-Coruption High Court*
RED	Reducing Emissions from Deforestation
REDD	Reducing Emissions from Deforestation and Forest degradation
REDD+	REDD+ adding with emissions sequestration, sustainable
REDD++	forest management, and carbon stock enhancement
(AFOLU)	REDD+ adding with Agriculture, Land Use, Land Use Change and Forestry
RI	Republic of Indonesia
RTRW	*Rencana Tata Ruang Wilayah (Spatial Plan)*
TNC	The Nature of Conservancy
UK	United Kingdom
UNEP	United Nations Environmental Program
UNDP	United Nations Development Program
UNFCC	United Nations Framework convention on Climate Change
UN-REDD	United Nation REDD
USA	United States of America
WWF	World Wild Fund for Nature

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CHAPTER I

INTRODUCTION

1.1 Background

Based on IPCC's (Intergovernmental Panel on Climate Change) fourth assessment report (2007), Green House Gases (GHG) emissions have increased significantly since the mid-19th century. They reported that the concentration of atmospheric carbon dioxide (CO_2) has expanded by 35 % since the pre-industrial era whereas 18 % came from deforestation and forest degradation. The increasing of GHG emissions and CO_2 concentration are causing global climate change and sea level rise. It impacts to billion coast people dramatically, the global environment quality and the countries capacity to manage economic sustainability in the future. Furthermore, IPCC reported that about 75 % of deforestation and forest degradation emissions are coming from tropical developing countries such as: Brazil, Indonesia, Papua New Guinea, Malaysia, etc.

Indonesia has the highest deforestation rate in the world and becomes the third largest country that releases total GHG emissions after USA and China (World Bank, 2007). Not holding a major stake effort to change the global climate, Indonesia is likely also one of the most suffered countries with the climate change. World Bank (June 2007) and Regional and Coastal Development Centre of ITB (2007), for example, reported that climate change will impact seriously on Indonesia where about 2.000 islands will sink when the sea level increases by 0.80 m for the next 30 years[7]. Reducing deforestation will not only reduce the climate change rate but also brings about other benefits such as the protection of biodiversity, the source clean water and food security for local and global communities (WWF International, 2008).

One way to reduce deforestation/emissions is carbon trading using market based approach which is called REDD (Reducing Emissions from Deforestation and Forest Degradation) scheme. It has emerged a central piece to address climate change from the Kyoto Protocol to the Cop 15 in Copenhagen in December 2009[8]. It refers to climate change mitigation because its action is the mechanism that developed countries help developing countries to reduce their deforestation rate/emissions through an economic incentive (UNEP, 2008). One of the largest multinational carbon trading schemes in the world is EU ETS (European Union Emissions Trading Scheme). In EU countries, it was ratified through Directive 2009/29/EC of the European Parliament amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emissions allowance trading scheme of the community. The second largest is USA with Acid Rain Program of the 1990 with Clean Air Act.

To address emissions, COP 13 in Bali held by UNFCCC (United Nations Framework Conference on Climate Change) produced the Bali Action 2007 containing the agreement to built the emissions reduction under the REDD scheme. Then, Indonesia ratified Bali Action agreement by issuing the decree of Forestry Ministry Number 68/Menhut-II/2008 about setting up of demonstration activities in decreasing carbon emissions from deforestation and

[7] www.antara.or.id

[8] www. unfccc.int/files/meetings/cop_15/application/.../cop15_cph_auv.pdf

degradation and Presidential Decree No. 46/2009 about the development of National Climate Change Council (*Dewan Nasional Perubahan Iklim/(DNPI*). In 2009, Forestry Ministry issued decrees for REDD readiness with No 30 of 2009 and for REDD benefit sharing No 36 of 2009. To date, Ministry of Forestry and stakeholders related are still doing the international negotiation, implementing of the REDD+ readiness activities for getting and contributing the good institutional arrangement of REDD and reports to parties in UNFCCC.

With many weaknesses and criticisms of REDD, then COP 15 Copenhagen in 2009 completed the REDD becoming REDD+. It means that it scheme is not only cover the reducing emissions from deforestation, but it also includes emissions reduction and sequestration from conservation, sustainable forest management, and enhancement of carbon stock. REDD+ also ensures the respect to the right indigenous/local people, and involves their participations in all of its process. Even though the REDD + has been agreed by many parties, but it scheme is not legally binding yet. In this thesis, I obviously use the term of REDD+.

The policy transfer of REDD+ and its mechanism work through the institutions both formal and informal. Inspiring from IDEGEC Scientific Committee (in Termeer et all., 2009:3 and Hall and Taylor (1996) institutions refers to system of the rule of the game, decision-makings, programs, efforts, agreements, etc., that give rise to social practices, roles to the participants in their practices, and guide interaction among the occupants of the relevant roles. Institutions will facilitate policy REDD+ transfer to actors in Indonesia on different levels. There are also many problems with the adoption the new policy because it faces some regulations, planning, organization, value, culture, etc. The succession of new policy-REDD+ policy transfer should be supported by regulation, institutionalized through institutions, involved in planning, and harmonized with value and culture. Sometimes new policies coming from developed countries do not work well in developing countries because of many variables that influence it.

In the context of the REDD+ scheme towards carbon trade, many researches or studies had been conducted by universities, international agencies and NGOs. Dovie, et al. (2002, P.70-72) reviewed about the CDM (Clean Development Mechanism) that had been implemented from 1999 and funded by GEF (Global Environmental Facility) lead to benefit for local, national, and international toward sustainable development. But in Indonesia the CDM scheme was failed (Gilberson and Reyes, 2009, WALHI, 2009). Implementation of REDD readiness in community forestry has been done in Cambodia and in customary forest has already being planned in Kenya (Mutunga, 2006). Van Noordwijk et all (2008; p.29), conducted a research about the payment rewards of global ecosystem that should consider for property, right, and sharing responsibility. Bradley (2009) establishing a community forestry-REDD project in Cambodia. But institutional analysis on the different levels of policy-REDD+ transfer is limited even do not do yet.

One of the main problems regarding to forest management and carbon trade in Indonesia is that the management of forest tends to be centralistic, especially in national park and logging concession, while carbon trading needs the decentralization and good forest governance. Until now, there is no legally conservation and production forest based on community management. In 1999, Indonesia implemented decentralized forest management, but it gave impact to faster deforestation and it had lack of integration and coordination. In addition in 2004, some of the forest district authorities were withdrawn to

central government. Finally, REDD+ mechanism also deals with the case of land use, tenure, certification, and participation of people in and around the forest.

Based on the basic knowledge forest management, I divide forest into two kinds which are state forest management and community based forest management. State forest management refers to management of forest that is based on formal institutions. CBFM is the management of sustainable long term forest ecosystem using the local knowledge and customary law (informal institutions) (UNFCC, 2009). CBFM forms are community forest, people timber plantation, customary forest and village forest. The less accommodation of the Community Based Forest Management (CBFM) is the other problem of forest management in Indonesia. It became a marginal policy as well. Some indications for that include the fact that it is only less than 1% of total 123.45 million ha forest that is agreed by Forestry Ministry to be managed under the framework of CBFM, whereas are about 20 millions of Indonesia's poor people living in and around forest (CIFOR, 2004). Besides, almost all of CBFM was agreed under the state forest management. It means that the state is afraid to lose control of the forests.

Furthermore, some regulations in forestry sector, planning and REDD mechanism do not really consider to community participation and ignore the right of local/indigenous people; whilst one of the requirement of REDD+ is to respect to indigenous people right. On the act No.41/1999 about forestry, for instance, the recognition of local and indigenous people is very scarce. Meanwhile, based on what is written in the Permenhut 68/II/2008, the carbon trade will likely benefit more for big companies, particularly those operating in pulpwood and oil palm industries. Then based on spatial planning of both on local, provincial and national levels do not provide the land and forest for local and indigenous people. It is the company benefitting from forest cutting, forest/land production, and carbon trade, while the local people spending opportunity cost to protect the forest which ironically have limited access to converse forests and likely suffer from the current and planned forest management practices. This is not fair and will lead to injustice.

Based on these problems, if REDD+ will be done with the current institutions and forest governance, it will lead to failure, and the local and indigenous people do not get benefit. On the contrary, they will become poorer and unfavorable, and local knowledge will be deprived and depleted the culture. One possible answer to handle it is to integrate Adaptive Collaborative Management (ACM) on carbon trading. It means to incorporate local people and other stakeholders in the process, in the development of concept and mechanism, and in the implementation and monitoring of REDD+ initiative. Its integration will lead to community participation; promote fair payment for environmental services, equity, and likely improve the benefit for local people and other stakeholders.

What I address for this study is the analysis of policy-REDD+ transfer from the institutional perspective both formally and informally with the multi levels research approach. Its approach covers the institutional analysis of REDD+ in international, national, and local level. Otherwise I do more attention for formal institutions because it is higher influence and supports the succession of policy REDD+ transfer.

1.2 Research Objectives

The main objective of this research is to explore problems and barriers of carbon trading under REDD+ scheme from the institutional perspective on different levels and to recommend the solution by combining it with ACM on state forest management and CBFM. This objective can be divided into three sub objectives as follows:

- To examine and analyze the policy-REDD+ transfer will work or not, and what is the pre-requirements that can be successful implemented
- To understand the carbon trading scheme problems in the context of REDD+ institutions on the different levels in Indonesia
- To formulate REDD+ recommendation with possibilities both combining of the Adaptive Collaborative Management on state forest and CBFM through case study in the Tesso Nilo REDD+ Project.

1.3 Problem statement and research question

Problem statement

Adoption of policy transfer of carbon trading on the context of the REDD+ from international agreement, national to local level will be through institutions and should be supported by good implemented performance. The concept of carbon trading that was initiated by developed countries sometimes does not work well in developing country. The type of government and planning, the forest management and regulation, carbon trading that market based economy and it's implication to the forest provider become the main problems of this research. The main question is **how does the policy-REDD+ transfer work out in practice and what are the institutions' problems and barriers.**

The case will be focused in Indonesia. The policy- REDD+ transfer in the different level institutions in Indonesia faces to some problems and barriers. The capitalism market, the centralized forest management and the decentralization politics, the limitation of accommodation of the community based forest management will give implication of unfavorable of community in and around forest regarding to implementation of carbon trading. It needs adaptation, arrangement of institutions, good forest governance implementation, capacity building, and new approach. ACM is possible the ideal approach that can answer and copes these problems. The study case of REDD+ voluntary in Tessonilo project and supported by the collaboration of the REDD+ in Cambodia and Ulu Masen-Aceh will be used to test the problem statement.

Research questions

From the problem statement above, and to achieve the objective of the research, some sub questions raised are:

1. How does the new international policy-REDD+ transfer work out trough institutional perspective, some sub question are:

- How the institutions from different level/approach can there be distinguished on forest governance

- different approach can there be distinguished on forest governance
- What does the concept of policy transfer mean?
- How does good governance perform in terms of forest management and policy?
- What are the problems and barriers of policy transfer?
- What are the institutional arrangement and good forest governance required in order to succeed in policy transfer?

2. How extent does REDD+ in term of the carbon trading scheme work in Indonesia on the institutions in different levels? The sub questions are:

   - What are the REDD+ concept and mechanism and how are their debates on the international level?
   - What are the REDD+ concept and mechanism and how are their debates on Indonesia?
   - How can new REDD+ policy be transferred on institutions in different levels in Indonesia and how is it anticipated?
   - Who is the actors and main role in the policy-REDD+ transfer in Indonesia?
   - How are the institutional arrangements of REDD+ in Indonesia from national to local level
   - What are the concept of state forest and CBFM and how about the implementation of CBFM in Indonesia?
   - What are the problems and barriers of Policy-REDD+ transfer in Indonesia?
   - What form are the institutional arrangement and the framework of REDD+ in Indonesia?
   - are the concept and mechanism of policy-REDD+ transfer fit or not in Indonesia?

3. What are the problems and barriers of the REDD+ project? Some sub questions are:

   - How is the REDD+ policy integrated in the local regulation, policy and planning?
   - To what extent do the formal institutions and informal institutions influence the REDD+ implementation in the local level?
   - How about the local forest governance dealing with REDD+ in the project level?
   - How are the roles and relationships of stakeholders in the Tesso Nilo REDD+ project?
   - What are the problems and barriers of REDD+ in the project implementation?
   - What are the problems and barriers of REDD+ concept with local institutions?
   - What institutional arrangement and improvement of forest governance are needed in term of REDD+ project level?

4. To what extent can ACM (Adaptive Collaborative Management) approach be recommended to cope the problems and barriers of REDD+ through institutional analysis in different levels? Some sub questions are:

   - What is ACM? and how is its implementation possibility to integrate on CBFM and on state forest?
   - What are lessons learned from other project in supporting of recommendation of ACM?

- What are problems and barriers for implementation ACM in national park and logging concession?
- What are the recommendations of REDD+ institutional arrangement and implementation based on stakeholders thinking and participation approach?
- What are the theoretical reflections about the policy transfer, institutional theory, and good forest governance approach regarding to REDD+?
- What are the needs for further research about REDD+ using the ACM.

1.4 Research Approach

Institutional analysis is the main theoretical approach in study of policy REDD+ transfer in Indonesia. Institutions both formally and informally will become the basis for understanding its policy transfer in different levels. These institutions off course as critical point in term of the successful and failure of the policy transfer. Then analyze further about the good forest governance for analyzing the implementation on the field project. Institutional approach also stresses on the interaction process and mutual-constitutive relationship between institutions (structure) and individual (agency) action (Gidden, 1986).

Institutions in different levels are very important approach to see the problems and barriers of the policy-REDD transfer in Indonesia. It will describe the problem and debates, discourses of REDD+ from international, national, and local level (provincial, district, and project). These problems and barriers could be possibility solved by adaptive collaborative management. Adaptive collaborative management is as the most possibility approach to address the lack participation, to cope the complex forest problem and uncertainty, to reduce of risk, and to enhance of democratic and to do the equity, sharing benefit and management. Using this approach, I expected that the REDD+ policy planning will be better, more implementable and pro climate, community attention and biodiversity concern.

The qualitative method using the single case study of the Tesso Nilo REDD+ voluntary project will be mainly strategy to do this research and to analyze the policy-REDD+ transfer. Using the deeper understanding of one project that can be as representative REDD+ project in Indonesia is very important. Using this study we understand more comprehensive the real and fact problems and barriers of the REDD+ in Indonesia on different levels. The analyzing and the formulation recommendation are integrating of stakeholder's thinking, theory, and personal judgments. The case study approach will be clearly explained in the chapter III.

1.5 Significance of this research

Scientifically, this study will contribute to understand of policy-REDD+ transfer in developing country in the different level from the view of institutions. Theoretically, this research contributes to combine of policy transfer and institutional theory, and also the need of good governance for successful implementation of the policy transfer. It is expected to help forest planning theorist, academicians, and researchers to develop a better understanding of policy-REDD+ transfer process in Indonesia. This study could also be used as a conceptual resource for policy makers and practitioners in Indonesia to develop and improve the REDD+ institutional arrangement. Besides, this study implements the ACM

approach-as an interactive planning process in the complex forest problems and uncertainties of climate change with multi stakeholders' involvement and interests.

In practical ways, this study is needed because the highest rate deforestation in Indonesia impacts to release of CO_2. The deforestation does not only effect to GHG emissions but it also impacts to loss of biodiversity, and stimulates socio-economic problems. Socially, this study will support the democratic ways and benefit to local people. The implementation of ACM obviously enhances the local participation and role. It will also deliver some inputs to planning of REDD+ and policy in Indonesia that pro poor, improve the good forest governance, biodiversity concern, and promote local knowledge and informal institutions.

Finally, by developing a corresponding research strategy implementing of interviews, observation and FGD (Focus Group Discussion) will support of qualitative analysis and method. The primary data from these activities are very important to find fact finding and develop the recommendations.

1.6 Outline of the thesis

The thesis is structured as follows. Firstly, in chapter I, I describe the Introduction of this thesis containing the background and reason why REDD+ is important scheme for the emissions reduction, what is the problem of its policy transfer facing to institutions and forest governance in Indonesia, and how I arrange the research aim and research questions. Secondly, in the chapter II, policy transfer framework, Institutional theory and forest governance will be used as frame work analysis, and adaptive collaborative management for formulating recommendation of the possibility of REDD+ on CBFM and on the state forest management. Thirdly, in chapter III, I describe the justification and reflection on methodological consideration and choice the single case study to answer the research aim, research problem and research questions.

Fourthly, I described the REDD debate internationally and in Indonesian context in the chapter IV and V. The descriptions of these chapters are to explain the debates of REDD+ policy transfer both of positive and negative ways. The discourses of REDD+ as climate mitigation are very important before I choose the appropriate views to support of my thesis. Fifthly, I look for the REDD+ project in the field and analyze the institutions, forest governance, and what are the gaps between REDD+ frame work and empirical fact in the Chapter VI. Sixthly, I do reflect from the other projects which designing collaboratively REDD+ in Cambodia) and the Ulu Masen REDD+ in Aceh-Indonesia in the chapter VII. The case study of the Tesso Nilo REDD+ project and lesson learns from these two projects are important to analyze the need of ACM and its possibility on state and forest management. Finally, I address conclusion, recommendation and theoretical reflection and also further research in the chapter VIII.

CHAPTER II

INSTITUTIONS AND GOOD FOREST GOVERNANCE

2.1 Introduction

This chapter addresses policy transfer and institutional theory. Policy transfer theory is used to analyze that policy-REDD+ fits or fail in integrating with Indonesian forest management. If this policy transfer is fit, then what are the succession factors that lead to failure, why and what are the problems and barriers? Thus, model and framework analysis of policy transfer of Dolowitz and Marsh (1996) is as the tool to define these factors.

Institutional theory focuses on understanding of the rules of the game, agreement, convention, norms, and value, etc., for the guidance of particular social practices. The institutions covers both formal and informally and how extent these two kinds of institutions influence the policy transfer and its succession form national, provincial and district level. In this study, institutional theory helps to analyze the unique adoption and problems faced by the international policy-REDD+ transfer in forest management in Indonesia. It also helps to understand the institutional arrangements of REDD+ in Indonesia, integration its policy into the rule of the game of forest management, interaction between agents related in forest management. Moreover, it is used to understand the institutional arrangements of REDD+ problems and barriers including its implementation in the central and the local levels.

Besides, policy REDD+ scheme and mechanism and also its implementation require good forest governance. Eight characteristics of good governance are as the indicator to assess the forest management system and implication of the policy REDD+. Good forest governance is the same spirit with the ACM (Adaptive Collaborative Management) that will be solved the complex, uncertainties, risk, and rapid changing policy, and adaptation of institution. Particularly of ACM will be explained in chapter VII as the result of the reflection from Tesso Nilo study case and relfection form other projects. Institutional arrangements and good forest governance are pre-requirements of REDD+ policies towards sustainable forest management. They are inter-related like two sides of a coin. Accordingly, policy transfer and institutional theory become more important in this study.

The structure this chapter is; first of all it explains about the policy transfer theory, then is followed by the institutional theory and good forest governance. In the end of this chapter addresses the conclusion and reflection of these theories.

2.2 Policy Transfer

Policy transfer (Dolowitz and Marsh, 1996) is always associated with several concepts of similar substance such as *policy convergence, lesson drawing* (Rose in James and Lodge, 2003), *policy diffusion, and policy adoption* (Strang and Macy, 2001). Rose'example (in James and Lodge, 2003) defines lesson drawing as "very similar to conventional rational accounts

of policy making which stress that policy decisions are made about the pursuit of valued goals through structured interventions by public bodies or their agents". Furthermore, Rose explored that a policy lesson is adopted from program elsewhere that may fit in their environment and place because of the dissatisfaction with the status quo of policy. Whilst Dolowitz and Marsh (1996) defined policy transfer "a process in which knowledge about policies, administrative arrangements, institutions etc. in one time and/or place is used for the development of policies, administrative arrangements and institutions in another time and /or place". The lessons learned in policy transfer include positive and the negative lessons. I prefer to use Dolowitz and Marsh' policy transfer definition in this research.

A new policy is always transferred through formal and informal institutions. The success of policy transfer depends on the institutional context and culture; the more similar the institutional and planning culture between original country, the more easy adoption and the more appropriate it becomes (Dolowitz and Marsh, 1996). In addition, Dolowitz and Marsh (2000), Evans and Davis (1999) suggested that in policy transfer, policy makers can look to the three levels of governance which are international, national and local level. It means that in the policy transfer should look at these levels because lesson can be learned from other countries, within supra national, and government units. Therefore it is very important to understand the concept of institutions of countries in policy transfer.

Furthermore, Dolowitz and Marsh (2000) developed a model and framework of policy transfer analysis that explains the kinds of policy transfer, actors involved, what is transferred, degree of transfer, from where and who transfer it, the constrains, how to demonstrate it, and the possibility of policy transfer failure (Dolowitz and Marsh, 2000: 9). The policy transfer can occur voluntary and coercive. A voluntary reason is because of the efficiency, policy competition, spontaneous coordination, and cross boundary cooperation. Coercive policy transfer is caused by colonialism, supra national regulation, and international treaties. They identified that six main categories of actors involved in policy transfer which are elected officials, political parties, bureaucrats/civil servant, pressure groups, policy entrepreneur/experts, and supra national organizations. But they emphasized on the two last of these categories in recent policy transfer development which are policy entrepreneurs/experts and supra national organization such us UN, International Monetary Fund (IMF), World Bank, etc. Lessons of policy transfer can range from copying, emulation, hybridization, synthesis and inspiration (Rose in Dolowitz and Marsh, 1996).

The success or failure of policy transfer is based on three factors which are sufficient/insufficient information, complete/incomplete transfer, and sufficient/insufficient attentions for difference the economic, social, political and ideological context in both transferring and borrowing country (Dolowitz and Marsh, 2000, Sanyal, 2005). Sufficient information about the policy, institutions, and how it operates, what are crucial elements of what made the policy or institutional structure are pre-requirements for the policy transfer to be successful. This model is part of analysis in term of transfer REDD+ policy in Indonesia.

It has been explained above that policy transfer work through the institutional both formal and informally. Thus institutional theory is very important to explain how policy REDD+ transfer through institutions. Below I describe the institutional theory.

2.3 Institutional theory

In this section I define the concept of institutions, institutionalization, and institutional continuity and change. Institutions theory has several definitions depending on context and use. The International Human Dimensions Program's Institutions project (IDEGEC Scientific Committee), defines institutions as "systems of rules, decision-makings, and programs that give rise to social practices, roles to the participants in their practices, and guide interaction among the occupants of the relevant roles" (Termeer et al., 2009:3). Hall and Rosemary (1996: 936-949) developed the term institutions in to "the tree new institutionalisms" to deal with politic science and behavioral perspectives. It means that three approaches that should developed in reaction to behavioral perspectives in during 1960s to 1970s and explore the role of institutions play determining of social and political outcomes. Three of these are historical institutionalism, rational choice institutionalism, and sociological institutionalism. But I define institutions referring to the IDEGEC Scientific Committee adding both formal and informal. In terms of REDD+ institutions include all of the rules of the game and procedures, convention/treaty, efforts, agreement from many stakeholders, norms, local culture formal and informal as a framing action to reach the shared common and goal which is global emissions reduction. For example: Copenhagen accord to agree the implementation of REDD+ readiness phase, commitment of RI's president to cut emissions, President and Forestry Ministry decrees regarding to climate change and REDD/REDD+, indigenous people culture and activities supporting the REDD+ policy.

The new rules, policies, concept, social behavior can be institutionalized within a social system, or society as a whole. Institutionalization refers to the process of embedding something (for example a concept, a social role, a particular value, policy, program and mode of behavior) within social system, or society as a whole, and an organization. Institutions are created for solving the certain problem in a society or certain group. The end of product of this institutionalization is institutions. So, the term "institutionalization" is the creation of institutional arrangements and particular policy, and establishes particular body for implementing policy. In this case, how REDD+ is institutionalized in Indonesia context, how its policy transfer is done and what are the problems, and how integrates it in the Indonesian forest management and planning.

The institutions will become as facility to transfer new value, new policy, and regulation through formal and informal way. It also prepare the sources for actors to do the interaction which the rational choice and human capacity and room for adaptation. Institutions can produce the social practices, but it can also create the new institutions (Giddens 1994; Termeer, 2009). Because of the institutions is agreement in arranging with long debates, it is embedded of robustness and resistance to change (Gupta et.al, 2008). In other words, institutions change is traditionally difficult to change; even though it sometimes can be reformed with the enforcement and the need of actors' interest for new rules and value. People are afraid to change the rules because of difficulty knowing what will happen after changing the rules. Sometimes, actors will maintain and continuity of institutions for saving their interest and power. Institutions can be both an opportunity and a constraint for policy transfer. Opportunity because institutions change may brings to the better situation. On the other hand, it becomes constraint if the local values opposite with

the new value or capture. Policy transfer and its successful implementation need adaptation of institutions and resources especially regarding to climate change (Termeer et al, 2009).

Nevertheless, we should consider and understand that diversity of structured human activities. Human behavior is affected by many elements; institutions are one of large number affecting it (Ostrom, 2005). Ostrom made example of the life. We need oxygen, water, and nutrition, but life itself operates at multi levels and interdependent. "Genes underlie phenotypic structures in a manner that is broadly analogous to the way that rules underlie action situations. But neither genes nor rules fully determine behavior of the phenotypes that they help to create. Selection processes on genes operate largely at the individual level, but rules—as well as other culture are likely to be selected at multi levels" (Hammerstein in Ostrom, 2005). Talking of institutions of REDD+, we need analyzing of working parts, the alphabet of the phenotype human social behavior as well as the underlying factor of rules and norms, biophysical law, environment, and community. The other important thing is governance. The successful implementation of emissions trading in EU countries and USA is because they have good governance. When the forest governance and human resources is weak, it will be problem with the implementation of REDD+ scheme.

Furthermore, Ostrom in Djogo et.al., (2003) made the institution analysis on common property that dived the rule became the formal and informal rules. She defined the informal rules as Formal rules or institutions are written and codified rules/convention, regulation etc. in order to be uphold and to be enforced or not. While the informal rules or institutions are norms, customs, and unwritten rules that use in the certain behavior both to be uphold and enforced or not. I will use the analysis of informal rules and formal rules to analyze the institutions of REDD+ policy.

Institutional theory will be mainly used to analyze the REDD+ neoliberal idea with the Indonesian planning culture and institutional context. Thus, REDD+ policy transfer will face on the national, provincial and local context and culture. Problems, effective adoption, differences and unique implications of the implementation of policy are depended on different components of institutions (Termeer et al., 2009). This theory will also support the perspective of interaction to understand the relation between actors and organizations in institutions, and how they institutionalize new social norm, value, and culture. I also emphasize on the interactive process, shared learning, balance of power, government performance to reach the social, economic, and ecological justice or sustainable development as mentioned by Healey (2003, 2006), and Sandercock (2004, 70(2): 133-41). According to the interaction process of REDD+, forest governance obviously is the important key and pre-requirement.

2.4 Good Forest Governance

For explaining of forest governance in Indonesia, first of all I should describe the definition of governance, good governance, forest governance, and good forest governance. Governance has many meanings and interpretations. But I tend to use two concepts of governance based on the Commission on Global Governance (CGG) and UNDP (United Nation Development Program). CGG (in Weis, 2000) defines governance as "the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is the continuing process through which conflicting or diverse interests may be

accommodated and co-operative action may be taken". Whereas, UNDP defines governance "as the exercise of economic, political and administrative authority to manage a country's affairs at all levels". Accordingly, governance refers to a set of individual ways and group to articulate their interests, to exercise their legal rights, to meet their obligations and to mediate their differences to reach a sustainable manner. It comprises mechanisms, processes, and institutions through which citizens and groups in all levels to do the democratic and sustainable manner. So, governance definition is broader than government meaning. Governance involves interaction between both formal and informal institutions and those of civil society. And government refers to organization of state and all units to perform and implement a public policy.

Subsequently, good governance means improving and reforming the functioning of democratic organization, including the 'deepening' of democracy and exploring of more active and creative roles for non-state actors and integrating economic and social goals (Weis, 2000). The UN body underlined good governance with reforming through human development and political institutions. There are eight characteristics of good governance, namely consensus oriented, participatory, following the rule, effective and efficient, accountable, transparent, responsive and equitable, and inclusive (Algere, 2000). This definition comprises the reforming effective government policies and administration with tackling corruption, improving efficiency and accountability of public and private sectors, respecting for the rule of law, protection of human rights and an effective civil society in managing and allocating resources.

Accordingly, forest governance means that process of decision making and comprising institutions of forest management involving state, private, community, and civil society. It includes management and responsible for it, how the decision making can be accountable, and how it is managed fairly and democracy. Forest governance should involve stakeholders all level, respect to human right and democracy, and fulfill the eight of good governance characteristics. Governance should be done on multi levels from international, national, regional, district, and local level. Concerning to forest governance on international/global level, Indonesia signed and agreed with UN Convention Biological Diversity and commit to REDD+ scheme. Then on the national to sub national, process of REDD+ and forest management should involve the participation of many stakeholders to reach sustainable forest management. Finally on the local level (which is local government, private and civil society) should share management, benefit and learning, follow the rule of the game, and apply collaborative action. Good forest governance refers to improve the decision making forest process, to reform forest management and policy, and to integrate socio-cultural, bio-physical, and economic aspect toward the sustainable forest management. Accordingly, for successful implementation of REDD+ in Indonesia needs good forest governance.

To enable sustainable forest management, it needs good forest governance including the formulation of institutional framework, implementation of forestry policies consistently in practices. Forest governance appears alongside such terms such as democracy, civil society, participation, human rights and sustainable development"[9]. It aims to minimize corruption, takes account minority's views, voice and right in decision-making[10]. Forest

[9] http://portal.unesco.org/ci/en/ev.php-URL_ID=5205&URL_DO=DO_TOPIC&URL_SECTION=201.html
[10] http://www.oecd.org/home/0,2987,en_2649_201185_1_1_1_1_1,00.html

governance is related to the regulation and allocation of forest and services, and if there are many corruptions, the REDD+ implementation will lead to failure and neglect of the indigenous people' view and right.

Regarding to institutions arrangements and good forest governance of REDD+ policy, the implementation of communicative rationality is more appropriate and better than technical rationality approach (Angelsen, 2009). On account communicative rationality will support the institutional arrangements of REDD+ that can be supported by all stakeholders. And communicative rationality is one of approach to reach the good forest governance. Institutional arrangements need coordination, cooperation and interactional process between stakeholders on the multi levels. Institutions and culture need to be changed for adaptation policy transfer. Based on these, ACM can be one approach to cope these problems and supports for institutional arrangements and good forest governance of REDD+.

2.5 Conclusion

The forest management and REDD+ scheme is very complex, fully with uncertainty and risk, and rapid changing policy. It needs institutional arrangement, good forest governance, and coordination-cooperation many parties. The policy-REDD+ transfer and its implementation in Indonesia are faced with these issues and depended on the degree of transfer and contextual institutions. Policy Transfer and implementation of REDD+ readiness indeed need of institutional arrangement and some pre-requirements such use adaptation, learning, human resources, room for change, and fair governance. The complicated issues, many stakeholders involved can be understood with the interactive-communicative process (collaborative) approach without ignoring of content and procedure.

Institutional theory helps to analyze the interaction actor, relation between actor, power relation, and many aspects influences to reach the global emissions reduction toward sustainable manner. Institutions both formal and informally can influence the succession of policy REDD+ transfer. Furthermore in the successful of implementation of the Policy REDD+ transfers needs the good forest governance performance. Forest management system and good forest governance concept are needed to analyze the exercise of policy transfer. MacMulloch (2010), finds that the problems of implementation of the REDD Ulu Masen project are mostly the weak good forest governance. Thus institutional arrangement of REDD+ in Indonesia and good forest governance are the prerequisites for successful of its policy transfer and implementation.

Regarding to these, ACM is more appropriate and challenge for the future planning and trend because it can lead involvement of local people in management, improve their capacity, share learning and experience, and need circle of evaluation to become better. It is holistic and multidiscipline approach, and needs new adaptation and creativity. The rapid forest policy changes and new of policy transfer, uncertainties and risk, and pre-requirements of institutional arrangement and good forest governance, need adaptation strategy. Diverse groups need to cooperate for natural resources management that are flexible and can incorporate feedback. These theories will use to describe the REDD+ climate change mitigation debate on the multi levels, institutional arrangements, and forest governance. In the next chapter I explain the methodology of this study.

CHAPTER III

RESEARCH METHODOLOGY

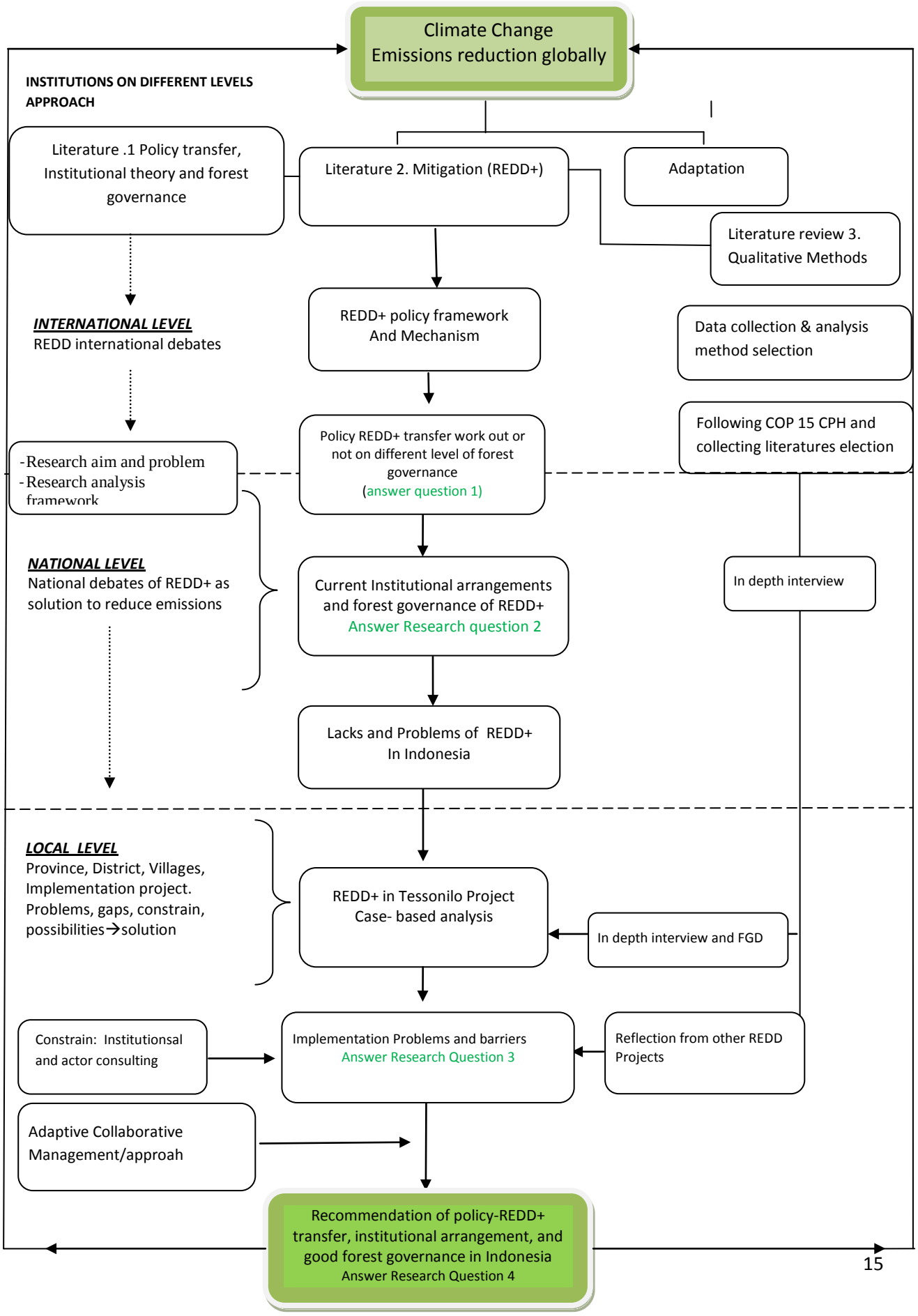
3.1 Introduction

This chapter discusses the research methodology as the strategy to answer the research questions and to achieve the objectives. To begin with, it is necessary to recapitulate the objectives of this research. The objectives are (1) to explore the problems of implementing REDD+ (Reducing Emissions from Degradation and Deforestation in Developing Country) in the different levels of institutions, and (2) to analysis and to recommend the possibility integrating REDD+ with ACM on CBFM and on state forest. In practical, this research aims to identify the problems and barriers facing of REDD+ voluntary activity in Indonesia on the different levels form national to local levels. From these problems and barriers, a plan of REDD+ that gives benefit for stakeholders and pro forest providers is designed. Two approaches that will be used for designing the plan include analysis institutions on different levels and adaptive collaborative management. Institutions on different levels approach will explore the problems of policy transfer faced in governance levels, and also the problems and barriers between framework and practices. Adaptive Collaborative planning with emphasis on interactive action will seek the role of actor in the multi levels for supporting the solution for REDD+ problems on CBFM and state forest. The interactive action or actor consulting will support the research finding for REDD+ policy recommendation.

The theoretical chapter regarding to policy transfer framework will be used for determining of the topic and to seek the factors of the policy-REDD+ transfer work out or not. Then analyze what are the problems and barriers, how about the institutional analysis in different levels, how the good forest governance performance. Institutions obviously become the main tools for analyzing the policy-REDD+ in Indonesia and the Tesso Nilo REDD+ project. Emphasizing on both formal and informal institutions to analyze the problems, barriers, and challenges of the policy-REDD+ transfer.

The structure of this research as a whole can be seen in the figure 3.1. From that figure is reflected that in the first stage, this research describes the overcoming climate change using mitigation instead of adaptation. REDD+ is the climate mitigation strategy to reduce GHG releasing to atmosphere. For exploring and analyzing of these problems, barriers, this research uses the review of 3 literatures, namely; *transfer REDD+ policy, multi level institutional approach and good forest governance, and qualitative method.* Following Yin's (2003) suggestion, in the case study is "novice may think that the purpose of a literature review is to determine the answer about what is known on a topic; in contrast, experienced investigators review previous research to develop sharper and more insightful question about the topic". The basic purposes of the literature review in this research are for helping the theoretical question, constructing analysis framework, and collecting any related material about REDD+ voluntary activity in Tesso Nilo forest. The analysis of problems and barriers of REDD+ from national level to local level needs to be understood. The research framework of this study can be seen on the figures 3.1. The Single case study will be explained from the case study approach, case selection, gathering several of data sources, data analysis and conclusion.

Figure 3.1 Structure of this research



3.2 A case study approach

In order to reach its objectives, the study mainly uses qualitative method with a *case study research*. Creswell (1998, pp64-68) compares five research traditions in qualitative research, namely: biography, phenomenology, grounded theory, ethnography, and case study. Specifically for case study research, Creswell explains that the characteristics of case study research are (1) its focus is to develop an in-depth analysis of a single or multiple cases; (2) data are collected from multiple sources and analyzed in description, themes and assertion; and (3) its narrative form is in-depth study of a single or multiple cases. The prominent strength of this case study is that it gives full understanding of real life context, particularly in policy transfer and readiness activities of REDD+ in an open, complex situation which many stakeholders are involved in Indonesia.

This study proposes two research questions, namely; (1) how does REDD+ policy transfer work in Indonesia, and (2) and what problems barriers, and the possibility solution to address these problems and barriers? Therefore, this study will explore facts about REDD+ policy transfer in Indonesia. Besides, the study also investigates the context of REDD+ using carbon trading and its implication for local people/forest providers and the solution based on stakeholders' perspectives. As a part of climate mitigations, the study of REDD+ also faces complexity, uncertainty, and the involvement of many stakeholders. Thus, this is a powerful methodological approach for achieving a good REDD+ planning and its policy that gives benefit for all stakeholders, in particular for local people.

According to Yin (1994, 2003), there are three basic steps in designing a case study. First, in defining the case to be studied, justify the choice of a single- or multiple-case study, and use theoretical perspective deliberately. The definition of this case study is clearly presented in chapter 1. Second, justify the choice of a single- or multiple-case study; this study uses the single case with the justification that REDD+ voluntary activity in Tesso Nilo forest area facilitated by WWF Indonesia is unique case and becomes the representative of REDD+ voluntary activities in Indonesia. The other justifications will be further explained in point III.3. Third, using theoretical perspective deliberately; this study is supported by several theoretical perspectives, namely: policy transfer, institutional theory, good forest governance, and Adaptive Collaborative Management. In conclusion, three steps above become a basis of designing REDD+ Tesso Nilo study case.

3.3 Case selection: Choosing site and specific persons/groups

Two kinds of case study include single and multiple cases. Single case is chosen when an *extreme* or *unique* case, or even *a revelatory* case (Yin, 2003, pp 7). Careful investigation is needed in single case study for avoiding misrepresentation and getting fact and evidence of real life for investigator (Umit, 2005). Meanwhile, multiple cases follow the representative logic inquiry, replicating the pattern-matching, contrasting case, or diversify case theoretically (Yin, 2003, Umit, 2005). In this research, single case is chosen based on the main objective of the research. In addition, the selection of cases is the most crucial step in a case study research (Stake in Yin, 2003). However, the implementation of REDD+ demonstration activities in community forest in Indonesia is still in the beginning initiation. Nevertheless, using the case study of the Tesso Nilo REDD+ activities will give broader perspectives.

Another reason for choosing the Tesso Nilo REDD+ as the study object is that the study about the implementation of REDD+ readiness project on CBFM in Indonesia is rarely found and the existing implementation was still in the beginning initiation. Meanwhile, it is found that some REDD projects are implemented on customary forest in Cambodia, Brazil, and other countries. In addition, one project is implemented in Ulu Masen Aceh which combines the carbon conservation in conservation forest areas and informal institutions named "*mukim*". In this case study, Cambodia and Ulu Masen REDD projects are used as supporting information. Since the project is still in the initiation phase, this study focuses on analyzing the problems and barriers in regards with the implementation REDD+ in conservation forest and production forest under the state management, specifically Tesso Nilo REDD+ project.

REDD+ project case in Tesso Nilo forest area

Tesso Nilo REDD+ project is carried out by WWF Indonesia which has a total area of 160,000 ha located in Riau Province. This project includes the forest areas of the Tesso Nilo National park and production forest supervised by two logging concession companies with stakeholder supports and participations. Therefore, the combination of these two kinds of forest which is embedded with many interests and needs, and is also inhabited by local people reveals the complex problems existed.

Tesso Nilo National Park, which was developed by government on 19 July 2004, has a total area of 38,576 ha from forest concession for protecting biodiversity, especially Sumatran elephant and tiger. This forest area was previously used as the developed areas (production forest) based on Riau Spatial Planning. Many stakeholders have different interests and needs to this area. For instance, acacia and palm oil industry wants to convert natural forest into acacia and palm oil plantation; most of local people and migrants want to have rubber and oil palm plantation. Environmental NGO (WWF Indonesia) has interest to conserve this area as the habitat conservation for Sumatran tigers and elephants; political parties and governmental elites have interests to raise money from these areas. Therefore, starting from 2001, WWF Indonesia and Riau NGOs have done advocacy for this area as forest conservation due to its rich biodiversity. Even though it faces conflicts of interests and involves many stakeholders, this area can eventually become a representative REDD+ project in Indonesia.

The government of Indonesia expanded this park into a total area of 88, 576 ha on 28 December 2008. Even though this expansion gives advantage for conservation of forest and wild life, it also brings disadvantages or problems with the community around the park. The main problem is that local people has limited access to this forest due to the expansion. Therefore, the limitation of access and lots of opportunity should be compensated by REDD+ scheme. The Tesso Nilo National Park becomes the example of protecting the forest in the complex and dispute problems related to the establishment and expansion of conservation area. The people around the national park should become the focus of attention in REDD+ implementation. Thus, this project becomes complex and needs comprehensive approach to implement. Then the implementation of REDD+ in Tesso Nilo National park can be considered as a major of implementation of REDD+ in Sumatera and Indonesia.

Furthermore, the REDD+ Tesso Nilo will also be implemented in forest production (71,424 ha) which is under the management of PT Hutani Sola Lestari and PT. Siak Raya Timber. Since these companies are recently not active, many forest encroachers do the agriculture and oil palm plantation in this area. Thus, these companies propose the license change from logging concession to industrial timber concession to the government. The WWF Indonesia has to convince these companies to agree with the REDD+ scheme and cancel their proposal of the license change. In brief, the WWF Indonesia faces challenges of how to deal with the companies, government and people surround these forests.

The single case of REDD+ voluntary activities in Tesso Nilo forest is eventually related to institutions on different levels from central government (especially Ministry of Forestry, Natural resources and conservation agency, and Tesso Nilo National Park Office), Riau provincial government, and 4 district governments (Pelalawan, Kuansing, Kampar and Indragiri Hulu) to village. In the project implementation, it deals with local institutions, which rule the villages, as well as the industry like Acacia plantation and Palm Oil Company. Besides, elites in informal institutions are also involved, such as community organization, local NGOs, and chief of indigenous community. In addition, Petalangan tribe as the indigenous people needs to be encouraged for community empowerment in term of REDD+ project. Therefore, it is essential to make all stakeholders on the institutions on different levels engaged to the implementation. It is expected that information about REDD+ activities from other reports and information taken during the data collection will answer the research questions. In the end, it is expected that this case study will give broader perspectives about the importance of REDD+ activities for the forest conservation in Indonesia.

3.4 Gathering varieties of data sources

Stake (1995) and Yin (2003, 1994) recommend at least six sources of evidence in case studies, namely; *documents, archival records, interviews, direct observation, participant-observation*, and *physical artifacts*. Yin asserts that *documents* involve letter, agreement, policy, regulation, memoranda, agendas, administrative documents, newspaper articles, maps and any other documents. *Archival records* include service records, lists of names and stakeholder's involvement, survey data, and other types of such records (Tellis 1997). However, Yin (2004) ascertains that the data from archival documents are sometimes inaccurate even though the data are quantitative. Thus, it is necessary to check the accuracy of the records before using it as the data source. Then, *Interviews* is one of the most important sources for case study. There are several forms of interviews, namely: open-ended, focused, semi structured, and structured (Tellis, 1997). *Direct observation* refers to the field visit during the case study. It uses either a simple casual data collection activities or a formal protocol to measure and record behaviors. This technique provides additional information about the topic being studied. *Participant-observation* means the researcher makes rapports by employing the key informants or directly come into the events being studied as active participant. The technique provides some unusual opportunities when collecting data. However, it may be unhelpful to the study if the researcher as active participant alter the course of events as part of the group. *Physical artifacts* refer to the tools, instruments, or some other physical evidence that may be collected during the study as part of a field visit. Nevertheless, Yin (1994) asserts that not all sources from physical artifacts are relevant with the case study.

In brief, three sources will be used as the main sources in this case study. The sources are documents, interviews, and direct participant. Archival documents and participant observation are only used as additional information.

Documents

Casual data collection activities or formal protocols will be used to measure and to record behaviors in regards with REDD+ implementation and Tesso National Park. Some of the protocols to be used are Bali Action Plan 2007, Copenhagen Accords 2009, policy, Forestry and conservation ACT, regulation regarding to REDD+ in Indonesia, planning for reducing emissions in Riau province, articles on news paper, website, reports relating to REDD+ institutions arrangement and implementation. These documents can strengthen the evidence. However, thorough checking will be conducted towards these documents in order to prevent misleading facts.

In depth interviews

Interviews will become the primary data. The mainly primary data come from the interviews results. Type of interview will be used which is open–ended interview. The key informants will ask the open questions to the research informants (or samples) about institutional arrangements, problems and implementation of REDD+ from national to local project. In order to prevent data bias, the researcher will not depend on only one informant. It is necessary to verify the information gathered with other relevant resources. Interview guide is prepared to help the interviewer/researcher focuses on research questions and objectives (see Appendix 1).

The interviews are carried out for multi stakeholders which include government, private, communities and CBOs, NGOs, funding agencies, research institutions, universities, and community based organization (CBOs). The total of informants are 25 consisting 6 government staffs, 12 NGO activists both international and national, 3 researcher, 1 academician, 1 CBOs, and 2 privates staffs. The interviews are done from national, provincial and local level with the certain reasons. The number of NGOs and the governments' staff to be interviewed is much more than other stakeholders because this project is initiated by WWF Indonesia (NGO) in cooperation with government. The list of informants and reasons can be seen clearly on the table 3.1.

The key informants above were chosen based on their representativeness as stakeholders on the institutions on different levels and their influence/role to the project. The interviews were done after the key informants being informed about the research, the informed concern form can be seen in the appendix 2. Most of informants were interviewed directly (face to face), and only two of them are interviewed via internet connection (using skype and yahoo messenger).

Table 3.1 List of informants and reasons

No	Institutions/Organization	Contact person	Position	Reasons
	Central Government			
1	Ministry of Forestry	Nur Masripatin	Representative of Indonesia in COP 15	Director of Socio-economic Policy analisys and Delegation of Indonesian in COP 15
2	National board of climate change	Dody Sukradi	Head of LULUCF	Knowing REDD policy, responsible for climat change issue in Indonesia
3	Tesonilo National Park Director	H. Suprahman	Head	Authority to Tesonilo National Park
	Riau Provincial Goverment			
4	Forestry Services Agency	Mamun Murod	Head of Planning	Knowing REDD policy in Riau province
5	Environmental Agency	Fadrizal Labay	Head of office	REDD policy in province
	Local government (Pelalawan District)			
6	Forestry Services Agency	Muliono	Head of office	REDD policy in district
	International NGOs			
7	WWF Indonesia	F. Ardiansyah	Energy and climate director	Have project of REDD in Tesonilo National Park
8		Yudi M agusrin	REDD manager	Local coordinator of REDD in Tesso Nilo
9		Zulfira Warta/ Erwin W	REDD coordinator/ Director of sumatra	REDD project coordinator at WWF Indonesia
10		Nursamsu	Forest coordinator	Forestry policy, illegal logging,
11		Kokok Yulianto	GIS experts	Responsible for baseline of REDD
12	Flora Fauna International	Jane Dunlop	Ulu Massen REDD+ coordinator	Implementing of REDD+ in Ulu Masen-Aceh
	National NGOs			
13	FKKM (National Forum on Community Forestry)	Andri Santosa	Vice national coordinator	Focus on Community forestry (CBFM)
14	LEI (Indonesian Ecolabeling Institute)	Agung prasetyo	Director	Focus on certification in CBFM and logging concessions
15	WALHI (Friend of the Earth Indonesia)	M. Teguh Surya	Forest campaign coordinator	Doing Review of REDD in Ulumasen
16		Dedi	Forest campaigner staff	Focus on forest and REDD advocacy
17	Telapak	Hapsoro	Project manager CBFM	Consent to enhance CBFM
	Local NGOs			
18	Jikalahari (Riau Forest Network Rescué)	Susanto Kurniawan	Coordinator	NGO focus on Riau Forest campaign
	Research Institutions			
19	CIFOR (Center for International Forestry)	Herry Purnomo	Researcher	Research dan Devt of REDD: rev of IPCC
20		Yayan	Researcher	Consent to ACM and REDD
21	ICRAF (International Center for Research Agro-Forestry)	Jusupta Tarigan	REDD officer	Research dan Development of REDD.
	Community			

22	Community Forum on Tessonilo National Park	Radamon	Coordinator	CBOs know the problem & challenges of REDD Implementation
	University			
23	Riau University	Nurul Qomar	Forestry lecturer and facilitator REDD	Knowing concept of REDD+ and facilitating of REDD+ AUCIAR
	Privates			
24	RAPP (Riau Andalan pulp and Paper)	Neil Franklin	Environment director	Forest Private perspective regarding to REDD close to TNP
25	PT Peace (carbon company and consultant)	Muayat A Muhshi	Director	Carbon company perspective regarding to REDD

Direct participant

During the case study, the researcher visited and observed the Tesso Nilo National Park, village and followed some meetings regarding to REDD+ implementation. The researcher's experience in conducting research about indigenous people in this area previously was useful to understand informal institutions context and problems. Some seminars related to REDD implementation is also useful for this case study because the researcher got comprehensive concept and development of REDD+ institutional arrangements, its debates, its discourse, and its implementation problems and barriers through those seminars. Those seminars are Seminar of the opportunity of REDD implementation in Community Based Forest Management held by LEI and KPWN 2008, COP 15 Copenhagen December 2009, Consultation and meeting Feasibility of REDD+ implementation in Riau Forestry Service May 2010, and REDD Civil Society Coordination seminar, 20 May 2010. In addition, the Focus Group Discussion (FGD) in one village for grabbing the all information, local knowledge and problems and barrier of implementation project in Tesso Nilo was also carried out as the additional information to this study.

FGD (Focus Group Discussion) in Air Hitam Village

FGD was done for collecting objective data and information from many informants at the same time. Using FGD we can do discuss about issues in the REDD+ implementation in Tesso Nilo area systematically. There are several steps of FGD that have been done in Air Hitam Vilage, namely; the preparation (including selection of village and participant), implementation, and transcript of FGD results. Regarding to these steps, doing and handling of FGD is not easy; it needs the good preparation, analysis of participants, and good capability of researcher to facilitate the discussion.

Preparation phase includes selecting the village as a representative location and representative of participant, preparing informed concern form, translating the guide question to local language, and contacting or inviting the participants to the arena. The location and participants of FGD are identified and done by researcher and staff of WWF Riau. Air Hitam village was chosen because this village has direct interaction with Tesso Nilo National Park. Some of the village's people do agricultural activities in the area of Tesso Nilo National Park. Their activities influence and give impacts to the implementation of Tesso Nilo

REDD+ and Tesso Nilo forest management. The Participants were selected on the basis of the recommendation from formal and informal village elites. The chosen participants were considered to have understood Tesso Nilo forest management and issue. The total participants of FGD were 11 people including the researcher and 1 staff of WWF Riau. The formal letter from WWF Indonesia and formal village head were handed to invite the participants. It is very important to ensure that participants are pleased to participate.

Implementation study phase, which deals with facilitating discussion, is the most important thing for doing the FGD. The WWF Riau Staff helps the researcher to record the discussion. The starting point of the discussion is that the participants understand the concept of REDD+ project. Then the researcher asks about the implementation of REDD+ project, their involvement in the meeting seminar REDD+, their perception, possible problem and solution of REDD+ project in Tesso Nilo forest In order to make the participants comfortable and easy to talk about the WWF activities and problems during the discussion, the WWF staff leaves the forum. The information gained in the discussion is noted and tape-recorded (see Figure 3.2.).

Figure 3.2 FGD in the Air Hitam Village, Ukui sub District, Pelalawan District Riau, Indonesia (source. Silalahi's documentations, 2010)

FGD extracts the hidden information, their interests, the problem among local people with WWF and government, and the possibility solution. These steps and method bring the good data collection, the accuracy and quality of data for making the good report in this study.

3.5 Data Analysis

Data analysis of the case study can rely on theoretical prepositions or problem statement as well as the field evidence. Getting pattern matching technique is a main way of in-depth interview analysis (Yin, 2003, 1994). Stake (1995) recommends categorical aggregation as another means of analysis and also suggests developing protocols for this phase of the case study to enhance the quality of the research. Tellis (1997) recommends analytic technique based on "rearranging the arrays, placing the evidence in a matrix of categories, creating flowcharts or data displays, tabulating the frequency of different events, using means, variances and cross tabulations to examine the relationships between variables, etc." In conclusion, data analysis is done using the analytic strategy to lead to conclusions.

Yin (1994) enhances researchers' efforts to produce an analysis of the highest quality by addressing four principles:

- Show that the analysis relied on all the relevant evidence
- Include all major rival interpretations in the analysis
- Address the most significant aspect of the case study
- Use the researcher's prior, expert knowledge to further the analysis

Based on these literatures, the data analysis in this research includes:

- The relevant of REDD+ project evidence from national to local level; the regulation and capacity government for supporting it in to project level.
- Problems, barriers, and different interpretation from all stakeholder involved related to study
- Getting pattern-matching is the major mode of case study analysis. Pattern-matching from empirical study is tested with the predicted one. Internal validity is done when the pattern coincide and need rival explanations. The pattern matching from policy transfer-REDD+ transfer in forest management is known based on theoretical review. Then seeking the pattern matching in the implementation from national to local level. Analyzing of problems and barriers and lessen earn from other projects are useful to construct the idea of REDD+ designing with ACM approach both in CBFM and state forest management.
- Using the researcher's knowledge, experiences, and personal judgment for further analysis of carbon trading (REDD+) both in community forest and state forest management will be done.

Using this method, data analysis and the result is expected to lead to good quality, accountable and more reliable research results.

There is no particular form of case study report; it depends on heavily influence of the analytical strategies. The greater challenge in report of the study case is creativity and art of the researcher for composing report the other methods (Yin, 2003, 1994). There are any ways to report the case study using the historical way, contradiction, and composing the substantive material. Either the composing report or data analysis in this study are done together with data collection. It helps to fill the data gaps and compose some substantive material.

3.6 Conclusion

There are 5 common worries in using case study method based on Yin (2003): (1) how do I know if should use the case study method to do my study?; (2) how should I select the case study to be studied?; (3) What is my case?; (4) how much time and effort should I devote to collecting the case study data? And how do I know whether I am finished collecting data?; and (5) how do I start analyzing my case study data?

However, in order to deal with those worries, the researcher carefully learns the concepts of REDD+ Tesso Nilo project implementation as well as its implications to the community and the environment. In-depth interview with many stakeholders and focus group discussion (FGD) in the village have been done to identify of unique elements of the actor's perception on REDD+ concept framework and practices. Besides, some meetings and seminars followed by researcher are useful to widen researcher's knowledge on this topic. The combination of in-depth interview, FGD, participation on REDD+ meeting and seminar gives the comprehensive perspectives and understanding about theory and practice of REDD+ in Indonesia.

The interview is ended when two of respondents do not give new or related data regarding to REDD+ framework, problem and barriers of project implementation. Then, the exploration of the study mainly refers to in-depth interview with 25 informants and FGD results. In the case study, stopping interview and reporting for analysis are done if the research questions have been answered through in-depth interview, FGD, and observation. Then pattern matching has been obtained (Yin, 2003, 1994) which are the problems and barriers of REDD+ in Indonesia, and forest policy and management. Analysis will be followed by restructuring and personal judgment. The description of analysis is used mainly for forming the theoretical propositions and empirical evidence together with why and how explanation is (Winston in Miharja, 2009).

It is clear that this study using a single case study to explore and describe the problems, policy and advantages of implementing REDD+ readiness phase in Indonesia. This chapter shows the analytical framework, explains how the selection case, explores the data gathering and method, establishes analyzing data, and displays composing report.

CHAPTER IV

INTERNATIONAL DEBATES ON

CLIMATE CHANGE MITIGATION THROUGH REDD SCHEME

4.1 Introduction

This chapter addresses the international climate change mitigation debates particularly in terms of REDD+ using the carbon trading. The debates in the region of causing climate change have taken several decades and scientifically involved multidiscipline perspectives. There are two international policies for facing up to climate change, which are climate change mitigation and climate change adaptation. Climate change mitigation refers to measures or taken actions to decrease GHG, or to act to reduce its concentrations, either by reducing the sources or increasing the sinks to global climate change limit at 2^{o} C. Climate change adaptation are actions involved in minimizing the effects of changing climate. After several decades in such debates, IPCC (Intergovernmental Panel on Climate Change) succeeded to persuade countries in the world through scientific arguments with its significant correlation between human activity and the global warming. The successful has been increasing global awareness and the solution offered brought it to the peace Nobel together with Algore in 2007. Several impacts of climate change are the increasing of annual temperature around 0.3 % ^{o}C for every season (particularly from 1990 to recently); the increasing intensity of rainfall; threats to food security; increase of sea level rise submerging productive coastal areas; the sea heating affecting biodiversity loss; and break of some diseases, such as malaria and dengue fever[11]. Therefore this chapter will answer the question 2.

Accordingly, below I describe a set of argumentations on why REDD+ is considered as climate change mitigation. Then it is followed by a brief explanation about the history of REDD+, its international concept and framework, and international debates of it. In the final sub section I show the reflection and conclusion.

4.2 Why REDD+ is important as climate change mitigation

The main cause of climate change and global warming is human activities from the industrial activities and deforestation and land use change. Avoid deforestation and forest degradation is a way to reduce and absorb emissions. About 15 % the earth's surface is covered with forest containing approximately 25 % carbon in land biosphere. Today, these forests are reduced annually around 13 million ha for various land uses[12]. Such deforestation and land use changes affect the emissions of green house gas (GHG), especially carbon to atmosphere. IPCC predicted that carbon emissions sourced from tropical deforestation in 1990s were no less than 1.6 million tons annually, it is equal to 18-20 % of global carbon emissions[13].

[11] www.REDD+.or.id

[12] /tp://ftp.**fao**.org/docrep/**fao**/meeting/011/j9242e.pdf

[13] www.REDD+-monitor.org, and www.REDD+.or.id

Pacala and Socolow of Princeton[14] describe that there are 15 ways to reduce GHG, but one of the most important is to stop deforestation and reestablish 300 million ha of new planting. The Stern Review on the economics of climate change, done by Prof. Sir Nicholas Stern, discussed on effects of climate change and global economy on the world's economy. He identifies several ways of mitigating climate change, these are reducing demand for emissions-intensive goods and services, increasing efficiency gains, increasing use and development of low-carbon technologies, and reducing non-fossil fuel emissions (Stern, 2007)[15]. The Stern Review has significant influence and is as the largest and most widely known and discussed report of its kind regarding to climate mitigation.

The importance of forest or REDD+ becomes a vital climate change mitigation because forest absorbs emissions and conserves carbon on the land, is home to local communities with providing foods and supporting the livelihood of 90 % of the 1.2 billion people worldwide, provides other environmental services, such as watershed protection, water flow regulation, nutrient cycling, rainfall regeneration, and diseases regulation (Parker et al., 2008). Then the deforestation in many countries is varied, it is caused by multiple and complex problems depending on the context and pressures. The major deforestation is triggered by poverty, agricultural activities driven by consumer demand. For instance, in Africa deforestation is mainly caused by small-scale subsistence farming, in South America is mostly affected by large-scale farming enterprise, in South East Asia is influenced by large-scale palm oil development, timber production, and agricultural land uses. So, protecting the forest has multiple benefits, including emissions reduction, source of livelihood and poverty alleviation, and biodiversity conservation (Parker et al., 2008).

Coping with these problems, many countries discussed it in the international meetings and conferences that have been dispersed in two different sides: emissions-producing countries and carbon-absorbing countries. The carbon-absorbing countries are owner of forested lands are mostly developing countries that try to protect forests and minimize land use changes, meanwhile developed countries as the emissions-producing countries should compensate to the carbon-absorbing countries. And now what problems being faced are how to count the value/price of this carbon, the method of mechanism of carbon compensation, etc. This is the main idea beyond the scheme of REDD+ (Reduced Emissions from Deforestation and Forest Degradation). The brief history and the differentiation of REDD have to be clearly understood, right before we proceed the REDD+.

4.3 A Brief History of REDD+: from RED, REDD, REDD+ to REDD++

The REDD+ as a preparation scheme towards carbon trading is a neoliberal idea (Gilbertson and Reyes (2009:18)[16]. REDD+ is developed from emissions trading that is market-based approach used to control pollution and achieve reduction emissions. Its concept come from USA and it was a successful implementation in EU countries with EU-ETS (Eropean Union Emissions Trading) scheme (ibid. 19-21). Based on Sanyal (2005), the

[14] http://cmi.princeton.edu/wedges/
[15] http://hm-treasury.gov.uk/sternreview_index.htm)
[16] Gilbertson and Reyes stated that REDD is a neoliberal context-market based approach to climate change emanating from United States supporting by EU

adoption of new policies faces contextual problems, new/ different institutional context, and a different planning culture for seeing its policy fit or failure.

Avoid deforestation using the scheme REDD+ becomes the main issue in recently international political views in fighting global warming. REDD+ is a neoliberal concept, market-based approach that emanates from United States (Gilbertson and Reyes, 2009). It is called neoliberal context because of the way and international institutions and efficiency justification. Neoliberal uses global institution and supra organization, such as international treaty, World Trade Organization, and World Bank for establishing new forms at global level. This institutions control world's resources with centralized approach. Neoliberalism reorganizes the property right regimes and fights against the national regulations to reduce power of national government, labor union and local communities over corporate activity (Gilbertson and Reyes, 2009). The carbon trading has been successfully implemented in EU countries to reduce emissions efficiently under the Protocol Kyoto.

The history of RED to REDD++ can be available from the UNFCC (United Nation Framework Convention on Climate Change Conference) in 1992 to COP 15 in Copenhagen in 2009. The issue of climate change has been discussed in UNFCCC in 1992 with main purpose to curtail the growth of GHG. Article 2 of the convention stated that "its ultimate objective is "stabilization of greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (UNFCC, 1992: Article 2).

In the 1997 Kyoto Protocol, the participating parties agreed a binding target amongst the 37 industrialized countries and the European community to cut GHG emissions down to average 5% for a five-year period (2008-2012). There are three mechanisms[17] for reaching the target, among which are emissions trading, joint implementation and clean development mechanism. The basic concept and idea of REDD+ appear from emissions trading in terms of carbon trading. In the Protocol Kyoto, REDD+ has been already proposed, but it did not get satisfied support.

The idea of emissions reduction from deforestation was originally launched at the COP 11 (Convention of Party) in Montreal in 2005, which was later known as **RED** (Reduction Emissions from **Deforestation**). Papua New Guinea and Costa Rica supported by 8 parties incorporated in Coalition for Rainforest Nation (CfRN) proposed incentive for avoided deforestation'. Then, in the COP 11, RED became an important agenda; related parties and accredited observer like NGOs was invited for their views to Subsidiary Body on Scientific and Technical Advice (SBSTA) about RED for 2 years until the COP 13 in Bali. RED became **REDD** with the adding of **forest degradation**[18].

In the 2007 Bali Action Plan, the parties clearly recognized that the REDD has become a way leading to reducing emissions as shown in Decision 2/CP.13. In the decision,

[17] Three mechanisms are under the Kyoto protocol:

- Emissions trading: allows countries to sell excess capacity/ emissions units to countries that are over their targets
- Joint implementation: allows a country to earn emissions reduction units from an emissions-reduction/removal project in another country, as an alternative to reduce emissions domestically
- Clean development mechanism: allows a country to implement an emissions-reduction project in developing countries

[18] www.REDD+-Monitor.com

UNFCCC with the involvement of SBSTA (Subsidiary Body for Scientific and Technological Advice) undertake a program relating to methodological issues; these are issues connected with policy approaches and incentives aiming at reducing emissions from deforestation and forest degradation in developing countries. Also, the meeting was to invite countries and parties to duplicate demonstration activities, develop method and mechanism of REDD (Bali Action Plan 2007). Parties are also encouraged to apply the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry for estimating and reporting emissions and removals. The "Bali Action Plan" calls for:

> "Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries".[19]

The problem of REDD is that the right of indigenous people as forest provider or forest dwellers is heavily neglected. In addition to it, conservation efforts, sustainable forest management and carbon stock enhancement did not include them yet. However, international instruments for human rights, for the most part the UN Declaration of the Rights of Indigenous Peoples (UNDRIP) and the concept of Free Prior Informed Consent have been recognized internationally. Many of scientists recommended SBSTA to integrate conservation efforts and carbon stock enhancement into the REDD scheme. Unfortunately, in December 2008, during the COP-14 in Poznan, some countries, including the US, Canada, New Zealand and Australia strongly rejected any reference to Indigenous Peoples' rights in the negotiating text and the draft text was duly weakened. A number of indigenous people alliances and NGOs rejected REDD if rights on land and participation are intentionally neglected. They consult to UN-REDD to approve and recognize indigenous people as the main part of climate mitigation under REDD.

In 2008, the SBTA advanced work program on methodological issues relating to a range of policy approaches and incentives on reducing emissions from deforestation and forest degradation in developing countries. The outcomes, including any recommendations on possible methodological approaches were reported by the SBTA to COP 14 in Poznan in December 2008. Policy approaches and positive incentives to REDD and **the role of conservation, sustainable management of forest, and enhancement of forest carbon stock** in developing countries, which it is called **REDD+,** has been considered in 2008-2009. It means that at the international level the rights of indigenous people as a part of consideration in terms of development REDD+ mechanism are officially recognized.

The COP 15 Copenhagen has failed to obtain agreement on REDD+ plus modality, mechanism and policy framework. It was mostly because the developed countries rejected to give their commitment to an agreed cut percentage of their emissions. Although legal binding for REDD+ Plus in Copenhagen Accord was not in agreement yet, it had been reflected in a consensus that there was a need to develop financing mechanisms for REDD+. The present of US president, Obama, has brought a fresh breeze for a further negotiation. Recently, there are many **REDD++** proposals are sent by experts, universities, international agencies and NGOs**.** It means that **agriculture, forestry and land use, and land use change (AFOLU)** should be incorporated in a REDD scheme because deforestation is not solely taken

[19] www.unfccc.int/meetings/cop_13/items/4049.php

shape by forestry sector but other sectors as well. REDD++ is not agreed yet by UNFCC and COP (Conference of the Parties) 15. Therefore I strictly focus and limit my study on REDD+.

4.4 Concept and Policy Framework of REDD/REDD+

The basic concept of REDD+ is simple; countries, governments, companies, project or forest owners in the South should be rewarded for having saved their forests from cutting in relation to reduce GHG emissions. In the next section, I will describe the concept and policy framework of REDD+. Reduced emissions or avoided deforestation is counted as a credit. The amount of carbon credit conserved in a certain time can be sold to international carbon market. As an alternative, carbon credit can be managed by a funding-developed organization to arrange compensation for countries conserving and protecting their forests. REDD+ scheme allows forest conservation for competing economically with other economic activities causing deforestation[20].

Conceptually, REDD+ scheme on carbon trading is a neoliberal context coming from USA and European Countries (Gilbertson and Reyes, 2009). The concept of REDD+ or carbon market is similar to privatization of emissions reduction enhanced by market mechanism. The REDD+ scheme is also founded by some of the lessons learned from many developing forest countries. I call it hybridization of policy from multi level perspective were formulated as an international agreement. In terms of market and investment, REDD+ requires a clear right and ownership, long term guarantee, good governance, and institutional arrangements. Referring to the original countries like USA and EU countries (in term of EU-ETS), these countries has implemented good governance, good institutional arrangements, and good resources both of technology and human resources. Indonesia on the other hand, as the adopter of that policy has not fully applied these yet. It obviously faces on some problems and leads to failure if the pre-requirements cannot be fulfilled.

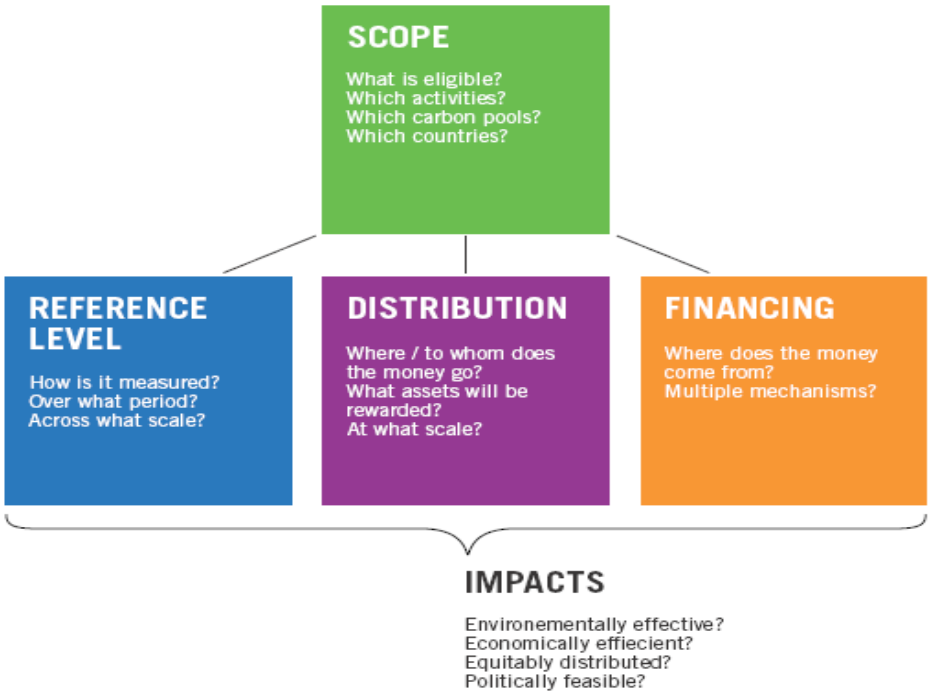
Some NGOs and academics rejected that concept and theory of REDD+ because it enforces the legal pollution permit or country, regional, local, and neighborhood to individual level (Gilbertson and Reyes, 2009; WALHI, 2009). It is against the awareness campaign to change consumption behavior, environmentally friendliness, and assumption that the emissions cannot be sold like a commodity through market mechanism. Emissions and forest are the common pool resources, referring to Ostrom (2005), common pool resources are not always successfully to be privatized. Public intervention and the setting of rules with legal binding are needed. Gilbertson and Eyes (2009) analyzed that carbon trading will fail and cannot reduce emissions globally with analyzing of CDM (Clean Development mechanism). The debates of REDD+ will be explained further in chapter V and VI.

The REDD+ framework contains four basic blocks as follows: **scope, reference level, benefit distribution,** and **how to finance it**. The **scope** covers the activities (through RED, REDD, and REDD+), carbon pools (above ground biomass, below ground biomass, soil carbon, and or all terrestrial carbon and countries (Non Annex I and Annex I) that are eligible to generate emissions reduction under REDD+. **Reference leve**l refers to how many emissions reductions are being measured and can be generated under REDD+ mechanism at the reference period and scale. Reference period comprises historic baseline, current

[20] www.cifor.org

(structural), and projected baseline. And scale can be sub-national, national and global. The **benefit distribution** of REDD+ should be equal and redistributed to countries with currently low rates deforestation but high forest cover. The **financing** of REDD+ can be done with direct market, hybrid/market-linked, and voluntary fund. Direct market refers to Government to Government (fund based), and voluntary market defines as market-based mechanism that could be operated at the national and international scales. The figure of framework with four building blocks of REDD+ can be seen in figure 4.1 below.

Figure 4.1 REDD+ Framework



(Source: Parker et al. 2008)

I identify at least 4 challenges in REDD+ Scheme, among which are: deciding the REL/RL especially counting carbon technology, payment system, accountability, and funding. In valuing a land with certain forest cover, we need a qualified technology. New technology, such us satellite imagery and computer modeling will facilitate the accurate counting of carbon conserved. Payment systems relate to who will be benefit from the REDD+?, Government (national, provincial-local), firm, people in and around the forest? The donors will expect that the recipients of the benefits are poor people. Accountability means warranty when the REDD+ payment has been received by certain country, yet the deforestation continues to occur. It refers to guarantee that carbon payment can accomplish sustainable forest management. The funding mechanism uses three types: (1) developed countries should prepare fund for carbon-absorbing countries, (2) market based approach, or combination of type (1) and type (2). Many scientists and policy makers realize that designing and implementing of REDD+ globally should give chance to parties for doing and implementing the several model based on their context. Using this method it is expected that it appear creation a new scheme for every countries that fit to their condition and situation.

There are two global initiatives for financing of REDD+ implementation, which are UN-REDD program and World Bank with Forest Carbon Partnership Facility (FCPF) initiative. UN-REDD program, which was set up by UNDP, UNEP and FAO offers extensive supports to developing countries fighting against deforestation and forest degradation issues. This program proposes capacity building, designs national strategy and approach, and institutional arrangement for verification of deforestation. UN-REDD has implementation of REDD+ demonstration activities in nine countries, such as Bolivia, Republic Democratic of Congo, Indonesia, Panama, Papua New Guinea, Paraguay, Tanzania, Vietnam, and Zambia. World Bank-FCPF program is based on the same idea with UN-REDD but it widely covers 39 countries, including Indonesia. The two initiatives have been rejected by many Indonesian NGOs because of less public participation[21].

Based on Stern review on the Economics of Climate Change (2007), the funding needed to cut down 50% of GHG emissions from forestry sector by 2030 is ranging from $17 million to $37 million per year. And Stern suggested that avoided deforestation should be involved in commitment of Post-Kyoto Protocol 2012, and big actions should be taken as soon as possible. Several governments are involved in REDD+ initiatives. For example, the Norwegian government has committed US$600 million a year to support REDD+ activities. Australia is involved in REDD+ projects in Australia Vanuatu and Indonesia. The German technical cooperation agency (GTZ) is setting up projects in Indonesia and Laos[22] .

Relying on the global carbon markets, the growth explosion has been seen in the last three years, particularly after the Kyoto Protocol and the European Union Emissions Trading Scheme (EU-ETS). “Transactions topped $30 billion in 2006, representing a threefold increase over 2005, and the first half of 2007 has already seen $21.9 billion in trades” (World Bank, 2007). The mechanism of global market have been funded by, Australia, Norway, Japan, and EU-ETS. As of June 2007, as much as 172 countries have signed the document, and 35 countries have agreed to reduce GHGs collectively to 5% below GHG levels by 2012 through a country-based cap-and-trade scheme (UNFCC, 2007; UNEP, 2008).

4.5 REDD and REDD+: Pro and Contra

Recently, REDD+ is one of the most controversial new issues on the climate change debates. The main focus of such debates are civil society versus government and North versus South, the avoided deforestation or emissions reduction from deforestation and forest degradation and development, indigenous people’s rights versus state’s rights, and international climate change funding versus controlling of it. There are two sides of views: that REDD+ is an effective solution for climate change problem and that REDD+ using carbon trading scheme cannot reduce climate change. The two views require comprehensive understandings, i.e. whether or not REDD+ will work, and its synthesis.

[21] http://www.redd-monitor.org/2010/05/25/world-banks-fcpf-in-indonesia-fails-to-address-civil-society-concerns/

[22] www.REDD+-monitor.org/REDD+-an-introduction

Pros to REDD scheme

The Forest Dialogue Consensus (TFD)- an international multi stakeholder dialogue process facilitated by Yale School of Forestry and Environmental Study, produced a consensus on financing REDD+ and 26 recommendations to ensure integrity of implementation REDD+. The main recommendation covers categories: firstly, underpinning principles of financial mechanism robustness, real $C0_2$ reduction, forest ecosystem enhancement, indigenous peoples and local communities' rights and participation, and equitable benefit sharing. REDD+ should create incentive for conservation, sustainable forest management, and enhancement of carbon stock, the broad participation of all stakeholders on equitable term at all levels. Secondly, phased approach: allows REDD+-plus to address drivers of deforestation according to country-specific circumstance, it will be developed at the national level, encourages scale up investment and market and fund-based mechanism that calls for the involvement of third party verifications[23]. Thirdly, financial architecture: it should make optimal and coordination of both fund and market, or other sources. A coalition of public and private sectors requires commitments of both developed and developing countries for a long-term finance. Fourthly, the process monitoring, reporting, and financial assurance: it should be based on performance, incorporation of social, environmental and financial aspects, and informed and involved local/indigenous people. Finally, institutional arrangements: it is set under UNFCC, encourages accountability of carbon market, improved good forest governance, and needs coordination and collaboration of many parties and stakeholders.

In connection with it, Arild Angelsen, a scientist at Norwegian University of Life Sciences and CIFOR is very optimistic that REDD+ will work. He noted that REDD+ will bring a good climate, biodiversity and livelihood benefits. He states that "according to the proponents REDD+ has a huge potential (one-fifth of current global GHG emissions), it is cheap (many deforestation and degradation activities are only marginally profitable), it can be done quickly ('stroke-of-pen' reforms and no new technologies needed), and it produces win-win outcomes (climate, biodiversity and livelihood benefits)"[24]. The Royal Society for the Protection of Birds in the UK argued that what we need to do is to create market signal that makes forest worth more than standing cut. "Only a market-based approach, with REDD+ credits tradable for developed country emissions reductions will generate enough money to incentivize forest protection"[25].

The Global Forest Alliance (GFA) consisting of The Nature Conservancy, Conservation international, WWF, and private sectors support REDD+ scheme. GFA and Word Bank initiate to facilitate FCPF for measuring and testing the feasibility on payment method. There are also some multilateral projects that being operated by Environmental Defense Fund, Woods Hole Research Center, CIFOR, Winrock International, etc. [26]

[23] www.theforestdialogue.org
[24] www.iucn.org/forest/av
[25] www.rspb.org.uk
[26] www.REDD+-mnitor.org

Contras to REDD Scheme

On the other hand, some NGOs and civil societies have rejected the REDD. They believe that REDD scheme cannot solve climate changes. Some NGOs, including Green peace, Friend of the Earth, Down to Earth, Forest People Program, REDD monitor, Dag Hammarskjold Foundation, etc reported that REDD is one simple way for reducing global emissions meanwhile North countries do not have commitment to reduce their emissions. They view that REDD scheme encourages and prioritizes conservation in order to more strengthen the government's role rather than to alleviate poverty and build up capacity of local/indigenous people.

Moreover, the REDD+ scheme funded by international organization e.g. World Bank, or private sector through carbon market will serve the need of the capitalists and states rather than local/indigenous people living in and around forests. Many of these rejections are mostly because the World Bank has failed to engage a wider public participation. The International Alliance of Indigenous and Tribal Peoples of the Tropical Forest advocate urgently the recognizing of their right and their participation on the development of REDD+ scheme[27]. Rain Forest Foundation-UK reported that under the FCPF, World Bank did not make an implication or impact analysis of arising credit for carbon market. The fact that private sector's involvement and interest contradicted with moral issue (climate change) is not easy in the practical way. These arguments are strengthened by Institute for Policy Studies in USA, which reported the failure of the Clean Development Mechanism under Kyoto Protocol (DtE, 2008).

Gilbertson and Oscar (2009) criticized the carbon trading using cap and trade like EU ETS. They said that government and international body like EU have handed out license to pollute (or carbon permit') to major industries. For industries, it is very cheap cost and easy way. The second type is carbon offsetting. It allows the international companies, government, and individuals finance "emissions-saving project" outside the cap area instead of cutting emissions at source. The largest example of offsetting is CDM (Clean Development Mechanism). Cap and trade and offset do not reduce emissions because of shift pollution from North to Southern countries. They argued that pollution continues at one location with an assumption that an equivalent emissions saving will happen elsewhere (Gilbertson and Reyes, 2009).

REDD+ Monitor (2008) analyzes that "financing REDD+ through carbon trading would mean that the North can delay effective and radical action to stop the burning of fossil fuels by offsetting its emissions with carbon stored in forests. Trading forest carbon allows pollution to continue somewhere else. The result is no reduction in emissions. Another word, deforestation is stopped in one area; but it increases in somewhere else. This process is called "leakage". REDD monitor concluded that financing of REDD+ through carbon trading will lead to create world's biggest loophole – effectively allowing industry to continue polluting.

With the huge development of carbon trading, many of brokers and carbon companies are looking forward to profiting from an increased trade in carbon. For examples; Eco-Securities (UK), Caisse des Depots (which partly owns Europe's biggest spot market), BlueNext (Paris), certifiers companies such as SmartWood, SGS and TÜV Süd will sell their

[27] www.international-alliance.org

"expertise"[28]. Some of the international and national carbon traders currently offer services to both national and local government in terms of carbon trading. Many of local government make agreement with the carbon brokers to sell their forest without clear understanding of REDD+ scheme[29].

The other concerns about the way of the ongoing REDD+ are the lack and less of indigenous people's participations, baseline problems, leakages, poor government's performance, and bureaucracy corruption in south countries. The wrong direction that allows the oil palm and industrial plantation to get money from REDD+ scheme is the most critique. The different meaning of forest by UN and FAO leads to contra productive of some of the developing countries. The adoption meaning forest[30] from FAO by UNFCCC is controversy and not appropriate in tropical countries. With this definition, oil palm is a part of forest, while oil palm development in south countries replaces natural forests through conversion.

Based on commitment of the parties, the role of international NGOs and organizations, the cheap way to reduce emissions and the co-benefits of REDD+, and international politics, it will be agreed and worked on even though many rejections will emerge. REDD+ will also generate large money to provide funding for forest conservation and avoided deforestation with market-based, fund, and combination of both.

In order to see the REDD+ will work or not, it should be considered to institutions on different levels arrangement, and forest governance. The rejections of many organizations and parties are primarily because of the poor institutions arrangement and poor good governance practice. At international level, legal binding of REDD+ is highly needed, coordination and collaboration of many parties and funding supports should be available. At national level, good governance is highly required, policy framework and contextual mechanism should be created, and equal distribution of money and participation should be done. At local level (provincial, local, and community), the collaboration, participation, capacity building, good governance practice in terms of REDD+ development and mechanism should be ensured. Without these requirements, REDD+ implementation will fail to reduce emissions at the global scale. Its scheme is just the same as the CDM.

[28] www.REDD+-monitor
[29] www.walhi.or.id
[30] "Forest refer to a minimum area of land of 0.05–1.0 hectare with tree crown cover (or equivalent stocking level) of more than 10–30 per cent with trees with the potential to reach a minimum height of 2–5 metres at maturity in situ".

4.6 Reflection and conclusion

Recently, international politics push the parties to urgently do emissions reduction regarding to climate change. Many scientists and IPCC have convinced the parties and UN body that GHG emissions are 18 % sourced from deforestation. Stopping deforestation can significantly reduce global emissions besides other benefits, such as conservation and poverty alleviation as they are integrated into an incentive mechanism. Stern Review is the most influence with the 'efficiency and effective" jargon and market-based mechanism.

Stopping and halting deforestation in developing countries is not easy as many institutional problems. It needs large funding, international treaty, and good institutional arrangements. Stopping deforestation to reduce emissions with REDD scheme has been proposed by many parties during a series of Conferences of Parties, from Montreal in 2005 to Copenhagen in 2009 with a set of history from RED, REDD, REDD+, and to current REDD++. This treaty is proposed especially to prepare for post Kyoto Protocol that will be ended in 2012.

This conception tends to political will rather than a way to change behavior seeing that deforestation has long happened. Political tension is crucial thing to enhance many parties, especially in North Countries to help developed country to reduce emissions under the carbon trading. The concept and framework of REDD+ is easy but it is difficult to implement. Regarding to REDD + framework, the big problems are scope, making reference level, distributions and financing. The concept is originally liberal idea and needs a set of pre-requirements, especially for developing countries.

The concept is also very controversial and emerge hot debates at international and local levels. Even though REDD+ has not a legal binding, yet this agreement has been adopted internationally. Besides, international organizations, experts, large corporations, and UN body support this scheme. Although many rejections come from NGOs and experts REDD+ still will be implemented. We can learn from the history and formulation from RED, REDD, to REDD+, and the possibility of the REDD++. If critics and recommendations from many parties are well accommodated in the REDD+ scheme, indeed this mechanism will be agreed and implemented.

Nevertheless, the most important thing while putting it into practice is how the REDD+ policy will be legally binding and is supported by many parties. Then policy-REDD + transfer is done with the adaptation institutions and is needed good forest governance. These process can be done with the adaptive collaborative management and approach at multilevel institutions. The REDD policy transfer problems and barriers in Indonesian forest management and institutions will be discussed later in the Chapter 5 and 6.

CHAPTER V

REDD IN INDONESIA (REDDI): POLICY TRANSFER, INSTITUTIONAL ARRANGMENTS AND GOOD FOREST GOVERNANCE

5.1 Introduction

The aim of this chapter is to answer question 2 and 3 particularly to describe the policy-REDD+ transfer and its current development and its institutional arrangements. In addition, this chapter analyzes the problems and barriers policy REDD+ transfer from institutional aspect and forest good governance performance. Referring to chapter 2 the policy-REDD+ transfer has been done in Indonesia, it is obviously work out through institutions both formal an informal. Then the successful of adoption the REDD+ policy needs pre requirement of good forest governance. Finally, these terms are described more elaborately in this chapter.

The Dolowitz and Marsh's model and frame works of policy transfer is mainly used to analyze the kind of REDD+, its unique adoption, actors involvement, degree of transfer, the constraints, problems, and barriers. Then analysis of institutions and forest governance is done and it also analyzes the possibility of policy transfer failure (Dolowitz and Marsh, 2000: 9). Thus the structure of this chapter is as follows: in the first I explore the current policy REDD+ transfer in Indonesia, forest and management system, current development of REDD+ institutional arrangement. After that, I analyze how extent the REDD+ policy has been integrated to forest policy and planning, the analysis of policy transfer framework, institutional analysis of REDD+, and Good forest governance. In the end I address reflection and conclusion. I describe these things, as follow.

5.2 Policy-REDD+ transfer in Indonesia

Meaning of REDD in Indonesia

Before explaining further about the reason of REDD+ policy transfer, actors involved, and its transfer and implications in Indonesia, it is very crucial to explain the concept and basic thought of REDD+. In the chapter IV is clearly defined the different of RED, REDD, REDD+, and REDD++. Particularly REDD+ is the abbreviation for Reducing Emissions from Deforestation and Forest Degradation, with + means that adds conservation, sustainable management of forest, and enhancement of forest carbon stock. As mentioned by UNFCCC[31], REDD is an international scheme for reducing the GHG emissions by avoiding deforestation and forest degradation, and land use change with economic incentive by developed countries using the market mechanism. The amount of carbon credit conserved in a certain time can be sold on the international carbon market. As an alternative, carbon credit can be managed by a funding-developed organization for preparing compensation for countries that conserve and protect their forest. The idea is that industrialized countries which signed the agreement do not want to make emissions reduction and they are allowed to make the emissions reduction in other countries with cap and trade. The developing

[31] www.unfccc.int/files/methods.../redd/.../the_little_redd_book_dec_08.pdf

countries whose emissions reduction is more than the national emissions level can sell these with certified and certain methodology to developed country (Gilbertson and Reyes, 2009). Theoretically, the availability of carbon permit will gradually be reduced, ensuring scarcity impacting to carbon value increase, while at the same reducing global pollution.

Based on my interviews, the understanding of REDD+ in Indonesia varies from many stakeholders both horizontally and vertically. Horizontally, it can be divided in to four categories which are:

1. REDD is an easy economic scheme from developed country to reduce emissions or offset carbon from deforestation and forest degradation in developing countries. Its definition comes from NGO hardliners such as: Green Peace, Telapak, AMAN, Friend of the Earth, and their groups. They believe that REDD+ cannot reduce emissions as a whole without global commitment, reducing demand of paper and oil palm, and strengthening forest governance. These groups also ensure to the North Country to reduce their emissions beside offset carbon into South country. Change consumption behavior for paper uses, reducing demand of oil palm, etc should be done because these activities have pressured deforestation, degradation, and land use change.
2. REDD+ is an incentive scheme developed for community and country to protect their forest and to reduce carbon emissions with effective way. It is held majorly by International NGO/institutions, supra national organization, International agencies/funding, national government, several nationals and local NGOs. This group believes that REDD+ is a good scheme to reduce emissions, and it is an easy way to get funding to protect forest and biodiversity, and give benefit of forest stakeholders. Nevertheless it needs a good governance performance and some requirements like MRV (Measureable, Reportable, and Verifiable). Definition MRV will be explained further on the REDD+ architecture point.
3. REDD is an economic incentive to protect forest rather than to exploit it, or it can be said that REDD is source of money. This definition is perceived by local government both of provincial and local government, and companies. They believe that by conserving the forest/carbon and trading carbon, they will get the money without performance based.
4. Community in and around the forest and local NGOs generally don't understand or confuse with REDD+ definition. The history from RED to REDD++ adds the confusion of the stakeholders.

Vertically, the meaning and the perception of REDD+ in national government is not same as well. Furthermore each sector is difficult to do coordination and collaboration. It varies in every sector especially for ministry of forestry, National Planning and Development Board, and other sectors have different meaning and make their activities by themselves. For example; Environmental Ministry has made its definition and planed related to REDD, the Forestry Ministry as well and furthermore thinks that the domain of REDD belongs to their management not other ministries or departments. Other example: National Planning and Development Board (*Bappenas*) thinks that all of sectors should coordinate with them in term of REDD+. While Environmental ministry as an executive of Climate Change National Board (DNPI) suggests that the coordination of emissions reduction activities through many sectors in DNPI. The ego-sectored policy is still being occurred now. DNPI as the official

delegation of Indonesia in international negotiation has also faced with authority. The different meaning and the understanding of REDD+ horizontally and vertically have become a big problem for the REDD+ further action.

The other problems with definition and perception of REDD+ are the accounting of keeping the forest or deforesting it. Can REDD+ fulfill the opportunity cost compared with other commodities like: palm oil, pulp and paper, agriculture crop, etc.? Then the worried of REDD+ will only give benefits for particular sector not for the overall development, and will not give benefit or impact to local people. This misunderstood and different meaning of REDD+ brings debates and stimulates to problems and its policy transfer failure in Indonesia.

Efforts of policy-REDD+ transfer

Indonesia becomes host at COP 13 in Bali 2007. For preparation this COP, Indonesia formed IFCA (Indonesia Forest Climate Alliance) in July 2007. The IFCA aims to analyze the REDD scheme that can be operated in practical carbon emissions mechanism. The IFCA is a forum/umbrella for communication/ coordination/ consultation of stakeholder working forest climate change in Indonesia under coordinated FORDA (Forestry Research and Development Agency), Ministry of Forestry. The IFCA consists of governments, private sectors, and civil societies, scientific institutional and international partners totaling 60 experts. Australia, Germany, and UK supported the funding for the IFCA process under coordination of World Bank. The IFCA resulted the Indonesian REDD framework and Institutional arrangements that were a part material presentation of Ministry of forestry in COP 13 and supported the REDD scheme (MoFor 2008, and IFCA, 2007).

Six month later- after Cop 13 Bali, President of Indonesia issued President Regulation Number 46/2008 concerned to formulate the Climate Change National Board (*DNPI*). The general head of DNPI is President and Ministry of Environment as daily coordinator. This body consists of other ministers. President has given 5 mandates to DNPI, namely:

- Making climate change strategy, Ministry of Environment has mandated to National Climate Change Action Plan.
- Coordinating all of activities relating to Mitigation and Adaptation climate change including its funding.
- Arranging and coordinating with other sector related to carbon trading mechanism
- Monitoring and evaluating climate change management
- As a focal point for global climate change negotiation under UNFCCC[32]

In the fact, the DNPI meeting has never been leaded by president and it implicates to "less politically will" from other sectors. The experiences of the DNPI to coordinate all sectors are difficult. The DNPI do not have power to do these, and some sectors made their climate change action plan with less coordination to DNPI. The DNPI has a big task, particularly REDD scheme is under the LULUCF (Land Use, Land use Change, and Forestry) department. Currently two conflicts of REDD management in Indonesia which are DNPI under LULUCF department and Ministry of Forestry.

[32] www.indonesia.go.id/id/index.php/content/view/.../index.php?

Indonesia government has actively to enhance the REDD scheme. Indonesia is one of 29 of the REDD scheme drafter countries. The commitment can be also seen from the President Susilo Bambang Yudoyono's statement in Duisburg in 2009. He stated that Indonesia government has committed to reduce the emissions 26 % without donor assistance and 41 % with donor supports until 2020. The main reason behind this is to cut 70-80 % of emissions from forestry sector. Particularly regarding to reducing emissions form deforestation and forest degradation, Indonesia is one of countries initiator. REDD+, as international agreement has been transferred to forestry management and policy. Based on Ministry Regulation No.30 of 2009, REDD+ defines as "all of efforts of forest management to reduce emissions and or reduce the quality forest cover and carbon stock through many activities to reach national sustainable development".

In the forestry sector, there are several regulations that have already issued regarding to REDD and REDD+. They area Ministry forestry decree P.6/Menhut-II/2008 on REDD pilot projects, Ministry Forestry Regulation Number 30/2009 on REDD Guide and emissions reduction procedures, Ministry forestry decree No.30 of 2009 concerning on distribution benefit o REDD, Ministry forestry decree on Working Group of Forest and Climate Change (WG-FCC) (SK13/Menhut-II/2009), replaced with SK No. 64/Menhut-II/2010, and others related to regulation that will be explained further on the institutional arrangements section (MoFor, 2009).

All efforts show the commitment and the seriously of Government of Indonesia to do policy transfer policy for reaching the sustainable forest manner and active involvement to reduce emissions both national and globally. The analysis of the problems and barrier and analysis of the its policy transfer framework will be described later on point 5.9.

5.3 Forest Policy and Management in Indonesia (State Forest versus CBFM)

Description and problems

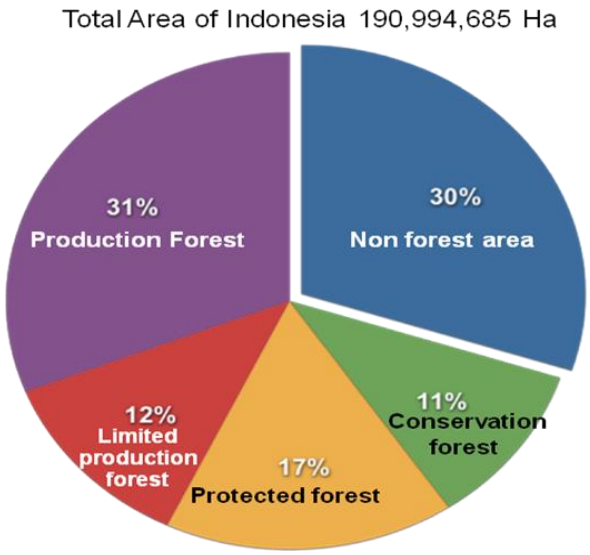
From the total land area (190, 994,685 ha), based on *TGHK* (1986)- a decision of Ministry Forestry about the distribution of forest area, irrigation and forest governance, the forest area come up with 70 % or 133,696,279 ha. From total forest area is about 42 % production forest and 28 % conservation forest areas (see picture 5.1) (MoFor 2008, IFCA, 2007). But in the fact, the total of forest in Indonesia based on forest cover analysis using land sat imagery by Geographic Information System Tool (GIS) tool is around 50 %. For example, forest cover analyzed by FAO (Food and Agricultural Organization) recorded that in 2005, it was only 88.5 million ha or 46,3% from total land in Indonesia[33]. It means that, there is any gap between de jure and de facto, or it called as deforestation or forest degradation.

Forest cover change in the big scale has been occurred from 1970 when the logging concession company managed the production forest. The main causing is deforestation. Based on Forest Watch Indonesia, deforestation rate from 1970-1990s estimated 0.6-1.2 million ha/year. World Bank and Government of Indonesia recorded that deforestation in the period 1986 – 1997 was 1.7 million ha/year (FWI/GFW, 2001). Moreover, in the period 2000-2006 deforestation in Indonesia was more significant. Forest Watch Indonesia analyzed that deforestation rate from 1989-2005 around 1,99 million/ha. In 2007, in the report of

[33] http://fwi.or.id/?p=82

State of the World's Forests, FAO (Food and Agricultural Organization) positioned Indonesia in to eight of the ten states with the largest natural forest area in the world. But the deforestation average is 1.87 million ha/year (2000-2005) and Indonesia becomes the first largest deforestation in the world[34]. The deforestation in Indonesia is happening until now, Gusti M. Hatta-Minister of Environment said that deforestation in Indonesia is average 1,1 ha /year [35].

Figure 5.1 the composition of forest and non forest in Indonesia



Source: MoFor, 20 08 and IFCA, 2007.

Deforestation in Indonesia is mostly caused of bad management of logging concession company, illegal logging, forest encroachment; forest conversion permits other land uses such us: plantation, mining, transmigration, agriculture, forest fire, etc. Other factors contributes adverse impacts to deforestation in Indonesia are high demand of wood and pulp and paper, international demand of crude palm oil (CPO), and poverty. Low law enforcement, corrupted- system of law, politic and economic factors accelerate the deforestation in Indonesia as well.

The other problems of forest management in Indonesia are the reality that many indigenous people/local people live in and around the forest. They get small recognition for community based forest management (CBFM) while the growing population needs land and space. It induces land tenure conflicts among communities and government and company. CIFOR (2004) noted that there are about 20 millions poor people living in and around forest in Indonesia. Meanwhile, CESS (Center for Economic and Social Studies in 2005, in Hidayat (2009) recorded that the number of poor household in/ around forest was higher than those poor household out of forest. Conflict land tenure, for example in Riau province, Jikalahari (2005) recorded more than 400 cases of land tenure conflicts between indigenous/local people and company. Population growth in Indonesia is high rate, which was from 97 million in 1961 to 215 million people in 2003. Apparently, it needs space and link with the poverty.

[34] http://fwi.or.id/?p=82
[35] http://www.menlh.go.id/home/index.php?option=com_content&view=article&id=4509%

The balance between conservation and development forest, and poverty alleviation should be more intense noted in term of REDD+.

In the context of CBFM, it needs elaboration policy, regulation, and the composition of management forest by community. In the forestry law Number 41 of 1999, clearly stated that forest should be regulated by state under the Ministry of Forestry with taking account of local/indigenous people's right. Then in the Government Regulation Number 6 of 2007 Indonesia has given opportunity for community to manage the forest. There are several kinds of community based forest management in Indonesia, namely community forestry, community planted forest, village forest, and customary forest. Ministry of forestry made a plan for 2015 that CBFM will reach 10 million ha, but until now it is only 25.415 ha permitted by government. It is less than 1 % from the planning in 2015 apart from customary forest (see table 5.1). The recognizing of CBFM in Indonesia is not also followed by supporting funding while conservation forest spends a huge amount of state budget. Furthermore, government gives forest management to logging and industrial plantation around 10-15 million ha. Indeed, this management of forest will be implied to low benefit sharing of local people if REDD will be implemented in 2012.

Table 5.1. Planning, verification, and recognizing of CBFM in Indonesia

The Kinds of CBFM	Target up to 2015 (Ha)	Evaluation & Verification (ha)	Reserve (ha)	Permittance (ha)
Community Forestry	2,1 million	203.573	19.445	7.753
Community planted-forest	5,4 million		341.302	15.306
Village forest	2,5 million	6.687	2.356	2.356
Total	10 million	210.260	363.103	25.415

Source: WARSI, 2010.

The framework for forest land management

There are two laws as a legal ground and reference of conserving natural resources and managing of forestry in Indonesia. They are Law (UU) Number 41 of 1999 concerning of forestry, and Law Number 5 of 1990 concerning of conservation of biological biodiversity and ecosystem. Forest area is under managed by the Ministry of Forestry department. The two laws indicated that forestry sector and environment tend to handle in central management even though Indonesia applies the local autonomy based on Law Number 22 of 1999 amended law Number 34 of 2004 about local autonomy. These two main reference forest laws regulate and reflect the accommodation of forest utilization between production and conservation toward achieving of sustainable manner. Indonesia has classified its land into two administrative purposes which are national forest (*hutan negara*) and non forest land. From the total land of Indonesia (112 million), 60 % of land surface has been administered by Ministry of forestry as national resource, while the remaining or 40 % land surfaces had been administered for agriculture, mining, plantation, settlement, and other uses (IFCA, 2008). National land Administration Agency (BPN) technically surveys and certificates land or convertible forest that has been agreed by forestry ministry. In the field there are some conflicts between Ministry of Forestry and BPN even though there is clear authority and task.

Based on the forestry ACT Number 41/1999, forests are divided into two areas which are protected areas and production forest. Protected area covering 50 million ha consists of conservation forest and protected forest. Conservation forest consists of natural reserve areas/*kawasan suaka ala*m (Wild life reserve and sanctuary), natural protected areas/*kawasan perlindungan alam* (national park, great forest area, and tourism forest), and special hunting forest. Both of natural reserve and natural protected areas area under the central government. Only protected forest is under managed by provincial and local/district authority. The production forest that has totally 60 million ha is divided into 2 kinds, namely production forest and convertible production forest. Production forest is categorized to several management purposes which are natural production forest (*Hutan Produksi Alam-HP-A*), Limited Production Forest (*Hutan Produksi Terbatas*, HPT), and Industrial Plantation forest (*Hutan Tanaman Industri-HTI*) (MoFor, 2008, IFCA, 2008). Convertible production forest refers to the production forest that can be converted to other functions with the agreement letter from Ministry of Forestry. The convertible forest can be done for strategic reason, and should be compensated for forest or money. Governor and Bupati's cannot change the forest status; they only have an authority to propose forest conversion with the recommendation from legislative. The production forest are mostly under the central management as well. Local government is only as assistant duties especially on controlling.

Planning of forestry sector consists of national planning (TGHK, national strategic planning), harmonizing TGHK and provincial spatial plan, provincial forestry planning, and district forestry planning. The Forestry planning includes forestry plan, management plan, research and development and training, and controlling (Forestry ACT Number 41/1999). To make effective and efficient management, forestry planning from national forest to local should be integrated. Thus, development and conservation forest activities can be done well.

It is very crucial to describe the history of Dutch colonial and Indonesia country because they have big influence on forest institutions and administrative system. Dutch colonial government adopted the forest administrative system that prevailed independent in Indonesia. It was implemented for a long time (350 years). With the long history Dutch colonial government planted the centralized control and management. Then, Sukarno- the first president declared Indonesian dependence and was officially recognized in 1949. In 1950, Indonesia made a new constitution with establishment of a Unitary Republic country. Administratively, based on constitution, Indonesia was divided into province and territory. Now Indonesia has 33 provinces that each provinces was divided into regencies/districts, sub-districts and villages.

In 1960, Indonesia made the agrarian law Number 5 of 1960 that was adopted mostly from Dutch heritage. In this law, the local right was still accommodated. Then, Soeharto regime called new order began since1966 with strongly centralized control and his management was supported by military. In addition, the forest management based on the law No.5 of 1974 allowed the military regime involved in forest management and business. Decision-making powers were concentrated in Jakarta. And the territory management and leadership from villages to districts used the same category and system with issued the Law no 5 of 1979 about village government. In the forestry system and management, the two latest laws contributed a big influenced and ignored the traditional leadership and local right. All forest is owned by government, and land is managed by formal leader which is head of a village. While in the daily life, informal leader and informal institutions still

influenced on the decision making. When the economic crisis had hit Indonesia in 1997, Soeharto military regime was collapsed by civil society.

After that, in 1999, Indonesia applied forest decentralization based on Law Number 22 of 1999 by giving mostly the authority to district government. Almost all sector authority from national was given to district level. The fundamental reformation without readiness human resources contributed to the lose control of forest and land management. It drifted to high deforestation from 2000-2005 with average 2 million ha/year based on FAO report. A large number of forests were changed into other land uses by district government without coordinating with provincial and national government. Finally, Indonesia revised of Law 22/1999 become Law 32/2004 and issued a mechanism how to consolidate with all districts and provincial levels in order to support, to coordinate and to cooperate with national interest. Some of the authorities have come back to national like license procedure and mechanism. Several the authorities in district government withdrew and harmonized with own forestry law. Recently the decentralization is not full given to district level. Some sectors like forestry, environment, defense, and land certification were /taken into central government.

Ministry of Forestry (2010) has set an implementation for five prioritized policies since 2000 due to deforestation, some problems of forest management, and land tenure conflicts, namely:

- Curbing illegal logging and its association to trading
- Restructuring forestry sector through enhancement of timber plantation development and forestry sector
- Rehabilitating land and forest conservation
- Empowering the people who live in/around the forest
- Strengthening forest boundaries to secure forest areas

Further elaborations of these policies are conducted into short term, medium and long term forestry planning. However, these s five prior policies have been amended into 8 policies in 2009 (Ministry of Forestry, 2010) to solve complex forest problems and future challenges, which are:

- Strengthening forest boundaries to secure forest areas
- Rehabilitating degraded forest and improving the flowing capacity of watershed
- Conducting forest protection and fire management
- Conserving the biological diversity
- Revitalizing forest utilization and forest industries
- Empowering indigenous people and local communities
- Mitigating and adapting climate change
- Strengthening forest institutions.

Not all these policies have been achieved until now. There are lots of problems related to forest boundaries which are unclear between conservation area and production forest. Furthermore, corruption and failure of rehabilitation program/reforestation program, empowerment indigenous people and local communities, and strengthening forest institutions are also taken into account. Nevertheless, there is a good progress toward forest protection and fire management, and mitigation and adaptation to climate change, one of

them is REDD+ scheme. Contrary, revitalization industry especially for pulp and paper has not done yet; furthermore it gives adding quota to these industries because of national revenue support.

5.4 Forest governance as the pre-requirement of REDD+ implementation

The good governance is needed for REDD+, because it will build and sustain among stakeholders and investor, especially related to the political attraction and funding support, and also the reliable of buyers to supply chain of carbon units (MoFor, 2008, IFCA, 2007). Based on this report, good governance will support REDD in three ways which are: "(1) reducing deforestation by improving the effectiveness of government policies and institutions, including forest management agency and laws, (2) creating incentive for better forest management and removing perverse incentive that drives deforestation for private gain at the expense of public good, (3) Monitoring REDD payment against corruption and elite capture by ensuring that payment mechanisms and the financial institutions are capable, accountable, and free from undue political influence". Indeed if the government of Indonesia improves the implementation of the good forest governance successfully, it will contribute to either carbon quality and price premium increase or effective and efficient forest management. I describe the forest governance situation in Indonesia accordingly.

The first **distribution of forest management and authority** is needed to solve the forest problems and to reach democratic society. Forest governance in Indonesian constitution gives the state broad authority over forest land but at the same time it also recognizes customary forest right and use. Decentralization empowers local government and local communities to shared management, risk and revenue. With the involvement of many stakeholders from multi levels, it will bring the good decision making. Some forest management has given special management of forest like in Aceh and Papua Province.

The second **consensus is** on forest definition. Definition of sustainable forest management, and definition of REDD+ are needed regarding to good forest governance. Now the definition of forest is contradictory between UNFCC and Indonesian forestry low (with the different criteria and ecosystem), and also has different meaning between NGOs and government. Furthermore, the definition of sustainable forest management is also different among government, NGOs, and private. For example, acacia plantation forest is not forest but define as the plantation for NGOs.

The third **participatory** of forest management in Indonesia is low. The local community's participation on forest management has begun after the military regime of Soeharto was fallen. So it had been 13 years. It can also be seen from the recognition and legalization of CBFM that was less than 1 %. Moreover, the process of forestry planning, implementation and monitoring and evaluation were less of community's participation. If we refer to ladder of participation, I can be said in the consultation step.

The Fourth **transparency and accountability** of forest management in the transition phase. With the fallen of Soeharto's military regime, the forest management transparency was better but it was not likely as expected. World Bank Investigation (2003) founded that corruption embedded in the license giving and reforestation funds. Regarding to license issue and license giving, many of provincial and local leader have sent to the jail. This further

report more recommended that it is need the greater transparency for accurate information and quality of forest area (MoFor, 2008, IFCA, 2007). Now with the remote sensing technology, it will be easy to conduct assessment of monitoring and e-government enhancement such as the transparency and accountability of forest management. Transparency obviously contributes efficiency of market REDD+ by providing more accurate information, reliability of data, open access data, and third party which can verify for those process.

The fifth **predictability** term towards permanent and guarantee of carbon emissions in the long time frame (30 to 100 years) must be sustained. Unpredictably, governance therefore leads to high risk and stimulates to low price of carbon. The reality forest management in Indonesia is not consistent and depends on the new leader both in national, provincial and district level.

The seventh **legal certainty and forest land tenure** need the management authority to local government and community right. Better local management and decentralization have encouraged the opportunities of CBFM. The encouragement of the CBFM such as village forest, community forest, community planted forest, and customary rights is one action of forest government to promote of local management and to handle the deforestation because of vague ownership, not transparent and land tenure conflicts. Joint forest management approach in Java Island has begun implementing to give local access and benefit. Now, legal basis for village forest, community forest, community planted forest, and joint forest management have been provided. But the legal basis of customary forest for recognition of indigenous people management is not issued yet. Some legal bases of them are: community forests are legalized by Government Regulation Number 6/2007 that recognizes community forestry, community planted forestry, and the process of agreement of customary forest. Then Ministry Number P.49/2008 about the village forest. These legal bases regulate the determination procedure of these CBFM. In the protected forest, Ministry of Forestry has also recognized the collaborative management, particularly national park with issuing Forestry Ministry Regulation Number P.19/2004). But there is no national park in Indonesia that is managed under CBFM.

Finally **responsive and equitable and inclusive** in forest management shows a good progress. With consideration of forest problem, local right and equitable of all stakeholders has been begun. Nevertheless, there are lots of obstacles to reach these terms such as: corruption, bad bureaucracy performance, and centralistic views. The sharing budget for CBFM is never done in Indonesia. Sharing of the benefit and corporate social responsibility is done by private logging companies which are only just run their obligation. Many of NGOs made critiques of the less and marginal policy of CBFM and the failure of state forest management, while CBFM has been successfully to manage forest for a long time, such as, Guguk customary forest in Jambi, Sungai Utik Customary forest in Kalimantan, etc.

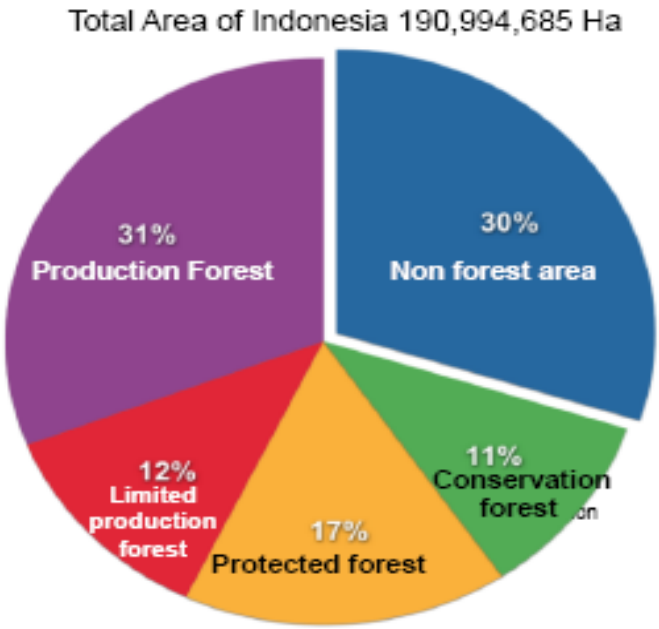
The forest crime and low law forest enforcement contribute are the main problem the deforestation toward good forest governance. The root of this problem is corruption that has embedded in bureaucracy and justice system. Regarding to deforestation and supporting of REDD+ implementation, since 2000, Indonesia has intensively implemented a program to curb illegal logging through the development of Forest Law Enforcement National Strategy (FLEN). President of RI issued the President Instruction (INPRES Number 4/2005) concerning illegal logging and instructed 18 provincial governments for working

together to combat illegal logging. The regulation and this commitment produce a significant result with a decrease of deforestation from 2 million ha/year to 1 million ha/year. Besides, Indonesia Government concerns against corruption in forestry sector issuing Law Number.25 of 2003 by ensuring the independent Agency known as *KPK* (Corruption Eradication Commission) to investigate illegal logging and corruption in forestry sector. It is also the establishment of Anti Corruption High Court (*PTAK*). But the two agencies now have not showed the significant results yet in forestry corruption eradication.

5.5 Current developments of REDD+ in Indonesia

The deforestation in Indonesia is estimated as major of emissions. Forestry and peat swamp sector release 84 % (indication that major of peat swamp is forest status), while only 16 % emissions from other sectors (agriculture, electricity, transportation and waste and industry), see the picture 5.2. DNPI, Ministry of Environment and National Planning and Development Board projected that Indonesia will do nothing till 2020, the total of emissions reach 2,250,000 $MtCO_2e$. REDD+ is believed can reduce these emissions. Accordingly, REDD+ is very important policy in Indonesia to reduce the emissions.

Figure 5.2. Distribution of green house gas emissions in Indonesia 2009



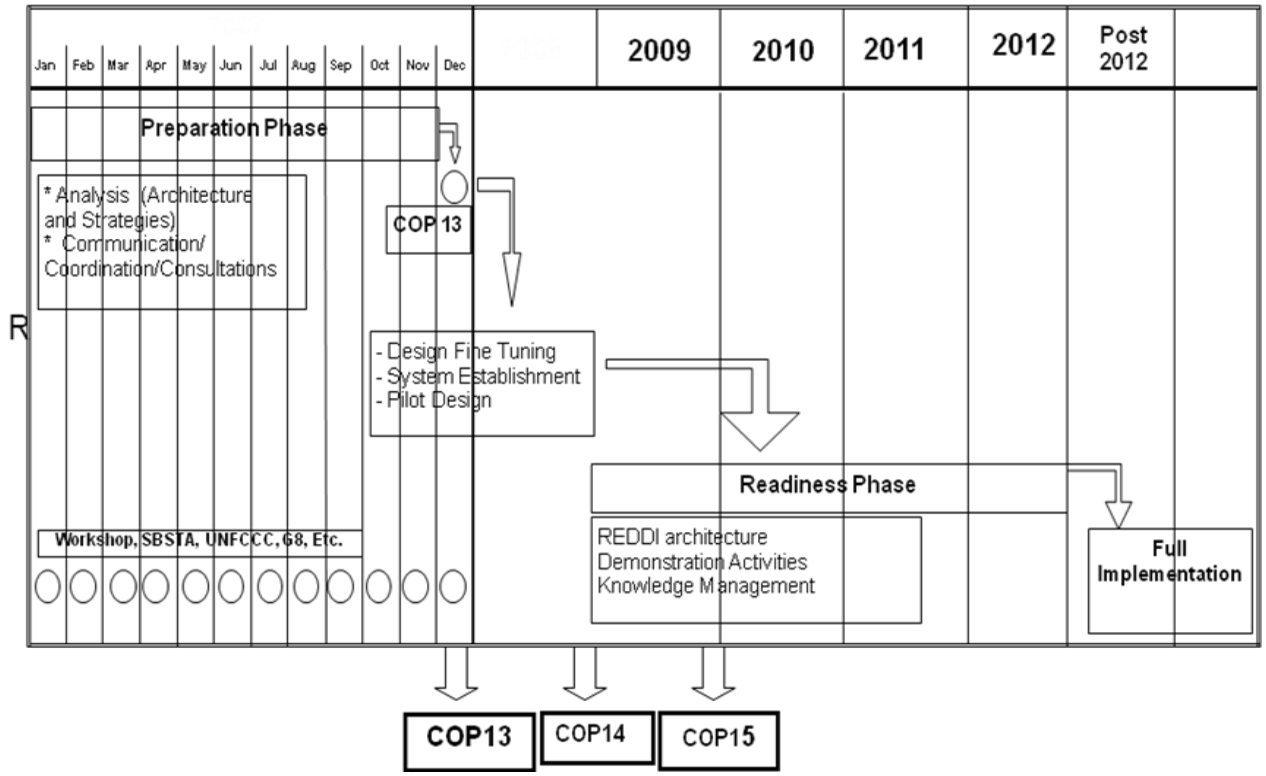
Source, DNPI, 2009

Carbon trading, later on should fulfill the requirements of REDD+. Indonesian REDD+ is still learning by doing according to Ministry of Forestry, (2010). There are three phases of REDDI, which are:

- Phase 1, preparation: phased approach, analysis, communication, design, system establishment and plot design. This phase was already done from cop 13 in Bali-Indonesia to cop 14 Poznan-Norway.
- Phase 2, Readiness Phase from 2009-2012 is to design REDD+, to perform demonstration activities and knowledge management.

- Phase 3: post 2012 is full implementation of REDD (addressing drivers of deforestation and degradation, methodological and institutional issues). The phases can be seen in Figure 5.3.

Figure 5.3 the phases of REDD in Indonesia

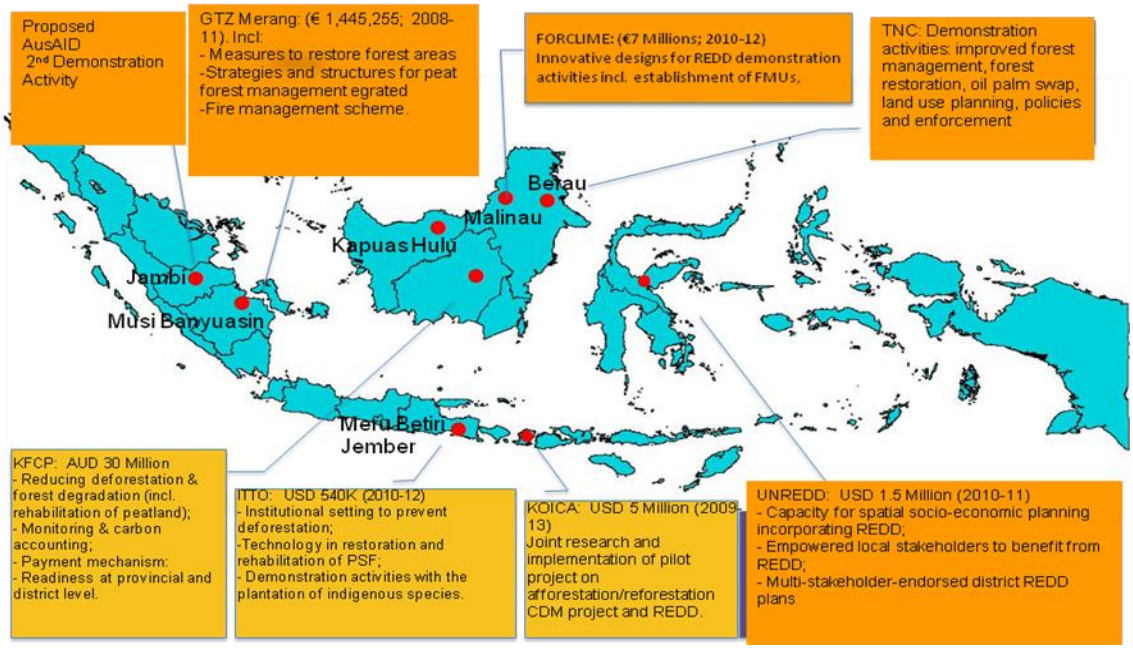


Source: Ministry of Forestry, 2010

From the figure 5.3, REDD+ in Indonesia now is in the readiness phase which is the phase to design REDD+, to implement demonstration activities and knowledge management. In order to design REDD+, many projects were developed by many stakeholders. Generally there are two kinds of project designs, which are demonstration activities and voluntary. Demonstration activities refer to measure case and development of methodologies, technologies and institutions in a sustainable forest management that seeks to reduce carbon emissions with government agreement. Whereas voluntary activities is that REDD+ project activities is developed by stakeholder without agreement of government. Another different of these projects and schemes are a demonstration activity refers to cooperation government to government (complimentary carbon market) and a voluntary activity aims to voluntary carbon market. But a voluntary REDD activities can become a complimentary market later on.

There are nine initiatives of REDD demonstration activities now in Indonesia which are covering 4 islands namely in Sumatra Island : Jambi province proposed by Ausaid, and Musi Banyu Asin district proposed by GTZ; in Kalimantan Island: Kapuas Hulu district proposed by KFCP , Malinau district initiated by TNC, and Berau District proposed by FORCLIME, in Java-Bali Island: Jember District initiated by ITTO, and West Nusa Tenggara province proposed KOICA, and in Sulawesi Island: North Sulawesi initiated by UN REDD, see the figure 5.4.

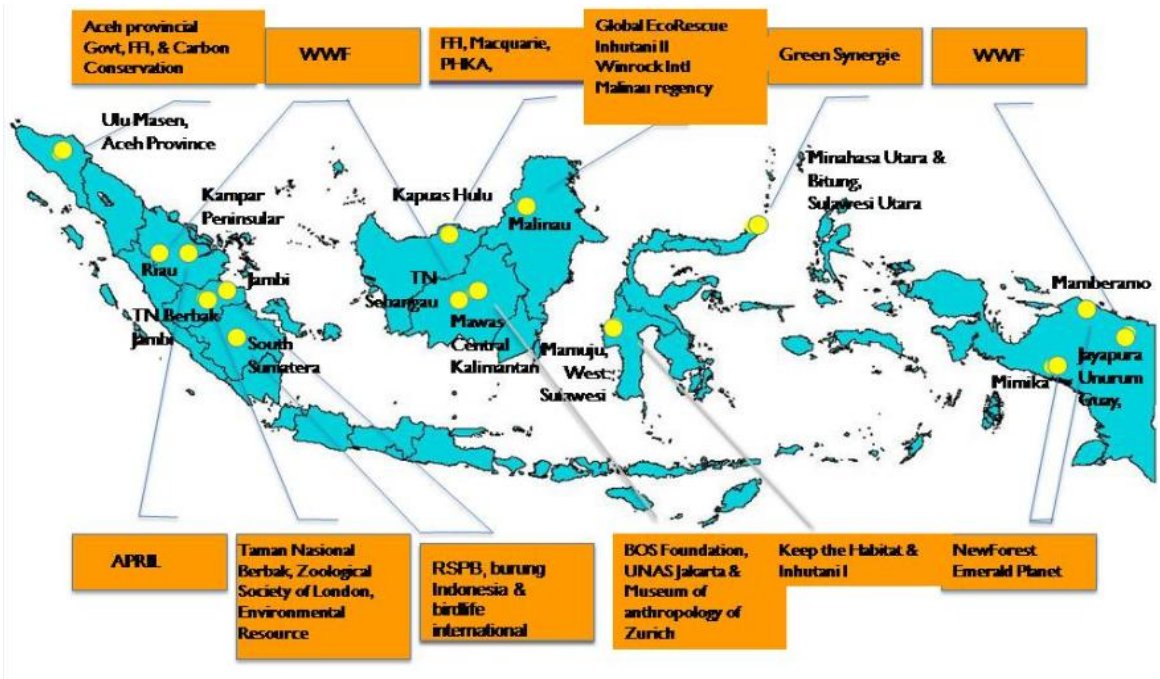
Figure 5.4 REDD demonstration activities project sites in Indonesia



Source: Ministry of Forestry, 2010, DNPI, 2010

REDD+ voluntary activities are much more than REDD demonstration activities. There are 15 initiatives covering in Sumatera, Kalimantan, Sulawesi and Papua Island. Two of these initiatives are Tessonilo area in Riau Province and Ulu Masen in Aceh province, Sumatra. REDD+ Tesonilo project initiated by WWF Indonesia become the case study. And REDD+ Ulu Masen Project done by Flora Fauna International and Government of Aceh supports the case study. The REDD+ voluntary activities can be seen clearly in the figure 5.5.

Figure 5.5. REDD voluntary project site in Indonesia



Source: Ministry of Forestry, 2010, DNPI, 2010

5.6 Regulatory framework and institutional arrangement of REDD+ in Indonesia

REDD+ implementation in Indonesia is still in readiness phase which are building capacity, developing the framework, and addressing related issues (drivers of deforestation and forest degradation, etc). Currently, Indonesia has formulated of REDDI architecture regarding to decision COP 13 Bali Action in 2007 to Cop 15 Copenhagen in 2009. Its objective is to provide the guidance concerning policy intervention required in the efforts to driver deforestation and forest degradation, and the infrastructures which must be prepared in implementing of REDD+. Indeed, it also becomes guidance for integrating all action and activities related to REDD+ funded by International funding. The strategy that is developed now regarding to REDD+ readiness are raising awareness, capacity building, access to data, access to technology stakeholder, communication and participation. There are 5 stages that should be done for REDD+ scheme (MoFor, 2008, IFCA, 2007), namely:

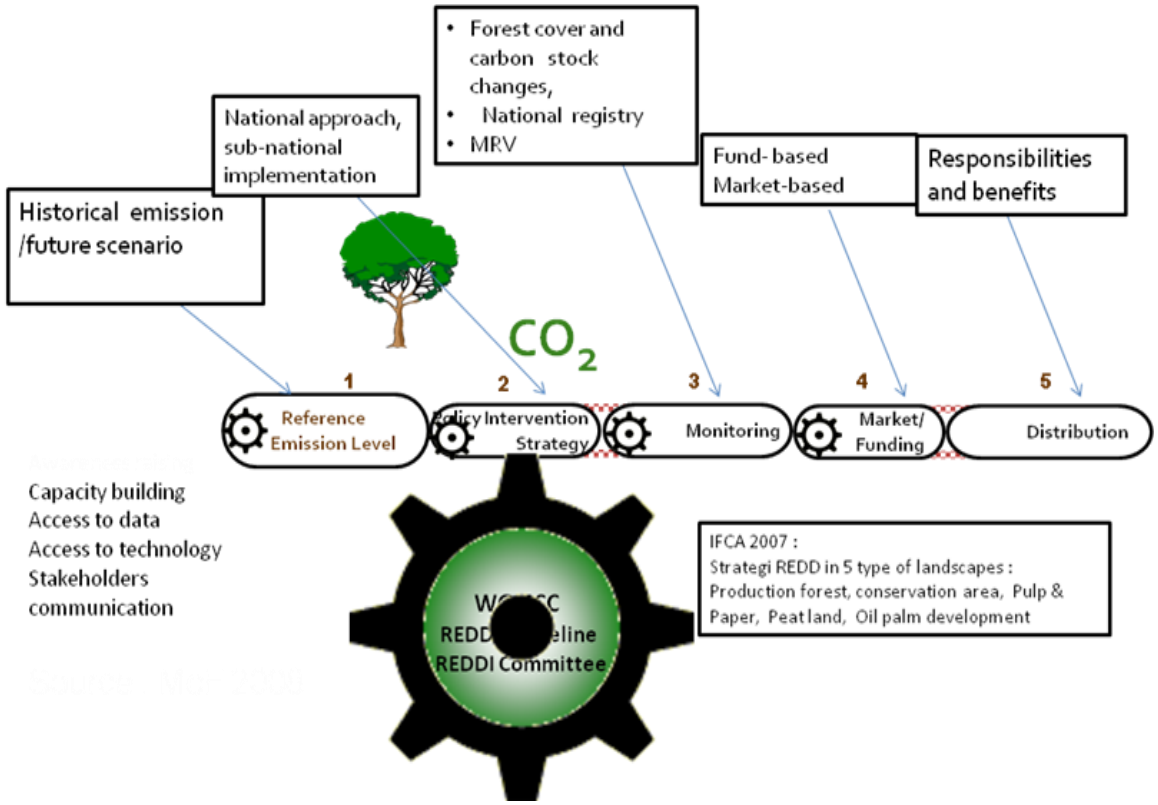
1. REL (Reference Emissions Level): This is determining gross emissions in a geographic area in certain time period of REDD+. And RL (Reference Level which is determining net/gross emissions and removals in a geographic area in certain time period of REDD +. Then makes a national reference scenario or national emissions release rate including level of reduction emissions, reducing deforestation in certain period, minimal 5 years to 30 years.
2. Policy interventions for addressing driver deforestation and forest degradation in 5 landscapes (production forest, protected areas, timber plantation, peat land, oil palm plantation (related to land use change). Policy intervention for addressing driver deforestation can be explained further in regulatory framework and institutions.
3. Measurable, Reportable, and Verifiable (MRV): describing of forest cover and carbon stock change with accountable methodology. Measurement refers to the development, comparable methodologies among agreed parties under AWG-LCA (Ad hock Working Group on Long Term Cooperation Action). Reportable requires all parties to communicate the conference of the party's information related to implementation. Verifiable means that requirements to review the detailed information provided by Annex I Parties with respect to their policies and measures on the mitigation of climate change.
4. Financing: with two schemes which are; fund-based or Market-based or the possibility to combine both of them.
5. Distribution: responsibilities and benefits (see the figure 5.6 more clearly)

This REDD architecture can be useful either for supporting of readiness REDD+ in Indonesia under the UNFCC framework, and for becoming a form of part the national strategy to achieve sustainable manner (Ministry of Forestry, 2010). But from the picture above, it needs to address the current situation for 5 stages.

Firstly, in terms of Reverence Emissions Level/Reverence Level; in order to determine of RE/RL, it needs clarification about baseline, permanency and leakage. Baseline means that emissions profile that would have occurred under business as usual. Projection of emissions that would have come from emissions has already predicted above which is 84 % from forestry sector and peat swamp. And Indonesia has committed voluntary to cut emissions 26

% without donor assistance and come up with 41 % with donor assistances (Presiden Susilo Bambang Yudoyono's statement in Copenhagen Dec 2009)[36]. Permanency refers to the propensity of reduction emissions not to re-enter the atmosphere. In REDD+, permanent reduction would mean the protected area to remain forested or un-degraded permanently, or for the duration of emissions reduction agreement. Leakage refers to direct emissions elsewhere caused by emissions reduction in the project/ program. For example, protection of a forest area in one place may lead to deforestation another place. Permanent reduction level and leakage do not set up officially yet.

Figure 5.6 REDDI Architecture



Source: Ministry of Forestry, 2010.

Secondly, that is related to policy and intervention strategy from national, provincial to Local Level. In the national level, there is no strong regulation in place that can readily accommodate carbon trading and mechanism to be developed during the readiness phase. Interim mechanism may be possible to exercise incentive distribution before international mechanism under COP is placed. To date, there has no strong connected yet to UNFCCC-process on REDD+ in Indonesia (ministry of Forestry, 2010).

The strategy of REDD readiness at the national level are (Ministry of forestry, 2010):

- Policy interventions to tackle the drivers of Deforestation and Forest Degradation,
- REDD regulations (REDD Guidelines and REDD Committee)
- Methodology (establishment of National REL and MRV system)

[36] http://www.thejakartaglobe.com/national/sby-talks-climate-change-with-soros/374301

- Institutional (Financing including distribution of incentives and responsibilities, National Registry, capacity building, stakeholders communication and coordination among REDD institutions, stakeholders consultation)
- Analytical works (REL, MRV, Co-benefits, risks, etc)

The readiness component at the sub-national level: provincial and district levels:

- Actions to tackle drivers of Deforestation and Forest Degradation,
- Methodology (establishment of Provincial/District REL and MRV system),
- Institutional (capacity building, stakeholders communication and coordination among REDD institutions, stakeholders consultation),
- Demonstration activities (Masripatin, 2010).

Thirdly, in terms of monitoring of forest cover and carbon stock change, national registry and MRV. Regarding to the using REDD+ Demonstration Activities and voluntary project, Indonesia is still developing the methodology to count the carbon stock change, to prepare national registry, to develop MRV, and to create networking communication of parties. Recently, Ministry of Forestry cooperation with Australia Government has set up of Forest Resource Information System (FRIS) and Indonesian National Carbon Accounting System (INCAS). INCAS will be an integrated system applying all of data from land use land use change and forestry (LULUCF), or Agriculture, Forestry, and other Land Use (AFOLU). INCAS will collect and analyze carbon accounting, data land on forest management, land climate data, and plant growth and biomass data for gaining of full profile of GHG using remote sensing. INCAS is developing the initial stage which emphasizes on analyzing forest cover and forest change, research and analysis of land use change, training and technical exchange between experts both of countries, and future implementation of scenario analysis on policy related to establishment of REL/RL. Developing of MRV system becomes the first step that should be done (Ministry of Forestry, 2010).

Fourthly, funding for activities of REDD readiness both of demonstration and voluntary activities is still fund based or donor driven. There is no market based funding in REDD/REDD + project. In the world, there are any 30 billion USD funding for 2010-2012 for REDD/REDD+ and it comes around 100 million USD/year from 2013 till 2020[37]. Indonesia has opportunity to get these funding to compete with other developing forest countries.

Finally, its distribution; Indonesia Government under the Ministry of Forestry regulation No P. 36 /Menhut-II/ 2009 has made the benefit sharing whether REDD can be implemented. The distribution of benefit from REDD/REDD+ generally can be divided into two, which are state forest and community forest. In the state forest especially for protected forest, central government get more than 50 % and in the production forest under managed by company, developer get 50 %. The government benefit will be distributed to central government 40 %, provincial government 20 %, and district government 40 %. But in CBFM, community gets the benefit from 60-70 %. In the state forest, community only get 20 % while there are many local people live in the state of forest will loss of opportunity or access of forest and their production (see table 5.2). Recently, Ministry of Finance rejects the distribution based on this regulation. This benefit sharing is still debating in Indonesia.

[37] Press conference with Doddy Sukradi, LULUCF chairman of DNPI, Jakarta 5 May 2010.

Indonesian government commits to cut emissions reduction by making some regulation. In the national level for coordinating of climate change, government of Indonesia has found the DNPI (National Board of Climate Change). The aim of this board establishment is to coordinate all sector in terms of emissions reduction and international negotiation. This board is leaded by president; the members come from many sectors/ministries and the daily executive of DNPI leaded by Ministry of Environment. Even though president is a leader, but he has never taken account to lead this board. Ministry of Environment as daily executive of DNPI met that it was very difficult to coordinate inter-sectors and there are many overlapping activities such as: forestry ministry, Planning and Development Board, etc.

Table 5.2 The distribution and benefit sharing REDD/REDD financial based on appendix of Ministry of Forestry Regulation no P. 36 /Menhut-II/ 2009, 22 Mei 2009

Tabel NJ2L No.	Permit holder / developer		Distribution		
			Gov't	Community	Developer
1.	IUPHHK-HA (Area of Forest Timber utilization at Natural Forest)		20%	20%	60%
2.	IUPHHK-HT (Area of Forest Products Timber utilization of Forest Plantation)		20%	20%	60%
3.	IUPHHK-RE (Forest Timber Utilization at Forest Ecosystem Restoration)		20%	20%	60%
4.	IUPHHK-HTR (Area of Forest Timber utilization at Forest Plantation)		0%	50%	30%
5.	Community timber plantation		0%	70%	20%
6.	Community forestry		20%	50%	30%
7.	Costumary forest		10%	70%	20%
8.	Village forest		20%	50%	30%
9.	KPH (Timber Plantation Forest Management Unit)		30%	20%	50%
10.	KHDTK (Special purpose forest area)		50%	20%	30%
11.	Protected forest		50%	20%	30%

Notes: NJ2L : Nilai Jual Jasa Lingkungan (Sales value of environmental services)

First regulation is Ministry of Forestry Regulation Number P.6/Menhut-II/2008 on REDD pilot projects. It regulates the development the readiness implementation of REDD. This regulation is also testing the methodology and monitoring the methods and it regulates governance mechanisms development as well. Secondly is Ministry Forestry Regulation Number 30/2009 on REDD Guide and emissions reduction procedures. It regulates REDD implementation, including requirements to meet developers, verification and certification, as well as the rights and obligations of REDD implementers. Until today there are no provisions concerning the determination of reference emissions level. Thirdly is Ministry of Forestry Regulation Number 36/2009 on the Granting Permit REDD. Its regulation is targeting REDD for voluntary market, detail process on production forest, not on protection forest and it has benefit sharing mechanism. In the third regulation states that REDD+ can be implemented in CBFM: village forest, community forest, and forest plantations forest and even in costmary forest. Fourthly, these ministry regulation is supported by a decree on Working Group of Forest and Climate Change (WG-FCC) (SK13/Menhut-II/2009), replaced

with decree No. 64/Menhut-II/2010. Finally, these regulations are released to respond high interest from both international partners and national stakeholders to participate in REDD+ activities, as well as to exercise outcomes of COP/SBSTA process on REDD+.

Following up of P.30/Menhut-II/2009, working group –Forest and Climate Change intends to finalize the draft REDD Committee (National Working Group on REDD) while will be tasked to oversee REDD+ implementation. National REDD Working Group will consist of representatives from other relevant sectors and stakeholders. The member of working group will be high level official whose its duties are to deal with strategic issues and policy. Technical team members consist of second level official and REDD secretariat. But now, obviously in development phase, and there is no regulation supporting this.

Some regulation relates to REDD/REDD+ are Act (UU) No 26 of 2007 on national spatial planning, Government Regulation No. 6/2007 and completed by Government Regulation No.6/2007 on forest plan and forest utilization and spatial planning**.** National, provincial, and local spatial planning should be integrated to forestry planning on the multi level governments that can ensure and secure the long term of REDD+ project called permanency. In national level, REDD+ term are not integrated to national planning and forest planning and utilization spatial planning yet. Emissions reduction is not part of one indicator to design national spatial and forest plan. Indeed, the terms of REDD+ are not integrated in every provincial and district plan yet to support the implementation of REDD/REDD+ for ensuring the REL/RL, and MRV. Elaboration of local regulation as an example of Riau province and district level will be explained further in chapter VI. Otherwise the term of REDD+ has not integrated yet in to spatial planning on multi level governments.

5. 7 REDD/REDD+ in Indonesia: debates and challenges

The debates of REDD+ in Indonesian context are almost same with in international level. The similar issues are North versus South countries (developed countries and Developing Countries), different interest and need government versus community, worried about REDD that can be a good scheme for reducing deforestation or not, and forest and emissions that cannot be traded as business usual. The other same issues are how to finance REDD efforts: through carbon taxes, international funding and/or carbon markets? And which organization should be in control of the activities and the achievement, how to ensure that poverty reduction, human rights protection, indigenous people's rights, including the right to free, prior and informed consent, and biodiversity protection Goals that are not pushed aside in the rush to cut carbon emissions. Government believes that REDD+ is a good and an opportunity scheme for getting funding to do the sustainable forest management in Indonesia, mean while civil society are worried that business as usual (REDD+) cannot solve the problem of forest with complex and many stakeholders involved. Civil societies believe that REDD+ should be fund based not market based and need forest governance and moratorium forest.

The same issues with international debates, but the deeper issues are about decision making process, indigenous people right, and finance mechanism. The question are who should involve in decision making in REDD+ from local to international level, how to ensure REDD will bring the benefit to all stakeholders and respect for indigenous people, how to secure poor people against the risks of engaging in these new, uncertain, market-based or

aid-based financial transfers. The decision making of REDD+ now tends to centralized in process, output oriented, and donor driven. REDD/REDD+ was decided by the countries representative with less of indigenous people, meanwhile the indigenous and local communities are the most vulnerable from impact of climate change or REDD policy.

In Indonesian level, the REDD+ architecture and policy is also generally decided by government especially in national level with experts. The planning REDD+ readiness was not planned from the contribution of local government and local people. Many of NGOs in Indonesia such us: WALHI, AMAN, KPSHK, and their group advocated involving indigenous/local people in decision making of REDDI. In the local level, many stakeholders related such us: forestry services, regional planning board, and environmental board do not understand about REDD meaning. Output oriented, because national government prepare REDD+ readiness for needing to get funding. All of policy like regulation in the REDD+ related was not based on the need and the problem in the local or site level; whereas the implementation of REDD+ and its problem will be in the site level. Government and some of international NGO's believe that REDD+ will be accepted by local people because of its incentive. While CSO ensured that every project including REDD+ should do with implementation of free prior informed concern. All of consultation, demonstration activities and other activities related to REDD+ are major funding by international agencies. The policy-REDD+ framework, and other requirements are based on donor driven not local problems.

The different issues with international debates are relating to good forest governance, REDD readiness implementation, commitment to cut emissions versus the policy or regulation issued forest conversion. In one hand government committed to cut emissions, but in other hand government formulated regulation that can be conversed forest to other use. Some of civil society thinks that REDD+ cannot be done if forest governance is not good. The corruption, not transparency, and bad of forest law enforcement now are still done, even though there are president instruction for curbing illegal logging, *KPK* and *PTAK*. Some of international organizations, NGOs believe that REDD will enhance forest governance.

Beside these debates, REDD faces many challenges. The challenges of REDD is the opportunities for government and many stakeholder to enforce forest governance if the carbon trading will be done. The International effort of REDD to enhance the REDD + accepts to accommodate the civil societies proposal that REDD should bring the benefit for the local/indigenous people. By learning by doing and readiness phase implementation, stakeholders will have big opportunities to revise and to complete the REDD+ in Indonesia. With the problems mentioned above, Government of Indonesia and other stakeholders should learn and move a head from centralizes process and output oriented to decentralize and process oriented, and the possibility to combine these. The other big challenges obviously, the commitment of cut emissions until 26 % without donor assistance, how to realize these commitment in to realistic operational. And the other hand, these commitment face the economic problem, poverty alleviation in Indonesia. their debates and challenges are very important to understand for further analyzing especially in the local level.

5.8 Dilemma: emissions reduction (conservation) and development

Indonesian government through President SBY's statement in Duisburg-Germany in 2009[38] has been committed to reduction emissions until 26 % without donor assistance and 41 % with donor support by 2020. It is about 14 % the reduction emissions come from forestry sector. Riau province particularly will be the biggest responsible to support national reduction with 26, 22 % with estimation fund 83 billion IDR. This commitment has also been taken concern by international support. To know how far this commitment is done and how these commitments can be achieved, it needs elaboration into planning and institutions. Indonesian action and policy in forestry sector and government intervention is crucial to avoid deforestation, forest degradation and land use changes.

It has mentioned above that, the commitment of RI president has not integrated yet in to national planning and provincial/district planning. It is difficult to reach the cut emissions 26 % without donor assistance because Indonesia is developing country that has many problems faced. These big problems are poverty, unemployment, influence of international economic crisis, limited budget, and bad of governance performance.

In one hand Indonesia and Riau province government committed the emissions reduction but on the other hand they issued the policy that can contribute impact to emissions release and forest degradation and land use change. For example, Indonesian government issued the government regulation number 2 /2008 that legalized the mining company to allow activities in forestry area including conservation area; while the coal mining activities accelerate deforestation. Secondly, agriculture Ministry regulation Number 14 of 2009 allows the conversion of peat swamp to oil palm plantation while in peat swamp conserves many of carbon stock. Thirdly, in 2008 Ministry forestry continued ministry decree Number. 101/Menhut - II/2004 for acceleration of industrial plantation that will be ended in 2008. It is widely known that development of industrial plantation in Indonesia is come from natural forest. Finally, in 2010, Indonesia issued government regulation Number 14 of 2010 allows all activities in forest area for national interest if there is any compensation area. All of the government policies mentioned above are contradiction with the president commitment to cut emissions reduction.

The representative of WALHI (Friend of the Earth Indonesia) said that "the SBY commitment is not followed by action and integrated planning. It is only lip service to get attention of international funding and agencies. Until now, there is no rational action for achieving its commitment". Based on these explanations, clearly show that the SBY's government commitment for cut emissions 26 % in 2020 without donor assistance and 41% with donor assistance is far away from action and policy intervention. Indeed it needs the integrated planning, policy and action to realize the commitment.

[38] jakarta post publication 4 Dec 2009.

5.9 Analysis of policy–REDD+ transfer, Institutions, and Good Forest Governance in Indonesia

I would analyze policy transfer framework, institutional and forest good governance from the current condition of policy REDD+ transfer, current management and policy system, current institutional arrangements and good governance performance. Referring to chapter II, the Dolowitz and Marsh (1996) transfer policy framework as the tools to analysis the REDD+ transfer policy. Then institutional theory of IDEGEC Scientific Committee, Termeer et al. (2009), and Gupta et al., (2009) and also Ostrom (2005) is referenced to analyze the institutional problems. And finally, the characteristic of good governance of Weis (2000) and Algere (2000) are used to analyze the forest good governance. The analysis of policy transfer framework, intuitions, and good forest governance will be described as follows.

Analysis and problems of Policy-REDD+ transfer

Based on the model and framework of Dolowitz and Marsh (1996) which emphasize on the kinds of policy transfer, actors involved, the degree of IDEGEC Scientific committee, transfer, constrains, and the possibility of policy transfer failure, I am going to explain the policy-REDD+ transfer analysis. First, the reasons of Indonesia to adopt REDD+ policy is because of the international agreement, and the failure and dissatisfaction of current forest management practice. REDD+ in this case can be a coercive policy transfer because the International agreement (Copenhagen Accord) stated that both developed and developing country should reduce the emissions using the REDD+ scheme. The agreement is still not legally binding yet. Otherwise if Indonesia will get benefit for that mechanism, then it should follow and do efforts to reach it..

The main actors involve in the policy transfer are policy entrepreneur/experts such as: UNFCCC (United Nation Conference on Climate Change), IPCC (International Panel for Climate Change), CIFOR (Centre for International Forestry Research), WRI (Word Research Institute), etc. then supra-national organization such as: World Bank, FCPF, GTZ, DFID, etc. And also international NGOs like WWF International, FFI (Flora Fauna International), CI (Conservation International), TNC., etc. The second actors are government official representing all parties and countries and national and international social groups have also influence to reformulate the REDD+ that can be seen from the brief history of REDD in chapter IV.

Following the degree of policy transfer of Dolowitz and Marsh (1996) that consists of copying, emulation, hybridization, synthesis and inspiration, policy-REDD+ transfer is categorized as hybridization and synthesis. My argument is that the REDD+ agreement is coming from developed country idea, and combines with forest developing countries management and exercise to formulate the REDD/REDD+ framework. Then each countries can developed their own framework and mechanism based on REDD international framework.

There are some constrains and challenges to policy-REDD+ transferred in Indonesia. First of all, REDD+ is neoliberal context, not these entire context does fit in Indonesian planning system and it is less fulfill market requirements. On one hand it fits because

planning culture in Indonesia is influenced by USA and Dutch planning culture (Sanyal, 2005). Indonesia planning now is in the transition step towards neoliberal context. Indonesian planning is more liberal and leads individual to develop the activities with less strict administration. There is a tendency trade systems leaded by market mechanism. But on the other hand it does not fit because of weak market in pre requirements. REDD+ is market-based mechanism, it needs for certification to measure the boundary of the forest clearly. While unclear forest boundary is occurred in Indonesia and it becomes major conflicts land tenure. It is also cannot be guarantee the permanency and leakage. REDD+ needs the clear rule of the game, forest management and forest governance whilst these are still blur.

Secondly, policy REDD+ transfer policy needs the institutions adaptation. Otherwise Indonesian institutions especially centralistic views have been long institutionalized by Dutch colonialism and military regime. They are difficult to change. The thesis of Hudalah and Woltjer (1996) about fragmented planning system in Indonesia and problems of decentralization supports this argument. Many policy transfer exercises in Indonesia from neoliberal idea are inappropriate and unsuccessful in implementation. For example the adoption of decentralization affects to the fragmented planning in Indonesia. Thus, the policy transfer and implementation face with the centralistic views and institutions.

Thirdly to success implementation of REDD+, indeed it requires good institutional arrangements and good forest governance whilst these activities have several weaknesses. These weaknesses are that REDD+ needs minimal government regulation to bind and coordinate all sectors. Besides, there is less of institutional arrangement of REDD+ at provincial and local level. Problem with decision making, marginal policy to CBFM, there is no sharing management and revenue about the forest management in Indonesia especially for indigenous and local communities. The institutional arrangement and good forest governance performance influence the succession of policy-REDD+ transfer.

Fourthly policy-REDD+ transfer needs the good planning performance and law enforcement whilst these indicators performances are weak in Indonesia. Some of indicators have bad performance of planning implementation and law enforcement, corrupted bureaucracy, and clients-culture. All of good planning in every sectors especially forestry planning are not followed by good performance and law enforcement. For example: Many of industrial acacia plantations in Indonesia are built on peat swamp area and good forest condition is contradictory with Presidential Decree Number 32/1990 about conservation of peat swamp area. They do not get punishment; on the contrary these activities become source of corruption. Many holders of logging companies have good relationship with the elite politics. The logging businessmen involves in funding supporting of political parties and candidate of leader both in national and local level.

Fifthly, REDD+ requires the performance based rather than administrative performance. Contrary the forest management in Indonesia tends to administration based and corrupted bureaucracy. More over the framework of REDD+ with the neoliberal context tends to strengthen the government and corporation. It implicates to weaknesses the local people' position and power.

Finally, the REDD+ needs high technology, huge funding, and good quality of human resources; while Indonesia has low technology, small budget, and low education. Based on theses, many challenges and activities should be done for adaptation institutions, capacity

building and improving the forest governance. The remote sensing technology for baseline and monitoring and evaluation activities currently are still depended on the international funding. National budget has limited for supporting these activities.

Following the Dolowith and Marsh (1996, 2000), three factors that should be fulfilled for policy transfer successfully are sufficient information, complete transfer, and sufficient attentions for difference the economic, social, political and ideological context in both transferring and borrowing country (Dolowitz and Marsh, 1996). The first and third factors are the most problem of policy-REDD+ transfer implementation in Indonesian. First factor about insufficient and sharing information to all of stakeholders about REDD+ is very low. It is supported by the statement of stakeholders and misunderstanding of the REDD meaning especially on the point meaning of REDD above and further in chapter VI. he third factor is the biggest challenge. The economic, social and politic and ideological context of the original country of REDD+ idea is USA and EU country. Indonesia has many different situation of social, culture and ideology compared to USA and EU. For example, professional culture in developed country versus the unprofessional culture in developing country, individual ideology versus the group for many of local people in forest, and educated people versus illiterate people

Policy transfer depends on institutional context, and sometimes needs to change institutions. Institutions are not easy to change exception in particular case, for example reformation needed. In case of Indonesia, REDD+ policy transfer needs the institutional adaptation and cultural change. The Indonesian institutions were influenced by Dutch colonialism and military regime with the strong of centralization and client culture. It derives nepotism, collusion and corruption that had become a culture. Reformation era and decentralization has been implemented to cope two these terms, but it needs long time to erase these culture. These problems will become the big challenge for policy transfer of REDD+.

Accordingly, the implication of the policy '' REDD+" transfer in Indonesia will lead to failure if institutions cannot be adapted, policy did not reform, culture cannot be changed, and good forest governance cannot improve. The forest governance problems, un-integrated institutional arrangements, less participation and neglected of indigenous/local people are the big obstructions; whereas the successful REDD+ policy transfer and implementation needs these pre-requirements.

Analysis and reflection of REDD+ institutional arrangement in national to local level

Following Ostorm in Djogo et al., (2003) about the institutions analysis, she was divided the rule both formal and informally. Formal rules or institutions are written and codified rules/convention, regulation etc. in order to be uphold and to be enforced or not. While the informal rules or institutions are norms, customs, and unwritten rules that use in the certain behavior both to be uphold and enforced or not. Based on these definitions, I analyze two these categories rules.

Formal rules/institutions:

1. *Conflicting regulation*. There are two umbrella laws on forestry policy and management in Indonesia which are Law Number 41 of 1999 concerning forestry and Law No 5 of

1990 concerning to conservation of biological diversity and ecosystem. Based on these laws, the management of forest in Indonesia tends to centralize approach contradictory with the decentralization politics based on Law 22 of 1999 and its revision Law no.34 of 2004. The contradiction of these laws makes the unclear authority and vague management of forestry in Indonesia. Forest management conflicts with strong national management and decentralization politics induce the mediocre implication, overlapping authority that lead to un-integrated forest planning. Currently, the local government has fully managed of land (non forest area) and they are only as assistance in controlling the forest. Central government mostly manages and handles the production and the conservation forest. In production forest, local governments have duty to control and to give recommendation if the certain forest is proposed for forest utility and other uses. Only the protected area with the small wide, local government fully manages. In the field, the unclear boundary and right of community land and forest is happened. The forest administration cannot work without strong delegation and authority. It leads to lack of decentralization and stimulates low forest governance.

2. *Institutional arrangements of REDDI*. Some of institutional arrangements and framework such as: REDD architecture, the national and sub national strategy of REDD+ readiness phase. These polices regulate and become the guidance of the implementation and exercise of REDD+ readiness activities both voluntary and complimentary. And development of MRV system.

3. *The conflict of authorities and vague of the leader of REDD+.* Now the unclear direction to manage the REDD+ and overlapping work become the problem of REDD+ implementation. The conflict particularly between Minsitry of Foresty, Minsitry of Environment and DNPI, and Bappenas. They see that REDD+ is a potential source for funding of their department rather than how to coordinate and cooperate between sector to reach emissions reduction nationally. The president should make strong decision who is the leader and responsible to REDD+. With seeing the domain, Ministry of Forestry should be a leader, cooperates with Planning and Development Board, and Ministry of Environment, and coordinates with other sectors and stakeholders. DNPI's role should tend to international negotiation and coordination all sectors. The leader of reduction emissions in out of forest areas (degradation) is Governor and Bupati. With the clear decision and direction can avoid the vague, blur bureaucracy, overlapping of authority in term of REDD+ (representative of WWF Indonesia).

4. *REDD/REDD+ regulation and rules in the national government*. Some of regulations regarding the REDD/REDD+ institutional arrangements which are:

- President Regulation Number 46/2008 concerned to formulate the Climate Change National Board (*DNPI*.
- Ministry Forestry decree P.6/Menhut-II/2008 on REDD pilot projects.
- Ministry Forestry Regulation Number 30/2009 on REDD Guide and emissions reduction procedures.
- Ministry Forestry decree on Working Group of Forest and Climate Change (WG-FCC) (SK13/Menhut-II/2009), replaced with SK No. 64/Menhut-II/2010, and others related to regulation that will be explained further on the institutional arrangements section.

- Ministry of Forestry Regulation No P. 36 /Menhut-II/ 2009 concerning on the benefit sharing of REDD/REDD+.

5. *Other regulations connecting with the REDD/REDD+ policy*. Some of them are spatial planning Act No. 26 of 2007 and its derivation regulations, and agrarian basic law No.5 of 1960 and its derivation regulations. This planning is important for ensuring the legal right and land tenure conflict, and the guaranty of permanency, additonality, and MRV system. Then other regulations that can be support the REDD+ implementation and distribution of benefit to local communities are Government Regulation Number 6/2007 concerning on recognizes community forestry, community planted forestry, and the process of agreement of customary forest. Then Ministry Number P.49/2008 about the village forest. These legal bases regulate the determination procedure of these CBFM. In the protected forest, Ministry of Forestry has also recognized the collaborative management, particularly national park with issuing Forestry Ministry Regulation Number P.19/2004). In regarding to deforestation and supporting of REDD+ implementation, since 2000, Indonesia has intensively implemented a program to curb illegal logging through the development of Forest Law Enforcement National Strategy (FLEN), Presidential Instruction (INPRES Number 4/2005) concerning illegal logging and instructed 18 provincial governments for working together to combat illegal logging. Besides, Indonesia Government issed Law Number.25 of 2003 by ensuring the independent Agency known as *KPK* (Corruption Eradication Commission) to investigate illegal logging and corruption in forestry sector. It is also the establishment of Anti Corruption High Court *(PTAK*).

6. *Strategic policy of Riau Forestry 2009-2013.* The vision of Riau forestry institutions is the realization of the sustainability of the forest function as life support systems towards community welfare through Riau' vision 2020. To reach this vision, the Riau forestry agency made five missions and ten programs. The five missions are as follows: (1) securing the forestry area, (2) optimizing forest area management and forest resources sustainability, (3) concerning of the equity for community welfare, (4) preserving/protecting the forest area, and reducing deforestation rate, forest restoration and waste land rehabilitation (reducing degradation), and (5) increasing capacity of organization forest and human resources. The ten programs in 2009-2013 are: (1) administration services, (2) increasing the apparatus structure and infrastructure, (3)improvement the apparatus discipline, (4) improvement the apparatus capacity of human resource, (5) improvement the financial reported system development, (6) forest resource utilization program, (7) the reforestation forestation program, (8) protection and conservation of forest resources, (9) guidance and control of forest products industry, (10) forestry planning and development (Riau Forestry Agency, 2009)

   The Riau forestry agency has two main tasks, one as the local government affairs based on decentralization policy, and two as assistance duties of forestry sector of central government. This agency has the tasks and the authorities that are given by central government to Riau Governor. There are some functions of Riau Forestry Agency which are the arrangement of technical forestry policy, implementing of governance and public services in forestry sector, implementing of forestry tasks, controlling and evaluation of forestry, and doing other task given by governor (Riau Forestry Agency, 2009). According to the Tesso Nilo REDD+ project, it should get recommendation from Governor and four Bupatis.

Riau province is one of the 33 provinces in Indonesia having the strategic location and rich of ecosystem types and biodiversity. The total area of Riau province is 107, 932. 71 km^2 or 10, 793, 271 ha. The land area is 79,67 % or 8,598,757,00 ha. About 4.3 million ha is forest area. In other word, based on Forest Utilization Agreement (*TGHK*) using Forestry Ministry Decree No.26/KPTS-II/1986, these areas consist of 50,25 % as forest conservation and production, and others 49,75 % as convertible forest for other utility. The Riau forestry strategic planning can be seen from *TGHK* and Riau Spatial Planning 1994. The composition of land and forest Riau province based on the Forest Utilization Agreement (*TGHK*) can be seen on table 5.3.

Table 5.3. The forest utilization based on *TGHK (*forest utilization agreement*)* Based on Forestry Ministry Decree No.26/KPTS-II/1986

Number	Utilities	Wide (Ha)	Percentage
1	Protected forest	228,793.82	2,66
2	Natural reserve and tourism forest	531,852,65	6,19
3	Production forest A permanent production forest b. limited production forest	 1,605,762,78 1,815,949,74	 18,67 21,12
4	Convertible production forest	4,227,964,39	49,75
5	Mangrove forest	138,433,62	1,61
	Total	8,598,757.00	100

Source: Riau Forestry Agency, 2009

The *TGHK* become more guidance for forestry sector, while the Riau province and the districts spatial planning be the guidance of many sectors. Indeed either the two of planning or utilizations forest should do integrated or harmonization. According to table 5.4 about the forest utilization based on government regulation No.10 of 1994. From 2005, Riau Province has revised the Riau provincial planning and proposed it to Ministry of Home Affairs in 2007 but it was rejected because of more than 30 % land use changing from that before. Based on Indonesia constitution, the spatial plan revision cannot be done more than 30 % changes from the spatial plan before.

Table 5.4 Forest Area and directed utilization based the Riau Spatial Planning, Riau Regulation No.10, 1994

Number	Utilities	Wide (Ha)	Percentage
1	Development forest area direction	2,872,491,00	33,41
2	Protected forest	161,283	1,88
3	Peat protected area	830,235	9,66
4	Natural reserve, sanctuary and natural wild life reserve	570,412	6,63
5	Forest and area reservoir	20,024	0,23
6	Other utilities	4,143,772	48,19
	Total	8,598,757.00	100

Source: Riau Forestry Agency, 2009

Until to date, the harmonization of the *TGHK* (forest utilization agreements) and the Riau spatial planning is not realized yet. It is only two of 33 Indonesian provinces which are Riau Province and East Kalimantan that is no harmonized yet. Forest utilization was made by central government under forestry ministry in 1984 that was mostly based on

the technical and the centralistic views. The Riau spatial planning is mostly planned by provincial government and supported by district government in term of development and conservation program referring to national planning. It needs harmonization because many of cases the *TGHK* is not referred the factual situation and the provincial planning should be coherent with the *TGHK*.

The strategic policy of Riau policy clearly support the national REDD+ institutions, but it also influence the REDD+ project in the local level. So it has link to the formal rules of the Teso Nilo REDD+ voluntary project on the chapter VI.

7. *Integrated planning system and problems.* Integrated planning system should do among national, provincial and districts levels in term of permanency and leakage of the REDD+ framework. The basic management administration of forest in Indonesia is not based on district or region but it tends to the water catchment area (DAS). Catchment area is almost through several districts provincial region, thus it needs national coordination. The integration of the Riau, the national planning and the districts spatial planning is very important. Its integration will guarantee permanency, leakage and the long term emissions reduction.

   In the centralization era, the integrated planning system was better than the decentralization era. Planning in the lower level should refer to the higher national level. But it has lack of participation, top down approach, and ignorance of local needs. Some policies were not implemented based on factual condition but more in the back of table. For example, many logging concessions were given by central government covered field rice and small holder plantations. Indeed, this planning centralization illuminates land right problems and conflicts. When decentralization has been implemented in Indonesia based on Law 22 of 1999 about regional autonomy, the authority of the district government became bigger. Provincial government was less power to interfere planning system between district government and provincial planning. Besides, every district and provincial government made their planning was mostly based on economy and development aspect, and concern less on environment and conservation aspects. It contributes to fast land use changes and high deforestation rate.

   The revision of provincial and local spatial plan is not obviously harmony among inter-district spatial plans, the provincial plan and the national plan. The biggest problem is the lost of natural forest. Based on the analysis of Jikalahari (2006) the problem of Riau spatial planning draft (2004-2015), it caused an impact to lost 50 % of total peat land in Riau (2,065,773.90 ha), and the depletion of 17.78 % natural forest (1.605.356,527 ha) compared to previous Riau spatial plan (1994-2005). The second problem is un-integrated planning system. Inconsistency of the provincial and the local planning is happening too. For example, in the Riau spatial plan the forest area status is still protected forest, however the status of Kuantan Singingi and Pelalawan district becomes convertible forest for other uses. The planning in districts level is mostly based on the analysis of development and the local revenue. They do not analyze comprehensively between the districts and the provincial spatial planning. The planning do not concern to economic, ecology, and social-cultural balance. These inconsistency and disharmony affected the REDD+ implementation regarding to the guarantee of the permanency and the leakage.

8. *President commitment to cut emissions and followed by governor commitments and policy*. Indonesian president commitment to cut emission by 26 % without donor assistance and 41 % with donor supports has been followed by governors such as: Riau province governor to reduce by 21,47 % from national cut emissions and the logging moratorium policy on logging concessions by Aceh Governor. Riau Province supports the national government in term of climate change mitigation. Riau province is the biggest supporter because Riau province has more than 4,3 million ha forest area and has 4 millions peat swamp (or around 50 % of peat swamp in Indonesia). From 26 % emissions reduction committed by Indonesian president, Riau will support 26.22 % whereas the forestry sector will support 21. 47 %. Riau government's support can be seen from the statement of Head of Riau Environmental Agency:

> Riau Governor, Rusli Zainal together with the President attended the COP 15 Copenhagen in December 2009. He obviously supports the national commitment for reducing of emissions in Indonesia to be 26 % in 2020. Riau province will support 26.22% from that commitment with needing funding 83 trillion IDR. Forestry sector is the biggest supporting with 21.47 % from 26.22 %. We have already accounted these.

The target emissions of in 2020 can be seen from the temporary calculation from many sectors collected by Riau Environmental Agency on the table 5.5.

Table 5.5 National and Riau Province Emissions reduction Plan in 2020

No	**Sector**	**Indonesian Emissions target In 2020 (26%)**		**Riau's Contribution in 2020 (22,62%)**		**Mitigation Plan**	
		Gton	**%**	**Gton**	**%**	**Emmission sequestration/conservation**	**Emssion reduction**
1.	Forestry	0,3458	13,3	0,145	21,47	will sequestrate emmison with amount 0,145Gton, from the activities: forestry community plantation, community forestry, industrial plantation, village forestry and management of conservation and protected forest	
2.	Peat Swamp	0,247	9,50	0,0009	0,13		Land and forest fire control will reduce emissions 0,00090 Gton
3.	Energy	0,026	1,00				Renewable engery development
4.	Waste	0,0416	1,60	0,00689	1,02		Changing from open dumping to landfill sanitary
5.	Industry	0,0002	0,01				Private contribution with implementing of clean technology, waste energy, CDM, etc
6.	Trans-portation	0,0078	0,30				Mass transportation development, controlling of transport. emissions
7.	Agriculture	0,0078	0,30				Organic fertilizer utilization
	Total	0,6762	26,01		22,62		

Source: Riau Presentation Material for supporting to Ministry Forestry's presentation in Bali April 2010.

Based on the table 5.5, especially in the forestry sector and in the term of REDD+, Riau government has committed to reduce emissions. The mainly activities are emissions sequestration from industrial plantation, community plantation forestry, community forestry, village forestry and management of conservation and protected forest. Recently, industrial plantation is 1,433,334 ha and proposing process is 1,603,534 ha. Referring to the Riau spatial plan above, almost all production forest will convert to plantation industry. Community plantation combines with industrial plantation totaling 35, 768, 20 ha is including in total of the current industrial plantation. There is no involvement from community forest and village forest to decide it (Riau Forestry Agency, 2007). Now, the total of conservation area is 642.516 ha[39] and protected area 397.150[40] ha, but most of these areas have problem deal with the illegal logging and the encroachment activities. All of the industrial plantation area and proposed area are built and would be cultivated in the natural forest which has highly good condition.

Another effort in facing with climate change is the development of the Riau Climate Change Information center with Governor Regulation Number 26 of 2008. This center is under the governor with involvement of climate change related sector and it is managed daily by Environmental Agency. The aim of this center is coordinating and providing climate change information that is collected from many stakeholders, planning and implementing climate change activities and doing capacity building as well. This center has been worked to collect emissions reduction, held the meeting and seminar of climate change, and conducted the socialization of governor regulation above, and raise climate change awareness together with DNPI.

The other efforts and policies relating to climate change activities are monitoring of weather together with Geophysical, Meteorology and Climatology Agency (BMKG), informing of hotspots data, intensifying of the district/city coordination, introducing the sustainability peat swamp management, managing water catchment management, and increasing awareness and capacity. Riau province set up a peat swamp master plan and made MOU (Memorandum of Understanding) with six districts/cities for commitment in peat swamp management to reduce emissions. Land use management integrates to the waterfront settlement, the industrial management, the combating illegal logging, the monitoring and preventing of land and forest fire, etc. Riau government also does some trainings and seminars of climate change and REDD+, for example introduction and training OSIRIS (Open Source Impact of REDD+ Intensive Spreadsheet) (Riau Forestry Agency, 2010).

Even though many efforts have been done by Government of Indonesia to do formalize the institutions but in the implementation are faced by many problems and barriers. Not strongly to do law enforcement and lack of institutional arrangement of REDD+ are the most problems. Institutions reform and harmoniously regulation are urgent to be done in term of REDD+ readiness phase and implementation. Institutions reforms relate to the harmonization of forestry law and decentralization law, sharing management and authorities and also benefit of stakeholders. Government gives chance and opportunity to local and indigenous community to manage and to get funding support that is identified

[39] Statement of Riau governor in Suara Karya daily paper 05 Dec 2009
[40] Based on *TGHK* 1986

success to do the sustainable forest management. Government gives opportunity to the local people groups, cooperation for managing of forest production and conservation forest. With possibility is to involve of community and NGOs on the forest enforcement.

Informal rules:

There are several informal institutions/rules influencing the policy REDD+ transfer and implementation, namely:

1. Centralistic government culture coming from Dutch colonialism to new order-military regime brings the difficulties to institutions changes. While the implementation of REDD+ transfer need changing centralistic culture to decentralist culture/thinking. The centralize approach, and the conflicting of the forest management and centralization politics and conflict land tenure between community and government/privates affected the high deforestation rate in Indonesia and the problem with REDD+ policy.
2. Corrupted and clients culture that has long time embedded in bureaucracy and daily life become the problem and barrier of policy-REDD+ transfer and implementation that need the clean governance.
3. The transitional politics in Indonesia where as tend to chaos and the big pressure and need of political party rather than public interest and needs. It will bring the political will of government to accommodate the parties instead of the public needs. Whereas the need of political parties and elite economy that close to elite parties for exploit natural resources for money machine.
4. The culture of antipathy from the society and less educated people implicates the less power of community. The less power of community cannot support the upheld of institutions.
5. Local culture and institutions that forcing the management of forest and land in Indonesia after reformation support the role of informal institutions of REDD+. Many of culture in Indonesia and Riau has potentially to sustain forest management under community forestry and customary forestry.
6. Deliberately culture in decision making and social cohesion. The concept of “gotong royong” or working together is the root of culture of Indonesian people in decision making process. It open all of stakeholders informally involve in each of village to solve the problem and to decide the informal rules.

The informal institutions mentioned above mostly become the problem and barrier of policy-REDD+ transfer. Only the fifth and sixth factors support of REDD+ policy like president commitment. Comparing with the formal and informal rules, the informal rules hag big influence on the succession of policy-REDD+ transfer and implementation. Otherwise the informal institutions influence lower than formal institutions but it should be combined them with the upheld of good forest governance. Indeed informal institutions need long time to change.

Analysis and reflection of good forest governance

In the context of good forest governance towards sustainable management, Indonesian should built principle and guideline above. Then sharing management and authority, decision making procedure and the 8 of good governance criteria should be applied. REDD+ is only can be done and succeeded if these criteria of good forest governance can be applied. I prefer think good forest governance should be done rather than REDD+ to enhance the good forest governance. If the good forest governance is weak or low, then what ever the scheme applied will not bring the successful of forest management and reducing emissions.

Regarding to sharing management, the government of Indonesia recognizes the management forest based on community. Otherwise in reality it is very difficult to get recognition by government (AMAN, 2010, WARSI, 2010). The difficulties of procedure and low commitment of government to recognize of CBFM are the most problems. Until now, Ministry of Forestry has not approved the customary forest because the procedure in order to fulfill of indigenous people requirement based on law is very difficult and it is not fully supported by regulation. Meanwhile thousands of indigenous people live in forest are success to manage their forest and natural resources based on their knowledge. Based on these data it can be said that Community Based Forest Management become marginal policy in Indonesia. Forestry policy reform and adaptation of local knowledge and management are very urgent if REDD+ will bring the benefit to community and democratic society. With the recent context and regulation, REDD+ implicates in benefitting to companies rather than to community

There are 6 keys most forest governance issues for REDD+ in Indonesia. They are land allocation and revenues and public accountability for policies and management. Then rule of law and legal certainty and ensuring forest law enforcement, secure and equitable right to forest utilization including land tenure conflict solving and transparency forest relating to information. In addition fair distribution and benefits, and eradication of corruption and elite capture should be implemented. The weakest is that the government dislikes sharing management of forest to community. Even though the CBFM has been approved, but the status of forest is under the state forest. It should be given the management to community and is indeed with the direction from government and evaluation annually. The Conflict of forest management issue between customary forest and state forest is the problem of issuing the government regulation to the customary forest. Then the government organization tends to view that the government has only right to do the law enforcement with law enforces. While local community is as the subject of the deforestation actors. Not transparent, less government accountability and corrupted bureaucracy are the roots of the complex problems. The belief that the deforestation rate is most caused by local communities' activities and agriculture support the centralistic law enforcement. Land tenure conflict and no strong demarcation of solving these problems implicate more complicated problems.

The challenges to achieve of good forest in Indonesia are big. But it can be achieve with strengthening accountability, building confidence and readiness, transparent increase, adaptation the institutions, safeguarding REDD+ payments and markets, and forest law enforcement. It cooperates and involves all stakeholders from many level and several stakeholders with the high political will and strong leadership.

5.10 Conclusion

The international politics and pressure to emissions reduction globally from deforestation are the main reasons of the policy REDD+ transfer. Besides, the failure of Indonesian forest management and the problems of GHG emission form deforestation, Indonesia participate to development of REDD+ scheme and do policy transfer as well. The aim of policy transfer is reduce GHG from forestry sector. With the incentive and reward of the implementation of policy REDD+ transfer Indonesia highly effort to do and to convince international funding and agencies. Government of Indonesia especially Ministry of Forestry has been developed the institutions to arrange REDD+. There are three phase of REDD+ implementation which are preparation, readiness, and carbon trade implementation. Recently the phase of REDD+ is on the second phase that are the REDD+ architecture, demonstration activities and knowledge management. The REDD+ transfer is categorized as the coercive transfer and currently is the readiness phase. The full implementation phase is in 2012.

Many of effort of hybridization of REDD+ in to forest management in Indonesia have been done relates. They derives from establishment of DNPI and REDD committee plan, president's commitment to cut emissions, integrating of REDD+ on forest management, issued regulation, and provincial and local government supports. It is also followed by provincial rules and policy to support the national cut emissions.

Nevertheless it faces with the dilemma of the emission reduction and development aspects. It is also lack of institutional arrangement, and bad the performance of good forest governance. Some lack of institutions is the regulation issued that cannot bind all sectors, problem of meaning of REDD/REDD+, conflicting forestry regulation and decentralization politics, unclear management and authorities, lack of coordination and collaboration, less adaptation of institutions, and un-integrated of REDD+ in planning system.

These institutions arrangements face many problems and gaps which are different definition and meaning of REDD. It has disputable debates in Indonesian context such as the rule of the game, commitment and action. The rule of the game of REDD+ are sometimes unclear, cannot bind all stakeholders, and it is over lapping. For example Ministry decrees for REDD+ cannot tight the other sector out of forestry sectors, while the deforestation and land use changes are also caused by those sectors. The REDD+ don't join national, provincial and local planning together. The conflicting interest between conservation policy and development can be seen from the contradiction of president's commitment and policy issued.

Institutional analysis covers the formal and informal institutions or rules. From two kinds of institutions, the formal rule is high degree influence than informal rule. That why, I recommend to fill the lack of formal institutional arrangement. Otherwise the informal institutions should be considered to transfer policy and implementation, but indeed the informal institutions need more time to change. The reward and punishment should be implemented to implement these two institutions.

The other problem of policy REDD+ transfer is the weakness of good forest governance. Almost of eight characteristics of good governance is low implementation. And six of them are very bad. The succession of the Policy –REDD+ transfer and implementation

to reach the emission reductions, to bring the benefit and justice, and co benefit for conservation indeed need the good institutional arrangement and good governance.

From these problems and barriers, thus it needs some real actions. First, government should engage stakeholder's dealing with the clear definition of REDD+ ; conduct the public consultation and interactive/collaborative action. Secondly, Open minded is needed for coping with the differences of meaning, dealing with collection all information and definition, and accommodate the differences. Thirdly, the rule of the game of REDD+ needs the higher degree of policy, minimal government regulation. If possible further action is issued about the REDD or climate change ACT. However, for the first step government regulation is considerably enough because of the limitation of time and budget. Fourthly, REDD+ term should be integrated to the national forestry planning and the provincial and the local planning, and TGHK/ agreement of forestry land use. Then all of policy and intervention should be integrated to reach cut emissions reduction. Finally the suggestion are to improve and strengthen of 8 characteristic of good forest governance, to increase capacity, to reform policy, to strengthen political will, and to do the strong leadership.

The policy transfer on the local level context, institutios, and good forest governance problems in project level will be clearer with the analysis of the Tesso Nilo voluntary REDD+ project. Indeed the national, provincial and local level will influence and have big link with the Tesso Nilo REDD+ project. These descriptions will be showed on the next chapter.

CHAPTER VI

REDD+ VOLUNTARY PROJECT IN TESSO NILO AREA

61. Introduction

The focus of this chapter is to identify the problems and barriers between the framework of REDD+ and the actual project implementation. This chapter aims to answer mostly research question 3. The problems are mainly the institutions and the forest governance including regulation, planning, organization, resources (technology and human), participation and also eight characteristics of good governance in the local level. The tension is the institutions that will be a frame work analysis which are both in formal and informal. Adopting form Orstrom in Djogo et.al (2003) the formal institutions of the Tesso Nilo REDD+ are the written and codified of rules, agreements, commitments, etc for supporting the successful of REDD+ project and sustainable forest management. While its informal institutions are norms, culture, customs, and efforts that un- written and un-codified that become guidance in the forest management and the Tesso Nilo REDD+ project. Formal and informal institutions have a big influence in the implementation of REDD+ and forest management in Tesso Nilo. The presence of indigenous people and their informal institutions should be considered in term of REDD+ project implementation and management forest in Tesso Nilo.

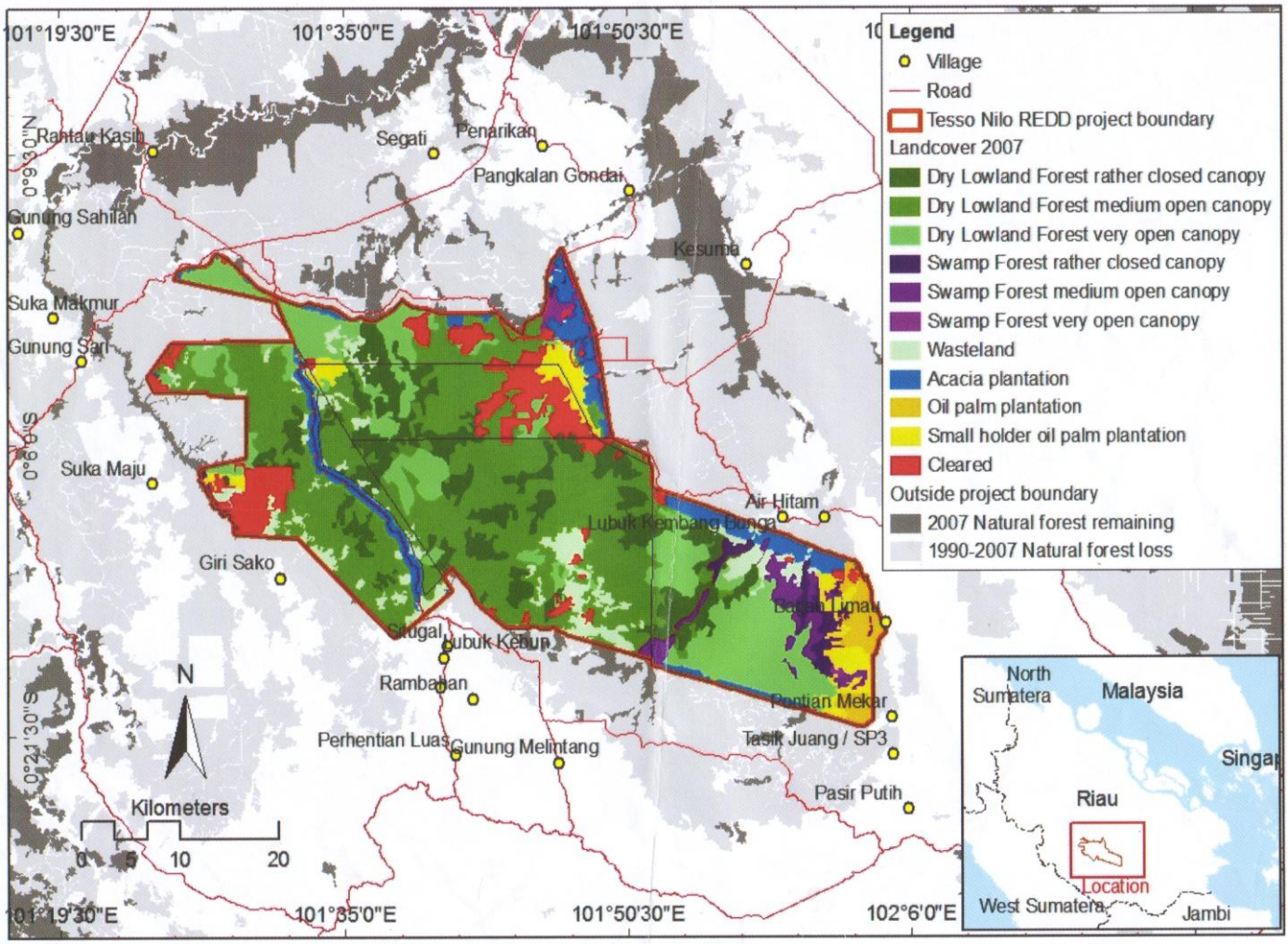
Trough a case study analysis, this chapter emphasizes on particular issue which is problem facing of REDD+ in the project site level with many stakeholders are involved. The description of stakeholder, different interests and roles, conflicting issues regarding these are needed before making an analysis. The forest management by state in the conservation and production forest faces complex problems and challenges, policy intervention, institutional influence, lack of bureaucracy coordination, lack of awareness, and the different interest of many stakeholders to forest. The perception and knowledge from many stakeholders will be very useful as empirical data for describing these situations and problems.

The outline of this chapter is as follows, first I will give a brief description about the Tesso Nilo REDD+ project. It describes of location, aim, and current development activities. Then, it is followed by stakeholder analysis, interaction and power relation and analysis. The stakeholder's analysis describes the relationship, influence, potential support or not, and make a diagram of stakeholder analysis. Then do the institutional focusing on formal institutions which rule of law on Tesso Nilo forest, agreement, commitment, and integrated planning of REDD+. Otherwise, informal institutions refering to norms, culture, and traditional knowledge for natural resource management need consideration. After that I describe forest governance analysis that shows the Riau forest management. In the end of this chapter I examine the reflection from the projects especially problems and barriers and conclusion.

6.2. A brief description of Tesso Nilo REDD+ project, Riau-Indonesia.

REDD+ Tesso Nilo project initiative has been proposed by WWF Indonesia and has a total area at 160.000 ha. The location are mainly in two forest areas which are in Tesso Nilo National Park (83, 068 ha) and in the production forest (76,932 ha) under the management of PT. Siak Raya Timber and PT. Hutani Sola Lestari. The REDD+ Tesso Nilo area is located in four districts which are mainly in Pelalawan, and others in Indragiri Hulu, Kuansing and Kampar, Riau Province, Indonesia, see figure 6.1. This location is in the middle of Sumatra Island which is close to Singapore and Malaysia. It is caused of illegal logging and wild life trading activities to Malaysia and Singapore, opening of some crops and acacia industrial plantation for national and international demand of oil palm and pulp also paper. With the strategic location, conserving of the wild life and forest is more challenging. The explanation of the situations of Tesso Nilo area including of Tesso Nilo National Park (TNP) and production forest is very important before further explain about the Tesso Nilo REDD+.

Figure 6.1 The Location of Tesso Nilo REDD+ project site, Riau Province-Indonesia



Source map: WWF Indonesia

Tesso Nilo National Park area is totaling 83.068 ha. The establishment of this national park was through two steps which were the first, using the Forestry Ministry Decree

No.255/Menhut-II/2004 on 19 July 2004 with total area 38,576 ha, and the second step was using with the Forestry Ministry Decree No.663/Menhut-II/2009 on 15 October 2009 with adding ± 44,492 ha. Mainly the area of TNP is located in Pelalawan district and the remaining is in Indragiri Hulu district. This National park area was former of the limited production forest for logging activities under management of the PT. Dwi Marta and the PT. Nanjak Makmur logging company.

Outside of TNP there is any remaining of production forest under managed by PT. Siak Raya Timber totaling 38,650 ha and PT. Hutani Sola Lestari totaling 45.990 ha. Based on WWF view, these concessions should be managed well as a part of landscape ecosystems for habitat of Sumatran elephants and Sumatran tigers. It needs minimal 80.000 ha to 100.00 ha forest habitat for sustainable life of 70-90 Sumatran Elephant in Tesso Nilo area (WWF, 2009) beside other wildlifes. In surrounding of Tesso Nilo area, there are the biggest industrial plantation owned by PT. RAPP Company, and several oil palm plantation companies.

Tesso Nilo forest has high biodiversity both flora and fauna. LIPI / Indonesian Scientific Authority (2003) recorded that 360 kinds of flora with 165 species/ha, 82 kinds of plant for traditional medicine, 50 kinds of fish, 33 herpetic fauna and 644 kind of beetles. WWF and BKSDA (Natural Resource Conservation Agency) found some of endangered species such as: Sumatran elephant (*Elephas maximus sumatranus*), Sumatran tiger (*Panthera tigris sumatrae*), Tapir (*Tapirus indicus*), honey bear (*helarctor malayanus*), hornbill, etc. (Prawiradilaga et al., 2003). The rich of biodiversity became the basis argument of the Tesso Nilo National Park establishment.

There are 22 villages surrounding of the TNP and 1 of village inside the TNP. The 23 villages in and surrounding of TNP are located in 9 sub-district and 4 districts. There are many land tenure conflicts between local community, migrants with TNP office-as management authority and companies as well. WWF Riau (2009) reported that there are 14 sites with totally 28,608.08 ha of degradation area done by illegal encroachment based on satellite imagery 2009 in both of this forest status. Totally the degradation and deforestation area increase significantly from 2002, but the rate of deforestation decrease slowly.

Every village is inhabited by local communities and migrants. Almost of migrants do opening forest to build the small holder oil palm plantation and other agricultural activities. TNP agency and WWF Indonesia called it encroachers. Encroachment becomes the biggest problem of Tesso Nilo national Park and forest concession management and the implementation of REDD+ further. The description of problems of Tesso Nilo National Park and landscape forest management can represent situations and problems of national park and forest concession in Indonesia generally.

The aims of Tesso Nilo REDD+ project

The general aim of WWF Indonesia in Tesso Nilo area is to protect the Sumatran elephant and tiger and their habitats. WWF Indonesia views that REDD+ is one of good potential scheme to support it with a financial incentive and support global emissions reduction. Besides protecting the endangered species and remained dry low land forest in

Sumatra, this scheme can give co- economic benefit to many stakeholders. As the representative of WWF Indonesia stated:

> The main background of REDD+ project in Tesso Nilo is that REDD+ is as a potential scheme for conserving the Sumatran elephants and Sumatran tiger and its habitat. It will protect the remaining dry land forest in Sumatra as well with financial incentive. The combination from many scheme and method is needed for conservation of wild life and forest and alleviating of poverty.

The main aim and objective of REDD+ voluntary activities in Tesso Nilo area is to improve good forest governance. This project will develop a strategy to engage communities and companies to adopt natural forest protection as a business based finance incentive. Accordingly, this project allows relevant local governments to successfully implement the national government's policy, to make sure the land use planning, to push the enforcement of the law of forestry and to implement the requirements of good forest governance. The communities and companies will accept voluntary that carbon protecting is needed with supporting by good policy and intervention from government and participation of other parties as a pillar of governance. WWF believes that by carbon protecting business solution will bring protection the forest rather than converting them in to plantations. REDD + voluntary project is perceived that it can simultaneously support the general aims of WWF Indonesia and can improve good forest governance.

Activities and current development of REDD + Project in Tesso Nilo area

There are several steps that have been/will be done in Tesso Nilo area. The step is obviously refers to REDD+ international framework see chapter V. The steps are from baseline data, engagement, design business plan, validation, certified emissions reduction, and carbon trading, as explained by WWF REDD coordinator below:

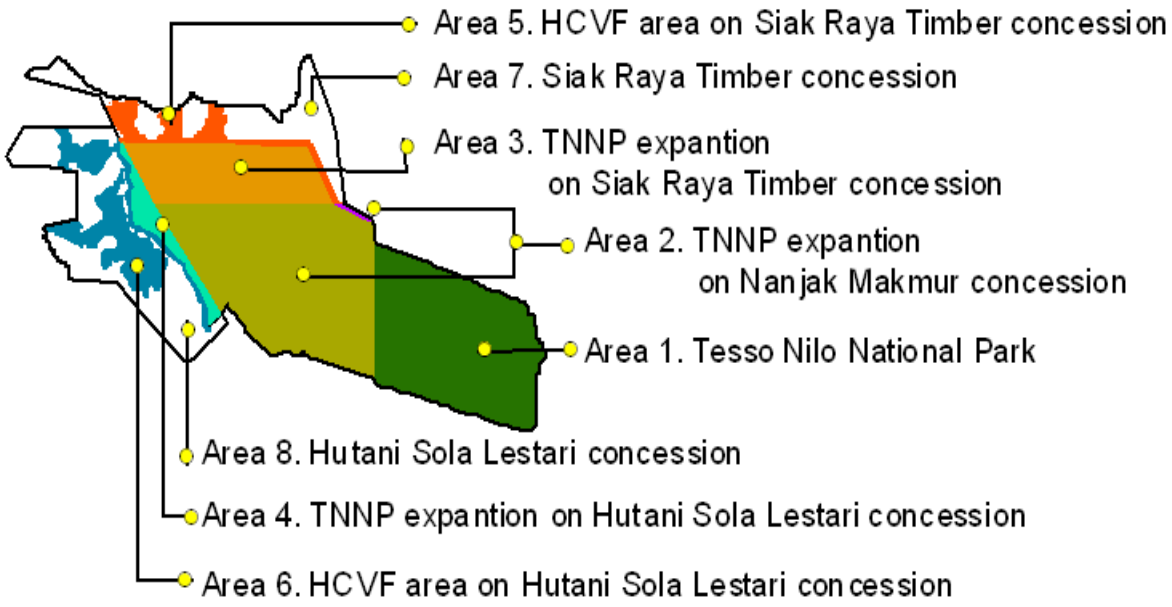
> "We are still in the beginning of REDD+ project activities in Tesso Nilo area. The several steps that have been/will be done in term of REDD+ in Tesso Nilo area are as follows:
>
> 1. Baseline data (carbon accounting) and projection of emissions reduction, making a scenario, build the agreement with TNP office, companies, and communities. Some of the analysis includes making a baseline risk and benefit for communities and biodiversity, and financial assessment.
> 2. Engagement: all stakeholders especially, governments, companies and communities for agreeing to do voluntary activities of REDD+ in Tesso Nilo with establishment of institutions, making a distribution benefit, job desk, and national registry
> 3. Design business plan/project design document (Business plan REDD+)
> 4. Validation
> 5. Implementing of carbon trading with the first step lessen learn from voluntary to second step complimentary carbon market.
>
> Currently we are still developing feasibility study of REDD+ in Tesso Nilo. Mainly our activities now are on the point 1 and 2".

The Tesso Nilo REDD+ project has been done for six months. But WWF Indonesia has already worked in this area from 2001 for protecting the Sumatran elephant as a flagship species and its habitat. Now the step of REDD+ in Tesso Nilo area is mainly in first and second step. For feasibility study of Tesso Nilo REDD+ project, WWF Indonesia contracts Eco-

Securitas (UK-consultant) to develop the financial assessment. For doing baseline data, WWF made 4 scenarios as follows:

- Scenario 1. TNP area based on first Forestry Ministry decree (area 1=38,576 ha)
- Scenario 2. TNP and its extension based on 2nd decree (area 1 +2= 83, 068 ha)
- Scenario 3. Currently TNP and third proposed extension (area 1+2+3+4+5+6= 124.626 ha)
- Scenario 4. TNP and production forest (area 1 to 8; about 160,000, ha), see figure 6.2.

Figure 6.2. Scenario REDD+ project on Tesso Nilo Area



Source: GIS studio WWF Riau (2010).

Each scenario shows how the biomass carbon could be conserved, forest degradation emissions could be reduced, and deforestation emissions could be diminished. Obviously the accounting of biomass, reducing emissions depends on the kinds of forest cover and type on land based on GIS and remote sensing analysis. Referring to REDD+ proposed by WWF Indonesia in 160.000 ha, I choose scenario 4 for picturing of base line data. Baseline calculation based on as business usual and Riau review spatial plan (2004-2015); how much carbon credit can be conserve till 2015 with the two scenarios. The analysis of reduction emissions is based on three years, namely 1990, 2000, and 2007 for making scenario to 2015. The base year 1990 is chosen by WWF Indonesia because of the availability and the reliability of data. The end of year analysis is based on the Riau spatial plan revision till 2015. The analysis shows that the biomass loss significantly from 26,451,125 ton biomass carbon in 1990 to 13.490,702 ton biomass carbon in 2007. It predicts that with the secure of spatial plan and the forest area, degradation emissions will become zero from 2007 to 2015. With do nothing or business as usual, deforestation emissions will remain increase for 10 years (1990-2000) which is 4,974,428 ton to ten year prediction 2007-2015 (42.019.815 ton). Meanwhile with strongly implement of spatial planning with REDD+ activities, emissions will remain the same from 2007-2015. The balance between business as usual and

implementation of spatial plan is 28,326,267 ton that can be credited and certified. The analysis and the calculation of emissions can be seen on table 6.1.

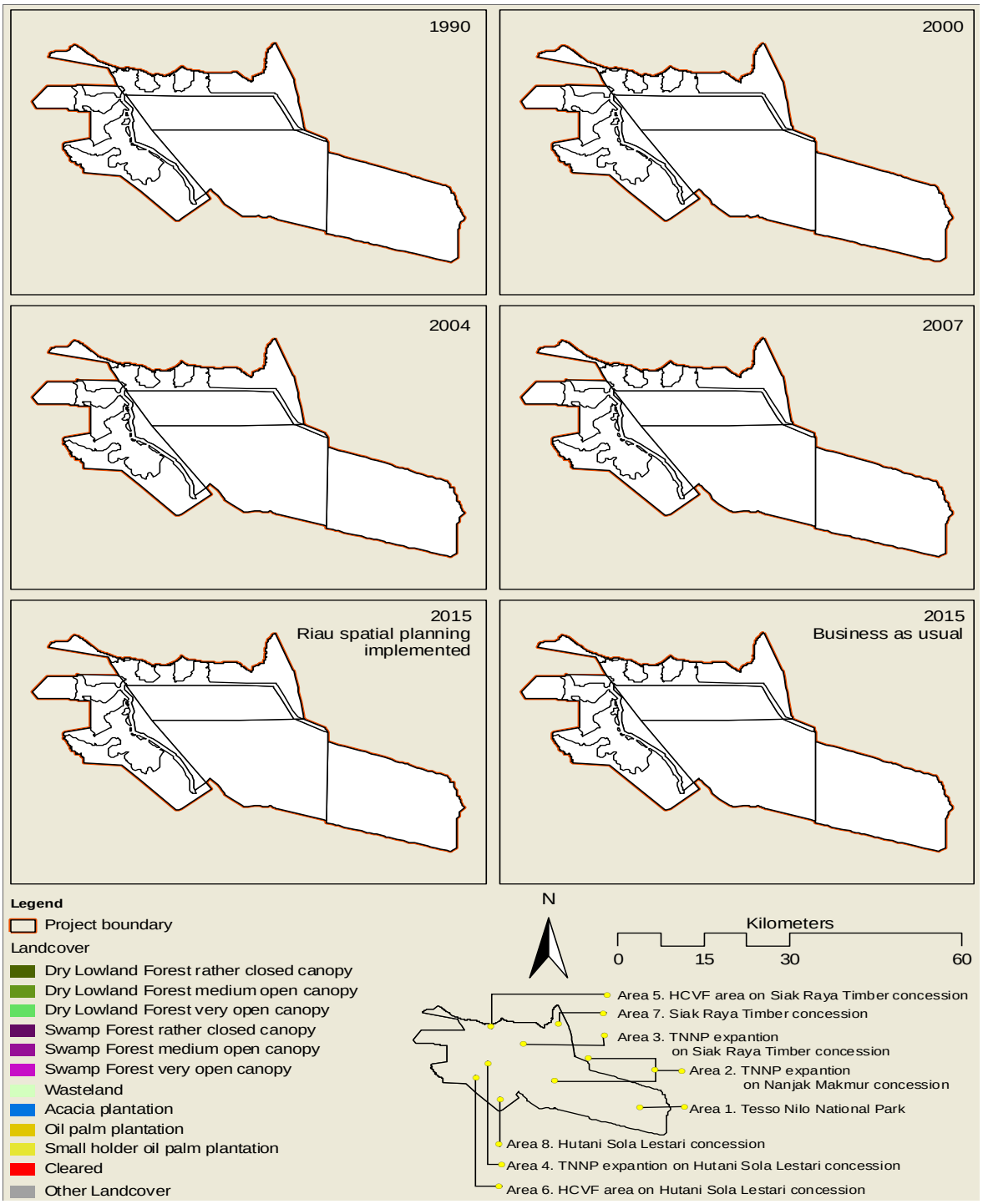
Based on the table 6.1, it is important to know what the driver deforestation is and how much biomass can be conserved and emissions can be credited. The credit carbon then will be certified and sale to the carbon market. Indeed, it needs measurable, reportable, verifiable and monitoring together with stakeholders. The map of emissions reduction scenarios 4 can be seen in the figure of VI.3. WWF Indonesia calculates the emissions release from 1990 to 2007. Based on these calculation, then WWF make a projection to 2015 based on business as usual (do nothing) and implementation of REDD+ with ensuring the implementation of Riau spatial plan revision (review).

Table 6.1. Analysis for scenario 4 of total biomass carbon, forest degradation emissions and deforestation emissions from 1990 to 2015 based on Riau review spatial plan and business as usual

Total area:	157.658	1990	2000	2007	2015 (1)	2015 (2)
	Total natural forest	157.658	148.034	116.199	81.952	24.971
Biomass Carbon						
t/ha		1990	2000	2007	2015 (1)	2015 (2)
183,5	Dry lowland forest rather closed canopy	21.618.212	8.619.522	4.073.368	3.440.651	757.534
132	Dry lowland forest medium open canopy	2.985.575	7.372.906	7.728.695	5.031.647	192.736
36,5	Dry lowland forest very open canopy	0	1.211.045	1.006.316	691.024	489.746
110	Swamp forest rather closed canopy	1.711.673	506.969	325.936	276.537	276.537
86,5	Swamp forest medium open canopy	132.690	483.531	332.884	307.682	291.572
22	Swamp forest very open canopy	2.975	40.199	23.504	1.755	1.755
	Total	26.451.125	18.234.171	13.490.702	9.749.296	2.009.878
Forest Degradation Emissions		1990 to 2000	2000 to 2007	2007 to 2015 (1)	2007 to 2015 (2)	
	Degrad. of Dry lowland forest rather closed canopy	22.350.772	4.111.299	0	0	
	Degrad. of Dry lowland forest medium open canopy	1.830.995	118.222	0	0	
	Degradation of Swamp forest rather closed canopy	917.856	0	0	0	
	Degradation of Swamp forest medium open canopy	0	28.697	0	0	
	Total	25.099.622	4.258.217	0	0	
Deforestation Emissions		1990 to 2000	2000 to 2007	2007 to 2015 (1)	2007 to 2015 (2)	
	Loss of Dry lowland forest rather closed canopy	2.734.924	4.764.233	2.315.745	12.135.952	
	Loss of Dry lowland forest medium open canopy	168.459	6.000.215	9.871.195	27.581.611	
	Loss of Dry lowland forest very open canopy	0	1.092.275	1.153.968	1.890.647	
	Loss of Swamp forest rather closed canopy	1.982.511	662.583	180.800	180.800	
	Loss of Swamp forest medium open canopy	88.534	512.882	92.238	151.203	
	Loss of Swamp forest very open canopy	0	70.891	79.602	79.602	
	Total	4.974.428	13.103.079	13.693.548	42.019.815	

Source: Base line data analysis of WWF Indonesia 2010.

Figure 6.3. Scenario 4 of REDD+ in Tesso Nilo area from 1990, 200, 2004, 2007 and projection emissions reduction in 2015 using Review Riau Spatial Plan and Business as usual



(Source WWF Riau 2010).

It is very important to convince the two of companies, people in Tesso Nilo, and government both of districts, provincial and national. The REDD+ implementation in Tesso Nilo can be implemented and will be succeeded if the companies, the community, and the

government are agree, and other stakeholders support. As the representative of provincial government stated:

> "REDD+ will work if the pre requirements: the companies agree, any carbon investor, clear location (forest), high political will in local government, and supporting from community in and surrounding the Tesso Nilo forest. If we cannot enhance and set up these, non sense we are talking REDD+"

The complex problem of forest management in Tesso Nilo landscape, many stakeholders that is involved, their role and participation, planning and implementation of REDD + problems needs collaboration and cooperation action between stakeholders. In addition, adaptation of institutions is urgent in term of new policy-REDD + project implementation. Collaborative action and institutional adaptation leads to reach the common *GoA*l which is reducing emissions in term of REDD+. For analyzing of collaboration action needs the understanding between stakeholders and roles in term of REDD + project in Tesso Nilo.

6.3 Stakeholders Involved and analysis

Stakeholder analysis

Stakeholders refer to individual, group, organization that has influence for project *GoA*l/succession. The stakeholder's analysis is important to know for understanding the interaction, interests, influences, relation among them, for reaching the of success of the Tessonilo REDD+ implementation. It is also relevant to basis recommendation and planning for REDD+ in the chapter VII with adaptive collaborative management.

Stakeholder's analysis refers to Harney in Messia (2010) that stakeholders are divided in three types which are core stakeholders (CS), internal but indirect stakeholders (IIS), external and indirect stakeholders (EIS). Core stakeholders mean that core of principle player in the Tesso Nilo REDD+ project. They are : WWF Indonesia as project proponent, Central government: Ministry of forestry and its provincial and local agency, provincial and district government especially forestry services, Environmental agency and Bappeda, communities in and around the Tesso Nilo forest, and privates PT. Hutani sola Lestari (PT. HSL) and PT. Siak Raya Timber (PT. SRT). Internal stakeholders is who are not involve in the TEssonilo REDD+ project implementation but they have influence to accomplish programmatic *GoA*ls, to evaluate program, and to plan for the future of REDD+ in Tesso Nilo project. In this term they are funding agency, other sectors of provincial and district government, private sectors in around the Tesso Nilo REDD+ project, investors, research institutions that involved in the project (LIPI, CIFOR, Eco Security), and local NGOs. Internal but indirect stakeholders mean that other members of the broader parties that have influences and participations to the Tesso Nilo REDD+ project. They consist of DNPI, other sectors in central government, media electronic and non electronic, legislative, International NGOs, National NGOs, etc., that can be seen on the figure 6.4.

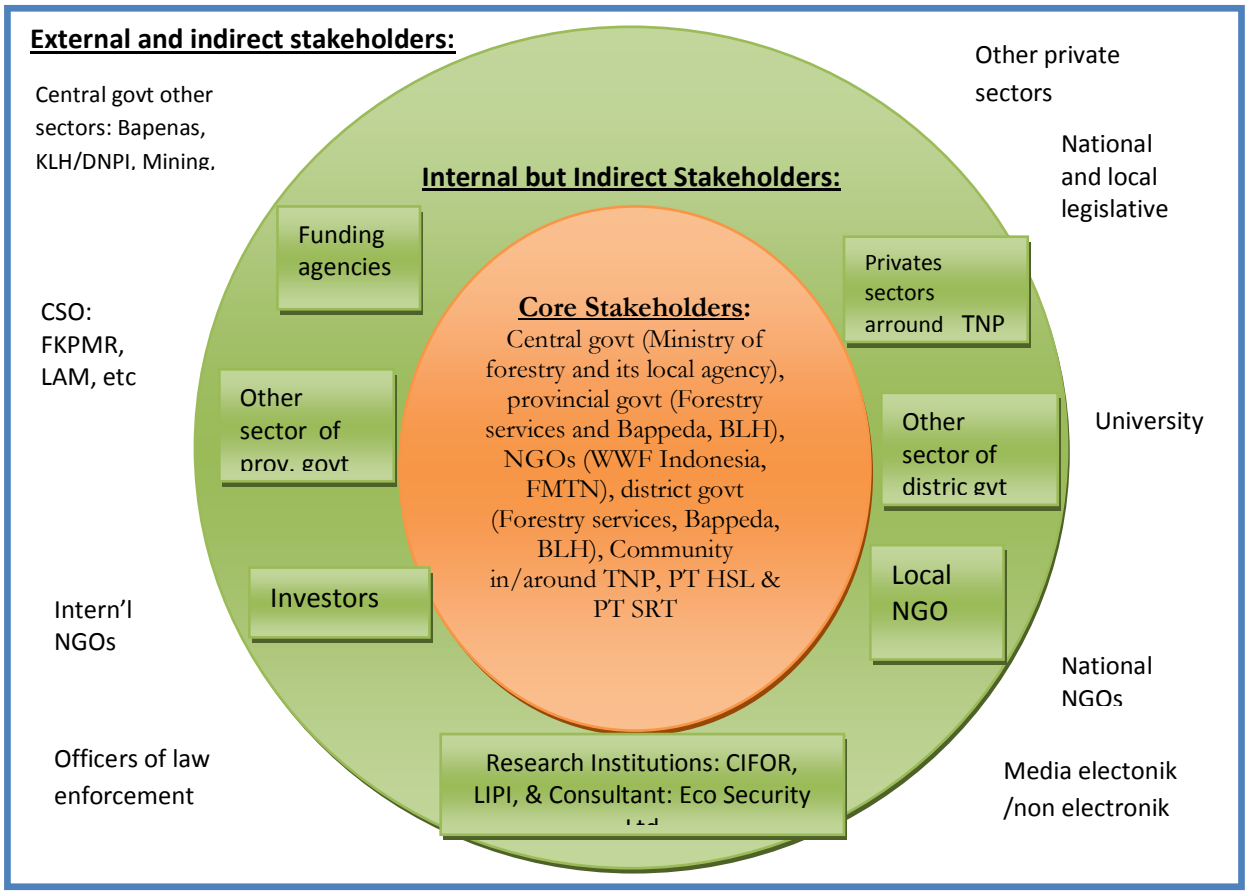
The basis argument and determination to count these stakeholders are main interest, influence, important, net impact, and option. These counts clearly can be seen on the table 6.2 below. In Figure 6.4 shows the diagram which represents their various levels of input, influence and involvement. The closer a group is to the core the more investment and weight that group has been advising.

Table 6.2 Assessment of stakeholders in Tesso Nilo REDD+ project

No	Stakeholders	Main interest	Role	Influen-ce	Net impact	Option/ category
1	Ministry of Forestry & its Agencies:	Responsible for REDD+ in Indonesia	Policy & decision maker of REDD+	Big	+	CS
	-Balitbang (FORDA)	Research and development REDD+	Responsible for research and devt of REDD+	Medium	+	CS
	-BAPLAN & it agency	Forestry planning	Reccomendation	Big	+	CS
	-PHKA and its agency (TNP office, KSDA)	Conservation biodiversity of forest management	Decision maker and implementor	big	+	CS
	-BPK and its agency	Sustainable management of production forest	Recommendation and policy maker	big	+	CS
2	Provincial goverment (governor)	Support the president aim to cut emissions reduction	Recommend and approve REDD+	big	+	CS
	-forestry service	Decision maker and policy maker at this project	Agree and recomend REDD+	big	+	CS
	-Bappeda (Planning and Development Agency)	REDD+ integration in the Riau spatial planning	Planner and decision maker	medium	+	CS
	-BLH (Environmental Agency)	Manage the emissions reduction in Riau province	Emissions reduction coordinator from sectors	medium	+	CS
3	Districts goverment (Pelalawan, Kuansing, Inhu, Kampar bupatis)	Support the president and governor aim to cut emissions reduction	Recommend and approve REDD+	big	+	CS
	-forestry service	Decision maker and policy maker at this project	Agree and recomend REDD+	big	+	CS
	-Bappeda (Planning and Development Agency)	REDD+ integration in the Riau spatial planning	Planner and decision maker	medium	+	CS
	-BLH (Environmental Agency)	Manage the emissions reduction in Riau province	Emissions reduction coordinator from sectors	medium	+	CS
4	Privates : PT HSL and PT SRT	Production forest management of 80,000 ha proposed REDD+ by WWF	Agree and voluntary implementation	big	+ and can be – (if not agree)	CS
5	Community in 23 interaction villages.	Access to forest and get benefit from REDD+	Agree and support REDD+	big	+ and –	CS
6	WWF Indonesia	Proponent of REDD+ project in Tesso Nilo	Planner, implementor and facilitator	big	+	CS
7	Bappenas and Env. Ministry/DNPI	Coordination and collaboration REDD+	Internationa negosiation Policy and decision maker,	small	+	EIS
8	Other National sectors: Mining, Publick Work, land agencies, etc	Policy and development activities in Tesso Nilo forest area for revenue gain.	Coordination and can be a cause of land use changes in Tesso Nilo	small	+ and –	EIS
9	Others sector in provincial and districts	Policy and development activities in Tesso Nilo forest are	Coordination and support REDD+ in Tesso Nilo area or cause land use change	small	+ and -	IIS
10	Funding Agencies (WWF NL)	Conservation and emissions reduction	Funding supporter and project owner	small	+	IIS
12	Research Institutions (CIFOR, LIPI, etc)	Research and development REDD+	Researcher and recommendatory	medium	+	IIS
13	Local NGOs (Jikalahari, YTNTN, etc)	Forest campaign and REDD+, community	Campaigner, advocator, and pressure group	medium	+	IIS
14	National and International NGOs	Forest campaign and REDD+, community	Campaigner, advocator, pressure group	medium	+ and -	EIS

15	Riau university & others	Research of REDD+	Researcher	small	+	EIS
16	Legislative both of provincial and districts	Community benefits	Policy maker and recommendation	medium	+	EIS
17	Media	Community awareness and policy pressure	Publication actor and pressure	big	+ and -	EIS
19	Civil Society (FKPMR, LAM, etc)	Community benefits and policy pressure	Pressure group	medium	+ and -	EIS
20	Other privates	Forest and land	Propose area to convert	medium	-	EIS
21	Migrants, encroachers, illegal loggers	Forest and land access in Tesso Nilo forest	Threat actor of REDD+ implementation	big	-	CS
22	Privates sector around Tessonilo Forest (PT RAPP, etc)	Coolaboration management of REDD+ to reach sustainable	Supporting of REDD+ management and funding	small	+ and -	IIS

Figure 6.4. Stakholder analysis of Tesso nilo REDD+ poject diagram



Adoption from Messia, 2010

Interaction between actors

Interaction between actors is also an important thing regarding to REDD+ implementation project. It will describe how actor relations, their influence and power; the interaction of many stakeholders in designing REDD+ and its readiness phase particularly in the Tessonilo. REDD+ project are as the bases for implementation of Adaptive Collaborative Management that will be explained in chapter VII.

In the planning process of REDD +, interaction between stakeholders is very low. REDD planning and readiness phase do not consult and involve local stakeholders yet. The majority of policy, planning, framework, and institutional arrangements are done by central government, experts, and International NGOs. The involvement of provincial and district government are less participating. It indicates only several people in the Riau provincial forestry and very little staffs in district forestry agency who know REDD+. It can be seen from statement of the district government representative:

> "Until to date, involvement of Pelalawan district government in the planning and consultation of REDD+ is low, more over never involves both in the national and provincial level. District government should be involved and can give much contribution for its policy framework and mechanism because the implementation of REDD+ will face and locate in district level. It is very crucial from government or NGO for doing consultation REDD+ in district level".

Not only for local government, but also the consultation and seminar of REDD+ has never involved the community in village surrounding Tesso Nilo area. WWF Indonesia is only explaining it to the head of Tesso Nilo Community Forum. This forum does not explain yet to the community in and surrounding Tesso Nilo landscape. As the representative of community in Air Hitam village stated below:

> We don't understand what REDD+ is, this is the first time I am hearing the REDD+ and carbon trading. And we has never involved in the REDD meeting and discussion. We hope whatever the WWF Riau activities should consult to us even though the mechanism and framework do not fix yet.

The worries of WWF Indonesia to consult and to involve the communities in planning and process of REDD+ because the REDD+ is not internationally legally binding yet and the funding support is not clear. WWF Indonesia will work for long time with not only REDD+ project, but the conservation wild life and habitat. It is true; but if we refer to the representative of community's statement, WWF Indonesia should begin to consult and give the explanation about the possibility of REDD+, provide sufficient information, and decide with community to involve or no regarding to FPIC (Free Prior and Informed concern) standard. One of the important requirements for implementing REDD+ in term of voluntary scheme is the CCB (Climate Community and Biodiversity) analysis and evaluation[41]. CCB is the REDD+ voluntary standard which requires the social economic assessment and impacts, climate and biodiversity assessment.

Each agency both in the same level and the different level has their own aim and target with difference level and achievement. Sometimes the aim and target is overlap and activities are not coordinated with others. It leads to the lack of coordination between agencies and different sectors in the district level, among 4 districts, and between the districts, the provincial and the national level. For example, Riau Forestry Agency has been planning and aiming to support much local revenue for forestry sectors, while the other

[41] CCBA online on www www.climate-standards.org/standards/index.htm

agencies such as plantation agency and agricultural agency have their own aim and target too. In term of planning to reach aim and target they do not coordinate with each others. There is Riau Planning and Development Agency to coordinate them, during the consultation phase, all of the agencies agree, but when in implementation phase it is quite difficult. In the different level, indeed coordination between provincial and district is more difficult. For example, Pelalawan forestry agency is responsible to Bupati[42], they do not responsible directly to Riau forestry agency. Pelalawan district agency has its aims to support Pelalawan local revenue. Sometimes their forest planning is mostly based on their interest referring to decentralization era. It implicates many of forestry planning between Riau province and Pelalawan district are not integrating.

Hierarchy bureaucracy and corruption increase when decentralization politics implemented. For example local revenue corruption in Aceh and Bali governor, corruption on forest fire infrastructure by former Riau governor, etc[43]. The head of forestry agency cannot directly make a letter to head of the districts forestry agency. It should be sent to Bupati. While Bupati is on a politics position, she/he is not the professional position. Most of the interests of Bupati are depend on how big the project and policy can support their power and position. Besides, the corrupted bureaucracy can hamper coordination. Many Bupati did not coordinate and use the reforestation fund for other activities. Many of Bupatis in Sumatra are put in jail because he/she used the reforestation fund in the production forest and patrol forest area. Meanwhile the reforestation fund is mainly used in the production forest and only planting forest. My argument supported by statement of practitioner of forester Nana Suparna (2001) "the orientation of ministry forestry regulation is administrative and bureaucracy rather than performance based". Based on these explanations, the root problem of coordination and cooperation are lack of consultation, lack of participation, corrupted bureaucracy, and different aim, target, and interest.

Interaction with NGOs both in Riau province and national, universities, research organizations, and other stakeholders regarding to forest management in Tesso Nilo landscape is done well even though there are many obstacles. The consultation of REDD+ is limited respecting to time of implementation. Now the WWF Indonesia is still trying to engage all stakeholders to support REDD+ project in Tesso Nilo Landscape. For making clear understanding and engaging the common vision to REDD+ obviously need time and a good facilitator to be good quality of interaction of stakeholders.

Based on the interview and FGD results, the highest power relating to forest management and REDD+ is ministry of forestry followed by private companies, and WWF Indonesia. The lower power is community, because the lack of understanding of REDD+, policy, bureaucracy, law, etc. People who have much knowledge will get more power, and people who have less knowledge the less power (Flyvbjerg (1998). The weakness of power also relates to the unclear of right and boundaries between the local people and government rights and authority. The vague boundaries of rights and less recognition for the local people land rights affect lesser power of community. It is supported by representative of NGO's statement:

> A local community is the weakness stakeholder in the forest management and REDD+ project. Government and International NGO have the dominant power. The weakest is local community. It is

[42] Bupati is the head of district

[43] Bali Post, 13-1- 2005; Kompas daily news spaper 2-3,2003

> affected by the lack of knowledge, lack information, and less of land right recognition. Government and NGO should do the capacity building, and government is ready to decrease their power, share information and learning, and share management.

I fully agree with this statement, the ways to make the good quality of interaction between stakeholders are to do the capacity building to community, and to share the power with readiness of government power sharing. Good quality interaction and power sharing will lead to democracy and justice, and will result the decision making that accommodate all stakeholders, as well.

The relationship and power of stakeholders should be viewed as a complex problems regarding to social behavior. Complex systems, because it relates to relationship between all many factors not only human interaction but also ecological and biological interaction referring to Portugali (2006). Adoption of Portugali, I state that the wildlife in Tesso Nilo such as Sumatran elephant and tiger, other wild lifes, trees/forests, and habitat should be viewed as direct stakeholders because they need space for live. WWF Indonesia analyzes these and believes that with the establishment of TNP will bring the protection of wild life and habitat and also will reduce the conflict between human and wildlife. Furthermore, the REDD+ project aims to reduce emissions and to strengthen forest governance with participatory approach. In the project concept noted that:

> The objective of the ultimately proposed REDD+ demonstration activity in Tesso Nilo Landscape (TNL) is to reduce emissions substantially and measurably from deforestation and forest degradation (REDD+) in the landscape through an at-scale, incentive-based, participatory approach. WWF believes, the eventual REDD+ activities will also avoid further loss of TNL's outstanding biodiversity including the protection its elephant and tiger habitat. WWF envisions that an eventual REDD+ demonstration activity in TNL and the forest carbon protection funds generates actors with seeing eight main actions by project stakeholders including governments, companies, communities, other partners and WWF, that reduce emissions, address leakage and permanence, and protect co-benefits.

Both of REDD+ and other conservation projects are done by WWF Indonesia in Tesso Nilo landscape to enhance the harmony between people, forest, and wildlife to reach sustainable development in Tesso Nilo Landscape. Based on these explanations, relationship between ecology, economy, socio-cultural, and politics should be reach toward the sustainable development. Institutional arrangements should be done to reach the reducing emissions in Tesso Nilo area and Riau Province.

6.4 Institutional analysis of the Tesso Nilo REDD+ project

6.4.1 Formal institutions

In the local level, Riau province with many stakeholders made an agreement and efforts to combat illegal logging and the encroachments in Tesso Nilo forest. Some agreements and rules are:

- Governor Riau made commitment to cut emission with amount 26,22 % from national cut emissions whereas 22,47 % from forestry sector. Otherwise the commitment does not follow the action yet in to regulation and planning. Using the review Riau Spatial Planning the emission reduction target can be achieved.
- Forest patrol in Tesso Nilo area between the BKSDA (Natural Resource Conservation Agency). This activity is routinely done every month for data collection, awareness, and law enforcement of illegal logging.
- NGO such as environmental advocacy, Kantor Bantuan Hukum (Legal aid and advisory office), and Tesso Nilo Community Forum (FMTN) reported and enhanced the Jaspun-local actor forest sale to the court.
- In Maret 2007, multi stakeholders in Tesso Nilo made an agreement about preventive and illegal logging combating, encroachment and forest fire. The stakeholders involves national government (TNP Office, BKSDA), district government (Pelalawan Forestry Agency), logging and industrial plantation companies (PT. RAPP, PT. Nanjak Makmur, PT. SRT), NGOs (WWF Riau and TNP Foundation), and civil society organization (FMTN). This team is called as Tesso Nilo Eradication Illegal Logging with the main activities similar to that the patrol team. they has already succeeded to process 2 illegal logging cases, 2 groups of encroachment, 2 cases of forest fires, and 4 check point development.
- In the same year, Riau Governor made the decree No. 271.1/VIII/2007 about development of team of combating illegal logging widely with involving of central government, local government, NGOs, CSOs, army and police.
- Regarding to these on 23 August 2008, the multi stakeholders in Tesso Nilo involved the legislative and environmental NGO such as Riau's Friend of the Earth and Jikalahari to sign the collective agreement.

These efforts, agreements, rules and regulations are done by project proponent and stakeholders to reach the sustainable Tesso Nilo forest management and preparedness REDD+. Nevertheles the lack of institutional arrangement from national to local level impact to problems and difficult implementation of REDD+ in the project level.

Resources (technology and human resource)

Human resource is needed to manage institutions. In order to reach these tasks, the Riau forestry service has 319 civil servants. Most of them (54%) graduated from high school, followed by undergraduate school (34,70 %), master graduate (8,52 % and remain (3,78 % low school. The implementation of REDD+ needs the high technical expertise e.g. remote sensing and Geographic Information System (GIS) experts. In Riau Province for example there is only one person who has GIS background and one person assistant. No staff has the background of the remote sensing. While all of calculation baseline, projection, scenario,

implementing, and monitoring of emissions use remote sensing technology and GIS. Besides, the equipments and digital mapping is very limited. Both in provincial and in district levels have lack of technology and limited of human resources in term of GIS and the remote sensing. The representative of Riau forestry agency stated:

> We only have one of the GIS experts, and one of the GIS assistance. We don't have the remote sensing expert and also the equipments. We only have the plotter, the computer, and the digitizing of GIS, no equipment for remote sensing. With only the two human resources, it is very limited and can hamper work and activities especially in the REDD+ framework.

6.4.2 Informal institutions

The market carbon or REDD+ is the new idea that sudden adopted by Indonesian in the multi levels. Thus it faces with informal institutions, especially in the local level. This idea sometimes is against to the local culture and on the other hand supporting the local culture especially participation. The REDD+ needs clear ownership, neoliberal context that strength the state power and corporation instead of strengthen the local community power and right. In the local level, the big issue is currently about forest which is owned by government based on forestry regulations and less interferes of community right. The state ownership is very difficult to change because it has been institutionalization for long time. It will stimulate the government and private to get benefit if REDD+ is implemented. Besides, the requirement of REDD+ is remain same both in state and CBFM. Local illiterate people cannot afford the REDD high technology and need assistances. For that reason, REDD + can support the informal institutions because one of its requirements is to involve local/indigenous people and to respects to local right and participation.

Because of the implementation of the REDD+ project is in the beginning step or done for 4 months, indeed difficult to see the informal institutions that have influence the succession or the failure of REDD+ Tesso Nilo. The informal institutions are only based on analysis of forest management of Tesso Nilo forest. Therea several informal institutions that influence the Tesso Nilo REDD+ and forest management. Some of these are informal leadership, norms, culture, and social capital.

First is about the informal leadership. When reformation era began, the indigenous and local people tried to claim the forest area again because of the socio history. The traditional chief has claimed that based on history the TNP and Tesso Nilo production forest are under managed by Petalangan informal institutions and descent of kingdom. The Tesso Nilo forest management informally is divided by eight chief as showed in table 6.3.

Tabel 6.3 Allocation of traditional right of Tesso Nilo forest area

Name of Leader/ chief	Etnich group	Forest areas
Batin Muncak Rantau	Petalangan	TNP and PT. SRT
Batin Mudo Langkan	Petalangan	TNP, PT SRT and PT HSL
Batin Hitam S.Medang	Petalangan	TNP and PT. SRT
Batin Pelabi	Petalangan	PT. SRT
Datuk Rajo Malayu	Malay-Logas Tanah Darat	TNP and PT. HSL
Mandailing	Malay-Gunung Sahilan	PT. HSL
Gunung Sahilan	Malay- Gunung Sahilan	PT. HSL

Source WWF Riau and TNP Office, 2009

Based on law no.41 of 1999 about forestry, Indonesian government recognized indigenous people's right by stating the existence of indigenous people by local government regulation. Based on basic law of agrarian Law No.5 of 1960 (UUPA), indigenous people right is recognized too. But untill now from 7 indigenous people in Riau, there is no recognized by local regulation. Meanwhile the management of forest and land based set up by oral tradition in Riau because of illiteracy. In my research, from 1998 to 1999, had been found that Indigenous people has been settled in forest form long time and high dependencies to forest. Riau Province as a case, it was recorded that around 19,859 house hold and 99,42 persons Petalangan, whereas a part of them present and live in the Tesso Nilo forest (Silalahi, 2009). In the field the power Petalangan informal institutions is high and recognized by many stakeholders. In Air Hitam village for example, to determine the opening of forest for farming should get recognition from head formal and informal village. This argument becomes the legitimacy for local people to open forest. Local leadership have big role as well in the local and provincial politics.

Secondly is about norms. Traditionally, social norm is high influence in the social practices to forest management. Local people belief that forest can give economy and it is also as identity of indigenous people. The Sialang trees (honey trees in the forest) are believed that they have the god and holy spirit so the bee want to make home and result the honey. Otherwise this belief fades in recently. Only 10 % people depends on the harvest of honey bee. Local leader will give punishment to whose cut the honey bee trees. The high immigration to this area and the influence of globalization go along to fades this norm. Based on traditionally norm, the forest is a common good and the opening should get agreement from the informal leader and do the ritual. Otherwise recently, many of local elite utilize these authorities to sale forest.

Thirdly is changing of local culture and customs. The changing of local culture and custom from the forest as the place of holy spirit and source of non timber production forest to exploitation of forest and further more to sale to migrants. Government is difficult to stop forest opening. Now the problem is more complex when the migrants get the support and back up from indigenous/local people to oppose government and companies. The changing of custom and culture from conservation thinking to exploitation are the problems of implementation of the Tessonilo REDD+.

Finally is about social capital and human resources. Some social capitals are the *gotong royong* [44], every local policy and decision making in the village through the deliberation process. The REDD+ project can be as one of policy that has been implementation in the Teso Nilo area can be achieved with the deliberation process. The others are about Tesso Nilo Community Forum and weaknesses of local people resources. The presence of Tesso Nilo Community Forum is big role in dissemination of REDD+ project. Otherwise the low education and illiterate people in the village become the problem of implementation REDD+. Thus it need capacity building and improving the awareness. The other local organization such as Petalangan organization and Malay organization have potential role to force the Riau and four district government to do the law enforcement and consistent to rules and regulation of REDD+ and forest management.

[44] Gotong royong is the working together or process of local delibarate int he decision making process involve many stakholders in the village.

6.5 Good forest governance analysis in Local level

This section will emphasize on good forest governance in Riau. It relates to how the Riau province and four districts government manage their forest, the involvement of private and community and pressure group to reach the Riau sustainable forest and Tessonilo forest management. Using Tesso Nilo cases, Riau good forest governance will be described and the problems and barriers will be explored. Below I will describe the analysis of good forest governance in Riau.

The decentralization politics in Indonesia imposes local governments to be actively to search for their own sources of financing. Thus, local government competes with the others to gain the revenue. Basically local revenue comes from the central government and local revenue. The first revenue is basically depending on the total of population and local natural resources with relatively fixing of amount budget. The second one is based on effort each local government from tax and retribution from public services and private sector investment. It implicates each local government competes to invite investor. Thus, forest as source of income will be exploited to get highly local revenue.

As mentioned above, most of forest in Riau is managed by state/government. From its management, forestry sector supports districts, provincial and national revenue. The total revenue of forestry sector in Riau province from 2001-2008 is 643,339,177,343 IDR or 56, 423, 361 €. Based on table (V.2) of sharing revenue, its shares as follows: for the central government (20 %) is 128,679,823,469 IDR or 11,287,704 € (with recent currency), provincial sharing revenue (16 %) is 102,943,858,775 IDR or 9,030,163€, sharing revenue for producing district/city (32 %) is 205,887,717,550 or 18,060,326€ , and sharing revenue for non producing districts in the Riau province (32 %) is 205,887,717,550 or 18,060,326 €. From this revenue, reforestation fund (DR) is 1,595,634,808,808 IDR with the sharing reforestation fund for the central 60 % (957,380,885,285) and producing districts 40 % (638,253,923). On the table V.2 shows that 40 % of revenue distributes to producing districts. With this scheme, hoping that the producing districts get more benefit.

Even though the decentralization politic and semi forest decentralization has been done for more than ten years, the local participation is very limited in Riau province. In fact, Riau governance does not agree and legalize the community forest, as one of the clear examples. Riau government and districts agree the community plantation is under the management of industrial plantation. Meanwhile, many forest village and costmary forest were proposed by indigenous people such as Talang Mamak costmary forest, and Teluk Binjai village forest in Pelalawan district. The planning that emissions reduction from community forest is only in the planning and on the paper, do not really realize in the field. The willingness of government to realize the community forestry is rare because they are afraid of loss control over the forest.

However, the existence in the decentralization era and the complex problem of forest have allowed Ministry of forestry, Riau and districts forestry services to open chances for NGO and community to discuss deliberately about the forest management. Many Internationals NGO such as WWF Indonesia, Greenpeace International, International Institutions e.g. CIFOR and ICRAF, national NGOs and local NGOs such as: WALHI/Friend of the earth Indonesia, Jikalahari and their networking involve in the Tessonilo forest management, advocate and encourage forest policies to be good forest governance.

Regarding to transparency, both Riau forestry agency and districts forest agency are not fully implementation. There are some changes on behavior from provincial and district forestry agencies but the culture of centralization is still dominant. It has never been transparent or even it has been published the planning, budget, activities to the public's through electronic or non electronic media. The changes is that the provincial and district forestry data can be accessed by NGOs, CSOs, and community.

The situations of forest activities in Tesso Nilo are very complex and deforestation is very high. By picturing the number of encroachers and the number of total deforestation area show the situation of bad forest governance. The failure of forest management under logging concession companies is also adding the weaknesses of forest governance. Many conflicts of community and wild life such as conflict between human and Sumatran tiger happened 36 cases during (2004-2009). It caused eleven Sumatran tiger killed and 5 local communities died[45]. During in 2007-2009, Law enforcement Tesso Nilo team founded six group of illegal logging, 7 groups of forest and land fire. Some of these cases have been punished in the local court. Local government gave permission to investor- Maria- to convert forest to oil palm without agreement letter from ministry forestry. Some Industrial acacia plantation was built on the good forest production in and around Tesso Nilo and Riau province. One case is the illegal logging which is done by Bupati Pelalawan. It completely shows that much homework that should be solved in Tesso Nilo regarding to REDD+ and forest management.

Other sectors which made policy on Tesso Nilo area were not based on their authority. For example, National Land Agency in Indragiri Hulu certified land for cooperation which is proposed by Mekar Sakti for 515 pieces (1,030 ha). Based on the Indonesian regulation, National Land Agency cannot certify forest if there is no agreement from ministry of forestry. The another example was in Pelalawan; the government formalized Bagan Limau definite village which located in the national park, by issuing regulation of Pelalawan district No. 11 year 2007. Local government has no right to formalize the village in the forest area. It shows that each sector does not coordinate with forestry sector when they will make policy and decision.

The accountability of forestry officials both at central and at district level is low. The alignments and the policy tend to pro-companies; the accountability of government become weak because of corrupted bureaucracy and it makes the lost of trust from the local community. The less accountability is indeed impacting to forest management and deforestation in Tessonilo as mention in the point of problem and gaps. The representative of local people in Air Hitam village stated:

> The deforestation is mostly done by company's especially industrial plantation and oil plantation. The governments officials are always support the companies because they get money, you can see the acacia plantation and oil palm plantation beyond our house. Indonesia bureaucracy system is very corrupt. Companies can give money to government official but we cannot. Thus we don't belief to government officials. What we can do is to open the forest and to plant the rubber or oil palm for our generation future. We are ready to face with the government officials.

[45] http://mediaswaraindonesia.blogspot.com

From the description above, we can understand about the good forest governance and its problems. The history, the long centralized system, and corruption bureaucracy culture are influenced of forest governance. Sharing management, accommodation of community to the forest management is very low. The involvement of pressure groups contributes to the changes of forestry services mind set, data and information access. Decentralization politics has been implemented, but forest decentralization is not fully implemented yet. Provincial and district government are still confusing to do forest governance and causing conflict between semi decentralization and decentralization of politics. The deforestation of Tesso Nilo forest and the conflict among stakeholders shows the forest governance weaknesses. From this analysis, I will describe the problems and barriers of the Tesso Nilo REDD+ Project.

6.6. Reflection from the Tesso Nilo REDD+ project

With seeing and observing the Tesso Nilo REDD+ Project, I describe the problems and barriers between framework of REDD+ and its project implementation and also the reflection. There are several fundamental problems and dilemmas with REDD+ implementation in Tesso Nilo area, which are different terminology, lack of human resources, institutions problems, lack of coordination and cooperation, weaknesses of forest governance, lack of awareness, and un-integrated REDD planning system .

6.6.1 Different definition of REDD+

The definition and perception of REDD+ are generally different either in the same or different category and level stakeholders. Another word, there is no same perception and shared vision of REDD+ definition from stakeholders and at the national, provincial, and local level. The lower level stakeholders is, the less understanding of REDD+. Both different sectors in national level and in the same sector (internal of Forestry Ministry) perceive differently the meaning of REDD+. One of the fundamental different meanings is about carbon trading. On one hand, stakeholders think that this is easy money on the other hand stakeholders also think that this process is difficult and complex regarding to actor involvement and pre-requirement. In provincial and local government definite REDD+ with misunderstood as mechanism to get “easy money”, provincial and local government having and committing to maintain its forest areas is eligible to get “compensated fund” with not necessarily “payment for performance”. Head of Riau Regional Forestry, during the consultation said that

> We need money for serving public services; WWF Indonesia should explain directly the accounting of money in the term of REDD+ and carry out the investors. We don’t need “vague promise and uncertainty process”.

In addition, local government, local NGOs, and local people are still confusing about REDD+ in meaning. The representative of provincial government stated:

> The definition of REDD+ is fuzzy, most of local governments, NGOs, and local people didn’t understand well what REDD+ is. In our office for example, most of us don’t exactly understand well, only one or two staffs who know the REDD+ clearly. More over other agencies staffs such as: Planning and Development Agency, Environmental Agency, Mining agency, and others, indeed they do not know about REDD+.

The other dilemma of REDD+ is keeping the forest with REDD+ scheme to pay "opportunity costs" or "converting the forest" to other some commodities (palm oil, pulp & paper). Local people have rational choice to do conversion or protection. CIFOR (2009) done Research in Jambi reported that if the REDD+ activities are benefitting under than opening of oil palm, or rubber, or farm activities benefit, local people and Government of Jambi will not support REDD+. With the accounting of present situation, the price of carbon emissions should more than 25 USD for compensate the opportunity cost. The companies' stakeholder will think that if REDD+ benefit is lower than taking the logging, they are difficult to follow the REDD+ scheme proposed by WWF Indonesia. But if the REDD+ scheme can give revenue, they will follow the REDD+ scheme. As the Representative of companies is stated below:

> REDD+ accommodates the Sustainable forest management. If there is any potencial revenue that can share to other stakeholders and give benefit sharing, absolutely, we will join with this scheme. It will enhance and encourage community to help us to protect natural forest, logging concession and industrial acacia plantation. But now, the REDD+ is not legally binding, we still wait and see.

6.6.2 Lack of Resources

Local government has limited resources regarding to REDD+. For accounting the baseline of carbon and emissions uses the remote sensing and GIS analysis with the high technology. For doing the base line year, emissions accounting, implementation, and monitoring and evaluation, readiness phase need huge money before the carbon sales is implemented in 2012. Both provincial and district level has no enough technology and human resources for doing these activities.

Besides, provincial and districts government have limited budget for preparing technology, software, electronic data imagery doing this activities. Indeed, they depend on the international funding and international experts to do these activities. The lack of capacity especially in the local level should do with consultation, involvement local government and stakeholders in the national and international meeting, transfer knowledge and technology from international and national to local level. Furthermore, carbon trading needs good internet connection and good communication, meanwhile internet connection and server in district level are very bad and commonly local stakeholders cannot speak English. It needs the big investment and capacity building for filling these gaps.

Not only the government human resources, the informal leader and community have also lack of resources. The community as the front lines of the project, they should have capability to counting, monitoring and evaluating the REDD+ project. The controlling and preserving of the forest cannot be done well without the involvement of local community. Thus is very urgent to do the capacity building and increase the understanding of REDD+.

6.6.3 Institutional problems

Formal institutions problems

There are several problems and barriers that have been identified based on formal and informal institutions. In the formal institutions the problems are (1) regulation problems, (2) problem of planning REDD+, (3) less coordination, cooperation and

participation, (4) unclearly boundary of authority and managment, (5) bad financial organization performance. These problems and barriers will be described below.

The regulations problems include the changing regulation, bad implementation of forest regulation, less technical guidance, and law force enforcement. The elaborations of these are below:

- The most changing of policy and regulation in Indonesia is forestry regulation, because it relates to many interests and pressures from many stakeholders. In the forest, there are many of mining natural resources, good opportunity to develop oil plantation, good business for building industrial acacia plantation. Besides, there are many of political parties get funding from forest and many of elites get money informally from forest sector. Because of that, the changing of government is prone to change regulation in forestry sector. The rapid changing of the regulation implicate to loss of resources and need time to understand.
- Almost all the forestry regulation theoretically is done well, but the implementation in the field is bad performance. For example, if the procedure and mechanism of logging concession under *TPTI* is implemented well by company and its controlled well by government, the production forest management in Indonesia will be sustainable. Thus, the problems is bad performance and low law enforcement.
- In REDD+ regulation especially Ministry Forestry regulation No.68 of 2008, No 30 of 2009 and No 36 of 2009 are still general and need operational regulation in the field. It should be derived to "*juklak and juknis*" (implementation direction and technical guide). Because of it, currently, provincial and district government is difficult to implement the REDD+ project demonstration activities.
- Lack of law forest enforcement and disobedient of regulation both of government and community

Problems with planning of REDD+ cover less involve of local stakeholder in planning of REDD+, REDD+ term are not integrated in to local planning yet, the governor commitment to cut emission are not followed by action and planning. The analyses of these are:

- The REDD+ planning is less participation from provincial and local stakeholders. While, the national REDD+ committee that is developing now, governor and Bupati should be involved because the implementation of REDD + will be taken place in the field. The staffs both from provincial and district level should be involved in every activities of REDD+. Each Governor and Bupati will support the certain amount emissions reduction and guarantee of leakage, permanency with in spatial plan, and control the development in the region/area. The National reverence emissions level/Reference level, leakage and additionality are depended on the Governor and Bupati supports. National and central government do not have the area, and cannot control the forest alone in the field based on decentralization system. The national function is more to coordinate and to cooperate many sectors and regions to reach the national emissions reduction.
- Regarding to Riau Governor supports for national emissions reduction, until to date; there is no action clearly in regulation, integrated policy or planning to reach this

commitment. Each Bupati does not know this program yet, and Riau province does not do consultation to every district. The emissions reduction term do not integrated into planning and forest management. Based on the representative of provincial government, Riau commitment which is 22, 6 % can be reached from reforestation and Industrial acacia plantation and community forestry. Contrary, the reforestation in Indonesia is generally failed and development of Industrial plantation from natural forest areas. Riau province believe that the emissions reduction from Riau province is rationale and can be reach with the current review spatial plan 2004-2015 with green scenario to 2015. But it has rejected by Jikalahari (2006) because the green scenario is currently natural forest with good potency and High Conservation Value Forest Area (HCVF). Finally, Governor and Bupati have not put the REDD+ term in the spatial planning yet. The commitment of Riau government should be realize and embed action, policy and regulation. Representative of NGOs stated that:

> The commitment of SBY and Riau governor to cut emissions is only lip service. The statement aim is to get attention to International funding. The fact is that the commitment cannot be derived into regulation, institutional arrangements, policy and planning by national to local government institutions. It can be said talk only no action.

- Law enforcement of planning with fair implementing and involve many stakeholders is urgent. Harmonizing spatial plan inter districts, between districts and provincial should be done urgently referred to national plan direction. Not only planning harmonization, the implementation and strong controlling and evaluation, but also law enforcement of plan should be done strongly with transparent, openness, and public participation. Law enforcement should be done to company and government that break the rule and spatial planning. Only with the strong forest enforcement and forest governance, REDD+ can be implemented in Tesso Nilo area.

Then the other formal institutional problems are less of coordination, collaboration and participation. The vague of authority contributes to uncoordinated and un-cooperated activities in term of national emissions reduction and it illuminates confusion among local government and other stakeholders. REDD+ in implementation need coordination and collaboration inter sectors in government and others by involving many stakeholders, to handle many risks and uncertainty and complicated problem related to forest management.

In addition unclear of authority and leader of REDD+ in the national level, implicate to the fuzziness of local government and project proponents. Each agency made their national emissions and climate change planning. Beside the local level sectors difficult to implement the REDD+ project, they are also more confuse because of unclearly understanding of REDD+

Finally financial REDD+ organization needs a performance based rather than administrative based. Indonesian financial organizations under the Ministry of Finance is only deal with more to administrative and rather than in performance. Ministry of Finance is not strong enough to tackle the REDD+ financial mechanism. Moreover, it also has lacks performance in bureaucracy and high level of corruption. For that purpose, It needs new REDD+ financial organization based good performance and professional that can be accountable internationally and responsible to government. This organization can be under the coordinator ministry of economy and industry with coordination with ministry of forestry

and other sectors. Otherwise it can be built independently both in national, provincial or district level. In term of REDD+ and carbon trading, the financial organization based performance and professional is needed regarding to guarantee and accountability.

Informal Institutions

Besides the formal institutions problems, there are also informal institution problems namely, centralistic local staff behavior, les recognize of local knowledge and right in the REDD+ implementation, elite leadership use the reformation era and authority for sale the forest, and the changing of social norm and local culture. Below I describe these problems.

First of all is about centralistic behavior. Similar to national and provincial government staff, local staffs especially in the district and sub district are still thinking about centralistic approach. They think that the government staff have the big authority and as the person who should be served by local communities. The governmental administrative function should be change to governmental entrepreneurship.

Secondly, less of local knowledge and local land right in terms of CBFM is a source of conflicts in Tesso Nilo forest. The long history of land tenure conflict is also the root of problems of forest management. Adoption and accommodation of these may be better for coping of the land tenure conflict. Besides, Informal organization like NGO, CSO and community have big influence in the implementation of REDD+ in Tesso Nilo WWF Indonesia as project proponent should engage these stakeholder to get supports and avoid the rejection.

Thirdly is the informal elite use their authority and power to sale the forest for their need and interest. Need of land because of high demand of oil palm for migrant are high. Thus elite informal leader work together with the migrants to exploit and to open the forest for building the oil palm plantation.

Finally the changing of the norms and local culture from conservationist to exploitation is difficult to use the local culture and norm in the management of REDD+ project. The formal rules like the clearly reward and punishment and law enforcement are needed in to account.

The other informal ways to convince the all stakeholder for receptiveness the REDD+ are consultation, cooperation and lobby to all core stakeholders. WWF Indonesia should also explain to companies with strong analysis working with academician, research institutions and professional consultant that the REDD+ scheme will give benefit to economic, ecology and social aspect. The accounting of REDD+ should minimal can fulfill the operation cost and possibility with additional benefit. The restoration cost from preparation to readiness to the selecting logging harvesting have to be paid by REDD+ scheme. With 70 % of revenue using the REDD scheme is feasible for company to implement REDD because it has co benefit to ecology and biodiversity. The deeper and comprehensive analysis should be done in term of deforestation, encroachment and unsustainable management influenced by formal and informal institutions. Deforestation, land use change, illegal logging, forest fire, etc., in the concession of PT Hutani Sola Lestari and PT Siak Raya timber should be handled and solved well. The strengthening Riau forest governance and REDD+ institutions should be established.

6.6.4 Land Tenure Conflicts affected by conflict formal and informal law

Land tenure conflicts have been long happened especially when the military regime dominated in Indonesia. These conflicts implicate to deforestation and forest degradation and marginal community right. WG Tenure (2007) identified the source of land tenure conflict which are the problem of forestry law No.41 of 1999, old paradigm and monopoly practices in forest management in Indonesia, gap of forest land tenure regarding to ownership and possession, less community participation and neglected of community right and land, fragmentation of customary land, different perception of each sector in government, formal and informal law, and conflict horizontal between communities. The deforestation, forest degradation, marginalized community right and access over forest resources are caused by law and government policy that is no pro people and ecology. Besides, ignoring justice-democration-sustainable dimension in forest management, community right recognition is unclear, communal forest is not a legal entity, and customary law against state law. These land tenure conflict is happening in Tesso Nilo area. The forest management both in past and recently are less involvement and participation, and less recognition of customary forest, and stakeholders have different perception of forest, different needs and interests.

Based on law No.41 of 1999, all of forest area is managed by government even though de facto there is any community and farm activity. The old paradigm of government and forest management concession is that community does not have access and right for the forest and land in Tesso Nilo area. More than 32 years community was only a spectator; the forest resource is tending to benefit to companies and elite's governments. The government tend plan the convertible forest to company rather than give to community for agriculture. Impact the area of village in around of Tesso Nilo area to become limited. When the reformation era has been happen from 1998, the decentralization and democration become the most issue. Many community and informal institutions claim the forest and land based on history and the traditional legitimacy.

Now the problem more complex because the migrant has involved in the encroachment of forest as mentioned in point 6.2. Vertical and horizontal conflicts happen between community, community and government, and community and companies. Many local people actors manipulate informal institutions and sale forest area to migrant. Some of the land buyers are from elite government, law enforcer. It is difficult to stop encroachment and deforestation. Forest governance becomes weak. The WWF Indonesia should analyze and understand these problems well, government should have the political will, and community should have awareness and re arrange the formal and informal institutions to do the common action. The problem of TNP and production forest should be solved with adaptive collaborative action. Every stakeholder should involve and getting the common vision for sustainable management of areas in Tesso Nilo. Win-win solution such as: accommodation local people to do the agricultural farming with the certain agreement, law enforcement to illegal logger and protection the forest are the ideal way. Indeed it needs policy reform, adaptive policy and institutions, and collaborative action.

6.6.5 Good forest governance problems

The main problems of forest governance in local level are similar to that in national level. The highest problems are corrupted bureaucracy embed in all sectors corruption and weak of law forces enforcement. Then it is followed by less participation and coordination each others, not transparent, weak accountability, less sharing benefit/authority and benefit of forest management. Local decentralization is considerably can improve good forest governance, but it is still not fully implementation because of lack of resources and management and it needs good institutional arrangements. These problems drive to high deforestation in Tesso Nilo forest area. If deforestation cannot be halted and be improved, thus REDD+ will lead to failure. The implementation project and local level should ensure the framework of REDD+ from base line to implementation of carbon trading. It cannot guarantee of permanency, leakage, MRV system, and CCB concept that guarantee on the planning and rule of the law.

To overcome these problems, WWF Indonesia has been endorsed and should involve many parties to strengthen the good forest governance for succession of REDD+ project in Tesso Nilo. On the contrary, the good forest governance is the main pre requirements of REDD+. I prefer to conclude the second sentences. What kind of the scheme in term of forest management and reducing emissions, if not good forest governance cannot implement, it lead to failure. One example is CDM mechanism.

6.7. Conclusion

The REDD+ voluntary project in Tesso Nilo forest area shows the complex issues and which involves many stakeholders. The implementation of REDD+ both in conservation area (TNP) and the production forest under company management, and 23 interaction villages need collaboration and adaptation management. Many of external stakeholders and dependencies of stakeholders to REDD+ Tesso Nilo forest area add the complex, risk and uncertainty of this project. Adoption Harney in Messia (2010) the project proponent, government related to forest at national, provincial and district government, and communities who live in 23 village interaction are a core of Stakeholders. They have big influence and closer to the REDD+ implementation. While the other stakeholders that indirect involvement in the project in Riau and in four districts (Pelalawan, Kuantan Singingi, Indragiri Hulu, and Kampar) categorized as the Internal Indirect Stakeholders. Other stakeholders out of these that have influence for implementation and successful of Tessonilo project is categorized as External Indirect stakeholders.

To know that the REDD+ project problems and barriers, it needs elaboration of institutional analysis and good forest governance. Institutional analysis is done using the formal and informal institutions. Both formal and informal institutions have influence each other to the successful of REDD+ implementation and Sustainable forest of Tesso Nilo. All efforts done by provincial government, policy, rule of law, agreement and commitment to support national emissions are a part of institutional arrangement of REDD+ implementation project. Formal institutions are more attention of this project rather than informal institutions. While the forest governance analyze based on the 8 characteristics of good governance. Almost all characteristic of good government are weak and bad implementation. Many efforts of Riau province and district level, and other parties are done

to enhance good forest governance in Riau. The involvement of pressure groups is to balance the power government and privates, on the other hand increase the involvement and attention to local communities and conservation aspect.

Furthermore, the institutional arrangements and good forest governance that is done in Riau province has problem and barriers in term of REDD+ implementation project. The institutional problems cover of formal consisting of lack and the changing of regulation, bad implementation of forest institutions, less coordination and cooperation/less participation, unclearly boundary of authority, commitment are not following by action and integrated planning and policy, less technical guidance, bad financial institutions performance. The informal institutions problems are centralistic local staff behavior, les recognize of local knowledge and right in the REDD+ implementation, elite leadership use the reformation era and authority for sale the forest, and the changing of social norm and local culture. One of the possible answer to handle these problems is the implementation of Adaptive Collaborative Management in REDD+ planning, implementation and monitoring of evaluation. The possibility of ACM on REDD+ implementation both in sate forest and CBM can be seen on the next chapter. Reflection from Tesso Nilo REDD+ project and other projects both international and national REDD+ project are very important. These will be examine and analyze further to reflect and to get lessons learned from OM-REDD+ and Ulu Masen REDD+ project on the chapter VII.

CHAPTER VII

REFLECTION FROM THE OTHER PROJECS

AND THE NEED FOR ADAPTATIVE COLLABORATIVE MANAGEMENT (ACM)

7.1 Introduction

This chapter addresses the reflection from the other projects and the need of Adaptive Collaborative Management (ACM). Two of the reflections both from international project (is the designing of REDD+ in community forestry in Cambodia) and national projects (the Ulu Masen REDD+ Project) are enriching the case study of the Tesso Nilo REDD+ voluntary project. The designing of REDD+ in community forestry in Cambodia is as the first world initiative using the methodology of CCB (Climate Community Biodiversity) Alliance and the VCS (Voluntary Carbon Standard). The REDD+ in Ulu Masen-Aceh project- Indonesia is the first REDD project initiative in Indonesia combining between the state forest and informal- *mukim*[46] institutions. It also has conducted the CCB standard toward carbon trading voluntary market. In addition, the lesson learns from two these projects can support the Tesonilo REDD+ case study to analyze the possibility of the REDD+ using ACM approach both on the CBFM and state forest in Indonesia. From the reflection, ACM is one approach to cope the problems and the barriers of REDD+ project in readiness phase. Accordingly, the aim of this chapter is to answer the question 4.

The outline of this chapter is the first the explanation the concept and approach of ACM. The second reflects international and national projects. The third I analyze the need for ACM from the reflections of Teso Nilo case study supporting by reflection from the other projects. In the end I conclude the summary.

7.2 Adaptive Collaborative Management (ACM)

To understand about REDD+ scheme problems and barriers, and to set up it to be effective, efficient and more democratic, both on state forest and Community Based Forest Management (CBFM) will be supported by Adaptive Collaborative Management (ACM). In the context of uncertainty and risk, policy transfer needs adaptation; and in the context of interaction, communication approach needs collaborative management. The Centre for International Forestry Research (CIFOR), as mentioned by Colfer (2008) has developed "ACM" emphasizing on communication and consensus, shared learning, and responsibilities of actors for achieving more sustainable resource management leaded by stakeholder's agreement and action. In the planning perspective, recent development of theory of planning is moving from technical to communicative rationality or combining of these (Allmendinger, P., 2002). Accordingly, I analyze and recommend the possibility combining

[46] "A *mukim* (sometimes known as *kemukiman*) consist of a number of communities or villages with a common ethnic and cultural background under the leadership of the mukim (or more correctly the *Imeum mukim*), a religious leader who also had secular functions. Under the Imeum mukim were specialist community leaders such as the Kejrun blang (responsible for agricultural matter), the Pawang Uteun (controlling forest use) and the Panglima Laot (fisheries in coastal areas)" (*GOA*,2009).

ACM with REDD+ that will be more appropriate in Indonesia with the empirical testing of the Tesso Nilo REDD+ project activities. Below I address the description of these ACM approach.

CIFOR has developed ACM to "embrace the diversity, complexity, and unpredictability of human and natural ecosystems in order to develop collaborative management schemes that benefit both forest-dependent communities and forest resources" (Colfer (2005). Some key factors that become main driving to reach sustainable forest management is inequities in social relationship (e.g., male–female, permanent agriculturalist–shifting agriculturalist, North–South, wealthy–poor, plantation owners–smallholders; low caste–high caste). ACM is viewed as conventional approach to boost the institutions which is responsive and flexible to local conditions and encourages local participation early in resource management initiatives. The fundamental reason and premise to enhance ACM are the complexity of forest and unpredictability, the context dependent of local communities, and the solution that should be solved with collaborative process and adaptation of institutions. The ACM approach is a cycle form from observation, analysis of action and stakeholders, reflection, monitoring and evaluation, new action and planning based on adaption, reflection, and so on (Colfer, 2005).

My experience from 2003 to 2006 as facilitator and expert of collaborative planning at the project of Terrestrials Bukit Tigapuluh National Park facilitated by Norway Kingdom (Adisumarto et.al. 2006), found that the weaknesses of collaborative planning in the implementation process. We succeeded to formulate the strategic and action plan for integrated natural resources management in Bukit Tigapuluh National Park and the Bufferzone with collaboration planing, but it fail in the implementation. The big problems in the implementation are the lack of sharing management and benefit, the agreement that was not legally binding, and unclear of authorities and rewards and punishment. Thus, I appropriate to use the adaptive collaborative planning as the development of collaborative planning.

In the planning perspective, there is collaborative planning emphasizing on interactional process and relation, common action and goals (Healey, 2003). The critics generally neglected content and focused heavily on process, and also neglected the power. Based on critic on collaborative planning and my experience supported by Colfer (2005), I propose the adaptive collaborative planning which can be said as a part of ACM to eradicate these weaknesses by involving local people in management, improving their capacity, sharing lesson learns and experiences. For that purpose it needs a consecutive evaluation to make it better, a holistic and multidiscipline approach, and a new adaptation and creativity. The journey of planning perspective from technical rationality to communicative rationality and combination between them enrich my view in term of institutional REDD+ arrangements and good forest governance.

Regarding to good forest governance, Indonesia has regulated about the CBFM. And CBFM is one of the terms of civil society forest management towards sustainable manner and democratic ways. CBFM is one example of the policy as the implementation of ACM approach. CBFM can be said as sharing management and benefit of forest, shared learning, use formal and informal institutions to manage these forests. In the state forest, I intend to apply the ACM especially in terms of REDD+. ACM indeed enhances the involvement, sharing management, and shared learning in the state-centralistic forest (conservation and production forest); it also enhances the CBFM.

7.3 Reflection from the other projects

7.3.1 International lesson learn: the designing REDD+ collaborative project in Oddar Manchey Province, Cambodia

The reflection of project shows the crucial of collaborative approach in designing of REDD+ in Cambodia. This project is relatively success with the indicator of political will of government, good institutional arrangement, improvement of good forest governance, sharing management/authority and collaborative action. The outline of this section is description of location, aim and contextual problem, and then the strategy and finally the lesson learn.

Location, aims, and contextual problems

Royal of Cambodia Government through Forestry Administration in collaboration with Community Forestry International (CFI) and Terra Global Capital has been implementing and designing of REDD+ in the Oddar Meanchey province called OM-REDD+ from December 2007. This first REDD+ project initiative in Cambodia enabled local communities to safe guard their forest comprising thirteen community forestry (CF groups), which protected 67,783 ha of forest land with high biodiversity in the northwest province- Oddar Meanchey. It is predicted that this project will generate and segues 7.1 million metric tons of CO_2 over 30 years and alleviate of poverty for ten household farmers. The demonstrating of this project shows the combining of how developing countries can generate income from the carbon market scheme for the rural poor and positively impact climate change (Poffenberger et.al, 2010; Bradley 2009).

Oddar Maenchey is the newest province in Cambodia with 185,443 inhabitants in 2008 and total area 6,663 km^2; it is known as land mines in with 10 % of land mines in Cambodia. The total land area is 663,165 ha with forest cover in 2006 is 47,151 ha or 70 % from total land area. The presence of this landmines impact to remain stable of economic and local people got suffering even though the Khmer Rouge regime was fallen in 1979. The presence of land mines is ironic because on one hand, they made the less accessible and thus contribute to protection forest to date; on the other hand, the land mines give significant impose to REDD+ project implementation and forest management generally (Bradley, 2009).

The history of this project has begun from November 2007 with meeting of the joint donor-Government Technical Working Group on Forestry and Environment with supporting of several fundings which are DANIDA, DFID, NZAID, and Clinton Climate Initiative. CFI introduced the concept of REDD that would implement to community forestry in Oddar Meanchey province. This area has the potency for REDD project implementation because the community forestry area is sufficient scale. This initiative was very enthusiastic for the Forestry Administration of Cambodia and fortunately, in COP13 in Bali 2007, REDD has been become international concern. In February 2008, the Forestry administration endorsed the agreement and collaboration with project donors NGOs and local communities. Besides, Forestry administration designated the seller body to negotiate the carbon credit. The agreement outline the project objectives were: building partnership among stakeholders and the increasing of the capacity of CF groups to manage their forest, assessing and

verifying carbon stock, and additionality. Moreover they prepared the CF carbon project proposal, negotiated and finalized a carbon contract, and income sharing and distribution (Bradley, 2009).

The aim of this project is to establish a community REDD+ project to generate funding from the carbon credit on the global market under REDD+ project protocol. This project also contributes to support of the implementation of the national community program implementation, secures long term tenure right for forest-dependent communities, responds to rural livelihood needs, conserves biodiversity and support hydrological regime. Besides, OM-REDD combines and hopes get validation of CCB (Climate Community Biodiversity) Alliance and VCS in late of 2009. In early of this year, it is intended to generate of carbon credit using the voluntary market mechanism (Poffenberger et.al, 2010; Bradley 2009).

The contextual problems of this project were deforestation impacting from many rural livelihoods under poverty line, immigrants, large development of agricultural investments. The deforestation rate which is 2.1 percent annually (2002-2006) over than national deforestation (0,5 percent) has given big pressure for the natural forest in this province. The rate of population growth was annually 8.62 % (1998 -2008 period) mainly affected by immigration in Oddar Mancheay province. The main activities of rural people were opening the paddy field and slash and burn. Some of local communities did resin tapping, logging and charcoal production. The Growth population and immigration was influenced by attracted land and the need of labors for oil palm development. These activities gave impact to forest disappearing and degradation. In term of REDD+, halting deforestation and doing restoration are fit under REDD+ protocol (Poffenberger et.al, 2010; Bradley 2009).

In terms of intuitional context, Cambodian government mandated and recognized the community forestry both of in the forestry law (2002) and community forestry sub-decree (2003). Under these regulations, community is required to develop and submit legal document as a part of application of CF. Forestry Administration has committed to the community forestry with inspecting and made demarcation of CF boundary and cracked down of opening forest by military, and has prevented base military in this forest area. According to REDD+ implementation, government issued the Government Decision No.669 about carbon credit fund utilizes (Bradley, 2009).

Strategy and project success factors

The strategy of this project to cope these problems is mobilizing of community with supporting of national government and international funding to protect the forest for sustainable community forest management. The key issues of strategy are:

- Strengthening CF groups, including the formulation and adoption of management resolution
- Networking with Forestry Administration field staff and neighboring villages
- Raising awareness regarding the REDD project and REDD activities
- Strengthening community forest-tenure rights through management agreements, mapping, and boundary demarcation

- Saving fuel wood through the introduction of improved cooking stoves
- Controlling fire through fire line construction, fuel load reduction, and fire brigades
- Halting illegal logging through volunteer patrols and forest watchers
- Building stronger coordination with community and local government
- Creating financial incentives for successful protection
- Developing annual carbon stock monitoring systems
- Focusing on agricultural intensification *(*Poffenberger et.al, 2010).

The main factor for succession of this project is the supporting of national government with government decision (GD) No.699 in May 2008. This decision concerns that revenue from OM- REDD+ project will be used to improve quality of forest and maximize of local communities benefit and their participation in the project. In the project level, it convinces stakeholders for future buyer of carbon credit and government commitment to this project. In addition the GD is a crucial thing to solve the conflict between communities, concessionaires, and military. The designated seller body also helps to made good communication and negotiation between Forestry Administration and carbon broker. Then, the Terra Global capital is selected to carbon modelling work and methodology development for submission to VCS. In counting carbon stock, Terra Global capital was helped by local communities' especially former Kmer Rouge military (Bradley, 2009). The Oddar Mancheay Governor' declaration strong support and encourage all authorities to cooperate and to coordinate of project implementation. Furthermore the budget supports for regular meeting and travel for representative of Community Forestry Federation (CFF) in Oddar Maenchey province. CFF has done sharing information with the province authorities effectively and taken problem solving together (Bradley 2009). The other factor is the satisfying the project document that was approved by two certifiers which are CCB and VCS[47]. Finally is the participating of local people to do patrolling with authorities of Forestry Administration (Bradley, 2009).

Dealing with the drivers of deforestation and degradation, thorough of REDD+ project has done several actions. They were: reinforcement of land tenure with securing of CF, forest and land use plan, forest protection, Assisted Natural Regeneration (ANR) and enrichment planting, respecting to local custom and belief. Then did fuel-efficiency stoves (reduce fuel wood use by 20-30%), avoided insect threaten the cattle by using mosquito net, did agricultural intensification, managed natural resource project for fisheries and ecotourism, developed non Timber Forest Product management and did fire prevention (Poffenberger et.al, 2010; Bradley 2009).

Lesson learn

If we see from the complex problem of forest in Cambodia is almost similar with Indonesian forest problem. The drivers of deforestation shown above were causing of unclear of land tenure, involvement of military regime, land mining, reformation era, and socio-economic aspect such as poverty, immigrants, opening forest and land, and illegal logging activities. All of these factors have occurred in Indonesia as well. Nevertheless the

[47] In term of voluntary market, CCB provides evaluating of social and environment and VCS concern to carbon stock assessment.

succession of the protection community forestry and REDD+ project implementation in Oddar Maenchey were depended on national political will, institutional arrangements and participation all of stakeholders. I note some lesson learn from this project.

First of all, the political will and institutional arrangements of Cambodia government both of national and provincial government was clear. The national government under Forestry Administration issued the Forestry law (2002) and community forestry sub-decree (2003) with respecting to community. The implementation of this regulation in the field area was clear with doing the problem solving, making demarcation, and securing the boundary of community forestry. Then in the implementation of REDD+ in the field got support from both national and provincial government. National government issued GD 669 that can bind all sectors to cooperate and to coordinate. Finally, provincial government declared the commitment, and respected with coordination and budget sharing to do the REDD+ in the community forestry.

Then local knowledge and social capital as informal institutions enhanced the project implementation with the commitment of local communities to concern about loss of deforestation. The community built the CCF and land use plan with assisting of international NGOs. The authorities of local people from forestry administration and the voluntary patrol the forest are also crucial thing. Buddhist Monks and provincial NGOs did support in training and capacity building of local communities in term of protection forest as social capital as well.

Finally collaboration action and supporting from all stakeholders lead to successful of implementation of OM-REDD+. CFI do the project identification, REDD+ design strategy and design team coordinator, Royal Government of Cambodia was as co-implementing agency and forestry administration. Terra Global Capital contributed to the calculation and development of carbon counting methodology. Many donors has supported the funding and DANIDA has been as Technical Working Group on Forestry Funding Agency in the implementation, PACT NGO was proposed as implement agency, Children's Development Association as the trainer of community together with Buddhist Monks of Samraong Pagoda and local NGOs. In the protecting the forest and implementation, CFF did forest patrolling, restoration and activity planning. All the collaboration actions enhance the successful of OM-REDD to conserve the community forest from international to local context. Strong political will from national, social capital from local people, good institutional arrangement and sharing management are very important to support the succession of this project. Clear and shared authority has played important role as well for the succession of this program.

7.3.2 National lesson learn: The Ulu Massen REDD+ project in Aceh-Indonesia

The reflection of this project relates to the REDD+ problems faced in Indonesia using the combining of informal institutions *mukim*. Then it explores the problem of institutional arrangements and good forest governance. This project reflects the REDD+ implementation in provincial government that faces some problems of institutions and gives lesson learn. The outline of this section is begun from the description of location, aim, and contextual problems, then is followed with the strategy, and in the end is finished by the lesson learn.

Location, aims and contextual problems

The ulu Masen REDD+ project is initiated by FFI (Flora Fauna International) using participatory approach and integrating of informal institutions-*mukim* This project is developed with collaborative action from international and local context involving many stakeholders. The REDD+ Ulu Masen project is located in Aceh Province covering six districts which are Pidie, Pidie Jaya, West Aceh, Aceh Jaya, Central Aceh and Aceh Besar. This project covers about 750,000 ha mostly in Ulu Masen landscape to other landscapes. The Ulu Masen landscape ecosystem is a part of Northern Sumatran landscape forest stretching from northern Aceh, Bukit Barisan Mountain, Leuser National Park, to North Sumatra forest. This landscape is rich biodiversity involving the endangered species e.g. Sumatran Elephant and Sumatran Orang Utan (*GOA*, 2009).

Many of stakeholders are involved which are government, privates, NGO and CSO. Government of Aceh (*GoA*) has been the leader of project implementation to cooperate and coordinate national and districts government and taken the lead of this project later on. This project has and will get funding support amount US$9 million from Bank of America-Merril Lynch. FFI helped by local NGOs facilitates participatory processes in project implementation. Carbon Conservation Ltd, PTY is the technical adviser having role especially to project design and carbon finance, development, start-up and carbon finance. All stakeholders committed to endorse the collaborative action for emissions reduction with benefitting among stakeholders including forest dependent communities (*GOA*, 2009).

The aim of this project is to reduce GHG emissions by using the REDD+ scheme contributing to sustainable economic and social development and to conserve biodiversity over the next 30 years. Its aim will be achieved using land use planning and reclassification, monitoring and law enforcement, reforestation, restoration, and sustainable community logging. If these activities are implemented well, based on FFI's prediction, it will decrease of deforestation by 85 % and will reduce emissions 3,369,848 tons of CO_2 annually. This project target can generate U$432 over 30 years through the carbon credit to voluntary carbon market (Down to Earth, 2008). Adequate carbon finance is essential for succession this project. The Project design note is intended to provide a qualified CCB audit with sufficient information to make informed decision on whether the project passes CCB validation (*GOA*, 2009).

The contextual problems of REDD+ Ulu Masen project is divided in to three parts, namely socio-economic, physical and biodiversity, and institutions. In the socio-economic problems, it can be seen from population, poverty, and conflicts. Total population of Aceh province is about 4,3 million in 2004 (before tsunami whereas); they are 160.000 people get

impact and 61 *mukim* include to this project. It is estimated that 50 % population in Aceh is lived under s under poverty line. Bappeda NAD (2006) reported that about 48 percent of the population had no access to clean water, 36 percent of children under the age of five was undernourished, and 38 percent of the Acehnese had no access to health facilities in 2002 Aceh province is the example of one province in Indonesia that has rich natural resources but the majority people's welfare is low. In the long time especially in Soeharto's regime, the traditional right to natural resources was ignored. It has implicated to conflicts natural resources between community and government until currently. Aceh province contained the political and social conflict between government of Indonesia *Gerakan Aceh Merdeka* (GAM*,* or Free Aceh Movement). Particularly during the ten year periods (1993-2003) Aceh was declared as a Military Operational Area (*Daerah Operasi Militer*, or DOM) and the Martial law (*Darurat Militer*) status (*GOA*, 2009). In addition, the tsunami in Aceh occurring in 2004 gave huge impact to dead and suffered people and infrastructures destruction[48]. Socio-economic problem mentioned above become challenges of this project with hoping that can improve the socio-economic conditions.

In the physical problems, based on FFI analysis for twenty years (1985-1997), the high deforestation in Aceh Province was high with annually 20,796 ha. But in the later ten years (1990-2000) analyzed by Conservation International, deforestation was faster in amount 30.952 ha/year (*GOA*, 2009). Especially in the forest of the Ulu Masen REDD+ project the deforestation about 9,630 ha or 1.28 % of the total area (McCulloch, 2010). This deforestation indeed threats the high biodiversity of Ulu Masen forest containing over 700 species of vertebrates, 320 birds, 176 mammals and 194 reptiles and amphibians (FFI survey in 2006 in *GOA*, 2006). There are much legal and illegal mining for gold in Gunong Ujeun, Aceh Jaya. Currently there are 6 logging licenses in the project area, comprising 404,704 hectares but when logging moratorium issued by *GoA* in 2007, their activities are stopped (McCulloch, 2010) but the deforestation is still occurring that is conducted by illegal loggers. It was found that 4.412 illegal logger in the Ulu Masen REDD+ forest based on report of FFI in 2009. Another threat is the plan of central government for this area to plantation forest (*GOA*, 2009). These problems will be addressed by REDD+ Ulu Masen project.

In the institutional context, Aceh province has been given the specific autonomy by central government with Law No.18/2001. Then it was replaced by law No.11/2006 for greater economy, forest management, including religious life, customs, education and the role of *Ulama*[49] in policy making of Aceh region. This law concerning to separation management and authority for natural resources that is greater than decentralization law. This specific law gives share 70% benefit to province and district from natural resources revenue especially oil and forest. But in the practice this law is contradicted with some of national law e.g. Forestry ACT No.41/1999. Until now, the *GoA* cannot manage by itself to forest management and make an agreement with Overseas Development Agency.

Relating to the Ulu Masen REDD+ project, the *GoA* issued moratorium logging regulation which is governor instruction No.5 in 2007. It gives impact to stop logging activities done by companies. In line with logging moratorium regulation, *GoA* establishes

[48] Its tsunami impacted to over 150,000 dead or missing, 127,000 houses destroyed and a similar number damaged, over 500,000 homeless, and 230 km of roads destroyed, and damage to over 37,500 hectares of land and 90% of surface corals and vast areas of mangroves (World Bank, 2006

[49] *Ulama* is the Islam religious leader

TIPERESKA/*Tim Penyusunan Rencana Strategis Pengelolaan Hutan Aceh* (expert team to design forest and planning to reach Aceh sustainable forest management) with Governor Decree No.522.1/534/2007 in 31 October 2007. Then *GoA* enacted the government decree No.5222.21/284/2008 concerning the development of team on eradicating illegal logging activities. This policy is followed by national government for adding 2.000 forest rangers engaging by provincial government in collaboration with law enforces and governments staffs for implementing logging moratorium.

The other institutional arrangements are the Ulu Masen REDD designation and Aceh spatial plan revision. Governor Aceh set up the Decree No.522/372/2009 concerning the Ulu Masen REDD demonstration project covering around 750,000 ha spread over six districts. It is followed by Governor Decree No.522/18/2010 concerning the establishment of the REDD Ulu Masen Task Force. Its task force is under the direct management of governor. It has a steering committee (SC) and an organizing committee (OC). SC mandates are to define procedure and substantive issue of REDD+ Ulu Masen and to report reported to governor whilst OC is to organize socialization; collaboration and cooperation of parties to enhance the draft REDD policies. Then in March 2010, *GoA* proposed the new spatial plan to central government for getting the approval with significant change of mostly Ulu Masen Area from produced forest status to protected forest status. All of these activities support the setting up of institutional arrangements of the Ulu Masen REDD project.

Based on the project design for audit CCB (*GOA*, 2009), this project will be succeeded depend on:

- The emergence of a real market for REDD credits that allowed sustainable forest land uses to out-compete unsustainable logging and forest conversion
- Independent review and approval of this project's baseline land use and carbon mission scenario.
- Successful design and implementation of project activities
- Development of robust forest monitoring and carbon accounting systems.
- Actual reductions of deforestation in the project area
- Measures to adequately address the possibility of leakage and permanence concerns

This project is in the early step with the implementation of FPIC in the beginning process. Even though there are many efforts to prepare some institutional arrangements and activities, but it has many problems in the implementation. Based on interview with the manager of the Ulu Masen REDD project, funding and institutional problems are more challenges. Then it is followed by lack of resources and political will. She stated:

> The most problem implantations of the Ulu Masen REDD project is funding to get the activities happening, we badly need interim financing before carbon credits are generated. We also need a clear regulatory framework from international-national-sub-national level. Copenhagen accord is not a binding document; it is certainly not enough but provides positive indications that REDD would be accepted in any international scheme, especially voluntary market still needs a clear regulation and direction. In national to sub national level, there are challenges (political mainly) - especially as national government is saying that all funds have to be channeled through national level. Thus, it is very difficult *GoA* to directly access funding from ODA (Overseas Development Agency). Problem of sharing benefit is still not solved yet. *GoA* has recently said revenues for UM Project should be: 50% (at least) to communities; 25% project implementation; 15% district/city; 10% provincial government. Ministry Forestry regulation that has been issued was unclear and contradictory which makes them very difficult to work with. Key point is that money has to make the project implementation ongoing

> and communities get benefits. There are, of course, lots of issues with capacity (financial and human resources etc), but the Government of Aceh is so keen to make REDD happen, and so committed and enthusiastic, that it's a really exciting time to be working with them and supporting what they are doing.

The other problems based on McCulloch (2009: 10-14), she noted that several pre-requirements of good forest governance are not upheld yet. McCulloch further more noted that this project is lack of consensus the Ulu Masen project definition. It has less of transparently especially on agree or not agree of land owners, poverty, and carbon right. Accountability of decision making both vertically and horizontally is weak; not only in the forest sectors but also in the other sectors. There is any confusing about role and responsibility of national and provincial government in managing the forest. It is difficult to see the equity and social cohesion in the development of policy in Aceh. It has lack of degree participation of local communities in institutional arrangements and mechanism. Finally there is no transparent independent verification and access for who use the forest that has gotten the legal right and the implementation. Forest law enforcement only involves the government and law enforcer; instead of collaborative action including community and other stakeholders (McCulloch, 2010).

Strategy

There are several strategies of this project. First, it is emphasizing on institutional arrangements. It comprises the REDD project management in the Provincial level with coordination with the national level and local level. National coordination is very important regarding emissions reduction that is national responsibility. Collaboration many actors and stakeholders is developed including international funding and local institutions. Related to international funding, this project funding is managed by World Bank for getting multi donor (known as APEF/ Multi-Donor Fund's Aceh Environment and Forest project). This project accommodates the all UM forest-edge *Mukim* (unique Acehnese governance institutions) and get recognition of CCB standard and has done FPIC in the beginning of the process. Another strategy is to decrease deforestation by improving the law enforcement. The project owner believes that this strategy will be useful to decrease the number of deforestation.

Lesson learn

The most tension of the Ulu Masen REDD project lesson learns is institutional problems. Even though, *GoA* has specific autonomy for greater management and issued many of regulations and agreements, but the implementation project are faced by the other conflicting the regulation that is made by central government as well. Strong decision and the clear rule from national government are very important. The ownership forest and carbon should be clear as well. The implementation and the succession of the Ulu Masen REDD project need clear direction and rule international, national and sub-national. Furthermore, combining of informal institutions in the project requires more efforts, resources, and good forest government. Finally, the positive and negative of lesson learn of the project are very important to support recommendation for REDD+ readiness phase in Indonesia.

7.4. The need for Adaptive Collaborative Management (ACM)

Following Colfer (2009) about the need of ACM to embrace the diversity, complexity and human and natural ecosystem and to reflect from previous three REDD+ projects description, ACM is as an approach that is more appropriate to cope the REDD+ complex problems. From the reflection of the Tesso Nilo case study REDD+ project and the Ulu Massen REDD Project, we can see that the collaboration approach has been done in the project implementation. Nevertheless the implementation of REDD+ in the field has faced some problems and it can be said that doesn't work well. Two problems were the lack of institutional arrangements and weak of good forest governance. Contrary, the lesson learns from OM-REDD in Cambodia showed the successful of implementation for protection the forest with the collaboration of many stakeholders emphasizing on the sharing management/authority and benefits. The OM-REDD in Cambodia as a matter of fact have been done the ACM in the implementation even though it cannot be clear stated. From the OM REDD in Cambodia and from my experience when I arranged the collaborative action plan of the Bukit Tigapuluh National Park and the buffer zone, ACM approach could support and fill the lack of institutional arrangements and good forest governance. Adaptation is needed in the collaborative approach because the collaborative approach has a little tension to power relation, to see the equities, and to concern the sharing management/authority and benefits. Thus this section addresses the possibility of the using ACM in REDD+ on the state forest and CBFM forest, its challenges, and its opportunities.

Based on the stakeholder interviewes, almost all the informant said that ACM is more appropriate approach in implementation of REDD+ both in state forest and CBFM. The representative forest institutions research stated"

> The ACM approach is ideally conducted in the REDD+ project because it can guarantee the full participation of local people, the shared learning, the equities at an complex problems, the shared management and benefit, the fast changing and needs of local adaptation, national and international level recognitions, and the contents from multi disciplines sciences accommodation.

I fully agree with the statement above, because if we are talking about the REDD+ policy, it will implicate to the local level which is local people who has the most vulnerable of climate change. Thus, they should be involved from its planning to its decision making and informed enough information. Then, their knowledge and informal institutions should be adopted as well. According to these explanations, the ACM concept is coherent with good forest governance.

Based on Colfer (2005) the pre-condition of ACM cover 3 items which are equity, learning process, and planning and action conducted collectively. Based on these, the REDD+ planning, the decision making, the implementation, and the monitoring evaluation should be done with the equity relation and power of stakeholders. Then is followed by learning together from many stakeholders, by taking account certain planning and action collectively, by resolving different interest and needs. The learning process will contribute to co-benefits which are acceptance of planning and increasing capacity of stakeholder especially local communities. Finally is how to make planning together as a living document that implements, evaluates, and revises/adapts again based on situation change, problems, and so on together.

The possibility of planning the REDD+ using ACM in the state forest has big chances. For example in the national park, the Forestry ministry enacted the Decree No. P.19/2004

concerning to collaborative management in the National park. Then government issued of Ministry Forestry Regulation No 56/2006 concerning to national park zoning. Two of their zones are traditional use zone and special zone. These zones are decided to allow the local people in national park and other stakeholders to do collaborative management including local government. Now CIFOR and Ministry of Forestry has been developing the zoning of the traditional use of local people and the special zone, these are a part of accommodation of the local people in the national park and collaborative management. Furthermore if the REDD+ implementation has been done, it needs the agreement of local people and government about the sharing benefits. Nevertheles, on the other conservation areas such as natural reserve, wildlife reserve have a little chance because the regulations are very strict to involve collaboration on these areas. Then in production forest or logging concessions, the possibility to plan REDD+ using the ACM has no chance to because there is no regulation decided yet for local people logging concession management. Especially on the industrial logging concession under the company management has big chance; but the legal right of concession is under the companies. Obviously it needs policy reform both in the conservation area and in logging concession to allow the community to get concession. Whilst the fact that many people's live on the production forest and conservation forest before the conservation area was be appointed and logging permit was issued.

On CBFM, the ACM is very fit. The spirit of CBFM accommodates of ACM. There are many forestry regulations to enhance the legalization of CBFM such as: Government Regulation Number 6 of 2007 concerning the community forestry, Forestry Ministry decree No P. 36 Menhut-II/ 2009 concerning distribution benefits, and Forestry Ministry Regulation Number 36/2009 concerning the allowing of the REDD project on community forestry. Nevertheless the marginal policy of CBFM is the problem; it needs the strong political will from central and local government to push the realization and legalization of some CBFMs. Otherwise, the customary forest under the informal institutions of indigenous people do not accommodated yet. The government should make policy reform to the right of indigenous people; it possible to decide not under the state forest but under the informal institutions management. Not only in the production forest but also in conservation forest like national park could be given as well to indigenous people management. It need some exercises to get the good possible way and management to protect the forest; but indeed, requires the further research. Based on the explanation above, ACM is the potential approach to address the problems of REDD+ planning and implementation that will give multiple benefits.

Besides, the challenges to implement of ACM on REDD+ in Indonesia is big as well. The problems are how to make same of understanding and perception to REDD+, how to enhance the same commitment, how to make institutional arrangements, how to improve good governance and law enforcement, and how to make the equity leveling the playing field. Off course these activities need policy reform and big effort to research and exercise all of these.

7.5 Conclusion

Theoretically, the ACM approach is combination from adaptation and collaboration approach. The combination of these approaches refers to the complex forest problem, rapid changing of regulation, uncertainty, risk of REDD+ and emissions reduction. CIFOR an forestry international organization has developed ACM on forest management. Adoptions from CIFOR expert-Colfer (2009), then I propose to combine and the possibility to integrate with the REDD+ planning and setting up on state and CBFM.

It is clearly described that many lesson learns from the reflections of the OM-REDD Cambodia and The Ulu Masen REDD+ project. The more similar condition of the two of reflection projects which are the same characteristic administration, planning, condition of developing countries, and forest problems; the more appropriate in the policy transfer. Even though the almost similar approach and strategy of the REDD+ of two these projects, but they bring the different of succession. It is caused by the different of institutional arrangements and different of political will. In the REDD+ Ulu Masen institutions arrangements are not integrated and the national political will is weak. Whilst in the OM-REDD in Cambodia, the strong national and provincial political will and shared management/authority and benefits are clear. The fundamental solution from the Tesso Nilo case study and the Ulu Masen project are the need of adaptation and collaboration approach. The summary of comparison of these two project can be seen on the table 7.1.

Table 7.1 the summary of comparison from the case strategy and lessons learned of OM REDD Cambodia and Ulu Masen REDD Project in Aceh.

	OM –REDD Cambodia	**Ulu Massen, Aceh-Ind**
case	Deforestation, land tenure conflict betwwen: of military regime, land mining, community. Problem with socio-economy and illegal activities	Deforstation, land tenure, conflict between logging comapnies, govt, and community, illegal activities
Strategy	Mobilizing of community with supporting of national government . International cooperation, CCB and VCS standard.	-emphasizing on institutional arrangements, - Collaboration many actors , CCB standard, and low forest enforcement to decrease deforestation
Lesson learn	• Clear and strong national support (issued GD 669 for CF, issued sub decree for community forestry); • Then local knowledge and social capital (CCF, Buddhist Monks, Local NGOs) • collaboration action and supporting from all stakeholders lead to successful of implementation of OM-REDD+ • Share management, authority and benefits	- The most tension is institutional problems - has specific autonomy for greater management but the implementation project are faced by the other conflicting the regulation made by central government - No Strong decision and the clear rule from national government - The REDD regulation can not bind all sectors - need clear direction and rule international, national and sub-national - Corrupted bureaucracy

That's why combining of REDD+ and ACM can more give guarantee of emissions reduction, protection biodiversity, climate change-REDD+ justice, and social and economic improvement. This is the end of this chapter; conclusion and recommendation will be summarized on the next chapter.

CHAPTER VIII

CONCLUSION AND RECCOMENDATION

8. 1 Conclusion

Since the pre industrial era **t**he increasing of GHG emission and CO_2 concentration are huge impacts to climate change. Currently, many parties is convinced by IPCC and other experts that deforestation emission contributes 18 -20 % these emissions. Accordingly, from COP 13 in Bali in Indonesia in 2007 to COP 15 in Copenhagen in 2009 has made an agreement of REDD policy as reduction emission using economic incentive and market mechanism. This agreement presupposes the developed countries to help developing countries to do emission reduction together. Indonesia is one of the countries in the world that has done the policy REDD+ transfer because of the international coercive and the failure of forest management, highest deforestation in the world and third largest emissions release after USA and China. The hybridization of policy REDD+ in Indonesia are through institutions both formal and informally. Thus it hybridization will work on different levels from international, national, to local levels. Sometimes adoption and hybridization of policy transfer does not work well in developing country like Indonesia. Therefore I analyze how extent does the policy-REDD+ transfer work out in practice and what are the institutions 'problem and barriers.

The problem above is analyzed by using the Dolowitz and Marsh (1996) policy transfer framework, institutional theory and good forest governance. Institutional theory analyzes the how the policy transfer work through institutions in difference levels and what are institutional problems and barriers. While good forest governance analyzes the performance and implementation of REDD+ when integrates with forest management system. Combining the policy transfer, institutional theory, and good governance is very useful to understand the policy REDD+ work out or not in Indonesia. Then qualitative research is used as a methodology with collecting the primary data from choosing the representative of REDD+ project in Indonesia which is Tesso Nilo REDD+ project. The interviews from national, provincial, districts, to village levels, the FGD and observation in the project level bring the primary data and enrich my views to analyze the institutions aspect of the REDD+ policy in Indonesia.

The study of policy transfer is very important especially dealing with international problems and agreement to face a climate change. The most existed controversy of climate change issue is how to mitigate it through REDD+ scheme. The vigorous debates and controversial issues are the effective and efficient way to reduce emissions using the market mechanism versus the market failure in reduction of emissions and its implications to injustice of climate change. Pro groups to REDD scheme believes that market mechanism for emissions reduction is considered the easy and the rational way in terms of emissions reduction globally. While the contra groups view that UN body and states intervention and the changing behaviors are more crucial things to reach emissions reduction. Then from the analysis in chapter IV, the contrast groups are firmly pushing the completeness of the REDD+ rather than reject it completely. By seeing the trends of the international politics (the Copenhagen Accord 2009), the supporter states behind the concept, the agreement, REDD+ policy will be agreed and implemented after the post Kyoto 2012. Indonesia is one of the

initiators of REDD scheme, currency Indonesia synthesizes REDD+ scheme on the forest management and policy in Indonesia.

The most problems in policy REDD+ transfer are how unique the adoption is, how the institutional arrangement can be setup, how to integrate the new policy in the contextual planning and culture, and what the implication of REDD+ in emissions reduction, social, and economic impacts. Institutional analysis on different levels is a necessary way to analyze the successful and the failure of the policy transfer in Indonesia. Good forest governance, real participation, and adaptation institutions are the pre requisites. Thus using the case study of the Tesso Nilo REDD+ voluntary project with adding the reflections from the designing collaborative REDD+ project in Cambodia and REDD+ Ulu Massen project in Aceh, the problems and barriers of policy transfer and implementation of REDD+ will be used as a study case to test the problem statement and to answer the research questions

Following the policy transfer framework of Dolowitz and Marsh (1996, 2000), there are many efforts, unique hybridization, constrains, and challenges of the policy REDD+ transfer in Indonesia. The Policy REDD+ hybridization is categorized as coercive policy transfer. The failure of forest management contributes impact to huge emissions release in Indonesia and international agreement. Indonesia began intentionally amount of efforts required in the Policy REDD+ transfer as a host country of the cop 13 Bali and other international negotiations. Then it is followed by the commitment of President and governor to cut emissions by issuing national regulation and enhancing collaboration and coordination to all stakeholders even though there still has low ladder participation. The uppermost constraints and challenges are that REDD+ as neoliberal context that is not all fit with Indonesian planning system and culture. The centralistic views that had been influenced by colonization of Dutch and new order-military regime make it difficult to change the mind set of government staffs. They need more time to evolve the decentralization perspective. Then, the condition is also followed by the marginal policy for CBFM where there still have bad law enforcement including bad planning performance, and weak resources both technology and human resources. In addition the different situation of social, culture, and ideology with the original countries of REDD+ (USA and EU countries) are also be the constraints. The challenge is that if the policy REDD + transfer work well, it will benefit to climate, community and conservation.

The policy REDD+ transfer in Indonesia is done through institutions. Formal institutions more attention and influence the succession of policy REDD+ transfer and implementation rather than informal institutions. The formal institutional problems cover the lack of regulation, planning problems, lack of participation/collaboration and cooperation, un clear direction/management/authority/benefits sharing, and bad of good forest governance. While some of informal institutions do not support or contra with the REDD+ policy. The good institutional arrangements and performance need good forest governance. In term of institutions, Indonesian government has been issued many regulations, integrated it into forest management. Indonesia government has made commitment to setup REDD+ framework and implement the demonstration activities and voluntary and done other efforts to consultations. Indeed institutions both formal and informal influence, become the constrain and need more attention to the successful of policy REDD+ transfer and implementation well.

The successful of the policy REDD+ transfer and its implementation should be followed by good forest governance. The bad performance of good forest governance that performs in Indonesia both at the national to local level is the main encounter. The good forest governance problems cover lack of transparency, less participation, lack of land allocation and revenues, low public accountability, low forest law enforcement, land tenure conflicts, unfair of distribution and benefits, and corrupted bureaucracy. The bad performance of good forest government influences unsuccessful the policy REDD+ transfer in Indonesia.

In the project site level, many stakeholders, interests and needs, complex issues of the Tesso Nilo forest are some challenges to implement of REDD+ and to ensure the sustainable Tesso Nilo forest. Accordingly, there are some problems and barriers of REDD+ voluntary project especially in institutions and forest good governance. The institutional problems in the project level are almost similar to national which are lack of formal institutions and less accommodative of informal institutions. The problems include regulation problem which are the lack of regulation and the needs of change, less technical guidance, conflicting the regulations, bad implementation law enforcement, and weak of resources. Then is in the planning aspect which are lack of participation planning, un-integrated planning of REDD+ from national to local spatial planning, the commitment un-followed by action and un-integrated to planning and policy in to provincial and local planning. In addition the problems are with unclear boundary management and authority, lack of sharing management and benefits. Furthermore it is also problem with less coordination, cooperation, and bad financial organization performance, Finally it is faced with problem of informal institution especially lack of accommodation informal institutions and leadership. Good forest governance problems cover all of the 8 characteristics of good governance weaknesses. The weakest problem is government accountability; corrupted bureaucracies embed in all sectors, bad law forest enforcement, and no acceptance of CBFM in Riau legally. Then they are followed by land tenure conflicts, weak of participation, less transparent, conflict issue regarding to centralization and decentralization, and lack of resources. The institutional problems and weak forest good governance lead to high deforestation in the field. These problems above cannot guaranty the leakage, additionality and permanency. In addition indeed it is difficult to do MRV and REDD+ implementation phase in 2012. Based on the description mentioned above and with current condition, the policy REDD+ does not work well or lead to failure.

The needs of institutional arrangements and good forest good governance can be taken from lesson learn from Cambodia and Aceh REDD+ projects. In OM-REDD+ Cambodia project, the central and provincial government's political will are strong. The central government issued the community forestry sub decree, the GD 669 about implementation of REDD+, and clearly demarcation between forest boundary and it gives authority to local people to safeguard the forest. The provincial government shared budget and management with the local community forestry federation. Then local social capital and local institutions were adopted by government in the implementation of REDD+. Finally OM-REDD+ project showed the good collaboration among international agencies and funding, government, local NGOs, Buddhist Monks, and local communities. It is different with the Ulu Masen and the Tesso Nilo REDD + project. Indonesia government issued ministry forestry that cannot bind all sector vertically and horizontally and the limitation of local institutions involvement.

Then, it is not followed by the clear management and authority. The reflection from the two these projects are obviously contributes to this study.

Particularly for the Ulu Masen REDD+ project, the efforts of provincial government were big, but they have problems with national government political and regulations. The conflicting of special autonomy and forestry law become vague and unclear of the owner and authority of the Ulu Masen forest. Then combining the local institutions of *mukim* has been very interesting and conducting the CCB standard that has accepted by international third party was the specific achievement. Nevertheless the project doesn't work well because of the lack of funding and less accessible funding and agreement done by provincial government to ODA. No strong political will of central government and conflicting law and regulation are the most problems of implementation REDD+ in Ulu Masen and Tesso Nilo. Then less involvement of local people on the forest law enforcement became also the problem. Finally the integrating of *mukim* in REDD+ project are not followed by the clear right for local communities, sharing management and benefits.

With the current condition of good forest governance, and problem of institutional arrangements in Indonesia, the ACM approach can enhance and enforce the two these condition. Besides, the consciousness of the complex forest problems, many stakeholder's involvement, big risk and uncertainty of reducing emissions, and high changing and political pressure, should be addressed with adaptive and collaborative approach. Refer to Colfer (2005), complex natural and social behavioral systems are possible anticipated with the ACM. The possibility to plan REDD+ using the ACM approach is big chance both in the state and CBFM. Nevertheless, in state forest especially in logging concession has no chance if there is no policy reform. In the conservation area especially in the National Park can be done but the other conservation areas like sanctuary and natural reserve have a little chance. The big chance and opportunity to implement of REDD+ planning using ACM is in the CBFM. So it is very important to push the regulation and political will in Indonesia for legalization and recognition of CBFM.

8. 2. Recommendation

Policy recommendation

There are several recommendations for solving the problems and barriers mentioned above. First it relates to policy REDD+ transfer:

- Internationally, the REDD+ agreement should become legally binding for the next COP; with the current condition many projects have problem with funding and further action with no clear direction.
- Reducing of emissions especially for developed countries is very urgent with making the reverence level of emissions, besides reducing GHG under the REDD+ scheme. With only cap and trade, there are no significant emissions reductions globally.
- Indonesian and international agencies should do real communication and high ladder participation of stakeholders for understanding and achieving same perception of REDD+ concept, framework, and future potency.
- Changing the centralistic to decentralization government culture or from government to entrepreneurship.
- Improving of infrastructure of REDD+ and human resources.

- The policy REDD+ transfer should accommodate the local culture and needs adaptation of institutions and improve of good forest government.

Secondly recommendations refer to institutional arrangements:

- Issuing minimal the government regulation and if possible the ACT for REDD+ or climate change
- Reforming the forest law no 41/1999 that coherent with decentralization law and pro to CBFM
- Making regulation that emphasize on the acceleration of CBFM legalization
- Integrating the REDD+ policy to spatial planning from national to local planning
- Putting down the president's commitment (to cut emissions 26 % without donor assistance and 41 % with donor assistance) to regulation and spatial planning from national to local level
- Doing real communication for making same perception and definition of REDD+ and community awareness.
- Using and accommodating of local and informal institutions in the forest management system and REDD+ framework.
- Strengthening of leadership and management of forest.
- Making more practical guidance and regulation to local level
- Doing capacity building of local stakeholders
- And collaborating to international funding and agencies.

Thirdly in connection with good forest governance:

- Making clear the forest management authority between the central, provincial and local government, and also for community.
- Strengthening accountability and building confidence and readiness of REDD+.
- Increasing transparency and the ladder of participation.
- Safeguarding REDD+ payments and markets, and making clear distribution that is bigger to local people.
- Doing forest law enforcement with involving civil society and NGOs
- The possible good approach in the implementation of REDD+ that can enhance the benefit for climate, community and biodiversity which is using ACM approach from planning, implementing, monitoring and evaluating with the circle way.

8.3 Theoretical reflection

There are several reflections of theory with using the empirical testing of the Tesso Nilo REDD+ study case and the reflections from Cambodia and Ulu Masen Aceh projects. The first respects to the policy transfer following the Dolowitz and Marsh (1996, 2000) framework. Using the institutions on different levels analysis can clearly how the policy transfer is done and faced the problems from national to sub national. All most all findings support the framework Dowlowitz and Marsh. Nevertheless there are two important contributions to their frame work. First is about most current actors in policy transfer and secondly is factors of succession policy transfer. The most currently actors of policy transfer are not two but three, which are policy entrepreneur/expert, supra national organizations, and also pressure groups e.g. International NGOs. Then in the empirical study found that the

succession or failure of policy transfer is not only depended on 3 factors which are sufficient/insufficient information, complete/incomplete transfer, and sufficient/insufficient attentions for difference the economic, social, political and ideological context in both transferring and borrowing country, but it adds with the implementation performance these. For example the problems of REDD+ in the Ulu Massen project even though has attention to the third factor. The implementation performance includes how the institutional arrangement is obeyed by stakeholders and the good governance is implemented well and also the reward and punishment is done.

The second relates to the institutional theory and good forest governance. I support the argument of Gupta et.al., (2008) that institutions are difficult to change traditionally. The centralistic view of Indonesian government is an example. Indonesia has been done reformation and implemented decentralization politics for eleven years but the cognitive script of individual actors of government tend to view of centralistic. Many of actors and groups in forestry sector are aware about of the lost of power; they don't want to share the responsibility and authority to other parties (especially community). Then I support the institutions on different levels to understand the policy transfer in the different levels. Because the succession of policy transfer is depended on contextual conditions, thus the contextual institutions on varied level should be understood. REDD+ policy need good governance, it also support the institutional arrangements of REDD+ in Indonesia. Good institutional arrangement and good forest governance performance are two pre requisites of the successful of implementation of policy REDD+ transfer.

The third is about collaborative approach. In the complex problem, uncertainty, and many stakeholders involves, many needs and interests collaborative approach is not enough. It needs adaptation approach. Using the three projects in this study, the combination of adaptation and collaboration is indispensable. Reducing risk and uncertainty of climate change on the REDD+ scheme can be done with adoption the situation and problems. Adaptive collaborative management is obviously more tension to accommodate the collaborative but it also approves the technical perspective. Then it also stress to process orientation with giving attention to content, accommodating international to local context, and combining all of aspect and discipline sciences.

Finally is in connection with strengthening of qualitative method. The case study of Tesso Nilo REDD+ strengthens the qualitative menthod. Empirical facts and findings are very important to support and generate grounded theory. With doing the interview, observation, following the seminar, and FGD, the researcher has deeper understands and more sense to know the realities and problems in the field. The stakeholder's perception and their knowledge are important as well to formulate recommendation.

8.4 Further research

Finally it needs further research to develop planning and research method for ACM. Some of important further researches are the designing of REDD+ using the ACM approach on the state forest and CBFM. For methodology I suggest to use participatory action research (PAR) to analyze the REDD+ planning with ACM approach. The exercises of REDD+ using ACM are also needed to complete and support of the REDD+ international agreement.

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