



Ministry of Forestry of Indonesia International Tropical Timber Organization

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Enhancing Forest Carbon Stock to Reduce Emission from Deforestation and Forest Degradation through Sustainable Forest Management Initiatives in Indonesia



REPORT

REVIEW INFRASTRUCTURE FRAMEWORK AND MECHANISM RELATED TO SFM AS IMPORTANT OPTION IN REDUCING EMISSION FROM DEFORESTATION AND FOREST DEGRADATION

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through Sustainable Forest Management (SFM) Initiatives
in Indonesia

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EXECUTIVE SUMMARY

REVIEW INFRASTRUCTURE FRAMEWORK AND MECHANISM RELATE SFM AS IMPORTANT OPTION IN REDUCING EMISSION FROM DEFORESTATION AND FOREST DEGRADATION (REDD)

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Reducing Emission from Deforestation and Forest Degradation (REDD) could be implemented through several options. One of the most important options for REDD implementation is practicing sustainable forest management (SFM). It could be concluded that there are some lessons learned from the existing legal framework concerning the REDD mechanism in the context of sustainable forest management in Indonesia, i.e.

First, some ambiguities and inconsistencies are identified in the existing laws and regulations related to REDD, among others are: ambiguity of authorities towards forest resource management due to unclear definition and scope of tasks and obligations of central and regional government -both province and regency/city- in the Law 41/1999 on Forestry and Law 32/2004 on Regional Governance. Some inconsistencies are also observed in the inter-sectoral laws and regulations, for instance Law 41/1999 on Forestry, Law 32/2004 on Regional Governance, Law 33/2004 on Fiscal Balance, Law 26/2007 on Spatial Plan, Law 32/2009 on Mining of Mineral and Coal, and Law 32/2009 on Environmental Protection and Management. Furthermore, inconsistencies are found among implementing regulations such as inconsistency of the Government Regulation 6/2007 jo. Government Regulation

3/2008 on forest arrangement and some others technical as well as sectoral regulations. In some cases, unclear division of duties is also found in the Ministry of Forestry internally among others are division of task and responsibility of the cross-sectional working units. Those situations appoint to an ineffective bureaucracy in forest administrations, most of them are due to unclear division of responsibility referring to location of forest areas, forest functions, and kind of activities.

Second, the other problems of the REDD implementation are concerning the “lack of technical details”. Some regulations on REDD have been enacted, e.g. Forestry Minister Regulation P. 68/2008, P. 30/2009, and P. 36/2009. However, they only gave general rules of REDD mechanism but less explaining the technical details of required documents, such as funding guarantee, legality of area, and the responsible unit for certain procedure or permit. Besides lack of technical procedure for REDD permit, it needs also some clarification on the detail of technical implementation such as institutional schemes (IUPJL, IUPHHK-RE, HKm, etc.) and profit sharing mechanisms.

The readiness of legal infrastructure framework on REDD shall ensure a minimum leakage of carbon. In Indonesia, the leakage could be occurred due to illegal logging, forest land encroachment, forest land conversion, or forest fire in the other regions due to implementation of REDD programme in another region.

Socio-economic and political situations influenced significantly to the implementation of forestry practices. In Indonesia, shifting political system towards decentralization, for instance, was resulting a massive policy of maximizing natural resource extraction in many regions. There were indubitable evidences that during the political transition period, illegal logging spiraled upward and the deforestation rate sharply increased. Therefore, more than silvicultural or technical factors, sustainable forest management shall be seen as a political choice. REDD could be practiced as one of the supporting instrument of sustainable forest management. Therefore, any regulations on REDD shall not challenge the national interests and have to respect and benefit to the local community. Due to those reasons, any fiscal regulations on REDD shall consider not only the price of carbon but also the other alternatives of economic use.

The current concepts on REDD are mostly challenging the national interest because they usually follow the concept of “Purchasing Development Right” (PDR). Instead of neglecting national interests, any regulations on REDD shall be able to create added value in term of Gross Domestic Product (GDP), linkages (forward and backward linkages), and multiplier effects (output, income, and employment).

As a political matter, institutionally REDD needs to be supported and could be achieved among others by speed-up the formation and operation of Forest Management Unit (FMU) and implementing “green” fiscal policies, i.e. by adopting green income accounting and green taxes. It recommends to policy makers to formulate green fiscal policies by considering the following schemes: **First**, adopting green GDP as satellite account in the national as well as regional income accounting system. **Second**, developing mutual agreement on PES among the regions along the watershed area. One of the alternatives of practicing fiscal policy is implementing PES through special allocation fund for conservation. The minimum payment of PES shall be equal with the difference of conversion value and conservation value. **Third**, enforcing “liability rule” through revision of fiscal balance law to ensure the implementation of “incentive and disincentive mechanism” in managing natural resources.

Fourth, regulating mechanism for “Purchasing Development Right” (PDR). In the context of REDD, by regulating mechanism for PDR the carbon buyers may prohibit the forestland owner (government or private) to cut trees, but the buyers will pay compensation to forestland owner with certain amount of money, equals to the income should be obtained from harvesting timber. Theoretically, most of the proposed REDD schemes right now follow the concept of PDR. In the context of international relations and national sovereignty, the concept of PDR shall be implemented selectively and carefully. To ensure a proper policy for PDR, some key questions shall be considered: 1) the cost for preparing REDD, 2) development pressures on the land, 3) productivity for agriculture and other economic uses, 3) legitimacy of Regional Spatial Plan, 4) environmental and cultural benefits of forest preservation, 5) proximity to other preserved lands, and 5) Leverage of matching funds coming from other funding entities.

The schemes of REDD could be implemented if and only if they fulfilled the criteria of the effectiveness, efficiency, and equity. Several important components are recommended to be regulated in order to implement low carbon development schemes effectively, i.e. first, definition of proponents; second, sale and purchase terms; third, project development and implementation; fourth, costs and taxes; fifth, defaults and remedies; and sixth, general provisions.

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INTRODUCTION

1.1 Rationale

Sustainable Forest Management (SFM) could not be achieved without proper infrastructure framework and mechanism. Infrastructure means the basic organizational structures and facilities needed for operation. On the context of SFM, infrastructure comprises a set of policy, institution, and facility constructed to operate SFM. Infrastructure of SFM is also embedded with forest governance, related to complex mechanisms, processes, and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations. Governance has a broader meaning than government, whose principal elements include the constitution, legislature, executive and judiciary – where they are the important components of the SFM infrastructure.

Although SFM is important option in reducing emission from deforestation and deforestation (REDD), however, it does not mean that SFM is part of REDD. On contrary, REDD shall be placed as one of the supporting schemes for SFM. Therefore the principles of REDD, i.e. effectiveness, efficiency and equitability shall parallel with the three pillars of SFM: ecologically viable, socially acceptable, and economically feasible. The construction of SFM's framework for REDD mechanism shall be also transparent, accountable and promoting the rule of law. The infrastructure framework of SFM shall assure that political, social and economic priorities are based on broad consensus in

society and that the voices of the poorest and the most vulnerable are heard in decision-making over the allocation of forest resources.

Improper infrastructure framework of SFM could be one of the influencing factors for deforestation and forest degradation. The deficiencies in SFM's infrastructure such as policies and legislation, tenure, organizational structure and bureaucratic apathy are among others, some macro level issues threatened to sustainability of forests resources. To review infrastructure framework and mechanism of SFM, evaluating content and hierarchy, ambiguity, and implementation gap of policies related to forest management in Indonesia is necessary.

1.2 Objectives

Development Objective

To promote the SFM as important option for forest based climate change mitigation - to reduce emission from and by tropical forest.

Specific objectives

To develop national strategy in maintaining and increasing forest carbon stock through SFM.

Activity objectives

To review infrastructure framework and mechanism related to SFM as important option in reducing emission from deforestation and forest degradation.

1.3 Study Tasks

1. Collect and evaluate relevant documents and other information on forest-related policies issues, including legal and institutional frameworks;
2. Identify and analyse content and context of the existing forest-related policies, including legal and institutional frameworks in Indonesia;

3. Recommend legal and regulatory frameworks and propose appropriate REDD mechanisms in order to implement sustainable forest management.

1.4 Study Outputs

1. List of legal and regulatory frameworks related to REDD mechanisms and sustainable forest management.
2. Documentation of gaps, constraints, conflicts and inconsistencies in the forest-related policies as well as methods, approaches and possible options related REDD mechanisms and sustainable forest management;
3. Recommendation of approaches and methods to develop and improve infrastructure frameworks and mechanisms related REDD towards a sustainable forest management;

1.5 Report's Outline

The report will consist of six chapters. Chapter 1 explains the background, objectives, tasks, and outputs of the study. Chapter 2 contains the study framework and methods used in the study included methods for collecting data, policy analysis, and research questions.

Chapter 3 is one part of the main substances of the study explains about policy and legal frameworks related to REDD mechanisms and sustainable forest management, as well as discusses the disharmony of the policies and regulations, consists of ambiguity and inconsistency as well as implementation gaps.

Chapter 4 contains analysis and formulation of appropriate infrastructure frameworks and REDD mechanisms in order to achieve sustainable forest management. Chapter 5 describes lessons learned from cases of stakeholder perceptions on REDD. The last part, Chapter 6, is the conclusion and policy recommendation.

CHAPTER 2

METHODOLOGY

2.1 Study Framework

The study in reviewing infrastructure and mechanism related to SFM as important option in reducing emission from deforestation and forest degradation has been conducted by the following framework (**Figure 2-1**):

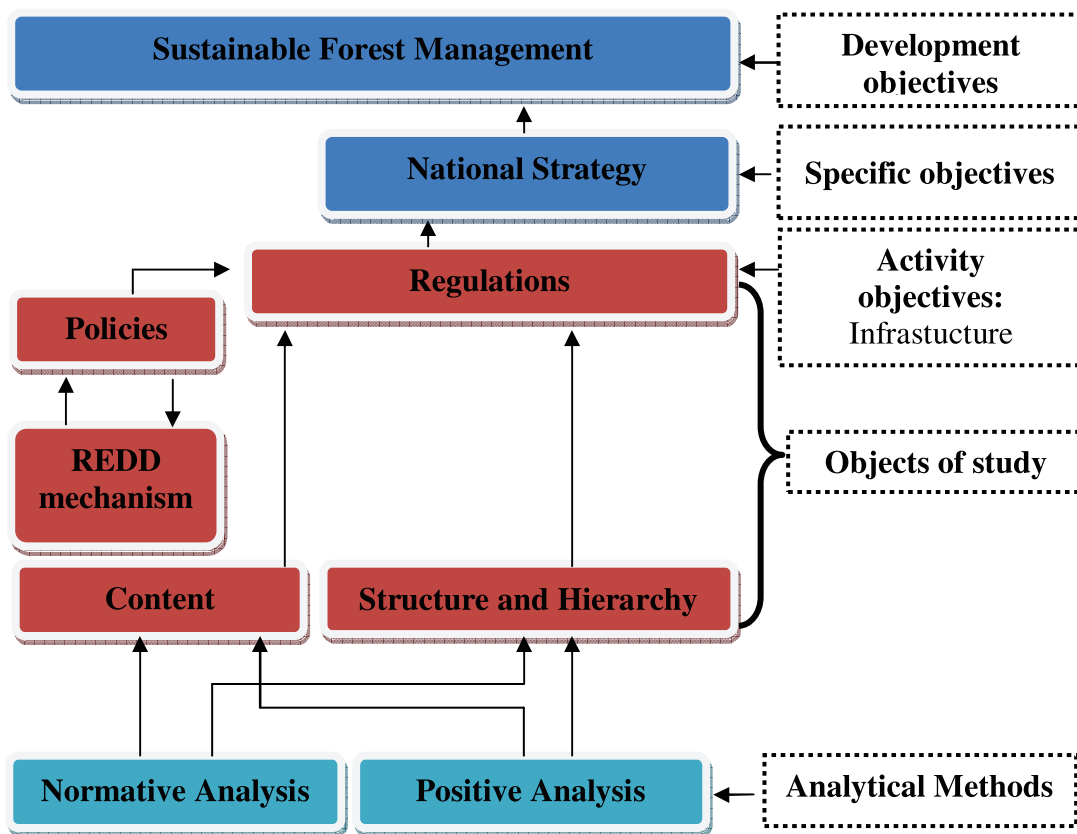


Figure 2-1: Logical Framework of Infrastructure Analysis on REDD and SFM

The **Figure 2-1** describes the logical flow of the study on the infrastructure frameworks and REDD mechanisms towards sustainable forest management. In overall, there are two analyses used in this study, i.e. content analysis and analysis of legislation hierarchy, to understand the consistency of policies as well as the implementation gap.

The specific objective of this study is to recommend a national strategy in maintaining and increasing forest carbon stock through sustainable forest management. To achieve this objective, it needs appropriate infrastructure framework, acceptable REDD schemes, proper SFM mechanisms, and removal implementation gap. Therefore, reviewing the existing policies, evaluating mechanisms, and identifying the implementation gap are necessary (**Figure 2-2**).

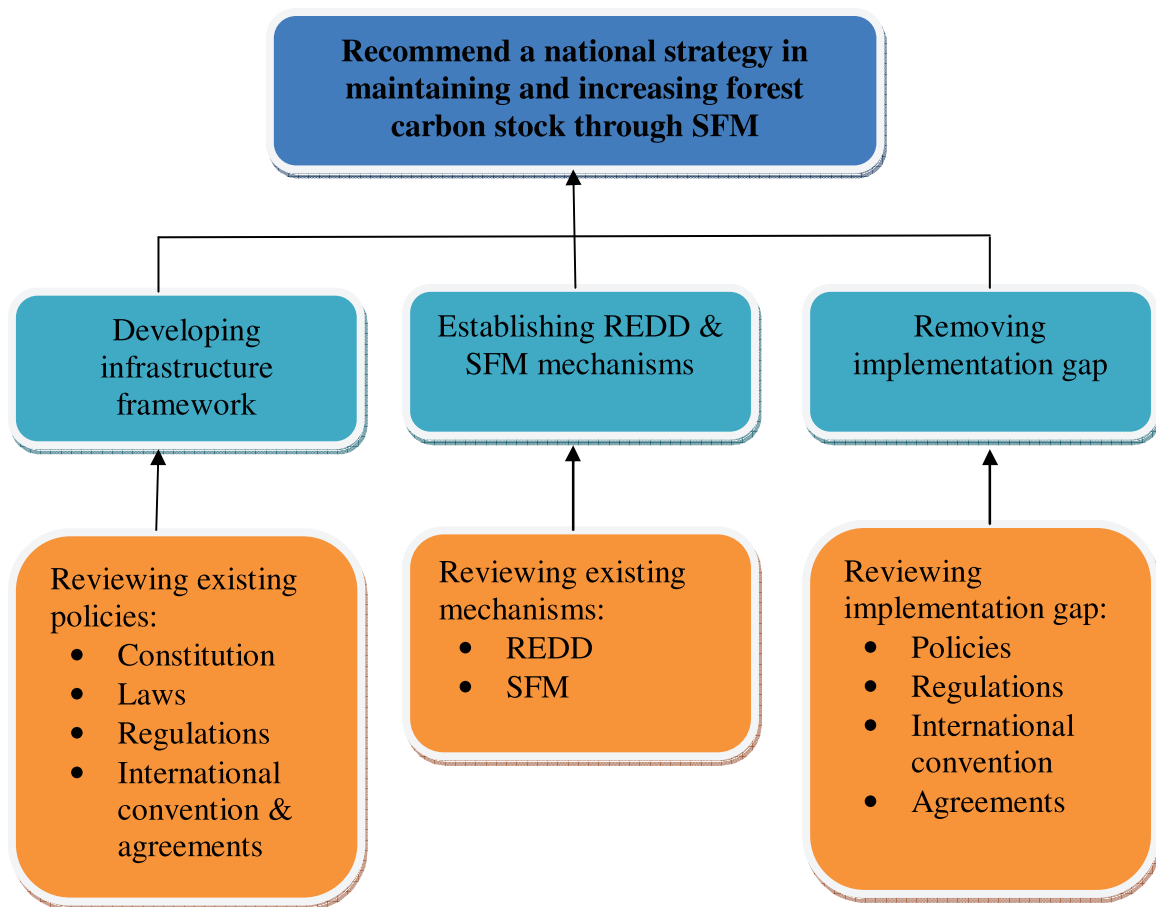


Figure 2-2: The steps of study

Institution is one of the most important aspects of infrastructure setting and therefore, discussing institutional dynamics is needed. The other pivotal aspects of infrastructure are law and regulation. Designing regulations should take into consideration the national policies as well as local specifics, i.e. political commitment, institutional dynamics and contextual situation (**Figure 2-3**).

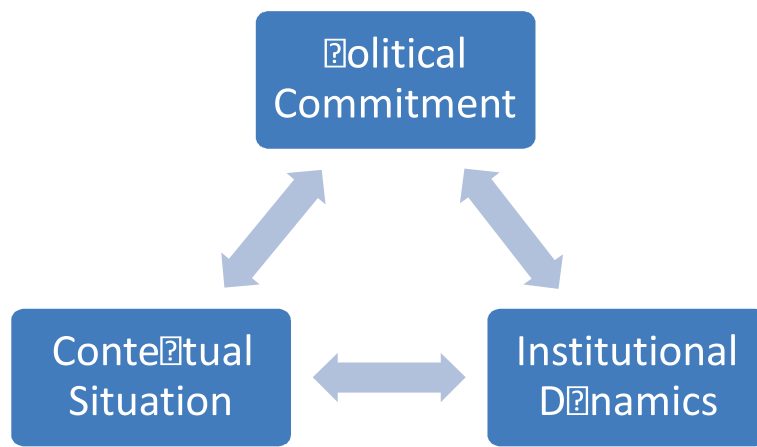


Figure 2-3: Infrastructure Framework's Setting

2.2 Methods

The study of “review infrastructure framework and mechanism related to SFM as important option in reducing emission from deforestation and forest degradation” were conducted through the following phases:

2.2.1 Data Collection

Collecting data and information on recent policy and regulation is necessary. Data is not only coming from official sources but also the unofficial ones to obtain better understanding on policy practices and legal aspects of the several alternatives of REDD

mechanisms in the context of forest governance. Those data comprise various regulations, reports, and relevant information from key person and media.

This study makes a cross check and examines the consistency of laws. A series of interview with various stakeholders were taken from the recent study in the province of East Kalimantan and Riau, to gather accurate information about actual policies, ideas, and policy implementation as well as policy implication.

2.2.2 Analysis of Policy and Regulatory Framework

The purpose of this study is to give a recommendation for a better infrastructure framework for REDD mechanisms and to support further dialogues in discussing appropriate policies to achieve sustainable forest management. This study will be conducted by using three analyses:

1. Content analysis of policies and regulations¹
2. Structure and hierarchy analysis²
3. Implementation gap analysis

a. Content analysis

Suitability of a regulation can be analyzed by using (at least) seven indicators based on regulation principles, which are:

1. *Purpose clarity*

Each regulation making should have a clear purpose to be achieved.

2. *Made by a right institution*

¹ Law 10/2004 article 5 stated that each legislation contents should be based on the seven principles of legislation making process.

² Regulation hierarchy is arranged by Law 10/2004 article 7, which describe the order of article 22A of the National Constitution of the Republic of Indonesia 1945

Each kind of regulations should be made by authorized institution/agency. If those regulations are made by unauthorized institution/agency, they can be cancelled by law.

3. *Compatibility between content type and material*

Every regulation making should really consider content material that fit with the regulation type.

4. *Implementable*

Regulation making should consider effectiveness of those regulations in community, philosophically, judicially, and sociologically.

5. *Effective and Efficient*

Every regulation is made because really necessary and beneficial to arrange the live of community, nation, and country.

6. *Clear and understandable*

Every regulation has to fulfill technical requirement of regulation making, systematic, understandable, and have a single interpretation.

7. *Transparent*

Regulation making process from planning, preparation, arrangement and discussion is transparent and open. Therefore, all people can have vast opportunity to give input on regulation making process.

b. Analysis of Regulation Structure and Hierarchy

Analysis structure and hierarchy of regulations will be conducted horizontally and vertically, as follows:

1. Analysis on regulation structure is focused on horizontal analysis. Horizontal analysis includes compatibility of a regulation with other equal regulation.

2. Analysis on regulation hierarchy is conducted to evaluate compatibility and consistency of a regulation with higher rule, according to regulation hierarchy.

c. Analysis of Implementation Gap

Compatibility of a policy or regulation cannot be seen only from the content and hierarchy as well as implementation. A comprehensive analysis includes normative principle of content and hierarchy as well as practical implementation and policy implication have to be studied together. For the reason, both normative and positive analysis approaches are necessary. According to Birner (2000), normative and positive analysis is defined as the following:

1. *Normative analysis*, is an analysis that use approach to answer the question *what should be exist*.
2. *Positive analysis*, is an analysis that use approach to answer the question *what reality is happen*.

Despite examine the consistency of legislations, normative and positive analysis is also conducted to see:

1. Institution, process and the dynamics of actors
2. Contextual situation that affecting policy process

2.3 Research Questions

This study is conducted to answer several basic questions as the following:

1. Are the existing policies and regulations' content related to REDD adequate for sustainable forest management?
2. Are there any inconsistency, ambivalence, disharmony and implementation gap on policies and regulations related to REDD?
3. What are the better alternatives for infrastructure framework and REDD mechanisms to support sustainable forest management?

REVIEW OF POLICY AND LEGAL FRAMEWORK ON FORESTRY

3.1 Legislation Structure and Hierarchy

After the fourth amendment of the National Constitution of the Republic of Indonesia 1945 in the year 2002, government issued Law 10/2004 on Legislation Making. *The release of Law No. 10/2004 is description of order of Article 22A of 1945 Constitution of the Republic of Indonesia.* Based on Law 10/2004 Article 7 (1), **the legislation type and hierarchy** is:

- a. National Constitution of the Republic of Indonesia (UUD 1945).
- b. Law and Provisional Law/Government Regulation as Emergency Law (Perpu)
- c. Government Regulation
- d. Presidential Regulation
- e. Regional Government Regulation

According to the explanation of the Law 10/2004, what so called "hierarchy" is the stages of each legislations based on the principle that the lower legislations should not against higher legislations. The legislations that are not mentioned explicitly in the Law 10/2004, e.g. Ministerial Regulation or Governor Regulation is admitted the existence and have legal power binding as long as ordered by the higher legislation. The presidential decree, ministerial decree, governor decree, regency head/mayor decree, or other official decrees, that have character to regulate, exist before Law 10/2004 valid shall further known as

regulation. The policy makers shall refer to Law 10/2004 to avoid “misplacing” legislations. The contents should be regulated by **Law** are first, arranging in further the provision of the Constitution of the Republic of Indonesia comprising and second, all substances were ordered by Law to be regulated by Law. Some substances have to be regulated by laws are: 1) human rights, 2) citizen right and obligation, 3) law enforcement, national sovereignty and distribution of power, 4) state area and regional distribution, 5) citizenship and demography, and 6) fiscal.

A **Government Regulation** shall contain material that ordered to implement Law as it should. The substances of **Presidential Regulation** consist of material that ordered by Law, or material to implement the Government Regulation. While, the substances of **Regional Regulation** is all material contents in order to organize regional autonomy and assistance task, and contain regional exclusive condition and further description of the higher legislation, included: 1) Provincial Government Regulation made by Provincial House of Representative together with the Governor, 2) District/City Government Regulation made by District/City House of Representative together with Regency Head/Mayor, 3) Village/or the same level regulation made by village consultation body or other name together with village’s chief or other name.

Mistake that often comes on policy making is the addition of **crime provision** on legislation that it should not. According to Law 10/2004, the contents of crime provision were allowed only on two kinds of legislation: **Law** and **Regional Regulation**. On all matters related to **regional autonomy, fiscal balance, and natural resources management**, the role of **Regional House of Representative** cannot be ignored. Discussion of all matters related to regional autonomy, relationship between central and regional government, forming, expansion, and the merging of natural resources management and other economic resources region, as well as fiscal balance between central and regional government is conducted by following the house of representative of the regions.

3.2 Structure of Legislation on REDD

Arrangement of the implementation of Reducing Emission from Deforestation and Forest Degradation (REDD) in the context of sustainable forest management practice is related on various legislations. The legislations can be categorized as:

- 1) Legislation that **regulated directly on legislation hierarchy**, which is National Constitution (UUD 1945), Government Regulation, Presidential Decree and Regional Regulation.
- 2) Legislation that is **not regulated directly on legislation hierarchy**, such as Ministerial Decree, Governor Decree, Regency Head Decree, and other rules.

The national constitution (UUD 1945) is a constitutional basis for law and all legislations within the national legal system of Indonesia. **Table 3-1** shown the **constitutional basis for REDD** as well as sustainable forest management (SFM) on chapters and detail of related articles in the national constitution.

Table 3-1: Basic Principles of REDD and SFM in the National Constitution 1945

Chapter	About	Article (Paragraph)
I	The Form of the State and Sovereignty	1 (1,2,3)
II	People’s Consultative Assembly	3 (1)
III	The Executive Power	4 (1), 5 (1,2)
V	The Ministers of State	17 (3)
VI	The Regional Governments	18 (1,2,5,6,7), 18A (1,2), 18B (1,2)
VIIA	The Regional Representative Board	22D (1,2,3)
IX	The Judiciary Power	24 (1), 24C (1)
XIV	National Economy and Social Welfare	33 (2,3,4,5)

3.2.1 Sovereignty of the State

REDD shall be implemented according to the basic principles of the state governance ordered by the National Constitution of the Republic of Indonesia 1945, among others are:

The State of Indonesia shall be a unitary state which has the form of a republic
Sovereignty is in the hands of the people as is implemented according to the constitution

The State of Indonesia is State based on law.

Since Indonesia is a state based on law and implementation of people's sovereignty is based on constitution, therefore all type of regulation in the Republic of Indonesia should be based on the principles on constitution. With certain terms and conditions, the change of constitution can be conducted by People's Consultative Assembly (MPR). Besides enacting constitution, People's Consultative Assembly also inaugurates and dismisses president and vice president as government chiefs of the Republic of Indonesia. To govern the Republic, the president has to follow the rules, i.e.

The president hold the power to make laws in agreement with the House of Representative (DPR)

The president shall determine the government regulations to expedite the enforcement of laws

The president shall be assisted by the ministers of state and each minister shall responsible for certain matters in state administration

REDD as well as sustainable natural resources management have to follow the Article 33 (2,3) of the national constitution: "*Sectors of production which are important for the country and affect the life of the people shall be controlled by the state. The land, the waters and the natural riches contained therein shall be controlled by the state and exploited to the greatest benefit of the people.*" Hence, each policy and practice of economic source and natural resources management shall be based to the spirit on article 33 of the national constitution. The control of the state over forest has not to be ignoring

the prosperity of community around forest. The spirit of article 33 of the national constitution mandate the state to control the forest with the spirit of togetherness and also has to accommodate various interests, not only the interest of the Forestry Department or foresters, but also the interest of farmers, breeders, traditional community, and other communal groups.

3.2.2 Regional Government's Authorities

The Regional Governments hold some powers and authorities according to the national constitution as follow:

The Unitary State of the Republic of Indonesia shall be divided into provinces and those provinces shall be sub-divided into regencies and cities, which each province, regency, and city possess a regional government, as regulated by laws.

The governance of province, regency, and city shall administer and manage their governmental affairs by themselves according to the autonomy principle and tasks of assistance

The regional governments shall carry out the widest possible autonomy, except in governmental affairs that by the laws shall be determined as being the affairs of the central government

The regional governments shall have the right to determine regional regulations and other regulations to carry out autonomy and tasks of assistance

The structures and procedures of administering of the regional government shall be regulated in laws.

National constitution also ruled the principles of relation between central and regional government. According to the national constitution, *“the relationship in authority between the central government and the provincial, regency, and municipal regional governments, or among the provinces, and regencies, and cities, shall be regulated in laws whilst noting the exclusivity and diversity of the regions. The relationship in finance, public services, utilization of natural resources and other resources between the central*

government and the regional governments shall be regulated and executed fairly and equitably based on the laws”

Furthermore, national constitution also recognized and respected the regions with specific characteristic in the following rules:

The state recognized and respected the units of **regional government that are exclusive** and unique in nature as regulated by laws.

The state recognized and respected the units of **traditional society** with their traditional rights as long as they **still exist** and are in accordance with community development and the principle if a Unitary State of the Republic of Indonesia, as regulated by laws.

REDD as well as other proposals for natural resources management are subject of consultation with regional governments. They can propose the amendment of law or submit draft of law through the Region Representatives (DPD) related to the matters of *“the regional autonomy, relationship between central and regional government, formation, expansion, and merger of regions, **management of natural resources and other economic resources, and any matters related to the fiscal balance between the center and the regions**”* as well as *“provide consideration to the House of Representative ... over law draft on the state budget and law draft related to taxation, education, or religion.”* In implementing regional governance, *“Region Representatives may **supervise** the implementation of laws concerning regional autonomy, the formation, expansion, and merger of regions; the relationship of central and regional government, management of natural resources and other economic resources, implementation of the state budget, taxation, education, or religion and shall in addition submit the result of such supervision to the House of Representative in the form of material for its further consideration”*

3.2.3 Mechanism for Judicial Reviews

If they are any problem concerning laws, regulations, and/or different legal interpretation, the solution could be found through **Supreme Court** or **Constitutional Court**, according to the following condition (**Figure 3-1**):

The Supreme Court (“MA”) has the authority to judge at the supreme level, reviews **regulations under a law concerning laws**, and has other authorities provided by laws.

The **Constitutional Court** (“MK”) has the authority to judge at the first and the last level as the final decision in **reviewing laws concerning the constitution**, to decide over conflicts on the authority of state institutions whose authority was provided by the Constitution, to decide over the dissolution of political parties, and to decide over disputes on the result of the general election.

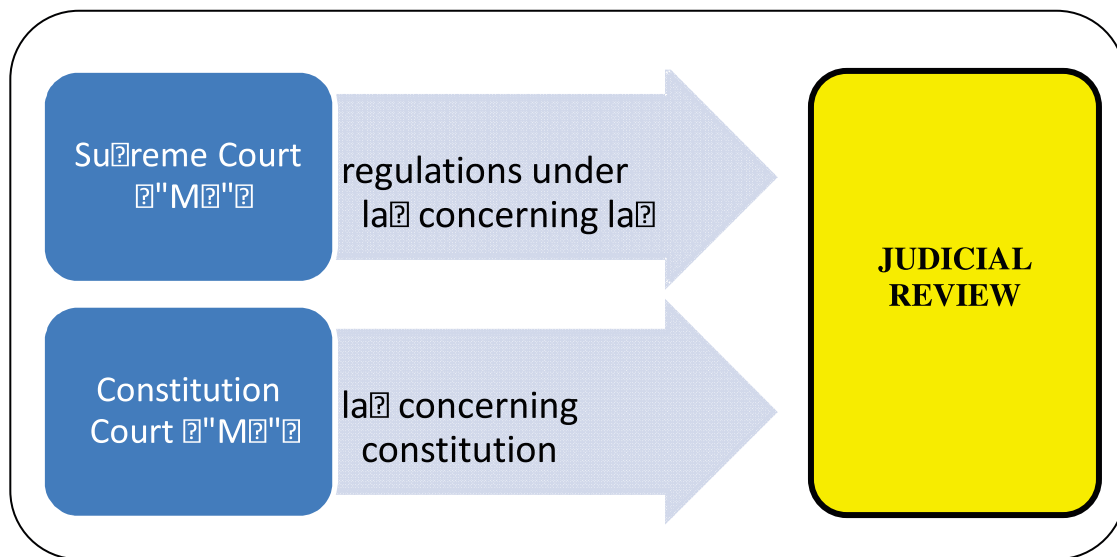


Figure 3-1: Mechanism for Judicial Review

Figure 3-1 shows that any laws in compliance to the national constitution could be cancelled by “Constitutional Court” (MK), while “Supreme Court” has authority to review laws or regulations against the other laws or regulations.

3.3 Hierarchy of Legislation

The fourth amendment of the national constitution ruled that the president and vice president are directly elected by people. As consequences, the president is not the mandatory of the People Consultative Assembly (MPR) anymore and the assembly has

no longer authority to determine the State Guideline (GBHN) as a guide for governance practices. Instead of GBHN, the government has to make a Long-term Development Plan, Mid-term Development Plan, and Annual Working Plan derived from the vision and mission of the elected president and vice president. However, the Long-term Development Plan is not without problem because there is no legal basis (no obligation) for the next president (successor) to follow the Long-term Development Plan of its predecessor. After the fourth amendment of the national constitution, the decrees of People Consultative Assembly with the character of “**regulation**” has lessen role that only such as policy recommendation, while legal product of People Consultative Assembly with the character of “**enactment**” such as determination of constitution or inauguration of president and vice president still has a legal power as long the material content is based on the national constitution. **Law is the highest legislation under national constitution according to the Law 10/2004.** Table 3-2 shows various laws related to the REDD and natural resources management.

Table 3-2: Laws related to REDD and Sustainable Forest Management (SFM)

No	Law	Substance
1.	Law 31/2009	Meteorology, Climatology, and Geophysics
2.	Law 32/2009	Environmental Management and Protection
3.	Law 4/2009	Mining of Mineral and Coal
4.	Law 26/2007	Spatial Planning
5.	Law 17/2004	Ratification of Kyoto Protocol to the UNFCC
6.	Law 32/2004	Regional Governance
7.	Law 33/2004	Fiscal balance
8.	Law 41/1999	Forestry
9.	Law 10/2004	Legislation Composing
10.	Law 7/2004	Water Resources
11.	Law 5/1994	Ratification of UNCBD
12.	Law 6/1994	Ratification of UNFCC
13.	Law 5/1990	Biological Resources Conservation
14.	Law 5/1960	Basic Rule of Agraria

Table 3-2 shows that the implementation of REDD in the context of Sustainable Forest Management (SFM) has to rely on and based on various laws, among others are laws on: Meteorology, Climatology, and Geophysics; Environmental Management and Protection; Spatial Planning; Ratification of Kyoto Protocol to the UNFCCC; Regional Governance; Fiscal Balance; Forestry; Legislation Composing; Water Resources; Ratification of UNCBD; Ratification of UNFCCC; Biological Resources Conservation; Basic Rule of Mining; and Basic Rule of Agraria.

Regional Government Law 32/2004 mandated to the central government to distribute various government authorities to the region. Simple understanding of decentralization is governance practice that gives larger power to region, in form of transfer of tasks, obligations, authorities, as well as particular responsibilities. Decentralization is meant to enable region to administer and manage their governmental affairs. It is necessary to emphasize that the implication of “shifting power” shall refer to the concept of “devolution”. It means that the decentralization should be not only the implementation of “consultation” function of central tasks that implemented by officer in the region, but also whole transfer of responsibilities and authorities to regional government or entities in the regions. The regional government, therefore, has to manage their natural resources based on their local specifics.

Decentralization is implemented to ensure people rights on natural resources management, including forest. Deconcentration, delegation, devolution, and privatization are several terms often use on discussion of decentralization. Deconcentration is transfer of administration tasks to central officer in the region. This mean decision making is still on central government, but the location is in the region. For the reason, some argued that deconcentration cannot be categorized on decentralization system. Delegation is transfer of part of central government authorities to government institution in the region. In this term, even tough part of authorities has been delegated to the region, but the implementation is the responsibility of central government. Devolution has different definition from de-concentration or delegation. Devolution means transfer of part of central government responsibilities to regional government or according to Meinzen-Dick and Knoxx (1999) the authority can also be given to entities in the region (traditional

community or other groups of people). Transfer of authority in this term includes decision making and for that reason regional government or the entity that have the authority have to responsible to the constituent (voter, public, community member). The last is privatization that means transfer of authorities to private sector or individual. Since it is not directly connected to governmental system, privatization often not categorized in decentralization category.

According to Regional Government Law 32/2004, decentralization refers to the delegation of government authority to the regional autonomy to administer and manage the government affairs within the system of the Unitary State of the Republic of Indonesia. Deconcentration refers to the delegation of government authority by the government to the governor as the government representative and/or vertical institution in certain region. “Assistance’s task” refers to the duties from the government to the regions and/or villages from the provincial administration to the districts/cities and/or villages as well as district/city government to the villages to carry out certain duties.

Based on the scope of authority, at least there are three important aspects that could be decentralized to the region which are administrative, fiscal, and politic. Fiscal decentralization is an important issue on regional autonomy implementation in Indonesia, beside administrative and political decentralization. Administrative decentralization is related to transfer of authority to governmental institution in the region to implement public services function, while political decentralization refers to transfer of authority to the region in determining public policies. Political decision to devolve authority from central government to the region can only be well implemented if regional government has adequate capacity in administrative, fiscal, and political management (Inman and Rubinfield 1997 on Litvack *et al* 1998). Therefore, to implement REDD as well as SFM effectively, the strong and clear legal basis to ensure administrative, fiscal, and political aspects has to be prepared. Since administrative, fiscal, and political decentralization cannot be separated, **Fiscal Balance Law 33/2004** is an integral part with the Regional Government Law 32/2004. Besides bringing public services closer, regional autonomy also gives opportunity for the regions that rich with natural resources to gain a greater income. According to Law 33/2004, regions get a bigger portion of revenues from natural

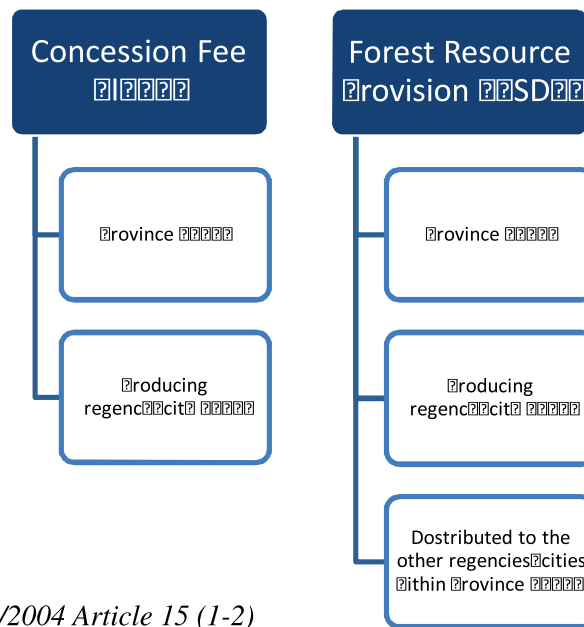
resources extraction, included forestry. **Table 3-3** shows the fiscal balance of natural resources utilization between central and regional government.

Table 3-3: Fiscal Balance of Natural Resources Utilizations

Source of Revenue	Central (%)	Region (%)
State Revenue from natural resources (forestry, general mining, and fishery)	20	80
Reforestation Fund	60	40

Source: Law No. 33/2004 Article 14 (a-d)

Table 3-3 pointed out that in general region get big share from the state revenue on forestry sector which is 80% from Forest Resources Provision (PSDH) and 40% of special fund in form of Reforestation Fund. Fiscal balance received by regions is further distributed with detail as with the **Figure 3-2**.



Source: Law No. 33/2004 Article 15 (1-2)

Figure 3-2: Distribution of Fiscal Balance from Forestry Sector in the Region

The shift of governmental system from centralization to decentralization does not always run well. Disharmony between central and regional government happened because of the

reluctant of central government to transfer their authority to the region and region attitude that tend to exaggerate on demanding their rights, among other by releasing various Regional Regulation (PERDA) that often against the higher regulation. Because of this, there is legal uncertainty that potentially will cause conflict between central and the region also among community groups related to their right to get benefit, access and responsibility over forest resources.

The release of the new Forestry Law in 1999 is a sign of starting the new episode of the forestry “reformation”. In comparison to the old Forestry Law 5/1967 that only emphasized on production aspects, **Forestry Law 41/1999** considered better the conservation and social aspects of forest management. In general the new Forestry Law contained more complete regulation instruments than the old one. The supporters argued that the new Forestry Law also gave a greater respect to the role and participation of community, especially traditional community, on forest management. Even so, the other ones criticized that the appreciation of the new Forestry Law to the traditional community is only rhetoric because several articles on the Law are potential to be “rubber articles” that the interpretation is much depending on the authority interest. The article 67(1), for instance, mentioned that the traditional community could have their rights as long as the existence is acknowledged. It could cause further problem since the evaluation of the existence of traditional community is very subjective depend on how and who authorize the acknowledgement. Then, the paragraph (2) explained that “... *affirmation of the existence or dismissal of traditional society is acknowledged by Regional Regulation*”. Thus, it is clear that the existence of traditional society strongly depend on “formal” affirmation from regional government. Even tough on one side “positive law” in form of “formal” affirmation from the government is absolutely necessary whenever there is dispute with third party outside the traditional society, but on other side “formal” affirmation from the government regarding traditional law can be distorted into “legitimizing” instrument of the authority on forcing their will or directing decision according to their interest.

Besides technical problem over forest management, one of the most important things that should be considered by the state related to REDD is **property right arrangement of**

forests. Forest ownership consists of “state forest” and “right forest”. State forest is forest on land bearing no ownership right. State forest can be in form of customary forest, where the status of customary forest established as long as the fact that the related traditional community is exist and admitted the existence. While from the function, forest is categorized into three big categories, which are conservation forest, protection forest, and production forest. The arrangement of the rights over forest is a fundamental problem that should be improved, so that regional community can manage their forest resources in a good way, sustainable, and giving prosperity. Barber *et al* (1994) said that good arrangement on the model of forest ownership; access and monitoring can be a fostering factor (incentive) that effective for sustainable forest management, otherwise, mistake on managing those factors can devastate forest system.

Carbon sequestration is only one of the benefits of forests. Besides carbon stocking and sinking, forest also benefits for water sources and plays pivotal role in hydrological functions. **Law 7/2004 on Water Resources** considered that “*Water resources are managed based on sustainable principle, balance, public benefit, integrity and harmony, justice, independency, as well as transparency and accountability.*” This law also mentioned that “*water resources is managed in holistic, integrated, and environmental concept with the purpose to create sustainable water resources benefit for people prosperity as much as possible.*” This law emphasized that “*water resources has social, environmental, and economic function that practiced and created in harmony.*” The law, however, was also criticized because it put spirit of privatization on water resources management.

On forestry sector, forestland allocation was formerly regulated by a concept of “Forestland-use Agreement” known as TGHK (“*Tata Guna Hutan Kesepakatan*”). This **concept shall be integrated with the Regional Spatial Plan (RTRW) regulated by Law 26/2007.** This law regulates right and obligation, planning, utilization, and controlling on spatial plan as well as authority and administration. Decentralization on forest and other land-use management is closely related each others. According to the spatial plan law, principally land-use management has to be implemented with environmental concepts and considering the optimal utilization. Spatial plan on the

national, provincial or regency/city levels shall be conducted integrally. In fact regional spatial plan (“RTRW”) could not be implemented successfully. Many obstacles faced in implementing RTRW, which were mostly caused by “regional and sectoral egoisms”. In several regions, RTRW cannot be established and delayed for years because of strong conflicts of interest in the region.

Besides considering the mentioned laws, the implementation of REDD has to be in line also with **the Environmental Protection and Management Law 32/2009**. This Law shall become basis for the further rules related to environment sustainability, included biological resources and ecosystem conservation. Biological resources conservation is directed to natural resources management that ensures the optimal utilization. Sustainable renewable resources mean the continuity of supply and increase the quality of the value and diversity. The law regulated also basic principles of environmental management such as right on information, right to complain, right to claim, as well as provided larger authority to the minister of environment to conduct environmental audit. The minister could also delegate to the third party to conduct environmental audit. The law also emphasized that environmental management has to be conducted integrally with spatial plan, non-biological resources protection, artificial resources protection, biological resources and its ecosystem conservation, cultural sanctuary, biodiversity and climate change.

Law 5/1990 on biological resources and its ecosystem conservation (KSDHE) is based on sustainability, ability and utilization of biological resources and its ecosystem in harmony and balance. Therefore, it can give more support on the effort of increasing people prosperity and the quality of human life. It also regulates utilization of sustainable biological resources and its ecosystem and conducted trough utilization of environment condition of natural preservation area and utilization of plant and wildlife. The utilization is conducted by maintaining the sustainability of area function. According to the Law 5/1990, there are several conservation areas that have a very strategic function and need to be protected such as nature preservation area consisting nature reserve and wildlife preservation, and nature reserve area, which includes National Park, Great Forest Park,

and Nature Recreational Park. This law is necessary to be known as supporting reference for REDD and sustainable forest management (**Table 3-4**).

Table 3-4: Activity that Allowed and Prohibited on Conservation Area

<i>No.</i>	<i>Area Type</i>	<i>Allowed Activity</i>	<i>Prohibited Activity</i>
1.	Nature Sanctuary	Activity for interest of research and development, science, education and other activity that support silviculture.	Activity that can cause change on the unity of nature sanctuary.
2.	Wildlife Sanctuary	Activity for the interest of research and development, science, education, limited recreation, and other activity to support silviculture.	Activity that can cause change on the unity of wildlife sanctuary, the prohibition is not including development for the interest of wildlife on wildlife sanctuary
3.	National Park	Activity for the interest of research, science, education, supporting silviculture and nature recreation.	Activity that can cause change on the unity of core zone of national park. Activity that not in accordance with the function of utilization zone and other zone on national park.
4.	Great Forest Park	Activity for the interest of research, science, education, supporting silviculture and nature recreation.	Activity that can cause change on the unity of Great Forest Park, the prohibition is not including development for the interest of Great Forest Park.
5.	Nature Recreational Park	Activity for interest of research, science, education, supporting silviculture and nature recreation.	Activity that can cause change on the unity of Nature Recreational Park, the prohibition is not including development for the interest of Nature Recreational Park.

Source: Law 5/1990

REDD and SFM are also stongly related with **Law 5/1994 on Ratification of United Nations Convention on Biodiversity (UNCBD)** and **Law 6/1994 on United Nation Framework on Climate Change (UNFCC)**. Law 5/1994 regulates biological diversity conservation, sustainable use of its components, and share benefit produced from the use

of genetic resources in just and distributed, including through adequate access to genetic resources, with the reason of efficient technology transfer, by considering all rights over resources and adequate fund. The last point emphasized that the own natural resources region has rights on utilizing and finding financial sources for management, including fund from other countries. This is highlighted that the stakeholders are obligate to cooperate, if in accordance, with other countries and international organizations on developing education and community awareness programs on conservation sector and sustainable use of biological diversity. Furthermore, the UNCBD also gives order to each country to develop national strategy, plan or program for conservation and sustainable use of biological diversity or the program already exist, and integrating conservation and sustainable use of biological diversity into plan, program, and sectoral or related inter-sectoral policy as far as possible and if in accordance. While Law 6/1994 ruled the rights and obligatories concerning the mitigation of climate change referred to the convention of the United Nations Framework on Climate Change. Both conventions of UNCBD and UNFCCC mandated to integrate conservation and development practice. They will be very relevant with the implementation of REDD in the context of sustainable forest management.

The substance of law that strongly against the spirit of conservation is Law 11/1967 on the Basic Rules of Mining as was replaced by **Law 4/2009 on Mining of Mineral and Coal**. The main substance of this law is to manage all potential capacity on mining sector to develop economy, but in other side the spirit of environmental protection is less considered. Decentralization in mining activity is only provided to the C-class of excavation material, which is given by the respective Regional Government. The law mentioned that the mining practice located close to public interest's area is prohibited. The term of "public interest", however, has various interpretations. None of explanation mentioned that conservation area or protected forests are categorized as "public interest area". The Law 11/1967 has been replaced by Law 4/2009, however, there is no significant differences of both laws regarding environmental aspects. The main differences of the two laws are shown in the **Table 3-5**.

Table 3-5: The Differences between Law 11/1967 and Law 4/2009

Substances	Law 11/1967	Law 4/2009
Authority towards natural resources	Government has full authority on mining.	Paragraph 4: Principally, state has authority on the mineral & coal as non-renewable natural resource, the authority of state could be implemented by (central) government and/or regional government Paragraph 5: Government & house of representative (DPR) shall enact policy on mineral and coal as priority of national development. The government has authority to state production of each province to control production and export.
Management authority	Minister has authority to manage strategic and vital mining. Regional Government Level I has authority to manage non-strategic and –vital mining.	Paragraph 6: (Central) government has 21 authorities on policy and management of mining at national scale. Paragraph 7: Province government has 14 authorities on policy and management of mining at provincial scale. Paragraph 8: Regency/city government has 22 authorities on policy and management of mining at regency/city scale. Those three levels of government have authority to give mining business permit (IUP) according to the regulations.
Form of Business Permit	Business permit on mining could be in the following forms: mining contractual work (KK), mining right (KP), work agreement on coal mining business (PKP2B), letter of regional mining business permit (SIPD), letter of community mining business permit (SIUPR).	Mining business permit (IUP), Community mining permit (IPR), Special mining business permit (IUPK).
Business actors	Domestic investor (KP, SIPD, SIUPR, PKP2B) and foreign investor (KK, PKP2B)	Paragraph 38: Mining business permit (IUP) could be given to cooperative or private as a business unit. Paragraph 67 & 68: Community mining permit (IPR) could be given to local people, whether to a person or to a communal group and/or cooperative in a specific area. Paragraph 75: Special mining business permit (IUPK) could be given to a business unit registered under Indonesian law, consist of both state-owned enterprise (BUMN) and region-owned enterprise (BUMD) as priority, or private.
Divestation	Not regulated	Paragraph 112: After operated 5 years, business unit of the IUP and IUPK’s holders whose shares are belonged to foreigner have to divest them into government, regional government, BUMN, BUMD, or national private business unit.

Source: Law 11/1967 on Basic Mining and Law 4/2009 on Mining of Mineral and Coal.

Finally, each problem of land-use will strongly relate to the **Law 5/1960 on the Basic Rules on Agraria**. The law mentioned that *land, water, and outer space –including conservation area- are an area in the Indonesian territory and is an area that the utilization is regulated by the government*. According to the law, the utilization of lands is conducted by the government for the following purposes:

- a. Interests of the State.
- b. Interests of the religion activities and other religious needs.
- c. Interests of the needs of human live, social, cultural and various other things prosperity
- d. Interests of the developing production of agricultural, animal husbandry and fishery and in the other same purposes.
- e. Interests of the developing industry, transmigration, and mining

The agrarian law mentioned that maintaining land, including increase the fertility and prevent the destruction is obligation for each individual, organization, or institution related to the land, by considering the weak economy. Although it does not point out directly, however, implicitly the law considered the necessity of the implementation of the principles of the payment for environmental services (PES).

3.4. Disharmony of Laws and Regulations

Some disharmonis of laws and regulations concerning REDD were identified, among others are (**Table 3-6**):

Ambiguity of regulation concerning the minimum area of forest in a province and regency/city (Law 26/2007 and Law 41/1999).

Ambiguity of mechanism concerning the mechanism to define city forest, especially the responsibility of community to allocate land for city forests (Law 26/2007 and Law 41/1999).

Ambiguity of requirements for REDD locations (Government Regulation 3/2008 and Forestry Minister Regulation P. 30/Menhut-II/2009).

Ambiguity of time period for utilization permit of environmental services (Government Regulation 6/2007 jo. 3/2008 and Forestry Minister Regulation P. 30/Menhut-II/2009).

Ambiguity of the practical implementation of the “additionality concept” of carbon sequestration (RAP) and carbon stocking (PAN) in protected forests (Law 41/1999, Government Regulation 6/2007 jo.3/2008 and Forestry Minister Regulation P.36/Menhut-II/2009).

Ambiguity of the term “strategic purposes” for mining activities in forest area (Law 41/1999, Law 4/2009 and Government Regulation 24/2010).

Unrealistic task for provincial government to conduct “inventory of Green House Gases (GHG) Emissions” as well as “measurement of emissions” (Law 32/2009).

Bias attention to Environmental Impact Analysis (AMDAL) as main focus for environmental management (Law 32/2009).

Ineffective zonation in forest conservation area because of incomplete forest inventory (Government Regulation 26/2008).

Inconsistency and unclear scope of decentralisation of authority in forestry matters (Law 41/1999 and Law 32/2004).

Unclear mechanism of Forest Inventory at the Management Unit (FMU) because FMUs are not officially established right now (Law 41/1999).

Inconsistency between sustainable forest management principles and generating maximum income from natural resources extraction (Law 33/2004, Law 41/1999, and Law 32/2009).

Table 3-6. Disharmony of Laws and Regulations in Forestry Matters

No.	Substances	Laws & regulations	Contents & Problems
1	Minimum area of forests in a province and regency/city	Law 26/2007: 17(5) Law 41/1999: 18(2)	<p>Contents: Minimum area of forests in a watershed area/island/province is 30%.</p> <p>Problems: If a watershed area covering more than one regency or province, how to define a minimum area of forests? If a regency or province covering more than one island, how to define a minimum area of forests?</p>

2.	City Forest	Law 41/1999: 9(1) Law 26/2007: 29(2,3)	Contents: Each city has to own a city forest. Problems: No clear definition of a minimum extent of forest area in the city. It is stated that from 30% of city forests, 20% of them regulated in RTRW and 10% shall be under the responsibility of community. No clear mechanism, how to achieve the 10% of city forests managed by the community.
3	Location of REDD	Government Regulation 3/2008, Paragraph 25,29,33 and 50 Forestry Minister Regulation P.30/Menhut-II/2009 Paragraph 5-10 (1)	Contents: REDD could be implemented in certain area as far as suitable with the criteria of REDD location. Problems: Those regulation created ambiguity because the criteria of REDD location did not state clearly. The problem would be more complicated since REDD involved not only deforestation and forest degradation, but also governance and institutional aspects of forest management.
4.	Time period of the utilization permit of environmental services	Government Regulation 6/2007 Paragraph 28 (1) jo. Government Regulation 3/2008 Paragraph 29 (1) and 50 (1) Forestry Minister Regulation P.30/Menhut-II/2009 Paragraph 13	Contents: The time period of utilization permit of environmental services for carbon is 30 years (Forestry Minister Regulation P.30/2009: 13) Problems: In the case of protected forest, it needs further explanation. Government Regulation 6/2007: 28 (1) stated that the maximum time utilization permit in protected forest is only 10 years.
5.	Carbon sequestration (RAP) and carbon stocking (PAN) in protected forests.	Law 41/1999 Paragraph 27 (2) Government Regulation 6/2007 Paragraph 25 Government Regulation 3/2008 Paragraph 25 (1) Forestry Minister Regulation P.36/Menhut-II/2009 Paragraph 3.	Contents: Implementation of carbon trading scheme with additionality concept in protected forests. Problems: Less additionality in protected forests. Usually protected forests are primary forests.
6.	Use of forest area for mining	Law 41/1999 Paragraph 38 Law 4/2009 Government Regulation 24/2010 Paragraph 4(1)	Contents: Use of forest area for other forest activities may be implemented for strategic purposes. Problems: No clear definition and further explanation of strategic purposes.
7	Inventory of Green House Gases (GHG) Emissions	Law 32/2009 Paragraph 45; paragraph 63 (2) point “e”, and Paragraph 63 (3) point“e”	Contents: Each province government has to conduct natural resource inventory and GHG emission inventory.

			<p><u>Problems:</u> Inventory of GHG Emission is extremely difficult to be implemented by province government. No clear explanation about the scope, whether based on the temporary changing of stock carbon (degradation) or permanent land use change (deforestation).</p>
8.	Measurements of emission	Law 32/2009	<p><u>Contents:</u> Each region shall implement carbon emission inventory. Each region shall provide funds for forest protection and nature conservation.</p> <p><u>Problems:</u> Regular measurement of GHG is not an easy task and it is also relatively expensive.</p>
9	Environmental Impact Analysis (AMDAL)	Law 32/2009	<p><u>Contents:</u> Environmental Impact Analysis (AMDAL)</p> <p><u>Problems:</u> The law focused on environmental Impact Analysis (AMDAL), but pays less attention to the other programs.</p>
10	Zonation	Government Regulation 26/2008	<p><u>Contents:</u> Zonation of Forest Area</p> <p><u>Problems:</u> Zonation could not be implemented effectively because of incomplete forest inventory .</p>
11	Decentralisation of authority in forestry matters	Law 41/1999 Paragraph 66 Law 32/2004	<p><u>Contents:</u> Decentralization of forestry matters from central to the regions.</p> <p><u>Problems:</u> No clear scope of authorities among central, province and regency/city.</p>
12	Forest Inventory at the Management Unit (FMU)	Law 41/1999 Paragraph 13	<p><u>Contents:</u> Forest inventory shall be implemented at national level, watershed area, and Forest Management Unit (FMU).</p> <p><u>Problems:</u> FMUs are not established right now.</p>

DEVELOPING INFRASTRUCTURE FRAMEWORK OF REDD

4.1 Scope of Infrastructure Framework

To ensure the effectiveness of REDD mechanism in the context of Sustainable Forest Management (SFM) policy, the scope of infrastructure framework shall involve four instruments of policy, i.e. regulative, fiscal, administrative, and administrative instruments. **The term of REDD in this study refers also to REDD+.**

4.2 Regulatory Framework

Regulatory is one of the most important components of the infrastructure framework of certain policy, included policy on REDD. This section discusses the effective way to assure regulatory of REDD work. The discussion involves the concept of governance, indicators of good governance, and forest governance practices. The performance of forest governance is highly influenced by government rule, technical implementation, and landuse.

4.2.1 Good governance for the effective regulatory framework

An effective regulatory framework could be and only be achieved by implementation of a good governance. Governance is a process whereby societies or organizations make their important decisions, determine whom they involve in the process and how they render

account. Since a process is hard to observe, students of governance tend to focus our attention on the governance *system* or framework upon which the process rests - that is, the agreements, procedures, conventions or policies that define who gets power, how decisions are taken and how accountability is rendered (Graham *et al.* 2003). They also explained that in principle, the concept of governance may be applied to any form of collective action. Governance is also about the more strategic aspects of steering: the larger decisions about direction and roles. That is, governance is not only about *where to go*, but also about *who should be involved in deciding*, and in what capacity. There are four areas or zones where the concept is particularly relevant (Graham *et al.* 2003).

Governance in ‘global space’, or global governance, deals with issues outside the purview of individual governments.

Governance in ‘national space’, i.e. within a country: this is sometimes understood as the exclusive preserve of *government*, of which there may be several levels: national, provincial or state, indigenous, urban or local.

Organizational governance (governance in ‘organization space’): this comprises the activities of organizations that are usually accountable to a board of directors. Some will be privately owned and operated, e.g. business corporations. Others may be publicly owned, e.g. hospitals, schools, government corporations, etc.

Community governance (governance in ‘community space’): this includes activities at a local level where the organizing body may not assume a legal form and where there may not be a formally constituted governing board.

The United Nations Development Program (UNDP) (1997) defined a set of principles of good governance that are: legitimacy, direction, performance, accountability, fairness. Therefore, the indicators of good governance could be derived from those fifth principles.

Figure 4-1 shows how the regulatory framework of REDD shall be positioned and implemented in the context of sustainable forest management.

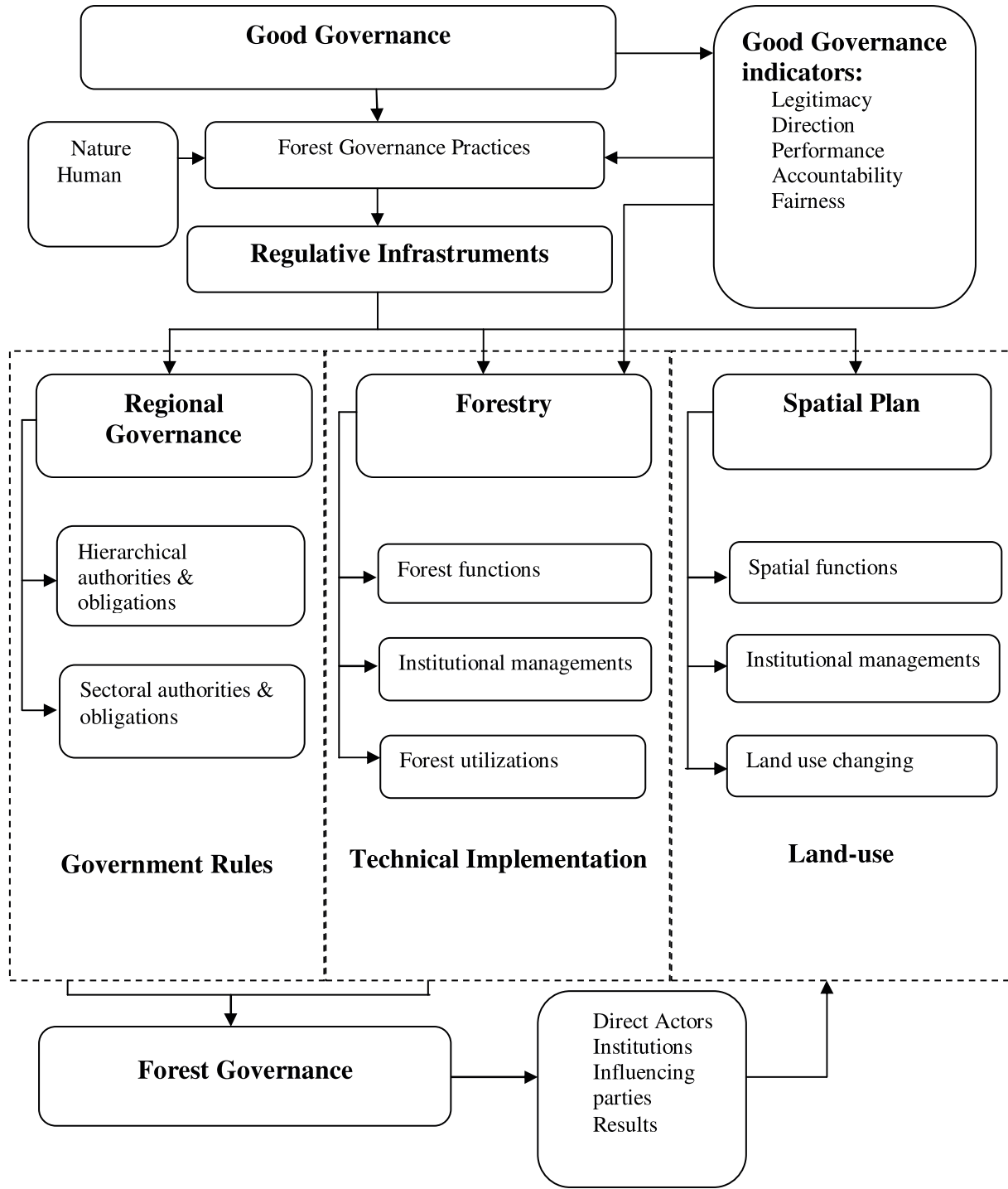


Figure 4-1: Regulatory Framework of REDD in the context of SFM

4.2.2 Government Rules on REDD

The rules of government on REDD were featured by some laws and regulations. The most important laws related to the government rules on REDD are Law 32/2004 on regional governance and Law 33/2004 on Fiscal Balance between the Center and Region. As was discussed in the previous section, those laws are very important for the legal basis of REDD because they contained the principles of hierarchical authorities as well as tasks and obligations of both the central and regional governments. Those laws also pointed out list of sectors decentralised from central into regions and fund disbursement principles of natural resources extraction. Besides them, there are also some laws related to REDD among others are:

Law 6/1994 on Ratification of the United Nations Framework Convention on Climate Change

Law 20/1997 on Non-tax State Revenue

Law 32/2009 on Environmental Management and Protection

Law 41/1999 on Forestry jo. Law 19/2004

Law 17/2003 on State Budget

Law 1/2004 on State Treasury

Law 15/2004 on the Audit of the State Budget Management and Responsibility

Law 17/2004 on Ratification of the Kyoto Protocol To The United Nations Framework Convention On Climate Change

Law 25/2004 on National Development Planning System.

Law 32/2004 on Local Government.

Law 26/2007 on Spatial Planning.

Law 36/2008 on the Fourth Amendment to Law 7/1983 on Income Tax.

4.2.3 Technical Implementation of REDD in the context of SFM

REDD is one of proposed mechanisms in supporting sustainable forest management (SFM). In the context of SFM, the implementation of REDD shall follow Forestry Law 41/1999. At the level of Government Regulation (GR), the most important GR related to REDD is GR 6/2007 jo. GR 3/2008 on Forest Planning and Formulation of Forest

Planning Management, and Forest Utilization. As operational regulations there are some ministerial regulations related to forest environmental services, included REDD. The most relevant regulations for the implementation of REDD are the Forestry Minister Regulation P.68/Menhut-II/2008 on Implementation of Demonstration Activities of Reducing Carbon Emissions from Deforestation and Forest Degradation (REDD), Forestry Minister Regulation P. 30/Menhut-II/2009 on Procedures for Reducing Emissions from REDD, and P. 36/Menhut-II/2009 on Procedure of Business Permit Mechanism for the Utilization of Carbon Sequestration and/or Carbon Stocking in Production Forests and Protection Forests.³

Those forestry minister regulations were enacted following the decision of the 13th Conference of Parties (COP) of UN Convention on Climate Change (UNFCCC) in 2007 in Bali. Although they seem alike, the terms deforestation and forest degradation have different meanings. Deforestation is the permanent change of forested areas into non-forested areas as a result of human activity, while degradation is the reduction in the quantity of forest cover and carbon stocks for certain period of time caused by human activities. Reducing emissions from deforestation and forest degradation is termed REDD, which is forest management efforts for the prevention or reduction in decreased quantity of forest cover and carbon stocks through various activities to support sustainable national development.

One effort to attain forest environmental services values is through REDD carbon trading activities. This activity implies a trade in services derived from forest management activities that resulted in reduced emissions from deforestation and forest degradation. One of the most important thing that need to be observed prior to implementing REDD carbon trading scheme is to identify the reference emission. Reference emission is the level of emissions from deforestation and forest degradation in the absence of REDD schemes and can be set based on historical trends and future development scenarios. All activities related to the implementation of REDD are administered by the National Registrar, the agency or institution that has the task to record all REDD activities. REDD

³ *The section of the Government Rules on REDD are mostly summed up from the Forestry Minister Regulations of P. 68/Menhut-II/2008, P.30/Menhut-II/2009, and P. 36/Menhut-II/2009.*

implementers can receive incentives from REDD activities in the form of financial support and or technology transfer or capacity building.

4.2.3.1 Areas and Implementers of REDD

The maximum length of REDD implementation period is 30 years and can be extended in accordance with the existing regulations. REDD schemes can be performed on various types of forest areas, both inside and outside forest areas, including (Table 4-1):

Table 4-1: Areas, Units and Implementer of REDD

Areas	Units	Implementers
Inside forest area	Working Area of Utilization of Timber in Natural Forest (IUPHHK-HA)	Private
	Working Area of Utilization of Timber from Plantation Forest (IUPHHK-HT)	Private
	Working Area of Utilization of Timber from Ecosystem Restoration in Natural Forests (IUPHHK-RE)	Private
	Working Area of Utilization of Community Forest (IUPHH-HKM)	Community
	Working Area of Utilization of Timber from Community Plantation Forest within Plantation Forest (IUPHHK-HTR)	Community
	Customary Forest	Community
	Village Forest	Community
	Production Forest Management Unit (KPHP)	State
	Protection Forest Management Unit (KPHL)	State
	Conservation Forest Management Unit (KPHK)	State
Conservation Forest	State	
Outside forest area	Right forest or people forest (HR)	Citizen/people

Source: Forestry Minister P.30/Menhut-II/2009.

Generally REDD implementer includes two entities, namely: first, national entity comprising: holders of License for Utilization of Forest Products (IUPHH) on forest areas, managers of state forest or rights forest. National entity has the right to obtain payment from an international entity for the resulting reductions of emissions in compliance with the laws and regulations. Second, international entity, namely funding

partners to fund the implementation of REDD. International entity is entitled to use REDD certificate as part of fulfilment of emissions reduction commitments of developed countries in compliance with regulations. REDD implementers are entitled to trade in the REDD certificates for post-2012 REDD carbon trading associated with the implementation of emission reduction commitments of industrialized countries. REDD implementer has the obligation of:

- a. Conducting forest management activities for the implementation of REDD.
- b. Setting the reference emission prior to the implementation of REDD.
- c. Conducting monitoring in accordance with the plan.
- d. Submitting monitoring report to the Minister through REDD Commission.

4.2.3.2 Selection of Location and MRV of REDD

REDD implementation is organized by REDD Commission established by the Minister of Forestry. REDD Commission may appoints independent assessors to conduct verification. Independent Assessor is an agency that has the right to carry out report verification of REDD activities. Furthermore, the Independent Assessor reports the results of verification to REDD Commission and REDD implementers. If all requirements have been met, at least 30 (thirty) working days after receiving verification reports from independent assessors, the REDD Commission will issue Carbon Emissions Reduction Certificate (REDD Certificate). REDD certificate is a form of acknowledgment of documents regarding emission reductions and other benefits derived from REDD activities given to REDD implementers and can be traded.

REDD Commission periodically submits report of REDD implementation to the Minister of Forestry and Focal Point. Focal Point is a state representative who is assigned the task to communicate with the Secretariat of the United Nations Convention on Climate Change. For obtaining recommendation on REDD implementation, the Regional Government will first conduct an assessment of: 1) the current status and total forest area proposed by the implementer, 2) appropriateness between the proposed location of REDD activity with the concerned Spatial Plan Administration, 3) compliance with the

criteria for REDD location, and 4) appropriateness between the REDD plan with the development priorities including poverty alleviation programs. On the basis of those four assessments, the local government can provide recommendations on the implementation of REDD in the area. In addition to considering the distribution of biogeographic regions of Indonesia, REDD site selection should also consider the following aspects (**Table 4-2**):

Table 4-2: Consideration Factors of the Site Selection for REDD

No.	Aspects	Consideration factors
1.	Data & information	The availability and comprehensiveness of data and information (historical), total area of forest and carbon stock and associated data required for the implementation of REDD.
2.	Biophysical & ecology	Ecosystem diversity, carbon stocks, biodiversity and their uniqueness.
3.	Threats to forest resources	Type and level of threat; level of risk of the location of deforestation and/or degradation.
4.	Social, economic and cultural	People's dependence on the site; presence / absence of conflicts; involvement of stakeholders in forest management, and clarity of poverty alleviation dimension.
5.	Economic feasibility	Estimated income from REDD and costs required to guarantee the implementation of emission reductions from deforestation and / or long-term forest degradation on the concerned location and surroundings.
6.	Governance	Efficiency and effectiveness of the bureaucracy (clarity about roles, responsibilities and accountability between parties), and the legal framework, and commitment REDD implementer to change behaviour (patterns of production and environmentally friendly land use).

Source: Forestry Minister P.30/Menhut-II/2009.

Determination of Reference Emission Levels/REL in Indonesia is regulated by the following provisions:

- a. Implementation of REDD in Indonesia is carried out using a national approach with implementation at the sub-national (provincial or district/city or management unit). Thus the reference emission (REL) is set at national, sub-national and on-site (local) levels.

- b. Reference Emission (REL) at the national level is set by the Ministry of Forestry, while emissions in the sub-national level is set by local governments (provincial or district/city) and confirmed with a national reference emission.
- c. Reference Emission (REL) at REDD location is specified by REDD implementer and confirmed by the national and sub-national reference emission.

REDD Implementation also requires data and information about changes in forest cover and carbon stocks, as measured based on: 1) measurement of changes in forest cover and carbon stocks using the IPCC Guidelines or the IPCC Good Practice Guidance for Land Use, Land Use Change and Forestry/GPGLULUCF, and 2) implementers can choose the approach and the level of tiers given in the IPCC according to the level of readiness / capacity starting from tier 2 and gradually to the use of approach and the highest tier (level 3).

4.2.4 REDD and the Problem of Spatial Plan

The implementation of REDD could not be separated with landuse policy. The main legal basis of landuse policy in Indonesia is Law 26/2007 on Spatial Plan. In Forestry sector landuse changes were caused by several activities, among others are land clearing and conversion of forests. Land clearing permit in forest areas is done through Timber Utilization Permit (IPK) scheme in the framework of preparing Industrial Plantation Forests (HTI) and the release of production forest area that can be converted to development uses outside of the forestry sector, such as plantations. Development of plantation within the ex-forest area can be carried out through partial forest land use change scheme through exchange of forest area and release of forest area.

Article 19 of Law 41/1999 explains the changes in forest land use and function. As implementing regulation of Forestry law, Government Regulation Number 10/2010 concerning Procedures for Changes in Forest Land Use and Function was issued. This Government Regulation justifies the meaning of forest land use change as the change of forest area into non-forest area. Forest land use change is defined as a partial or whole change of forest function within one or several groups of forest into other forest

functions. Land use changes through forest land exchanges can be performed only in definitive production forest; and/or limited production forest. Exchange of forest land can be performed for permanent developmental activities for non- forestry purposes, eliminating enclave in order to facilitate forest management area or improving forest boundaries.

The forestry law confirms that the exchange of forest land can only be performed if it meets the fixed provisions guaranteeing forest area of at least 30% of the watershed area, islands, and/or provinces with proportional distribution; and maintain feasible carrying capacity of forest area to be managed. If the forested area is less than 30% of the watershed area, islands, and/or provinces with proportional distribution, then the exchange of forest land with non-forest land is performed using the ratio of at least 1:2, except for forest land exchange to accommodate victims of natural disasters and for limited public interests can be done with a minimum ratio of 1:1. If the total forested area is above 30% out of the total watershed area, islands, and/or provinces with proportional distribution, then exchange of forest land with non forest land can be done using the ratio of at least 1:1. Although theoretically development of plantation is possible through exchange of forest, in practice it is very difficult to find area large enough to be exchange into plantations. Therefore, the scheme of developing plantation through forest exchange is very rare.

Plantation development scheme most commonly practiced today is the release of forest. The release of forest area can be executed for non-forestry development activities. According to the Forestry law, release of forest area can only be performed on convertible production forests. However, convertible production forests do not apply to provinces having a total forest area of less than 30%, except through exchange of forest land. Therefore, the development of plantation over ex-forest land under the release of forest land scheme without providing replacement can only be done in convertible production forest, which is usually known as APL (Other Land Use) or KBNK (Non-Forestry Cultivation Area), in provinces with forest area of more than 30%. In general, estate investors will choose this scheme because the plantation status is no longer forest, thus can be use as Concession Rights for Bank's collateral. Furthermore, investors can

grow unlimited plantation commodities in terms of total number and species composition for the plantation.

4.3 Administrative Framework

Administrative framework involved an effective bureaucracy in the practices of forest administration related to inputs, processes, and outputs. Bureaucracy is a concept in sociology and political science referring to the way that the administrative execution and enforcement of legal rules is socially organized. The attributes of modern bureaucracy include its impersonality, concentration of the means of administration, a leveling effect on social and economic differences, and implementation of a system of authority that is practically indestructible. Thus, bureaucracy goes beyond division of labor in a broad sense, although that is a necessary condition for the existence of bureaucratic systems. It involves precise, detailed definitions of the duties and responsibilities of each person or office. Administrative regulations determine areas of responsibility and control the allocation of tasks to each area (Weber 1947, reprinted 1997). Coined to the Weber's theory, this section considers three indicators for the effective bureaucracy, i.e.

- 1) Clear division of authority
- 2) Clear division of tasks and responsibilities
- 3) Clear procedure of works

The administrative infrastructure related to REDD in the context of sustainable forest management covers three main aspects:

- 1) Administrative infrastructure that regulates tasks and authorities of the central and regional government.
- 2) Administrative infrastructure that regulates fiscal administrations.
- 3) Administrative infrastructure that regulates forest services.

Figure 4-2 indicates a whole feature of the administrative infrastructure of REDD in the context of sustainable forest management.

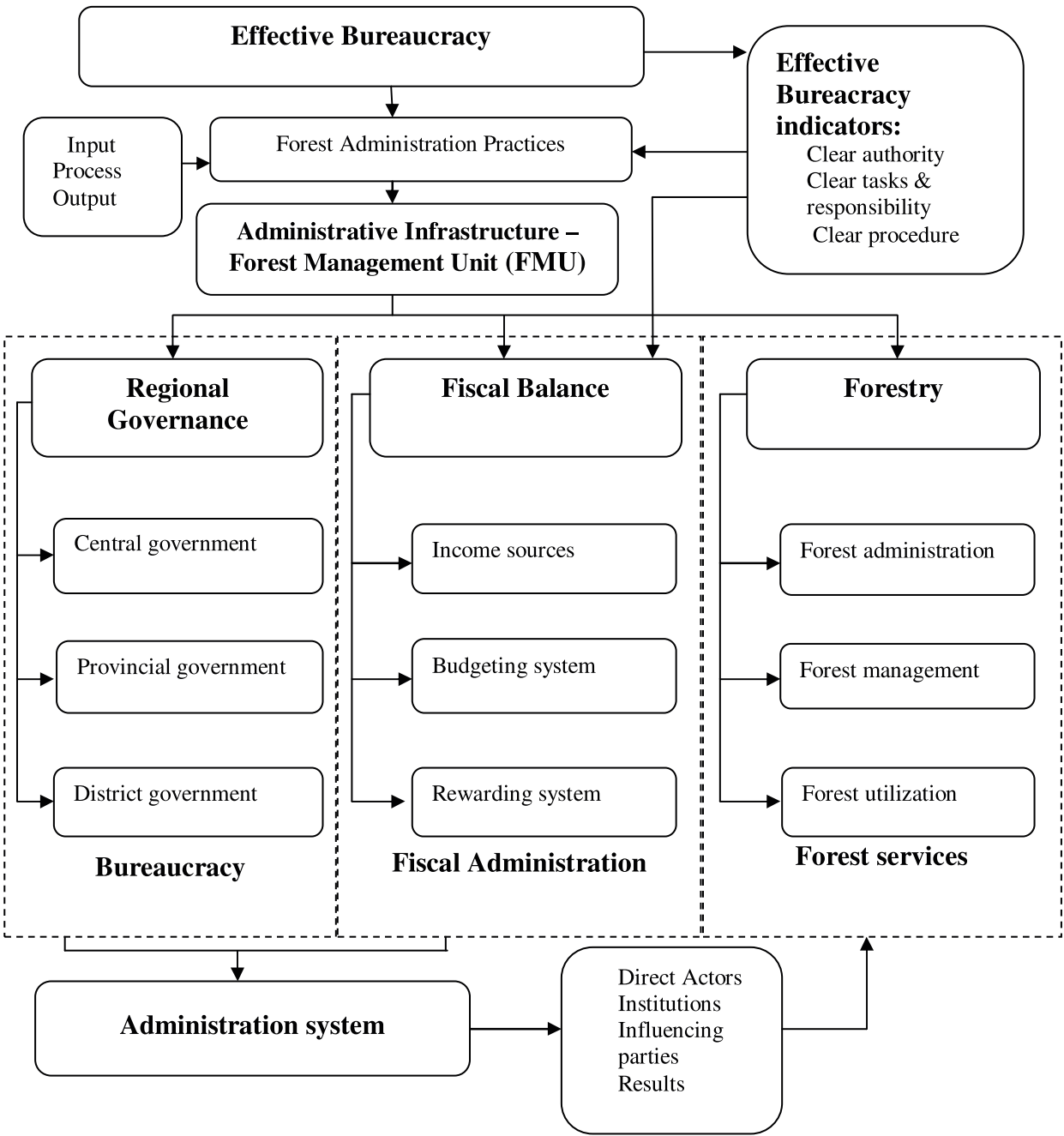


Figure 4-2: Administrative Framework of REDD in the context of SFM

4.3.1 The Problems of Bureaucracy on REDD

Attention of the government to participate in suppressing the rate of greenhouse gases increase through reducing deforestation and forest degradation is reflected through the issuance of Forestry Minister Regulation P. 68/Menhut-II/2008 concerning Demonstrative Activities of Carbon Emissions Reduction from Deforestation and Forest Degradation and Forestry Minister Regulation P. 30/Menhut-II/2009 on Procedures for Reducing Emissions from REDD (Nugroho, 2010). Licensing procedures for formulating DA REDD regulated in the Minister of Forestry Regulation No. P.68/Menhut-II/2008 as follows (**Figure 4-3**).

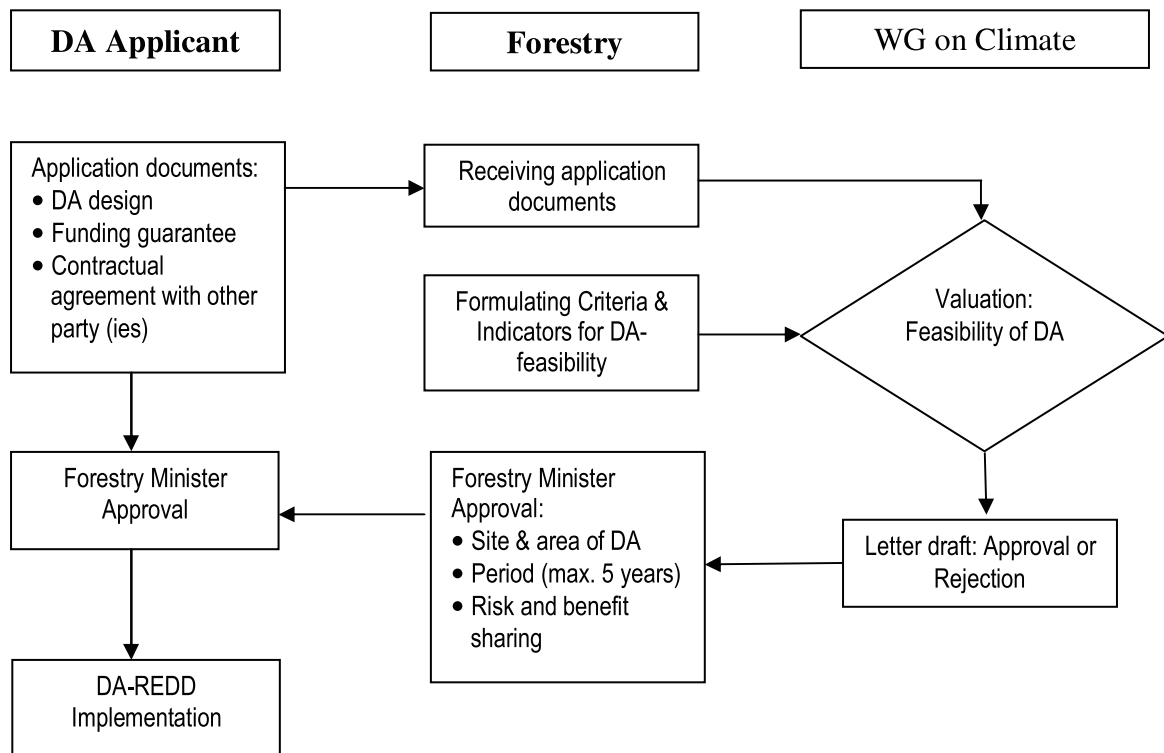


Figure 4-3: Procedure for DA REDD Licensing

While the licensing procedures for the implementation of REDD is regulated in the Forestry Minister Regulation P. 30/Menhut-II/2009 as **Figure 4-4**.

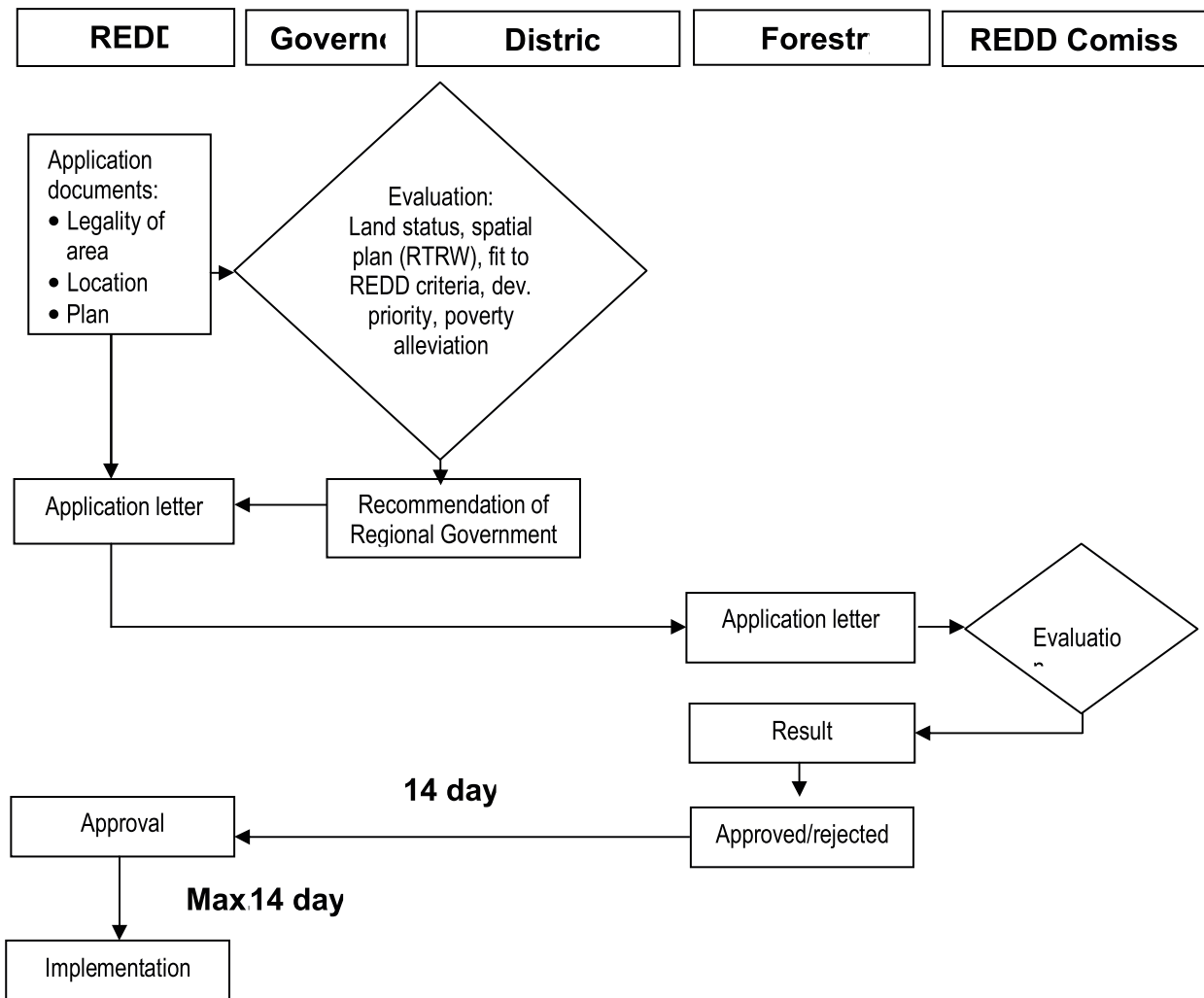


Figure 4-4: Procedure for REDD Licensing

Although the procedures for DA REDD and REDD licencing have been enacted, however, those regulations are not able to be operated. Both regulations contained only general term of the licencing procedures of DA REDD and REDD but they lacked detail of implementation, such us responsible unit for certain REDD project. Since there are many differend kinds of REDD schemes, therefore the unit who responsible for the licencing would be also different. Those regulations did not mentioned the responsible unit for the various REDD’s location related to the different forest functions or schemes related to the forms of business unit (problem of unclear procedure).

4.3.2 The Formation of Forest Management Unit (FMU)

The existence of Forest Management Units (FMUs) is one of the most important prerequisites of the institutionalization of sustainable forest management. In the last decade, the pressure for decentralization was very strong and it dominated to the discourses of the regional development politics. Due to this reason, formation of FMU shall not only follow the regulations but it also needs to adjust with political reality.

According to the scope of authority, generally there are three important aspects could be decentralized, i.e. administrative, fiscal, and politic. It is very important to note that the implication of shifting authority in the regional autonomy is not only operationalizing consultation function of the tasks given by the central government, but also devolution of responsibilities and authorities to the region. Regional autonomy is a governmental system that respects to participation, self-reliance, social welfare, democratization, and community development. It is seen also as a concept which is compatible with the principles of pluralism, transparency, accountability, and based on the local capacity. Furthermore, the concept of regional autonomy is also a platform for the implementation of the principles of fairness and social welfare in the policy of sustainable development. Through regional autonomy, theoretically the degradation of nature resources would be minimized because of a greater responsibility of regional government as well as local people. In this context, FMU shall be formulated appropriately.

4.3.3 The Structure of Forest Management Unit (FMU)

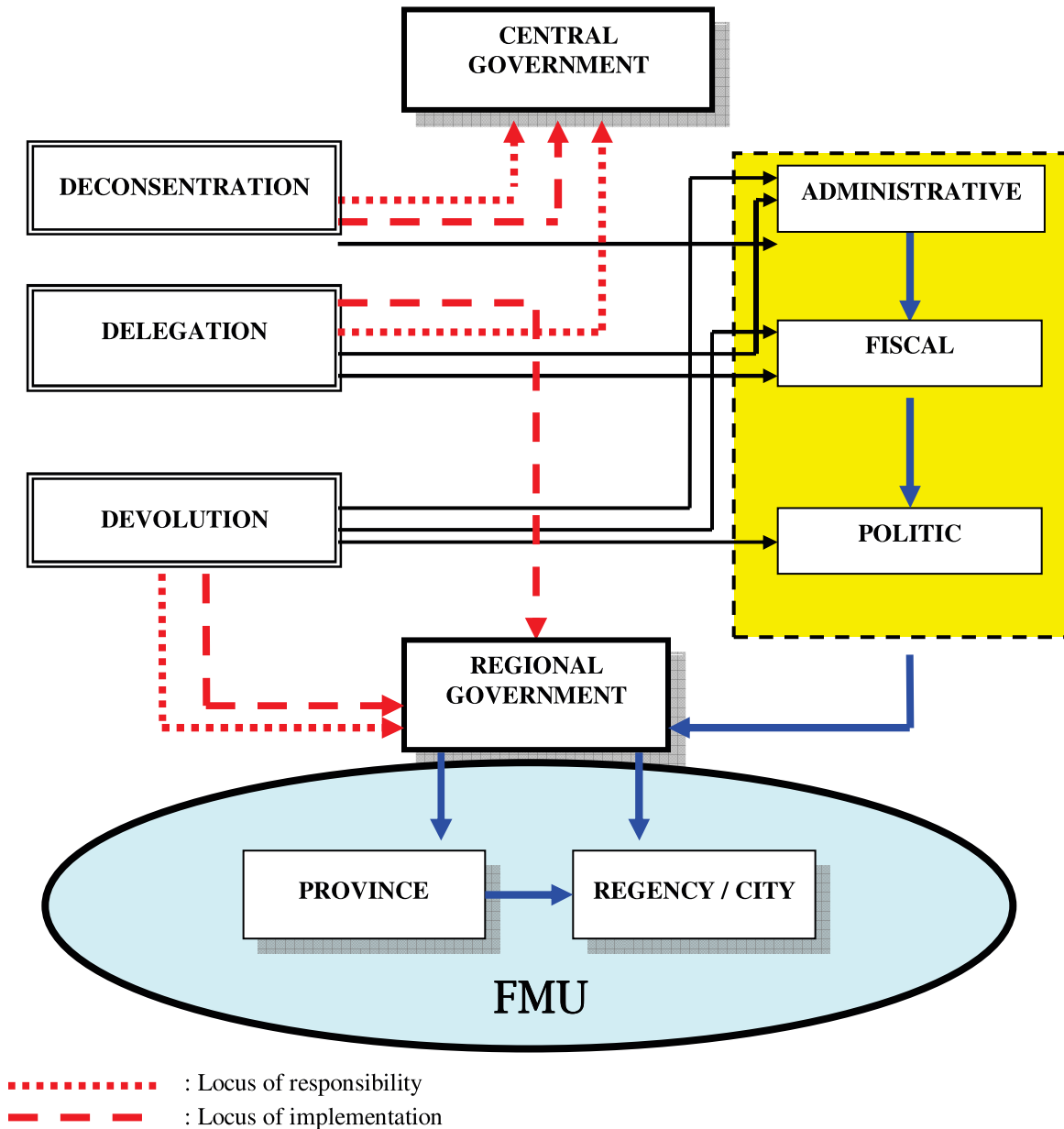
Decentralization in Indonesia under Law 22/1999 is a hierarchical decentralization, where central government devolved almost all government authorities to the region. After Law 22/1999 was replaced by Law 32/2004, then the decentralization did not follow a hierarchical decentralization but sectoral decentralization (Law 32/2004 paragraph 13, 14). Besides giving division of central government authorities and regional government authorities, Law 32/2004 also introduced 31 (thirty) “sharing” authorities between central and regional government, included forestry.

Formation of the Forest Management Unit (FMU) is obligatory since it is stated by Forestry Law 41/1999. The principle of fairness and respect to the local aspirations shall be considered in the formulation of FMU. The formation of FMU shall consider the wave of decentralization that shifts some authorities from the central to the region. The improper government administration will create loss of legitimacy and distrust to the state (Nurrochmat dan Purwandari 2006). It shall be highlighted in the formulation of FMU in order to gain a high legitimacy and trust to ensure the effectiveness in achieving sustainable forest management. It is not an easy task because of the different contextual setting between Forestry Law 41/1999 and Regional Governance Law 22/1999 (then replaced by Law 32/2004). The contextual setting of FMU in Forestry Law is deconsentration, while regional governance law placed the management of forest as one of the authority shifted to the region.

Nowaday, forestry decentralization has been practiced. There are several problems supposed to be factors influenced to the effectiveness of forestry decentralization, i.e. 1) the differences of interpretation, concept, and goal of forestry decentralization at national and local level, 2) the differences of historical context and surrounding environments, 3) inconsistency of the laws, 4) various forms, roles, and capacity of forestry institutions in the regions, and 5) the differences of "political will" of the region's head.

The problems became complicated when the political reality of supporting devolution stay in the opposite with the historical format of FMU, which is strongly support for deconsentration. Considering that the development of FMU should also respect to historical aspects, then the instition of FMU have to be a compromizing between deconsentration and devolution. This consideration is also relevant with the regional governance law 32/2004, where the forestry authority is placed as optional matters in decentralization law. Thus, under regional governance law some scenarios of FMU would be possible to be applied. One of the most realistic option for choosing the instition of FMU is **"delegation"**. Theoretically, **delegation is positioned in between deconsentration and devolution. Therefore, delegation could be chosen as a generic form of FMU.** By choosing delegation as the generic form of FMU, the homogenization of the institution format of FMU is not necessary. The institutional forms of FMU could

be different depend on the specific characteristic of the regions (considering human resources, socio-economic, cultural, and/or physical characteristics). **Figure 4-5** shows the alternative distribution of authority and scope of decentralization.



Source: Nurrochmat and Hasan (2010)

Figure 4-5: Options of Distribution of Authority and Scope of Decentralization

4.4 Fiscal Framework

In developing infrastructure of REDD the four aspects of regulative, administrative, fiscal and informative could not be separated. Therefore Law 33/2004 on Fiscal Balance, Law 32/2004 on Regional governance, and Law 41/1999 shall be put as integral legal basis of forest governance and thus also infrastructure framework of REDD. Fiscal balance law deals with the fund raising mechanism of the region among other by regulating sources of regional income. This law also regulated fund distribution mechanism from central to the regions. According to fiscal balance law, the region received most portion of income distribution from forestry sector.

Beside Law 33/2004, fiscal on forestry sector is also regulated by Law 41/1999 and some other related laws. Law 41/1999 on forestry basically regulated many tariffs in forestry business. Tariffs are fiscal instruments most frequently used and influential in determining the performance of forest management. In an effort to ensure the existence of forest areas, the sustainability of forest function, optimal utilization of forest products, control of forest use by forestry sector itself and by other sectors, as well as to ensure the fulfilment of life of the community and the lives of flora and fauna, provision of clean air, water, or other environmental services, it is necessary that the operational activities of management and utilization of forest should be regulated by the forestry tariff instruments.

In terms of legislations in the Republic of Indonesia, the implementation of forestry tariffs instrument is largely embodied in the form of Non-Tax State Revenue. **Table 4-6** shows the Fiscal Framework of REDD in the context of sustainable forest management.

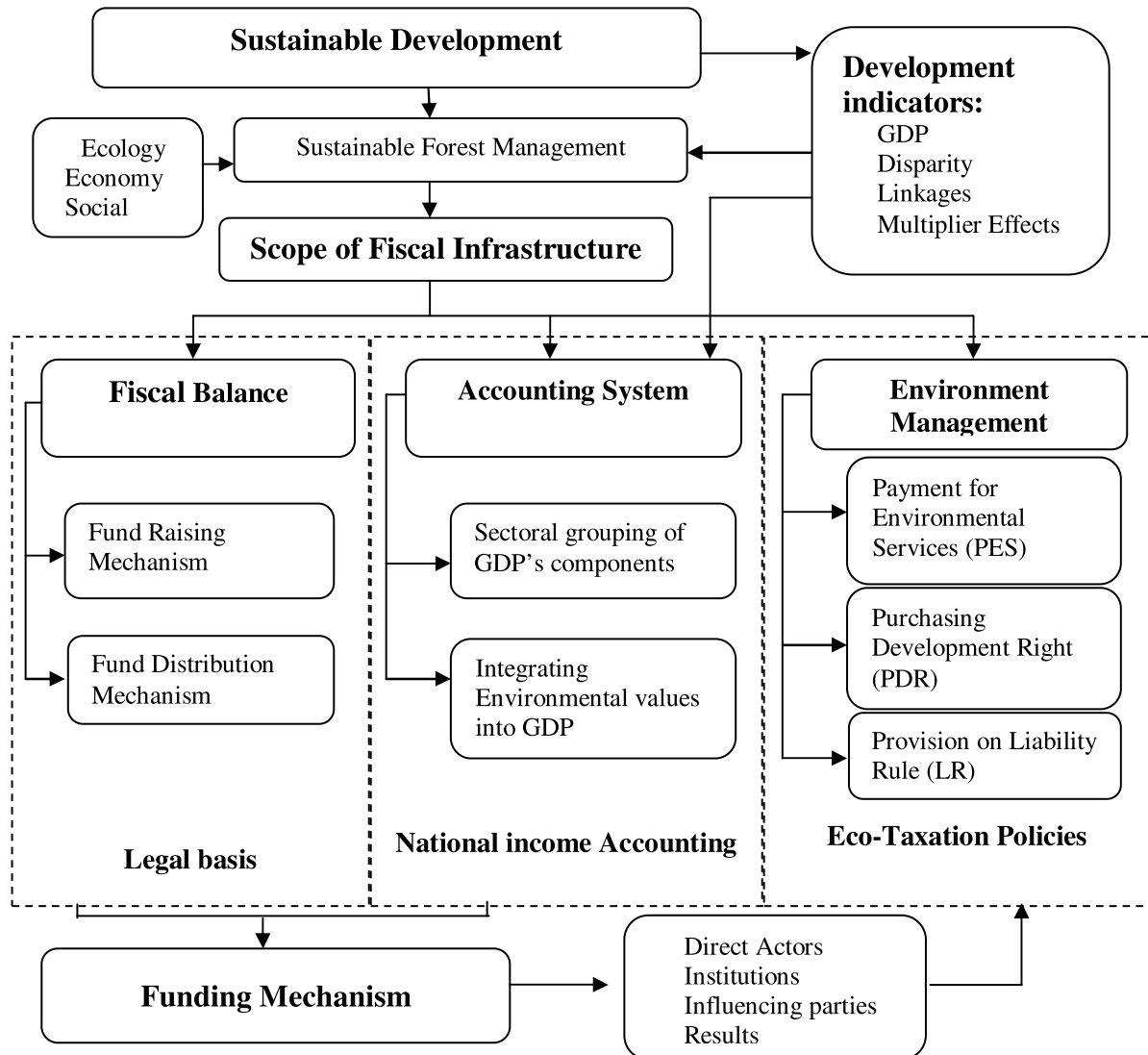


Figure 4-6: Fiscal Framework of REDD in the context of SFM

4.4.1 Forestry’s Fiscal Policy

Forestry tariff imposition in the form of non-tax state revenue from forest management activities, utilization of forest products, as well as the use of forests are strategic instruments in the effort to ensure the sustainability of forest functions and enhance the contribution of forestry sector for the national and local revenues. Based on the type, rate or levy can be broadly divided into three groups, namely:

- a) Taxes
- b) Retribution
- c) Non-Tax State Revenue

4.4.1.1 Taxes

One of the most important source of revenue for the country is tax, of which approximately 90% of state revenue derived from taxation. Tax is a levy imposed by the government (central or local) to the taxpayer without remuneration that can be directly appointed (Suparmoko and Nurrochmat, 2006). Taxes can be divided into two categories, namely:

- a) Direct taxes
- b) Indirect taxes

Direct taxes are taxes whose burden should be borne by taxpayers, while indirect taxes are tax burdens that can be shifted to others. Examples of direct taxes are individual income tax and corporate income tax or corporation tax. While example for indirect taxes include mining tax, property tax, sales tax on luxury goods.

4.4.1.2 Retribution (Provisions)

As with taxes, retribution is a levy imposed by the government and must be paid by the taxpayers or the people who imposed with provisions. However, different from taxes, retribution is imposed on services provided by government. Therefore, remuneration of retribution can be directly assigned, such as the use of space, natural resource extraction, forest use, licensing of forest concessions and so forth. Thus, retribution can also be defined as a levy imposed by government to the retribution payers on goods or services supplied by the government. Retribution is divided into three categories:

- a) Retribution for license
- b) Retribution for business services

c) Retribution for social services.

Retribution can be classified as non-tax state revenue, because other state revenues can be either a fine, confiscation, printing money, inflation, grants and so forth.

4.4.1.3 Non-Tax Tariffs on Forestry Sector

Non-tax revenues are state revenues that are not derived from tax revenue. Non-tax revenues are regulated by Government Regulation and collected from each department and non-department institutions. The existing levy from forestry sector is mostly non-tax revenues. Based on Government Regulation No. 22 of 1997, types of non-tax revenues that are generally accepted in all departments and non-department institutions include:

- a) Recoveries budget,
- b) Receipts from the sale of goods / wealth of the country,
- c) Acceptance of the rental of goods / wealth of the country,
- d) Acceptance of deposit of state money (current accounts),
- e) Acceptance of compensation for state losses (compensation claims and demands of the treasury),
- f) Acceptance of fine for a late completion of government work, and
- g) Receipts from the sale of auction documents.

Until now the prevailing non-tax revenues in the Ministry of Forestry in addition to the Reforestation Fund consists of eleven types, namely:

- 1) Royalties from Forestry - now called Forest Product Royalty,
- 2) Royalties from License Fee from Forestry (IHPH) – now is called IUPHHA,
- 3) Royalties from License Fee from Industrial Forest Plantation - IUPHHT,
- 4) Royalties from License Fee from Bamboo Forest Concession,
- 5) Royalties from License Fee from Rattan Forest Concession,
- 6) Royalties from Concession of nature tourism,
- 7) Royalties from entrance fee for jungle tours, national parks, grand forest parks and marine park,

- 8) Royalties from capturing / collecting and transporting of unprotected wildlife, as well as the exploitation of new animals,
- 9) Royalties from Violation Fines for Forest Exploitation,
- 10) Royalties from Post Audit Fines and administrative royalty from forestry, and
- 11) Royalties from collection of protected wildlife

As part of the forestry sector, forest environmental services management business would be associated with various regulations concerning forestry tariffs or fees. In the implementation level, imposition of forestry tariffs including environmental services, not only refers to a specific legislation but also greatly associated with the other sets of rules. The application of forestry tariffs should also refer to other relevant legislation such as Law 41/1999 on Forestry, Government Regulation 22/1997 jo. Government Regulation 52/1998, Government Regulation 35/2002, and Forestry Minister Regulation 14/2006 into the category of non-tax state revenues according to Law 20/1997.

Forest environmental services business as part of Forestry lawivities can be affected by one or several types of forestry tariffs as regulated in the Law 41/1999 on Forestry, including: License Fees, Performance Guarantee Fund, Reclamation and Rehabilitation Guarantee Fund, Forest Preservation Investment Fund, research and Development Investment Fund, Training, and Extension Services, Compensation for Community Losses Fund. While the provisions regarding Reforestation Fund levy is set by Government Regulation 35/2002.

In order to complement the previous regulations, in 2006 the Minister of Forestry has issued two non-tax forestry tariffs, namely: provision for payment of land compensation “Borrow-Wear Forest Area” through the Forestry Minister Regulation 14/2006 on Guidelines for Use of Forest Area Lending and Minister of Forestry Regulation P. 02/Menhut-II/2006 concerning the Guidelines for Administration Charges and Fees Field of Forest Protection and Nature Conservation. In addition, in 2007, the Minister also issued ordinances imposing non-tax forestry tariffs the new Forestry Minister Regulation P.18/Menhut-II/2007 About Procedures for Imposition, Collection and Payment of Forest

Resource Provision (PSDH), and Reforestation Fund (DR) replaces an existing Regulation.

4.4.2 Profit Sharing of REDD

The profit sharing of REDD activities in the various type of business units and forest functions has been regulated by the Forestry Minister Regulation P. 36/Menhut-II/2009 (Table 4-3).

Table 4-3: Profit Distribution of REDD

No	License	Profit Distribution		
		Government	Community	Developer
1.	Forest Concession (HPH)	20%	20%	60%
2.	Forest Plantation (HTI)	20%	20%	60%
3.	Ecosystem Restoration (HPH Restorasi)	20%	20%	60%
4.	Community Forestry Plantation (HTR)	20%	50%	30%
5.	Community Forest (Hutan Rakyat)	10%	70%	20%
6.	Community Forestry (HKm)	20%	50%	30%
7.	Costumary Forest (Hutan Adat)	10%	70%	20%
8.	Village Forest (Hutan Desa)	20%	50%	30%
9.	Forest Management Unit (KPH)	30%	20%	50%
10.	Special Purpose Forest (KHDTK)	50%	20%	30%
11.	Protection Forest (HL)	50%	20%	30%

Source: Forestry Minister Regulation P. 36/Menhut-II/2009

Although the profit distribution of REDD activities has been regulated, however, the regulation is not able to be implemented because of lack technical details and ambiguities

in some matters. The sharing of profit will be never happened when there are no technical details and unclear responsible units for the permit mechanisms of REDD in each forest function as well as type of business permits. There are also some difficulties in interpreting profit sharing for cross types of REDD activities, e.g. REDD with community forest scheme located at a protection forest.

4.4.3 Problem Concerning Formulation of Forestry GDP

GDP is the market value of all the goods and services produced by labor and property located in the region, usually a country. Understanding the value of GDP is very important to measure the level of economic growth of certain country. There are three approaches to measure the value of GDP as follows (Suparmoko and Nurrochmat, 2006):

- 1) Income
- 2) Expenditure
- 3) Added value

In Indonesia, usually Center for Statistics Agency (BPS) used added value approach to measure GDP. To measure GDP, the economic sectors were classified into nine categories:

- 1) Agriculture, Animal Husbandry, Forestry and Fisheries
- 2) Mining
- 3) Manufacturing industry
- 4) Electricity, Gas, and Water
- 5) Construction
- 6) Trading, Hotel, and Restaurant
- 7) Transportation and Communication
- 8) Finance and Leasing
- 9) Services

According to the above category, forestry is one of the economic sub-sectors under agricultural sector. The GDP could be used for some reasons: first, to analyze economic growth; second, to measure the development level of certain country; third, to understand results of development; and fourth, to formulate national development planning. GDP

has been also widely accepted to classify the country's category as developed or developing countries (Suparmoko and Nurrochmat, 2006).

Although containing many useful elements, the existing measurement system of GDP has a number of weaknesses. The value of conventional GDP is not reflecting the real economics because it is not taken into account the loss of value due to depletion and degradation of natural resources, as well as benefits from the environmental services. According to Suparmoko and Nurrochmat (2006), the value of green GDP equals to the conventional GDP minus natural resources depletion and degradation plus the value of environmental services (if available). The depletion value could be understood by identifying the number of extracted natural resources using for economic activities in a year, while the value of environmental degradation could be estimated by calculating the potential loss from related economic activities in certain area per year.

There were indubitable evidences for the important contribution of forests to the national economic development; however, according to the existing conventional GDP the forestry contribution is very low. It appoints clearly a bias calculation of the conventional GDP and shows ironical situation because the potential economic loss due to forest degradation could be much higher than the gains from the extraction. It occurs because forestry activities has a long and large forward linkages, i.e. wood processing industries, pharmaceutical industries, tourism industries, water reserve, agriculture, and water transportation. Forest resource had multipurpose function and contributed very important values to the national development in terms of economy, socio-culture, and ecology. According to its function, the government classified forest area into three categories, i.e. production forest, protection forest, and conservation forest. At the current situation, only production forest has contributed direct-value to the national GDP because of its outputs, especially timber, the only forest product has been marketed. Besides the marketed products, forest has very important function by providing environmental services, such as preventing soil erosion, sedimentation, hydrological function, biodiversity reserve, and carbon sink.

Although forest has a number of functions, Forestry's GDP in the statistical system released by the Center for Statistics Agency (BPS) considered only on the added value from the activities of extracting forest products and primary wood industries. Further processed wood products such as wood furniture and paper mills were not calculated in the Forestry's GDP. Although the nominal value of GDP increases continuously, it is important to note that the increasing nominal value of forestry's GDP (in IDR) does not mean the increasing contribution of forestry's GDP to the national GDP in term of percentage, because the nominal value of GDP is not only related to the production volume (outputs), but also highly influenced by the exchange rate (IDR to US\$) and inflation rate (Nurrochmat *et al*, 2007). Contrary to the increasing nominal value of Forestry's GDP, percentage contribution of forestry to the national GDP tends to decrease year to year. Nowadays, forestry contribution to national GDP is less than two percents. A reason for the minor contribution of forestry to the national GDP is due to the measurement of Forestry's GDP considered only on the tangible value of forest products mostly timber and primary wood industries, while a huge potential value of environmental services was not taken into account. In the other word, the existing Forestry's GDP was calculated undervalue and it was not reflecting the real value because of neglecting intangible benefits of forests.

4.4.4 Green Taxation Mechanisms

Many fellows reported various benefits of forests and created mechanisms to estimate total economic value of forests. The economic values of forest ecosystem have been identified, however, those values laid only in the scientific reports and almost none of them transformed into cash. Such situation causes a large gap between a huge benefit of forest ecosystem given conceptually by the scientists and less actual revenues from ecological function of forests received by forest communities as well as local governments. It appoints that forest valuation is important to estimate total value of forests, but the valuation itself reflected only a potential values and cannot guarantee them to transform into real values. To transform potential values into real values, it needs three steps i.e.

- 1) Economic valuation of forests. The result of this step is (potential) economic values of forests.
- 2) Trading mechanism. This mechanism is very important step to bring both used and non-used values of forests into the market.
- 3) Transaction. The economic values will never been transformed into cash without transaction.

To transform (potential) economic values of forests, especially ecological function of forests, schemes of green trading mechanism is needed. There are three important schemes of green trading mechanism that are Payment for Environmental Services (PES), Purchasing Development right (PDR) and Liability Rule (LR). At the operational level, those schemes could be implemented through various mechanisms, such as Clean Development Mechanism (CDM), Reduce Emission from Deforestation and Forest Degradation (REDD), Debt Swap for Nature (DSN), Incentive Mechanism between Upstream and Downstream Regions (IUD) and some other mechanisms. Those mechanisms, however, cannot guarantee a transaction. Transaction could be realized by a mutual agreement between respective parties or by enforcing a set of “green” regulation consistently.

The downstream region has an obligatory task to support upstream region in preserving watershed area. It is important to note that to manage watershed area effectively inter-sectoral and inter-region cooperation is needed. A better watershed management will increase added value, directly or indirectly, in the downstream regions. Therefore, by implementing PES the downstream regions cannot be free riders towards the utilization of environmental services anymore. Generally, the government still contributes to the main source of funding for nature conservation.

Nurrochmat *et al.* (2007) promoted three concepts for operationalizing green taxation policy: 1) Payment for Environmental Services (PES), 2) Purchasing Development Right (PDR) and 3) Liability Rule (LR).

a) Payment for Environmental Services (PES)

The concept of PES related to the amount of payment shall be given by the consumer region to the producer region, e.g. a city government at the downstream region shall pay to the government at the upstream region for certain environmental service has been provided such as drinking water. In Indonesia, this concept has been adopted in the some regions, for instance, mutual agreement between the city of Cirebon and the district of Kuningan (West Java). People in the city of Cirebon (downstream region) consumed water that is mostly coming from the Gunung Ciremai National Park in the Kuningan region (upstream region).

b) Purchasing Development Right (PDR)

Purchasing Development Right means that a certain amount of compensation shall be given to the land owner for certain public purpose, e.g. a forestland owner has right to cut his trees for income generating. Government can prohibit the forestland owner cutting his trees, but the government will pay certain amount as compensation for income generating should be gained by forestland owner from trees cutting.

c) Liability Rule (LR)

Liability Rule related to the rule of payment by responsible party. This rule has been widely accepted and in industrial communities this concept are often called as “polluter’s pays principle (PPP)”. Following this principle a polluter industry must spend more cost to install waste treatment and pay compensation to people or any parties as the victims of pollution. With the same principle, the regional governments, who extracting natural resources over sustainable level, shall pay compensation to the victim regions. This payment cannot be executed without a legal mechanism. Therefore, a legal instrument to regulate the PPP’s mechanism shall be created

4.5 Informative Framework

One of the most important elements in communicating policy on REDD is information.

Table 4-7 shows the informational framework of REDD in the context of SFM.

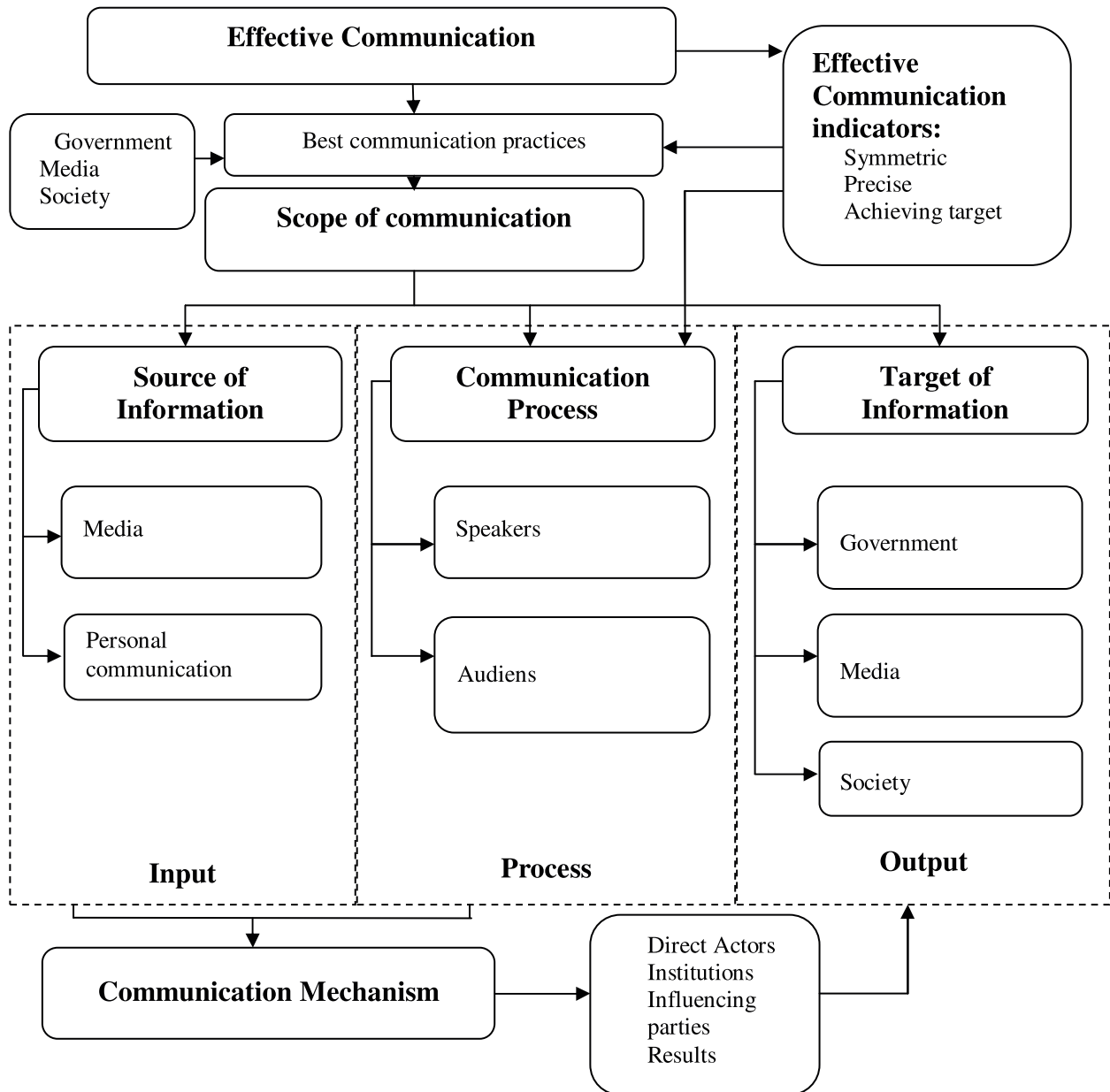


Figure 4-7: Informational Framework of REDD in the context of SFM

Coined to Brewer *et al.* (1983), Krott (2005) argued that information is the basic and most common political instrument for regulating human action, which affects people's decisions and actions in two completely different political levels, i.e. public awareness and power. Information is needed to see how the interests. Moreover, the stakeholders can also make themselves a picture of the real situation. So, it could say that “*the most important aspects of information are clarity, consistency and truth in terms of corresponding to reality*”. In forest policy practice, any efforts towards improving forest policy regulations and respective scientific analyses are mostly aimed at quality information. He summarized that by achieving high information content, forest policy regulation will become more effective.

4.5.1 The Importance of Political Communication on REDD

Information is going to become much more effective when associated with power. Max Weber defined power as the probability that in a social relationship, one can assert one's own will against that of the opposition (Park 2009; Ekayani 2011). Krott (2005) argued that by using information and power, forest policy can achieve three different types of conflict resolution, i.e. first, raising public awareness via information; second, promoting practical solution; and third, negotiation. He stated that by raising public awareness via information, policymakers hope to influence the stakeholders' views that were formed according to their self-interests. The use of information for the purpose of raising awareness is widespread and obvious in the forest sector, e.g. serving to alleviate the conflict.

It is also important to note that policy-making has achieved far more success in regulating conflicts by using information to promote practical solutions. Referring to Meadow (1980), the limits of providing information and practical solutions are found wherever different interests in a forest cannot be realized simultaneously. It is also commonly found that the regulation of such conflicts follows a pattern of negotiation and therefore, various interests, instruments of power, threats, as well as executive power, are engaged until a regulation is found. The effectiveness of information is thus also strongly determined by political communication, which refers to “any exchange of symbols or

messages that to a significant extent have been shaped by or have consequences for the political system”.

According to Dunn (2000), policy-relevant communication is a process in connecting these activities: policy analysis, structuring content, interactive communication, and science utilization. A raising public awareness, therefore, could be achieved among others, through correct information to stakeholders about the environment or their specific actions. Stakeholders, thus, can gain a broader basis for decision making by improving their capacity to take the proper action. In forest policy practice, the better the information, the easier it is for the stakeholder to choose the optimum forestry measures to promote his self-interests. Informational instruments are thus usually employed both for the purpose of achieving public awareness as well as power (Krott 2005; Ekayani 2011).

4.5.2 Interests as Driving Force of Politics on REDD

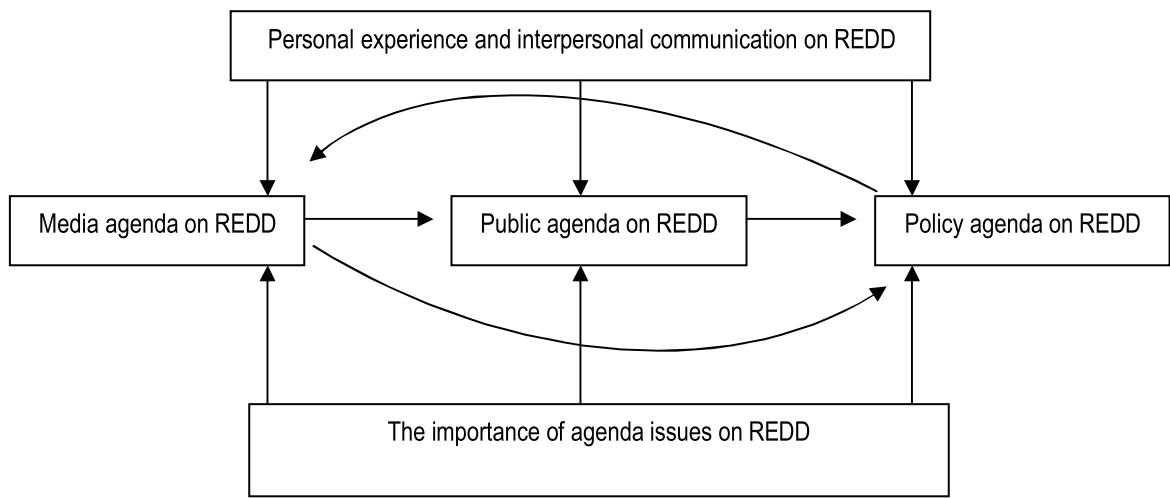
There were many indubitable evidences that interest is one of the most important factors in driving force of environmental politics, included REDD. The confusion, contradictions, selfishness, or hypocrisy characterize the political process. Interests are based on action orientation, adhered to by individuals or groups, and they designate the benefits the individual or group can receive from a certain object, such as a forest (Krott 2005). He argued that interests constitute the cornerstone of modern social sciences and therefore, they play a major role in determining all measures taken by politicians. All goals are usually hardly binding, therefore, politicians tend to follow their self-interests in as far as possible. Since interests unveil the truth, they are not all openly displayed, but kept secret according to the respective tactics. Interests are geared to the benefits gained by the political player or stakeholder. To reveal the key interests, the three dimensions of ecology, economy and social factors can be of help. As a rule, each interest is embedded in these three areas (Grundmann 1998; Krott 2005).

Ekayani (2011) reported that in environment politics, interests are divided into three positions, i.e. causer, victim, and helper. Any actor who represents one of those positions has either advantages or disadvantages in the political process. Actors will acquire a

negative image if they described as causer of problems. Vice versa, actors who are seen as a victim indicate powerlessness and therefore, could appeal sympathy. If actors are seen as helper, they are definitely advantageous and could acquire a positive image from the public (Von Prittwitz 1990). Those three positions of the causer, victim, and helper are extremely important in a political communication as well as agenda setting. Therefore those positions shall be also clear in defining and implementing REDD.

The REDD programme could be implemented successfully if the programme could be involved in the policy agenda-setting. According to Dearing and Roger (1996), the agenda-setting process is an ongoing competition among proponents of an issue to gain the attention of the media, the public, and policy makers. There are two most important elements of agenda-setting, i.e. awareness and information. To investigate the agenda-setting function of the mass media, they attempted to assess the relationship between what people in certain community said about the important issues and the actual content of the media messages. They concluded that the media exerted a significant influence on what people considered to be the major issues of certain matter (McCombs and Shaw 1972)

Dearing and Rogers (1996) hold that there is also interrelationship between those three elements of media, public, and policy in the agenda-setting. The REDD programme would be successful when it is supported by proper information on REDD in the media agenda, the public agenda and the policy agenda (**Figure 4-8**).



Source: modified from Dearing & Rogers (1996); Ekayani (2011)

Figure 4-8: The information Process in Formulating Policy Agenda on REDD

Usually, the media agenda presented to the public results from the decisions by many different journalists and their supervisors about the news of the moment. Since there are interrelationship between media agenda, public agenda and policy agenda, therefore, changing the media and public agenda on REDD will also influence to the policy agenda on REDD.

CHAPTER 5

LEARNING FROM CASES: STAKEHOLDER PERCEPTIONS ON REDD

5.1 Stakeholders Perceptions on Green Fiscal Policies

Test of public acceptance of some of the concepts that support the implementation of green fiscal policies was carried out by exploring the perceptions of various stakeholders related to natural resource management in two provinces, namely: East Kalimantan and Riau.

Table 5-1: Stakeholders Perceptions towards Environmental Services Management in East Kalimantan

Matters	Stakeholders Perceptions		
	Regional Development Planning Board	Forest Area Gazetment Office	Local University
Regional income from environmental services	Inadequate	Inadequate	Inadequate
Horizontal coordination between institutions	Good	Lacking	Good
Vertical coordination between institutions	Lacking	Lacking	Lacking
Comprehensiveness of environment regulations	Inadequate	Inadequate	Inadequate
Impacts of current natural resources fiscal regulation	Negative	Negative	Negative

Source: Nurrochmat et al. (2010)

Tabel 5-2: Stakeholders Perceptions towards Green Fiscal Policies in East Kalimantan

Policies	Stakeholders Perceptions		
	Regional Development Planning Board	Forest Area Gazetment Office	Local University
Rewards & punishment of revenue sharing on natural resources	Necessary	Necessary, but require field monitoring due to prone of misuse of assessment	Necessary
Fines for pollution-producing region and compensation for affected areas	No comment, depending on the cause of environmental disaster	Agree, require regulation	Agree, but investigation must be objective
Concept of economic valuation forest resources	No comment, lack of understanding	Necessary, but require accurate data	Necessary, as a basis for policy decision
Green GDP Concept	Lack of understanding	Necessary, but require accurate data	Necessary to know the real condition of natural resources
Purchasing Development Right (PDR)	Agree, could be implemented	Agree, since it is logical and could be implemented	Agree, but should be supported by good regulations
Clean Development Mechanism (CDM)	No comment, not yet available in East Kalimantan	No comment, not yet available in East Kalimantan	Agree, but the mechanism is too complex & not yet available in East Kalimantan
REDD mechanism	No comment, unclear concept	Agree, could be implemented	Agree, since it is logical and could be implemented
Upstream-downstream Incentive Policy	Agree, require efforts to establish it	Agree, require efforts to establish it	Agree, require efforts to establish it
Debt for nature swap	No Comment, lack of understanding on the mechanism	Agree, but have no knowledge of it in East Kalimantan	Agree, but should have good monitoring
Mutual understanding among regions within a watershed area	Agree, require joint effort to establish it	Agree, require joint effort to establish it	Agree, require joint effort to establish it
Level for the effective regulation of environmental services	National	National	National

Source: Nurrochmat et al. (2010)

Table 5-2 indicated that all stakeholders in East Kalimantan Province agreed that the current regional revenues from environmental services is still very low, thus require efforts to improve it. Efforts to increase such revenue from environmental services is not easy since institutionally, vertical coordination between central, provincial and district governments is felt very weak, although horizontal coordination among government agencies are generally perceived as good enough. In addition to reinstate the inter-institutional coordination, other issues deemed necessary to be considered by stakeholders in East Kalimantan in order to increase revenue from the use of environmental services is an umbrella of legislations that is still considered inadequate. Moreover, some parts of the substance of Law 33 of 2004 on Financial Balance between Central and Regional Government is also considered unsuitable because it triggers excessive resource exploitation that are short-term profit-oriented, thus threatening the sustainability of natural resources.

Table 5-3: Stakeholders Perceptions towards Environmental Services Management in Riau

Matters	Perception			
	Province Forestry Service	Regional Development Planning Board	Regional Environmental Board	Natural Resources Conservation Agency
Regional income from environmental services	Inadequate	Inadequate	Inadequate	Inadequate
Horizontal coordination among institutions	Good	Good	Good	Good
Vertical coordination among institutions	Lacking	Lacking	Lacking	Lacking
Comprehensiveness of environment regulations	Inadequate	Inadequate	Inadequate	Inadequate
Impacts of current natural resources fiscal regulation	Negative	Negative	Negative	Negative

Source: Nurrochmat et al. (2010)

Table 5-4: Stakeholders Perceptions in Riau toward the Alternative of Green Fiscal Policy

Policies	Stakeholders Perceptions			
	Forestry Services Office	Regional Development Board	Regional Environmental Board	Natural Res. Conservation Agency
Rewards & punishment of revenue sharing on natural resources	Necessary	Necessary	Necessary	Necessary
Fines for pollution-producing region and compensation for affected areas	Agree, require regulation	Disagree, since local area only carries out policy from the central government	Agree, require regulation	Agree, but should be supported by a consistent policy
Concept of economic valuation forest resources	Too theoretical, tend to be over valued	Too theoretical, not applicative	Too theoretical, tend to be over valued	Too theoretical, not applicative
Green GDP Concept	Important, good understanding	Lack of understanding	Important, good understanding	Lack of understanding
Purchasing Development Right (PDR)	Agree, could be implemented	Agree, require policy as a driver	Agree, could be implemented	Agree, could be implemented
Clean Development Mechanism (CDM)	Agree, but the mechanism is too complex	Disagree, since it is very complex mechanism	Agree, but the mechanism if too complex	No comment, not available in Riau Province.
REDD mechanism	Agree, require strong government commitment	Agree, very logical and may be implemented	Agree, require strong government commitment	Agree, could be implemented
Upstream-downstream Incentive Policy	Agree, require efforts to establish it	Agree, require efforts to establish it	Agree, require efforts to establish it	Agree, require efforts to establish it
Debt for nature swap	Agree, but lack of knowledge of it in Riau	Agree, but lack of knowledge of it in Riau	Agree, but lack of knowledge of it in Riau	Agree, but lack of knowledge of it in Riau
Mutual understanding among regions within a watershed area	Agree, require efforts to establish it	Agree, require efforts to establish it	Agree, require efforts to establish it	Agree, require efforts to establish it
Level of effective regulation on environmental services	National	International	National	National

Source: Nurrochmat et al. (2010)

Similar to East Kalimantan Province, all stakeholders in the Province of Riau also agreed that provincial revenues from environmental services are currently still very low. Weak vertical inter-institutional coordination perceived by the stakeholders is one factor that might complicate the implementation of environmental services utilization. Another issue considered important by the stakeholders in the Province of Riau to increase revenue from environmental services utilization is the absence of legal bases governing and can be used as a common ground for all parties interested in environmental services. The act governing the financial balance between Central and Regional government is also currently considered as part of the problem and has negative impacts of resource management.

Stakeholders in both provinces generally agreed that the mechanism of rewards and punishments should be incorporated within the policy of revenue sharing from natural resource management. Therefore, revisions of Law 33 of 2004 on Financial Balance between Central and Regional Government is necessary because the law is likely to encourage local government to carry out over exploitation of natural resources. Under the terms of the law, it is generally regulated that the larger an area exploit its natural resources, the greater the area will get revenue-sharing. This provision is viewed from one side only that is reward for the region capable of generating outputs from its natural resources. Meanwhile, the punishment for regions with poor performance on natural resource management or even conduct a massive destruction of natural resources was not regulated in a mechanism of benefit-sharing that is comprehensive and fair.

In addition to encouraging improvement of benefit-sharing mechanisms for natural resource management as sets out in the Law on Fiscal Balance between Central and Regional Government, in general the parties agreed for the need to apply a fine mechanism for regions generating pollutions / environmental disaster and compensation for the affected areas. Some key persons added that such fine mechanism should not be imposed if the causes are uncontrolled natural factors or as a result of a policy that has been outlined by central government.

The concept of economic valuation of natural resources in general has been understood by the parties. However, most of them stated that although economic valuation study is suitable for academic materials, but in practice, this concept has lack of implementation and difficult to be transformed into a policy. Except for key persons in BPKH, in general, the parties in the relevant institution do not quite understand the concept of Green GDP, but after further explanation in general they highly approve of this concept. Except for trials that have been conducted by the Ministry of Forestry in some areas, the concept of Green GDP is currently unknown by the implementers of government, let alone the wider community. Therefore, the current stakeholders encourage the socialization of Green GDP concept to broader stakeholders and immediately seek the legal bases that can be implemented as a accompanying balance sheet.

The concept of Purchasing Development Right (PDR) is a very simple concept, which in principle entitled the government or local governments to prohibit logging or exploitation of natural resources on private land if the location is considered to carry out protection or conservation functions, by providing adequate compensation for residents who owns the land in question. Stakeholders very much appreciate the existence of this concept and they generally agreed, noting that there are legal bases and clear mechanisms. The stakeholders generally thought that the Clean Development Mechanism (CDM) concept is very complicated, so difficult to implement. Moreover, although this mechanism has long been echoed on many occasions and have a fairly broad resonance, but in reality they never see the realization of this mechanism except in some studies or small-scale pilot project.

Although some stakeholders have never heard of or have little understanding of the mechanisms for Reduced Emissions from Deforestation & Forest Degradation (REDD), but the majority of stakeholders who understand the concept of REDD mechanism considers it to be much better and implementable compared to CDM. They are optimistic that REDD mechanism can be implemented, provided followed by a legal bases and adequate sets of rules. They also expect that REDD mechanisms can be implemented as simple as possible and expect that decision-makers and donor countries are not stuck in creating complex rules so that eventually it will become difficult to be implemented.

The term upstream-downstream incentive is an alternative to environmentally sound fiscal policy mechanisms that is the most widely known by the stakeholders. Most of them highly approve of the upstream-downstream incentive mechanism because it would provide a sense of justice and motivation for local governments in the upstream areas to be more responsible in managing natural resources in their area. With the upstream-downstream incentive policy, it is expected that there would be no more downstream areas that became free raider who enjoy the environmental services (water consumption, irrigation, flood protection, soil erosion, etc.) for free. Given this mechanism, the downstream areas are obliged to set aside some funds as compensation for the regions upstream for all the environmental services supplied by the upstream areas. In turn, upstream regions are obliged to manage its natural resources properly so that the quality of environmental service functions that result does not decrease. Although in some areas this upstream-downstream incentive mechanism has worked under the legal bases of bilateral cooperation agreements between districts / cities, but almost all stakeholders state the necessity of having national legal bases with Provincial Regulations so that the implementation of this mechanism can be adopted more widely and more effectively.

Mutual understanding among regions within a watershed area is one of the factors driving the implementation of mechanisms of upstream-downstream incentive. The parties concur that the agreement between upstream and downstream regions is necessary as an effort to accelerate the implementation of mechanisms of upstream-downstream incentive and as a precondition of achieving orderly implementation of Spatial Planning, in particular cross administration. Foreign debt relief mechanism through the rehabilitation & conservation of natural resources (debt for nature swap) is one an attractive alternative of green fiscal mechanisms and has been implemented by several donor countries in Indonesia. Most stakeholders agree of such mechanism, however they also reminded that foreign debt relief mechanisms should be examined thoroughly and carefully so as not to create political traps for the local governments and central government.

In order for a variety of alternative green fiscal policies and mechanisms offered above can run effectively, all stakeholders argued that it is necessary to have legal protection at national level to implement the inter-regional policy of environmental services

management. The legal bases should be immediately followed by more detailed implementing rules at the provincial level through Provincial Regulations to regulate the service mechanism.

5.2 The Importance of Green GDP

To provide the correct direction in the management of natural resources within the framework of sustainable development, there is a need for new approaches in calculating development which incorporates environmental dimension (depletion value of natural resources, degradation and value of environmental services). Up to now, the value-added of forestry sector to GDP is still resting on timber production, while the environmental services provided by forests have not been reckoned in the GDP. On the contrary, environmental remediation efforts such as creating embankments to prevent erosion, repair and dredging of irrigation canals to prevent sedimentation, environmental improvements due to flooding; all expenses for repairs are regarded as the value added created for construction sector (building) and will increase the value of GRDP of the areas experiencing the disaster.

The value of natural resources and environmental damage are not counted as depreciation of natural capitals and also not shown in the calculation of the conventional GDP. Such concept is clearly erroneous because it did not reflect the real welfare value of the concerned public. Revenues can be increased, but the assets or wealth is depleted. The misconceptions in calculating the values of forest resources as an integral part of economical, ecological, cultural and social values, have given incorrect policy direction, that is the over exploitation of forest resources that resulted in further degradation of existing forests and decreasing even loss of forest functions that support the lives of human and other living creatures.

To provide the correct direction in the sustainable management of natural resources and sustainable development, it is necessary to use a new approach in calculating the balance of development (GDP) which incorporate environmental dimension (depletion of natural resources value, degradation value, environmental services value). Unfortunately, the

green balance of development (GDP) obtained by calculating the concept offered by the researchers today, are generally smaller than the conventional GDP and is often seen as less rational, so that the level of public acceptance (is allegedly) low. The small value of environmentally friendly balance development (Green GDP) is allegedly caused by the current calculation concept of Green GDP that only incorporates disincentive components (depletion and degradation values) which are a deduction for Conventional GDP. While ecosystem services value which is a major component of incentives that adds on the value of GDP for those regions that are concern with environmental sustainability has not been taken into consideration in calculating the current GDP.

CONCLUSION & POLICY RECOMMENDATION

6.1 Conclusion

It could be concluded that there are some lesson learned from the existing legal framework concerning the REDD mechanism in the context of sustainable forest management in Indonesia, i.e.

- 1) Some ambiguities and inconsistencies are identified in the existing laws and regulations related to REDD, among others are:
 - a. Ambiguity of authorities towards forest resource management, due to unclear definition and scope of tasks and obligations of central and regional government both province and regency/city in the Law 41/1999 on Forestry and Law 32/2004 on Regional Governance.
 - b. Some inconsistencies are also observed in the intersectoral laws and regulations, for instance Law 41/1999 on Forestry, Law 32/2004 on Regional Governance, Law 33/2004 on Fiscal Balance, Law 26/2007 on Spatial Plan, Law 32/2009 on Mining of Mineral and Coal, and Law 32/2009 on Environmental Protection and Management. Furthermore, inconsistencies are found among implementing regulations such as inconsistency of the Government Regulation 6/2007 jo. Government Regulation 3/2008 on forest arrangement and some others technical as well as sectoral regulations.
 - c. In some cases, unclear division of duties is also found in the Ministry of Forestry internally among others are division of task and responsibility of the cross-sectional working units. Those situations appoint to an ineffective bureaucracy in

forest administrations, most of them are due to unclear division of responsibility referring to location of forest areas, forest functions, and kind of activities.

- 2) The other problems of the REDD implementation are concerning the “lack of technical details”. Some regulations on REDD have been enacted, e.g. Forestry Minister Regulation P. 68/2008, P. 30/2009, and P. 36/2009. However, they only gave general rules of REDD mechanism but less explaining the technical details of required documents, such as funding guarantee, legality of area, and the responsible unit for certain procedure or permit. Besides lack of technical procedure for REDD permit, it needs also some clarification on the detail of technical implementation such as institutional schemes (IUPJL, IUPHHK restorasi, HKm, etc.) and profit sharing mechanisms.
- 3) The proposed legal infrastructure framework on REDD shall ensure a minimum leakage of carbon. In Indonesia, the leakage could be occurred due to illegal logging, forest land encroachment, forest land conversion, or forest fire in the other regions due to implementation of REDD programme in another region.
- 4) Socio-economic and political situations influenced significantly the implementation of forestry practices. In Indonesia, shifting political system towards decentralization, for instance, were resulting a massive policy of maximizing natural resource extraction in the most regions. There were indubitable evidences that during the political transition period, illegal logging spiraled upward and the deforestation rate sharply increased. Therefore, more than a silvicultural or technical system, sustainable forest management shall be seen as a political choice. REDD could be seen as one of the supporting instrument of sustainable forest management. Therefore, any regulations on REDD shall not challenge national interests and have to respect and benefit to the local community. Due to this reason, any fiscal regulations on REDD shall not only consider the price of carbon but also the other alternative of economic use.
- 5) The current concepts on REDD are mostly challenge the national interest because they usually follow the concept of “Purchasing Development Right” (PDR). Instead of neglecting national interests, any regulations on REDD shall be able to create

added value in term of Gross Domestic Product (GDP), linkages (forward and backward linkages), and multiplier effects (output, income, and employment).

6.2 Policy Recommendation

As a political matter, REDD needs to be supported and could be achieved among other by speed-up the formation and operation of Forest Management Unit (FMU) and implementing green fiscal policies, i.e. by adopting green income accounting and green taxes. It recommends to policy makers to formulate green fiscal policies by considering the following schemes:

- 1) **Formation of Forest Management Unit (FMU) is extremely important to implement sustainable forest management and to assure the effectiveness of REDD.** Due to different characteristic of each region, the homogenization of the institutional form of FMU shall be avoided. Instead of homogenization, the “generic” institutional form of FMU should be a “delegation”, then further development of institution shall be flexible according to the local specific. If the regional government, i.e. regional forestry administration, has strong capability then the format of institution shall close to the “devolution”. On contrary, if the capability of regional government is poor, so the proper institutional format of FMU would seem as “deconcentration”.
- 2) **Adopting green GDP as sattelite account in the national as well as regional income accounting system.** Green GDP could be calculated by integrating costs of natural resources depletion and environmental degradation as well as benefits from environmental services into the existing GDP. The value of Green GDP shows a more comprehensive value of the whole economics included natural resources balance and environmental benefits, therefore, a biased value of GDP will be avoided. It is also important to note that pivotal role of forest should be looked not only from the value of GDP, but should also consider the other strategic development indicators such as multiplier effect and linkages.

3) **Developing mutual agreement on PES among the regions along the watershed area.** By mutual agreement on PES, certain amount of payment will be given by the regional government at the downstream area to the upstream region who providing environmental services. If mutual agreement does not happen, thus the fiscal policy intervention could play a role. One of the alternatives of the fiscal policy is **implementing PES trough special allocation fund for conservartion.** Central government could give special payment (Special Allocation Fund/SAF for Conservation) to certain committed regional government at the upstream area as an incentive for its contribution in providing environmental services. Revision of fiscal balance law is not needed in this scheme. In a short-term, it could become an interesting and effective scheme, however, in long-term, this scheme is supposed not too effective because it gives only attention in reward side, but neglecting punishment side. Therefore, the scheme of PES will be effective if and only if the benefits coming from the environmental service of forests (hydrological function, carbon sequestration and/or carbon stocking, biodiversity values, etc.) or special allocation fund given to the conservation region (conservation value) is higher than the benefits coming from natural resources extraction or forest land conversion (conversion value) (**Figure 6-1**). The minimum payment of PES shall be equal with the difference of conversion value and conservation value (A), while the maximum value of PES will be equal with the total value of costs of conversion activity (B).

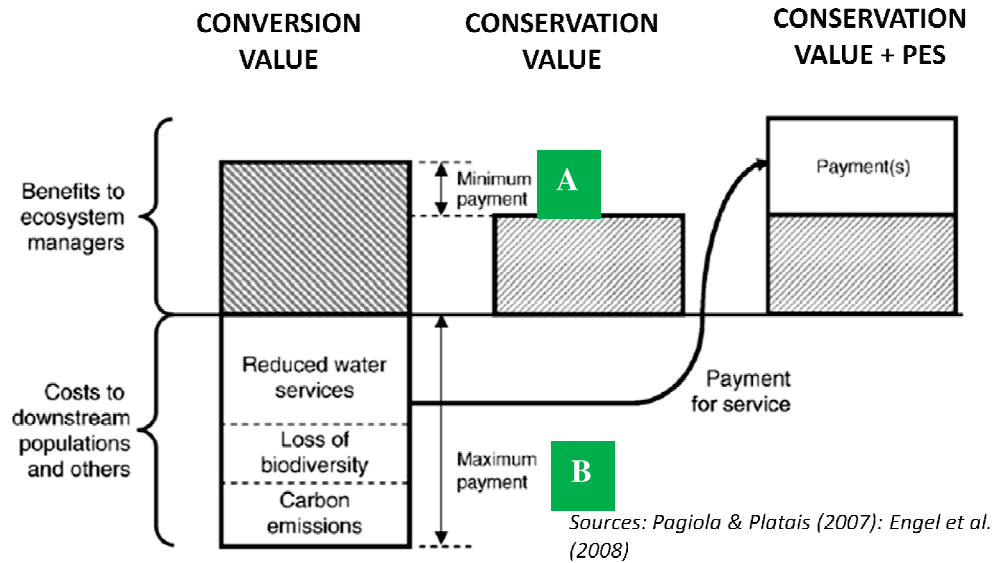


Figure 6-1: Minimum Amount of Payment for the Effective PES Mechanism

- 4) **Enforcing “liability rule” through revision of fiscal balance law.** According to the principles of liability rule, both reward and punishment side have equal attention. To implement the scheme of liability rule, revision of fiscal balance law is needed. The existing fiscal balance law regulates only the benefit sharing of natural resources extraction between center and region, as well as among regions. In this law, the regional government will receive a higher portion of benefit sharing if the rate of natural resources extraction is also high. In the other word, the higher number of the natural resources extracted from certain region, the bigger benefit sharing received by the region. Therefore, the revision of the existing fiscal balance law to be a more green fiscal balance is needed to avoid over exploitation and further destruction of natural resources in the regions due to short-term economic interest. A green fiscal balance shall give a proportional attention both in the reward side and in the punishment side to ensure the sustainability of nature resources management. The following **Figure 6-2** shows the principles of compensation (payment) following the concept of **property rule** and **liability rule**.

		Method of Protection of Entitlement	
		Property Rule	Liability Rule
Holder of Entitlement	Plaintiff	[1] Injunction Against Pollution	[2] Pollution Allowed, Compensation Awarded to Plaintiff
	Defendant	[3] Pollution Allowed, No Compensation Awarded	[4] Injunction Against Pollution, Compensation Awarded to Defendant

Adapted from Krauss (1999)

Figure 6-2: Payment Principles in Property Rule and Liability Rule

Theoretically, the carbon schemes proposed by international conventions, unilateral, or bilateral agreements (Kyoto Protocol, Copenhagen Accord, etc.) have to follow the concept of **Liability Rule**. The scheme of **carbon offset**, for instance CDM, are compatible with the Polluter Pays Principle (PPP), where the polluters or carbon emitters (carbon producing industries) are allowed to operate as long as they give compensation to the developing countries as their victims or plaintiff. According to the concept of Liability Rule, therefore, the CDM shall be seen as obligatory of the industrial countries (not their charity) and at the same time it is a right of the developing countries to receive compensation. REDD is another scheme, which is compatible with the Liability Rule. Assuming that forest-owned countries are the carbon emitters (defendant) from the activities of deforestation and forest degradation (DD), the reduction of emission could be executed if there are any payment given to the forest-owned countries as a **compensation for their loss of benefits** due to logging operation ban or moratorium of forestland conversion as the basic human right to get better prosperity.

5) **Regulating mechanism for “Purchasing Development Right” (PDR).** PDR programs might be suggested when government (or other parties) alarmed at the loss of certain function of lands (forests, farms, etc.) and the government (or other parties) funded the acquisition and retirement of development rights in order to preserve those lands in perpetuity Stein et al. (2001). Through PDR programs, the government (public or other parties) provides a cash payment to a landowner for the value of the development rights associated with a land parcel. **The owner still owns the land, but is compensated for relinquishing the right to develop it.** In the context of REDD, by regulating mechanism for PDR the carbon buyers may prohibit the forestland owner (government or private) to cut trees, but the buyers will pay compensation to forestland owner, certain amount of money, equals to the income should be obtained from harvesting timber. Theoretically, most of the proposed REDD schemes right now follow the concept of PDR. **In the context of international relations and national sovereignty, the concept of PDR shall be implemented selectively and carefully.** To ensure a proper policy for PDR, some key questions shall be considered (Stein *et al.* 2001):

□ **The cost for preparing REDD**

In many cases cost for preparing REDD is not considered in the carbon price negotiation. The preparation cost to make readiness of REDD is very important to calculate because sometimes the costs have to be spent by the forest owner (producers) are very high, even higher than the financial benefits received from carbon trading.

□ **Development pressures on the land**

The intensity of development pressure to forestlands would influence to the effectiveness of REDD implementation. The higher the intensity of development pressure, the lower the effectiveness of the REDD implementation.

□ Productivity for agriculture and other economic uses

The effectiveness of REDD would be highly influenced by the productivity of land for agriculture and other economic uses. If the land productivity of agriculture or other economic uses is high then the pressure for converting forestlands into agriculture or other economic purposes will be also high. The REDD programme will be successfully implemented if the benefits from REDD are bigger than from agriculture or other land utilizations.

□ Legitimacy of Regional Spatial plan

Spatial plan plays very important role to the effectiveness of land uses, included forestland utilizations. The activities of REDD programmes are mostly conducted in forestlands and the effectiveness of those programmes are highly influenced by land use changes. A legitimized regional spatial plan (RTRW) is needed to regulate land uses effectively.

□ Environmental and cultural benefits of forest preservation

The effectiveness of REDD programme will be higher if the environmental and cultural benefits of forest preservation is high. The higher the benefits from forest preservation is supposed to increase the effectiveness of REDD.

□ Proximity to other preserved lands

The REDD programme in certain forest area might be not so effective if there area any other choices of lands that are available to substitute the function of forest area proposed for REDD.

□ Leverage of matching funds coming from other funding entities

The higher the leverage of matching funds coming from other funding entities will increase the chance for a successful implementation of REDD. The effectiveness and trust of certain REDD project will be stronger with the increasing participation of other funding entities.

6) Considering the level of importance and acceptability of various types of green fiscal policies (reward & punishment mechanism of green fiscal balance, polluter pays principle's scheme, economic valuation of forest resources, implementation of green GDP, Purchasing Development Right - PDR, Clean Development Mechanism - CDM, Reducing Emission from Deforestation and Forest Degradation - REDD, upstream-downstream incentives mechanism, and debt for the nature swap), some policy recommendations were concluded in the following **Table 6-1**.

Table 6-1: The Acceptability and Recommendation for Green Fiscal Policies

Policies	Effects on Forestry PDB	Effects on National PDB	Resistance	Urgency	Policy Recommendation
Rewards & punishment of revenue sharing on natural resources	Unknown	Unknown	Low-Moderate	High	Improvement of Fiscal Balance Law
Fines for pollution-producing region and compensation for affected areas	Unknown	Unknown	Moderate-High	Moderate	Improvement of Environmental Law
Economic valuation of forest resources	Increase data validity	Increase data validity	Low	Moderate	Minister / Coordinative Minister Regulation
Green GDP including environmental services	Increase (large)	Increase (Moderate)	Low-Moderate	High	Improvement of Fiscal Administration Law and/or Regulation
PDR	None	Unknown	Low-Moderate	Moderate	Minister Regulation and Local Government Regulation
CDM	Increase (low)	Increase (very low)	High	Low	Minister Regulation
REDD	Increase (low)	Increase (very low)	Low	Moderate	Minister Regulation
Upstream-downstream incentive	Increase (very high)	Increase (high)	Low	High	Government Regulation and Local Government Regulation
Debt for nature swap	Increase (small-moderate)	Increase (low)	Low-Moderate	Moderate	Law and Government Regulation

Source: Nurrochmat et al. (2010)

- 7) The schemes of REDD could be implemented if and only if they fulfilled the criteria of the effectiveness, efficiency, and equity. Several important components are recommended to be regulated in order to implement low carbon development schemes effectively (**Table 6-2**).

Table 6-2: The Important Components for the Implementation of Low Carbon Development Schemes

Components	Recommended Level of Regulations	Level of Importance
1. DEFINITION PROPONENTS		
Producer/seller	MR, GV, BB	Important
Buyer	MR, GV, BB	Important
Location	Law, GR, MR, GV, BB	Very important
Type of schemes (i.e. AR-CDM, REDD, etc.)	GR, MR, GV, BB	Very important
Other parties (related stakeholders and their positions)	MR, GV, BB	Important
2. SALE & PURCHASE TERMS		
Volume	MR, GV, BB	Important
Delivery date(s)	MR, GV, BB	Important
Transfer of legal title	Law, GR, MR, GV, BB	Very important
Length and number of verification periods	MR, GV, BB	Very important
Payment (timing and method)	MR, GV, BB	Very important
Currency	BB	Important
Option to purchase additional credits	BB	Important
3. PROJECT DEVELOPMENT & IMPLEMENTATION		
Responsibility for project implementation (validation, registration)	GR, MR, GV, BB	Very important
Monitoring of emission reductions/removals	GR, MR, GV, BB	Very important
Verification/Certification	GR, MR, GV, BB	Very important
4. COST AND TAXES		
Responsibility for costs of validation, registration, verification/certification	GR, MR, GV, BB	Very important
Responsibility for international taxes and local taxes	Law, GR, MR, GV, BB	Very important
5. DEFAULTS AND REMEDIES		
Delivery shortfall provisions	MR, GV, BB	Very important
Events of default	MR, GV, BB	Very important
Time period to cure default	MR, GV, BB	Very important
Termination	GR, MR, GV, BB	Very important
Remedies	MR, GV, BB	Very important
6. GENERAL PROVISIONS		
Governing rules	Law, GR, MR, GV, BB	Very important
Assignment	MR, GV, BB	Very important
Amendments	MR, GV, BB	Very important
Force Majeure	MR, GV, BB	Very important
Representations & warranties	MR, GV, BB	Very important
Compatibility to national & UNFCCC policies	Law, GR, MR, GV, BB	Very important

Source: adapted from ERPA-UNDP.

Note: GR=Government Regulation, MR=Minister Regulation, GV=Governor/regency head/major Regulation, BB = Business to Business Agreement

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**REVIEW INFRASTRUCTURE
FRAMEWORK AND MECHANISM RELATED TO SFM AS
IMPORTANT OPTION IN REDUCING EMISSION FROM
DEFORESTATION AND FOREST DEGRADATION**

Dr. Dodik Ridho Nurrochmat



KEMENTERIAN Hutan dan Lingkungan Hidup



ITTO

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Management (SFM) Initiatives in Indonesia

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